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# OPTOELECTRONICS

## D.A.T.A. BOOK<sup>®</sup>

Edition 9

9381 Types

Obsolete After November 1979

104 Manufacturers

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# EDITORIAL POLICY & PROCEDURES

<b>Purpose</b>	<p>This D.A.T.A.BOOK is designed to report comprehensively on what is presently being produced throughout the world in the field of OPTOELECTRONIC devices. While a book such as this can not provide 100% of the information you might need, its primary aims are those of facilitating the selection of types suitable to your technical requirements, and of directing you to the sources of their manufacture.</p>
<b>Technical Data Acquisition</b>	<p>D.A.T.A. acquires and processes the information presented in this D.A.T.A.BOOK with the co-operation of the participating manufacturers who supply us with their latest technical information. Manufacturers are not charged for the listing of their products. Manufacturers listed include those with capabilities ranging from device testing and grading, to complete wafer/chip processing operations.</p>
<b>JEDEC Types</b>	<p>The electrical, optical, mechanical and environmental characteristics tabulated for the standard 1N, 2N and 4N type numbers are derived directly from the JEDEC registration releases. The particular manufacturer or manufacturers for whom such types are registered are so indicated by the use of a symbol next to their manufacturer codes in the Type No. Cross-Index. In general, the JEDEC-designated types produced by the various manufacturers, whether registered or not, do conform with the registered specifications; however, there may be exceptions, and it is recommended that the individual manufacturers be consulted.</p>
<b>Military Type Numbers</b>	<p>The electrical, optical, mechanical and environmental information tabulated for the military types in the technical sections is derived directly from the applicable military specifications and standards. The source information, showing the particular manufacturers qualified for each type, is derived from the QPL (Qualified Parts List) associated with the governing specification, or from the manufacturers Qualification Test Letters.</p>
<b>Substitute Types And Compatibility</b>	<p>This D.A.T.A.BOOK can not truly claim to be an interchangeability chart; however, because of the sequencing arrangement of selected characteristics in the technical section, types with the same or similar characteristics are grouped together. For purposes of replacement, this means of thorough convenient technical comparison should prove superior to, and safer than, a mere listing of possible substitute type numbers.</p>
<b>Price And Availability</b>	<p>Because of the rapidly-changing and complex nature of this field, current price and delivery information should be obtained direct from the manufacturers. The list of manufacturers and the Local Offices Section in back of the book will assist you in this.</p>
<b>Manufacturers' Specifications</b>	<p>This book includes currently-manufactured devices and devices soon-to-be available with their major characteristics, drawings and manufacturers. Every effort is made to ensure the accuracy of the entries herein; however, the publisher can not be held responsible nor guarantee against the possibility of error or omission. Only the manufacturers or their authorized representatives can provide you with complete technical details.</p>



# HOW TO MAKE MAXIMUM USE OF THIS D.A.T.A.BOOK

Select the particular KNOWN-UNKNOWN situation that applies, and follow the instructions as indicated. Examples shown here are taken from Edition 7 of the OPTOELECTRONICS D.A.T.A.BOOK.

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## OPTOELECTRONICS D.A.T.A. BOOK

Edition 7      Valid Thru October 1978  
8009 Types      97 Manufacturers

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3. Infrared Emitting Diode (Including Laser Types) ..... 30-34

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**1. TYPE NO. CROSS INDEX**

LINE No.	TYPE No.	MIN. POWER (mW)	MAX. PWR (mW)	WAVELENGTH (nm)	DC CURR (mA)	REV. NO.	PKG. STYLE	INTENSITY (mW/cm <sup>2</sup> )	ANGLE (deg)	TEST CA	FEATURE	SELECT
1	ME7121	2.0	100	850	100	3.0	24	800	10	100	100	BC
2	ME7124	2.0	100	850	100	3.0	24	800	10	100	100	BC
3	ME7100	2.0	100	850	100	3.0	24	800	10	100	100	BC
4	ME7122	2.0	100	850	100	3.0	24	800	10	100	100	BC
5	ME7123	2.0	100	850	100	3.0	24	800	10	100	100	BC
6	ME7125	2.0	100	850	100	3.0	24	800	10	100	100	BC
7	ME7126	2.0	100	850	100	3.0	24	800	10	100	100	BC
8	ME7127	2.0	100	850	100	3.0	24	800	10	100	100	BC
9	ME7128	2.0	100	850	100	3.0	24	800	10	100	100	BC
10	ME7129	2.0	100	850	100	3.0	24	800	10	100	100	BC
11	GAL31	3.3	100	850	100	3.0	24	800	10	100	100	BC
12	GAL32	3.3	100	850	100	3.0	24	800	10	100	100	BC
13	GAL33	3.3	100	850	100	3.0	24	800	10	100	100	BC
14	KC31C	3.3	100	850	100	3.0	24	800	10	100	100	BC
15	KC32C	3.3	100	850	100	3.0	24	800	10	100	100	BC

**1. KNOWN:** Electrical or Mechanical Requirements – Infrared Emitting Diode, 3.3mW Power Output, 100mA Forward Current

**UNKNOWN:** Suitable Type Numbers

a. Turn to the Table of Contents and select the Technical Data Section corresponding to the "known" device type; (Section 3, Infrared Emitting Diode).

b. Turn to any page in the Infrared Emitting Diode Section. Note the sequencing parameters, i.e., those characteristics for which the data are sequenced (MIN. PWR. OUTPUT first, IF second) indicated at the top right corner of the page.

c. Using the sequencing parameters, locate the type numbers that are in general agreement with your requirements. Because of the sequencing, these types will appear together; 3.3mW Po, 100mA IF types are found in this example on lines 11-15. From among these, select the one or ones most suitable.

d. To identify the manufacturers of the selected type number, follow the procedures outlined in 2.

---

**51. MANUFACTURERS CODES, NAMES & ADDRESSES**

MANUFACTURERS IN ORDER OF D.A.T.A. CODE LETTERS (Cont'd)

GPL MFR. DESIG.    FSCM. NATO No.    D.A.T.A. MFRS. CODE

PAN - Pantek International Corp., P.O. Box 587, Lewistown, PA 17044

K8747 - PLOB - Plessey Optoelectronics & Microwave, Wood Burcote Way, Towcester, Northamptonshire, U.K.

CRC - 02735 - RCA - RCA, Solid State Division, Route 202, Somerville, NJ 08876

52923 - REA - Readouts, Inc., P.O. Box 149, Del Mar, CA 92014

28564 - REC -

**2. KNOWN:** Type Number – GAL31

**UNKNOWN:** Complete Manufacturer Information

a. In the Type No. Cross Index (Section 1) locate the "known" type number in this alpha-numeric sequenced section. (For example GAL31)

b. Note the 4-letter manufacturers' code(s) indicated for the "known" type. (PLOB for GAL31)

c. Turn to the Manufacturers Codes, Names and Addresses (Section 51) for complete manufacturer information. (For example: PLOB)

d. Turn to the Manufacturers Local Offices (Section 50) where full local office listings are located.

---

**Manufacturers' Local Offices**

**PLOB - PLESSEY OPTOELECTRONICS AND MICROWAVE**

Wood Burcote Way, Towcester, Northants, England ..... Zip Code Telephone No. FAX/Telex  
NN12 7JN 0327 51871 317442

**UNITED STATES**




CALIFORNIA ..... Irvine ..... Plessey Optoelectronics ..... 92714 714-540-9934 910-595-1933  
1641 Kaiser

e. To locate the manufacturer's logo, turn to Section 52.

---

**52. MANUFACTURERS LOGOS**

IN MFR. CODE ORDER

PLOB - Plessey Optoelectronics & Microwave      QTC - Quatrad Corp.      RCA - RCA Corp.

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Continued on next page





# USE OF POWERS-OF-TEN MULTIPLIERS AND SYMBOLS & CODES IN THE TECHNICAL SECTIONS

To present a maximum amount of information in a minimum amount of space, use is made in this book of the following data modifiers:

## POWERS-OF-TEN MULTIPLIERS

The powers-of-ten multipliers shown below are used in numeric columns when the value being entered is many times greater or smaller than the units of measure indicated in the column heading. Usually, the latter are the so-called 'basic' units; such as V (volts), A (amperes) and s (seconds). The multipliers and an explanation of their use are given below:

MULTIPLIERS									EXPLANATION		
PREFIXES & SYMBOLS			Recommended by International Committee on Weights and Measures						Value of Data To Be Entered	Basic Unit In Column Heading	Actual Entry
Indicating Powers of Ten			Adopted by National Bureau of Standards								
Power	Prefix	Symbol	Power	Prefix	Symbol	Power	Prefix	Symbol			
10 <sup>12</sup>	tera	T	10	deka	da	10 <sup>-9</sup>	nano	n	3 milliamperes	A (amperes)	3.0m
10 <sup>9</sup>	giga	G	10 <sup>-1</sup>	deci	d	10 <sup>-12</sup>	pico	p	9 megaohms	Ω (ohms)	9.0M
10 <sup>6</sup>	mega	M	10 <sup>-2</sup>	centi	c	10 <sup>-15</sup>	femto	f	0.5 volt	V (volts)	500m *
10 <sup>3</sup>	kilo	k	10 <sup>-3</sup>	milli	m	10 <sup>-18</sup>	atto	a	10 amperes	A (amperes)	10
10 <sup>2</sup>	hecto	h	10 <sup>-6</sup>	micro	μ						

\* May also be written as 0.5, with no multiplier

## SYMBOLS & CODES

**Symbols** — Symbols such as #, Δ, and \$ are used in all columns, numeric or otherwise, whenever the data entries differ in some way from the entity defined in the column heading. For instance, if a given heading specifies Max. Power (in Watts) and the numeric value being entered for a given type represents the minimum power instead, the variance is denoted by the appearance of a special symbol alongside the numeric entry.

**NOTE:** The symbols and codes used herein are explained on the cards in back of the book.

**Codes** — Codes are used in some columns as means to abbreviate the data being entered. The codes may be alphabetic (A,B,C, etc.) numeric (1,2,3, etc.) or some combination of both.

## HOW TYPE NUMBERS ARE SEQUENCED IN THE TYPE NUMBER CROSS INDEX

Sequencing of type numbers in the Type Number Cross-Index is governed by the following rules:

	EXAMPLES
<b>Rules:</b> 1) Type numbers are listed in numeric-alphabetic sequence; i.e., type numbers beginning with a number (decimal, fraction, or whole) precede type numbers beginning with a letter.	13A01 143 1202 A147 AN127 B2000
2) Decimals and fractions precede whole numbers. An equivalent decimal precedes the fraction when the remainder of type number is identical.	25Z150 1/4Z150 3/4M12Z 1T3
3) Zeros are ignored in sequencing except when the zero is the only basis for distinguishing one type number from another. In this case the type number containing the zero is listed first.	0112 112 0113 00115 AP01 AP1 AP02
4) Number and/or letter groupings preceding hyphens or slashes are the controlling factors in sequencing. The hyphens and slashes themselves precede any identically positioned letters also having the same beginning number/letter groupings.	66-0706 66M1 70/10 70A9
5) Military prefix (JAN) is ignored in the numeric-alphabetic sequencing of type numbers. A military type number directly follows its equivalent JEDEC type number.	2N645 JAN2N645

# HOW TYPE NOS. ARE ARRANGED IN THE TECHNICAL SECTION – SEQUENCING PARAMETERS

The arrangement of types in the technical sections is keyed to a set of special characteristics selected for their importance from among the general group of characteristics tabulated in each section. These selected characteristics, or sequencing parameters, differ from one section to another, and are identified at the top corner of each page, as shown in the sample below.

MAJOR CHARACTERISTICS										SEQUENCING PARAMETERS					
<b>13. SENSOR: PHOTOTHYRISTOR</b>										IN ORDER OF: (1) MAX. IT(RMS) (2) TEMP.-T. (3) MAX. VDRM & (4) TYPE No.					
LINE No.	TYPE No.	MAXIMUM IT(RMS) (A)	RATINGS @ 25°C (1) @ T (C) (2) VDRM (V) (3) ITSM (A)	TEMP. RNG. CODE	MIN. IRRADIANCE TO TRIGGER Ee (W/cm <sup>2</sup> )	SOURCE λ (m)	VAK (V)	MAX. Δ-IRRM @ MAX T (A)	MAX. TURN OFF TIME tq (S)	MAX. IGT @ 25°C (A)	MAX. VGT @ 25°C (V)	MAX. IH @ 25°C (A)	MATER. & FEAT MAT	LEAD CODE	DRAWING Ø-RND. □-RECT. Δ-STRIP *-CHIP

The different types within a section are first arranged in ascending numeric (or alphabetic) order of the first such parameter. Groups of types having a common value for the first parameter are then arranged in ascending order of the second parameter. This process continues for each parameter in turn, up to and including the last parameter which, in every instance, is the type number itself. The final arrangement, by type number, is done in accordance with the sequencing of type numbers in the cross-index, as explained on the preceding page.

A simplified model of the arrangement as described is shown below.

4	Type Number	Characteristics			
		1 A	2 B	C	3 D
A13	100			325	
A4	100			1000	20
A9	100		A	20	25
A10	100		A	200	25
A3	100		B	40	15
A1	100		C	80	10
A8	100		C	900	15
A7	100		D	35	30
A11	110		A	60	25
A2	120		A	300	15
A5	120		B	150	20
A6	120		B	200	20
A12	120		B	475	25

▲ Last Seq. Par.
▲ 1st Seq. Par.
▲ 2nd Seq. Par.
▲ (Not Seq.)
▲ 3rd Seq. Par.

Note that the absence of an entry for any sequencing parameter is regarded as a zero, and precedes any actual entries in the sequencing.

# GENERAL TERMS AND DEFINITIONS

<b>detector</b>	A special application of light emitter and/or sensor devices where the light source may or may not be modulated in normal operation.
<b>display</b>	A light emitter/reflector capable of presenting numeric, alphanumeric and symbolic information.
<b>infrared-emitting diode</b>	A diode which emits radiant energy in the infrared region of the electromagnetic spectrum.
<b>light-emitting diode (LED)</b>	A diode which emits radiant energy in the visible region of the electromagnetic spectrum.
<b>optoelectronic device</b>	A device which responds to, emits or modifies electromagnetic radiation in the infrared, visible and/or ultraviolet regions; a device that depends on such radiation for its internal operation.
<b>photo current</b>	The difference between $I_L$ (light current) and $I_D$ (dark current) in a photosensitive device.
<b>photodiode</b>	A diode designed to be responsive to light.
<b>photodiode, avalanche</b>	A diode designed to take advantage of the avalanche multiplication of signal (photo) current.
<b>photoconductive cell</b>	A device designed to change its resistance as a function of light intensity.
<b>photovoltaic cell (diode)</b>	A photosensitive (diode) device which is designed to generate a terminal voltage in response to light.
<b>phototransistor</b>	A transistor designed to be responsive to light.
<b>photodarlington</b>	A darlington-connected transistor designed to be responsive to light.
<b>photothyristor</b>	A thyristor designed to be responsive to light for controlling its operation.
<b>photocircuit</b>	An integrated circuit which is designed to be responsive to light for controlling its specific function(s).
<b>photocoupler (opto-isolator)</b>	An optoelectronic device that isolates the input from the output by converting electrical energy to light and back again. Included in this volume are photocouplers with photocell, photodiode, phototransistor, photodarlington, photothyristor and photocircuit outputs.
<b>visible light</b>	Electromagnetic radiation characterized by wavelengths in the 0.38 to 0.78 $\mu\text{m}$ region.

# EXPLANATION OF CHARACTERISTICS AND RATINGS

The characteristics and ratings shown are generally for the worst case conditions. When columns do not specify Min or Max, typical conditions apply, excepted only by symbols following data entries. This allows the reader to compare and select devices whose characteristics are stated to be under comparable operating conditions. Unless otherwise noted, characteristics and ratings are measured at a temperature of 25°C.

- C.R.: contrast ratio — brightness of source minus brightness of background divided by brightness of background. Contrast ratio is a function of applied voltage in transmissive type liquid crystal displays and a function of ambient lighting in reflective type LCDs.
- $E_v$ : illuminance;  $E_e$ : irradiance — the luminous or radiant flux density incident on a surface; quotient of flux divided by area of illuminated/ irradiated surface.
- $h_F$ : current transfer ratio ( $CTR=I_c/I_F$ ) — in an LED-transistor photocoupler, it is the output transistor collector current divided by the LED forward current.
- $I_D$ : dark current — current flow through a photosensitive device in the dark condition (off-state); representative of device leakage current.
- $I_{FT}$ : input trigger current — emitter current necessary to trigger the coupled thyristor.
- $I_L$ : light current — current flow through a photosensitive device in the light condition (exposed to light); representative of on-state current.
- $I_v$ : luminous intensity;  $I_e$ : radiant intensity — the luminous or radiant flux generated per unit solid angle in a given direction.
- $L_v$ : luminance;  $L_e$ : radiance — luminous or radiant intensity in a given direction per unit of projected surface area, as viewed from that direction.
- $\theta_{HI}$ : beam angle or half-intensity beamwidth — the angle on the optical axis within which the radiant intensity is not less than 50% of the maximum intensity.
- $\lambda_p$ : peak wavelength — the wavelength at which the spectral radiant intensity is a maximum.
- $\lambda_L$  to  $\lambda_H$ : spectral range — lowest and highest wavelength in nanometers capable of being detected by the photosensitive device.
- $\Delta\lambda$ : spectral bandwidth — the wavelength interval in which the concentration of photometric/radiometric quantity is not less than 50 % of its maximum value.
- M.F.: matching factor — for arrays, the output current of a minimum channel divided by the output current of a maximum channel.
- $P_{case}$ : case power dissipation — the power dissipation resulting from the flow of all currents in a device, referenced to case temperature.
- $P_D$ : total power dissipation — the power dissipation resulting from the flow of all currents in a device, usually assuming availability of an infinite heat sink.
- $P_n$ , NEP: noise equivalent power — the noise equivalent power in a one-Hertz bandwidth at the detector output.
- $R_{off}$ : dark resistance — resistance of a photoconductive cell in the dark condition (off-state).
- $R_{on}$ : light resistance — resistance of a photoconductive cell in the light condition (exposed to light).
- $R_v$ : luminous responsivity;  $R_e$ : radiant responsivity — the rms value of the fundamental component of electrical output (voltage current) divided by the rms value of the fundamental component of the luminous or radiant flux from a specified distribution.
- $S_v$ : luminous sensitivity;  $S_e$ : radiant sensitivity — the total value of electrical output divided by the total value of incident luminous or radiant flux from a specified distribution.
- $t_R$ : typical response time — the general term used to describe rise times, fall times, turn-on, turn-off, decay times and any other independent specification of operational times in optoelectronic devices.

# PHOTOMETRIC / RADIOMETRIC: TERMS, SYMBOLS, UNITS

## PHOTOMETRIC SYSTEM

TERM	SYMBOL	MKS			CGS			ENGLISH		
		NAME	SYMBOL	UNITS	NAME	SYMBOL	UNITS	NAME	SYMBOL	UNITS
Luminous Flux	$\Phi_v$	Lumen	lm	lm	Lumen	lm	lm	Lumen	lm	lm
Luminous Intensity	lv	Candela	cd	lm/sr	Candela	cd	lm/sr	Candela	cd	lm/sr
Luminance (Brightness)	Lv	Nit	nt	lm/sr-m <sup>2</sup>	Stilb	sb	lm/sr-cm <sup>2</sup>	Candela per foot <sup>2</sup>	cd/ft <sup>2</sup>	lm/sr-ft <sup>2</sup>
	Lv	Meter-Lambert (Apostilb)	mL (asb)	$\pi$ - lm/sr-m <sup>2</sup>	Lambert	L	$\pi$ - lm/sr-cm <sup>2</sup>	Foot-Lambert	fL	$\pi$ - lm/sr-ft <sup>2</sup>
Illuminance (Illumination)	Ev	Lux	lx	lm/m <sup>2</sup>	Phot	ph	lm/cm <sup>2</sup>	Foot-Candle	fc	lm/ft <sup>2</sup>

## RADIOMETRIC SYSTEM

TERM	SYMBOL	MKS		CGS	
		NAME	UNITS	NAME	UNITS
Radiant Flux	$\Phi_e$	Watt	W	Watt	W
Radiant Intensity	Ie	Watt per Steradian	W/sr	Watt per Steradian	W/sr
Radiance	Le	Watt per Steradian-meter <sup>2</sup>	W/sr-m <sup>2</sup>	Watt per Steradian-centimeter <sup>2</sup>	W/sr-cm <sup>2</sup>
Irradiance	Ee	Watt per meter <sup>2</sup>	W/m <sup>2</sup>	Watt per centimeter <sup>2</sup>	W/cm <sup>2</sup>
Radiant Exitence	Me	Watt per meter <sup>2</sup>	W/m <sup>2</sup>	Watt per centimeter <sup>2</sup>	W/cm <sup>2</sup>

## COMMON OPTOELECTRONIC MATERIALS

Material	Description
Cd	Cadmium
CdS	Cadmium Sulfide
CdSe	Cadmium Selenide
CdSe:CdS	Cadmium Selenide:Cadmium Sulfide
GaAs	Galium Arsenide
GaAs:Al	Galium Arsenide:Aluminum
GaAsP	Galium Arsenide Phosphide
GaAsP:N	Galium Arsenide Phosphide:Nitride
GaAs:S	Galium Arsenide:Sulfide
GaAs:Zn	Galium Arsenide:Zinc
GaP	Galium Phosphide
GaP:N	Galium Phosphide:Nitride

Material	Description
GaP:ZnO	Galium Phosphide:Zinc Oxide
GaSb	Galium Antimonide
Ge	Germanium
InAs	Indium Arsenide
InSb	Indium Antimonide
LiTaO <sub>3</sub>	Lithium Tantalate
PbS	Lead Sulfide
Se	Selenium
Si	Silicon
SiC	Silicon Carbide
ZnS	Zinc Sulfide



# 1. TYPE No. CROSS INDEX

IN TYPE NUMBER SEQUENCE

TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line
1A48B	♦HAFO	39- 92	2SM1020E5	♦INR	81- 25	3SM1020E4PL	♦INR	81- 25	4N30	♦MOTA	91- 37	5SM1020E4	♦INR	81- 68
1A48C	♦HAFO	40- 12	(cont.)	INRB		INRB	INRJ		♦FSC	♦GESY		(cont.)	INRB	
1A48FB	♦HAFO	38- 1	INRI	INRJ		INRJ	INRJ		♦LIX	♦MTO		INRI	INRJ	
1A48FC	♦HAFO	38- 2	2SM1020E5PL	♦INR	81- 17	3SM1020E4T	♦INR	81- 26	♦OPI	♦SPT		5SM1020E4PL	♦INR	81- 68
1A48PB	♦HAFO	38- 3	INRB	INRJ		INRB	INRJ		4N31	♦MOTA	91- 32	INRB	INRJ	
1A48PC	♦HAFO	38- 4	INRJ	INRJ		INRJ	INRJ		♦FSC	♦GESY		5SM1020E4T	♦INR	81- 69
1A65A	♦HAFO	41- 48	2SM1020E5T	♦INR	81- 18	3SM1020E5	♦INR	81- 44	♦LIX	♦MTO		INRB	INRJ	
1A65B	♦HAFO	41- 49	INRB	INRJ		INRB	INRJ		♦OPI	♦SPT		♦INR	INRJ	
1A83	♦HAFO	41- 18	INRJ	INRJ		INRJ	INRJ		4N32	♦MOTA	91- 49	INRB	INRJ	
1A104	♦HAFO	40- 78	2SM1020E6	♦INR	81- 32	3SM1020E5PL	♦INR	81- 45	♦FSC	♦GESY		5SM1020E5	♦INR	81- 89
1AX65A	♦HAFO	41- 50	INRB	INRJ		INRB	INRJ		♦LIX	♦MTO		♦INR	INRJ	
1AX65B	♦HAFO	41- 51	INRJ	INRJ		INRJ	INRJ		♦OPI	♦SPT		♦INR	INRJ	
1N4378	ΔTII	56- 95	2SM1020E6PL	♦INR	81- 33	3SM1020E5T	♦INR	81- 46	4N32A	♦MOTA	91- 50	5SM1020E5PL	♦INR	81- 90
	TIB		INRB	INRJ		INRB	INRJ		♦GESY	♦LIX		INRB	INRJ	
1N5722	ΔTII	57- 25	2SM1020E6T	♦INR	81- 34	3SM1020E6	♦INR	81- 56	4N33	♦MOTA	91- 51	5SM1020E5T	♦INR	81- 91
	♦MOTA		INRB	INRJ		INRB	INRJ		♦FSC	♦GESY		♦INR	INRJ	
1N5723	ΔTII	57- 26	INRJ	INRJ		INRJ	INRJ		♦LIX	♦MTO		♦INR	INRJ	
	♦MOTA		INRJ	INRJ		INRJ	INRJ		♦OPI	♦SPT		♦INR	INRJ	
1N5724	ΔTII	57- 27	2SM1020E7	♦INR	81- 38	3SM1020E6PL	♦INR	81- 57	4N35	♦GESY	90- 50	5SM1020E6	♦INR	81-100
	♦MOTA		INRB	INRJ		INRB	INRJ		♦FSC	♦LIX		INRB	INRJ	
1N5725	ΔTII	57- 28	INRJ	INRJ		INRJ	INRJ		♦MTO	♦OPI		♦INR	INRJ	
	♦MOTA		INRJ	INRJ		INRJ	INRJ		♦LIX	♦MTO		♦INR	INRJ	
1N5765	ΔTII	24- 18	2SM1020E7PL	♦INR	81- 39	3SM1020E6T	♦INR	81- 58	4N36	♦GESY	90- 51	5SM1020E6PL	♦INR	81-101
JAN1N5765	HPA	25- 31	INRB	INRJ		INRB	INRJ		♦FSC	♦LIX		♦INR	INRJ	
1N6092	ΔTII	28- 94	2SM1020E7T	♦INR	81- 40	3SM1020E7	♦INR	81- 78	♦MTO	♦OPI		5SM1020E6T	♦INR	81-102
JAN1N6092	HPA	28- 95	INRB	INRJ		INRB	INRJ		♦LIX	♦MTO		♦INR	INRJ	
1N6093	ΔTII	33- 23	INRJ	INRJ		INRJ	INRJ		♦OPI	♦SPT		♦INR	INRJ	
JAN1N6093	HPA	33- 24	2SM1020GE8	♦INR	81- 50	3SM1020E7PL	♦INR	81- 79	4N37	♦GESY	90- 52	5SM1020E7	♦INR	81-109
1N6094	ΔTII	37- 28	INRB	INRJ		INRB	INRJ		♦FSC	♦LIX		♦INR	INRJ	
JAN1N6094	HPA	37- 29	INRJ	INRJ		INRJ	INRJ		♦MTO	♦OPI		♦INR	INRJ	
1N6264	♦GESY	40-101	2SM1020GE8PL	♦INR	81- 51	3SM1020E7T	♦INR	81- 80	4N38	♦MOTA	88- 82	5SM1020E7PL	♦INR	81-110
1N6265	♦GESY	40-102	INRB	INRJ		INRB	INRJ		♦GESY	♦OPI		♦INR	INRJ	
1N6266	♦GESY	38- 5	INRJ	INRJ		INRJ	INRJ		4N39	♦GESY	92- 16	5SM1020E7T	♦INR	82- 1
2-312	♦BAR	47- 18	2SM1020GE8T	♦INR	81- 52	3SM1020GE8	♦INR	81- 84	4N40	ΔTII	92- 21	♦INR	INRJ	
2-412	♦BAR	118- 47	INRB	INRJ		INRB	INRJ		4N41	ΔTII	95- 85	♦INR	INRJ	
2A	♦OCLI	79- 29	INRJ	INRJ		INRJ	INRJ		4N45	ΔTII	91- 13	5SM1020GE8	♦INR	82- 5
2AL	♦OCLI	79- 30	2SM1020GE9	♦INR	81- 59	3SM1020GE8PL	♦INR	81- 1	4N46	ΔTII	91- 15	♦INR	INRJ	
2B50B	♦HAFO	58-107	INRB	INRJ		INRB	INRJ		4N47	ΔTII	90- 8	♦INR	INRJ	
2B50C	♦HAFO	58-108	INRJ	INRJ		INRJ	INRJ		4N48	TIB	90- 11	5SM1020GE8PL	♦INR	82- 6
2B50FB	♦HAFO	58-109	2SM1020GE9PL	♦INR	81- 60	3SM1020GE8T	♦INR	81- 85	4N49	TIB	90- 12	♦INR	INRJ	
2B50FC	♦HAFO	58-110	INRB	INRJ		INRB	INRJ		♦TII	TIB		♦INR	INRJ	
2B50PB	♦HAFO	58- 7	INRJ	INRJ		INRJ	INRJ		4X11	UCE	104- 2	5SM1020GE8T	♦INR	82- 7
2B50PC	♦HAFO	58- 8	2SM1020GE9T	♦INR	81- 61	3SM1020GE9	♦INR	81- 94	5-E-A	♦IAV	41- 26	♦INR	INRJ	
2B95B	♦HAFO	59- 11	INRB	INRJ		INRB	INRJ		5-E-B	♦IAV	41- 14	♦INR	INRJ	
2B95C	♦HAFO	59- 12	INRJ	INRJ		INRJ	INRJ		5-E-C	♦IAV	41- 6	♦INR	INRJ	
2B	♦OCLI	73-105	2SM1020GE10	♦INR	81- 72	3SM1020GE9PL	♦INR	81- 95	5-E-D	♦IAV	40- 67	5SM1020GE9PL	♦INR	82- 12
2BL	♦OCLI	73-106	INRB	INRJ		INRB	INRJ		5-H-A	♦IAV	41- 27	♦INR	INRJ	
2D1	♦PI	118- 34	INRJ	INRJ		INRJ	INRJ		5-H-B	♦IAV	41- 15	♦INR	INRJ	
2D1PDA	♦PI	119- 1	2SM1020GE10PL	♦INR	81- 73	3SM1020GE9T	♦INR	81- 96	5-H-C	♦IAV	41- 7	5SM1020GE9T	♦INR	82- 13
2N5777	ΔTII	60- 67	INRB	INRJ		INRB	INRJ		5-H-D	♦IAV	40- 68	♦INR	INRJ	
	♦GESY		INRJ	INRJ		INRJ	INRJ		5-L-A	♦IAV	41- 2	♦INR	INRJ	
2N5778	ΔTII	60- 75	2SM1020GE10T	♦INR	81- 74	3SM1020GE10	♦INR	81-103	5-L-B	♦IAV	40- 72	5SM1020GE10	♦INR	82- 14
	♦MOTA		INRB	INRJ		INRB	INRJ		5-L-C	♦IAV	40- 36	♦INR	INRJ	
2N5779	ΔTII	60- 68	INRJ	INRJ		INRJ	INRJ		5-L-D	♦IAV	40- 8	♦INR	INRJ	
	♦MOTA		INRJ	INRJ		INRJ	INRJ		5-O-A	♦IAV	41- 28	5SM1020GE10PL	♦INR	82- 15
2N5780	ΔTII	60- 76	03-15	REC	109- 90	03-15DP	REC	109- 76	5-O-B	♦IAV	41- 16	♦INR	INRJ	
	♦MOTA		03-15PM	REC	109- 91	03-15PM	REC	109- 91	5-O-C	♦IAV	41- 8	5SM1020GE10T	♦INR	81- 2
2SC2072-1	♦SONY	57-109	03-30	♦REC	109- 89	03-30	♦REC	109- 89	5-O-D	♦IAV	40- 69	♦INR	INRJ	
2SC2072-2	♦SONY	57-110	3C63	♦HAFO	90- 34	3C63	♦HAFO	90- 34	5-W-A	♦IAV	41- 3	♦INR	INRJ	
2SM1020A4	♦INR	81- 5	3C63B	♦HAFO	90- 32	3C63B	♦HAFO	90- 32	5-W-B	♦IAV	40- 73	♦INR	INRJ	
	INRJ		3C63C	♦HAFO	90- 33	3C63C	♦HAFO	90- 33	5-W-C	♦IAV	40- 37	06-30	REC	110- 9
2SM1020A4PL	♦INR	81- 6	3C91B	♦HAFO	88- 80	3C91B	♦HAFO	88- 80	5-W-D	♦IAV	40- 9	06-30DP	REC	109- 78
	INRJ		3C92B	♦HAFO	88- 81	3C92B	♦HAFO	88- 81	5-W-E	♦IAV	91- 8	06-30EW	REC	110- 10
2SM1020A4T	♦INR	81- 7	3N243	ΔTII	88- 63	3N243	ΔTII	88- 63	5-C	♦IAV	91- 9	06-30LR	♦REC	110- 11
	INRJ		3N244	ΔTII	88- 67	3N244	ΔTII	88- 67	5-D	♦IAV	40- 67	06-30NS	REC	110- 12
2SM1020A5	♦INR	81- 13	3N245	ΔTII	88- 70	3N245	ΔTII	88- 70	5-E	♦IAV	41- 27	06-30PL	REC	109- 83
	INRJ		3SM1020A4	♦INR	81- 21	3SM1020A4	♦INR	81- 21	5-F	♦IAV	41- 15	06-30PX	♦REC	110- 13
2SM1020A5	♦INR	81- 13	INRB	INRJ		INRB	INRJ		5-G	♦IAV	41- 7	06-40	REC	110- 14
	INRJ		3SM1020A4PL	♦INR	81- 22	3SM1020A4PL	♦INR	81- 22	5-H	♦IAV	90- 26	06-40DP	REC	109- 79
2SM1020A5PL	♦INR	81- 14	INRB	INRJ		INRB	INRJ		5-I	♦IAV	90- 1	06-40EW	REC	110- 15
	INRJ		3SM1020A4T	♦INR	81- 23	3SM1020A4T	♦INR	81- 23	5-J	♦IAV	90- 27	06-40LR	♦REC	110- 16
2SM1020A5T	♦INR	81- 15	INRB	INRJ		INRB	INRJ		5-K	♦IAV	90- 4	06-40NS	REC	110- 17
	INRJ		3SM1020A5	♦INR	81- 41	3SM1020A5	♦INR	81- 41	5-L	♦IAV	90- 28	06-40PM	REC	109- 84
2SM1020A6	♦INR	81- 29	INRB	INRJ		INRB	INRJ		5-M	♦IAV	90- 5	06-40PY	♦REC	110- 18
	INRJ		3SM1020A5PL	♦INR	81- 42	3SM1020A5PL	♦INR	81- 42	5-N	♦IAV	90- 29	06-50	REC	110- 19
2SM1020A6PL	♦INR	81- 30	INRB	INRJ		INRB	INRJ		5-O	♦IAV	90- 6	06-50DP	REC	109- 80
	INRJ		3SM1020A5T	♦INR	81- 43	3SM1020A5T	♦INR	81- 43	5-P	♦IAV	90- 30	06-50EW	REC	110- 20
2SM1020A6T	♦INR	81- 31	INRB	INRJ		INRB	INRJ		5-Q	♦IAV	90- 7	06-50LR	♦REC	110- 21
	INRJ		3SM1020A6	♦INR	81- 53	3SM1020A6	♦INR	81- 53	5-R	♦IAV	90- 31	06-50NS	REC	110- 22
2SM1020A7	♦INR	81- 35	INRB	INRJ		INRB	INRJ		5-S	♦IAV	88-104	06-50PM	REC	109- 85
	INRJ		3SM1020A6PL	♦INR	81- 54	3SM1020A6PL	♦INR	81- 54	5-T	♦IAV	88-104	06-50XY	♦REC	110- 23
2SM1020A7PL	♦INR	81- 36	INRB	INRJ		INRB	INRJ		5-U	♦IAV	88-104	06-L50	REC	109-103
	INRJ		3SM1020A6T	♦INR	81- 55	3SM1020A6T	♦INR	81- 55	5-V	♦IAV				

# 1. TYPE No. CROSS INDEX

IN TYPE NUMBER SEQUENCE

TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line
18CT12	♦ABI	105-27	56P1	♦OCLI	73-91	249-8068-3333-504	♦DI	521-9180	♦DIA	25-22	559-0103-003	♦DIA	94-44	
20AT40	♦ABI	107-79	56P2	♦OCLI	73-92		♦DIA	521-9181	♦DIA	23-28	559-0201-001	♦DIA	94-26	
22BH18M	♦OCLI	55-1	56PBH	♦OCLI	73-90	249-8069-3333-504	♦DIA	521-9183	♦DIA	29-76	559-0201-003	♦DIA	94-27	
22BH18P	♦OCLI	55-2	56PL1	♦OCLI	73-93		♦DIA	521-9184	♦DIA	29-77	559-0202-001	♦DIA	94-28	
22N01A	♦TSP	104-108	56PL2	♦OCLI	73-94	249-8070-3333-504	♦DIA	521-9185	♦DIA	23-103	559-0202-003	♦DIA	94-29	
22N21	♦TSP	104-109	59-5035	♦IRI	49-51		♦DIA	521-9186	♦DIA	23-104	559-0301-001	♦DIA	94-30	
22PB18M	♦OCLI	54-96	59-5055	♦IRI	49-52	249-8071-3333-504	♦DIA	521-9190	♦DIA	25-23	559-0301-003	♦DIA	94-31	
22PD18M	♦OCLI	55-5	59-5635	♦IRI	49-53		♦DIA	521-9195	♦DIA	23-66	559-0302-001	♦DIA	94-32	
22PH18M	♦OCLI	55-3	59-5637	♦IRI	49-54	249-8072-3333-504	♦DIA	521-9200	♦DIA	28-96	559-0302-003	♦DIA	94-33	
22PH18P	♦OCLI	55-4	59-5655	♦IRI	49-55		♦DIA	521-9201	♦DIA	34-42	559-2101-001	♦DIA	94-34	
23.5C01A	♦TSP	105-47	59-5735	♦IRI	49-56	249-8167-3331-504	♦DIA	521-9208	♦DIA	31-77	559-2101-003	♦DIA	94-35	
23.5C21	♦TSP	105-48	59-5737	♦IRI	49-57		♦DIA	521-9210	♦DIA	36-11	559-2201-001	♦DIA	94-36	
25PDU5M	♦OCLI	55-36	59-5755	♦IRI	49-58	249-8168-3331-504	♦DIA	521-9211	♦DIA	32-51	559-2201-003	♦DIA	94-37	
29D5R19	♦LXD	106-74	59-5757	♦IRI	49-59		♦DIA	521-9212	♦DIA	25-24	559-2301-001	♦DIA	94-38	
29D7R19	♦LXD	106-75	59-5800	♦IRI	49-60	249-8169-3331-504	♦DIA	521-9214	♦DIA	28-70	559-2301-003	♦DIA	94-39	
30-30	♦REC	109-71	59-5802	♦IRI	49-62	249-8170-3331-504	♦DIA	521-9215	♦DIA	29-78	601	♦BAR	52-10	
30F2	♦NPC	54-4	59-5804	♦IRI	49-63		♦DIA	521-9216	♦DIA	24-24	602	♦BAR	51-67	
	♦THCF		59-5840	♦IRI	49-64	249-8171-3331-504	♦DIA	521-9222	♦DIA	29-66	603	♦BAR	51-6	
31F2	♦NPC	54-5	59-5842	♦IRI	49-65		♦DIA	521-9223	♦DIA	23-29	704-1549	♦DIA	119-3	
	♦THCF		59-5844	♦IRI	49-66	249-8172-3331-504	♦DIA	521-9240	♦DIA	28-97	706-01	♦BECK	106-60	
32F2	♦NPC	54-6	59-5844	♦IRI	49-66		♦DIA	521-9242#1	♦DIA	28-60	706-02	♦BECK	106-61	
	♦THCF		80D5R05	♦LXD	104-66	249-8267-3332-504	♦DIA	521-9242#2	♦DIA	35-102	708-01	♦BECK	106-62	
33BH05M	♦OCLI	55-7	80D7R05	♦LXD	104-67		♦DIA	521-9244#1	♦DIA	28-61	708-02	♦BECK	106-63	
33BH05P	♦OCLI	55-8	80NT10	♦ABI	104-17	249-8268-3332-504	♦DIA	521-9245#1	♦DIA	35-103	710-01	♦BECK	106-58	
33F2	♦NPC	54-7	80NT20	♦ABI	104-27		♦DIA	521-9245#2	♦DIA	28-62	710-02	♦BECK	106-59	
	♦THCF		81SV	♦APX	49-16	249-8269-3332-504	♦DIA	521-9246	♦DIA	35-104	710-0300-015	♦DIA	110-83	
33PB05M	♦OCLI	54-99		♦PHIN			♦DIA	521-9247	♦DIA	28-39	710-0300-025	♦DIA	110-84	
33PD05M	♦OCLI	55-11		♦RTCF		249-8270-3332-504	♦DIA	521-9248	♦DIA	28-40	710-0300-075	♦DIA	110-85	
33PD05P	♦OCLI	55-12	82SV	♦MULB	50-2		♦DIA	521-9249	♦DIA	32-67	710-0301-015	♦DIA	110-86	
33PH05M	♦OCLI	55-9		♦RTCF		249-8271-3332-504	♦DIA	521-9250	♦DIA	36-50	710-0301-025	♦DIA	110-87	
33PH05P	♦OCLI	55-10					♦DIA	521-9251	♦DIA	36-51	710-0302-015	♦DIA	110-89	
33PD05R	♦LXD	107-47	85D5R09	♦LXD	104-79		♦DIA	521-9253	♦DIA	36-52	710-0302-025	♦DIA	110-90	
34D7R02	♦LXD	107-48	85D7R09	♦LXD	104-80	249-8272-3332-504	♦DIA	521-9254	♦DIA	33-27	710-0302-075	♦DIA	110-91	
34F2	♦NPC	54-8	86PB08M	♦OCLI	55-18		♦DIA	529-01-1	♦CPD	62-78	710-0304-015	♦DIA	110-92	
	♦THCF		86PBF9C	♦OCLI	55-43	249-8367-3333-504	♦DIA	529-01-5	♦CPD	62-79	710-0304-025	♦DIA	110-93	
	♦THCF		86PD09M	♦OCLI	55-30		♦DIA	529-2-1	♦CPD	62-80	710-0304-075	♦DIA	110-94	
35F2	♦NPC	54-9	86PH08M	♦OCLI	55-29	249-8368-3333-504	♦DIA	529-2-5	♦CPD	62-81	710-0305-015	♦DIA	110-95	
	♦THCF		70D5R10	♦LXD	104-70		♦DIA	539-01-1	♦CPD	62-1	710-0305-025	♦DIA	110-96	
40AT40	♦ABI	107-98	70D7R10	♦LXD	104-71	249-8369-3333-504	♦DIA	539-01-5	♦CPD	62-2	710-0305-075	♦DIA	110-97	
40NT10	♦ABI	107-44	78D5R10	♦LXD	104-10		♦DIA	539-003-1	♦CPD	62-3	711-01	♦BECK	106-66	
40NT40	♦ABI	104-83	78D7R10	♦LXD	104-11	249-8370-3333-504	♦DIA	539-003-5	♦CPD	62-4	711-02	♦BECK	106-67	
41A01A	♦TSP	107-90	81A01A	♦TSP	107-92		♦DIA	539-005-1	♦CPD	62-5	712-01	♦BECK	106-64	
41A21	♦TSP	107-91	81A21	♦TSP	107-93	249-8371-3333-504	♦DIA	539-005-1	♦CPD	62-6	713-01	♦BECK	106-65	
41N01A	♦TSP	104-14	81N01A	♦TSP	104-18		♦DIA	539-005-5	♦CPD	62-6	730-8001	♦DIA	98-90	
41N02A	♦TSP	107-42	81N02A	♦TSP	107-45	249-8372-3333-504	♦DIA	547-2001	♦DIA	23-87	730-8002	♦DIA	98-91	
41N21	♦TSP	104-15	81N21	♦TSP	104-19		♦DIA	547-2002	♦DIA	29-52	730-8004	♦DIA	98-85	
41N22	♦TSP	107-43	81N22	♦TSP	107-46	256M11	♦IPI	547-2003	♦DIA	29-63	730-8005	♦DIA	95-29	
41S01A	♦TSP	104-4	81S01A	♦TSP	104-6	256M	♦IPI	547-2004	♦DIA	29-71	730-8006	♦DIA	98-100	
41S21	♦TSP	104-5	81S21	♦TSP	104-7	270PE2-35	♦FPLC	547-2005	♦DIA	29-95	730-8007	♦DIA	98-92	
42D5R03	♦LXD	105-32	83D5R11	♦LXD	107-10	270XY3-35SC	♦FPLC	547-2006	♦DIA	30-1	730-8007	♦DIA	98-86	
42D7R03	♦LXD	105-33	83D7R11	♦LXD	104-34	304	♦EII	547-2007	♦DIA	29-59	730-8009	♦DIA	95-32	
43D5R03	♦LXD	107-6	84D5R11	♦LXD	107-15	402	♦EII	549-0101	♦DIA	25-25	730-8010	♦DIA	100-78	
43D7R03	♦LXD	107-7	84D7R11	♦LXD	107-16	404	♦EII	549-0104	♦DIA	29-72	730-8011	♦DIA	100-79	
43.5C01A	♦TSP	105-49	85D5R11	♦LXD	107-4	404CM	♦EII	549-0201	♦DIA	36-53	730-8012	♦DIA	101-79	
43.5C21	♦TSP	105-50	85D7R11	♦LXD	107-5	404VM	♦EII	549-0301	♦DIA	33-28	730-8014	♦DIA	101-80	
44BH05M	♦OCLI	55-14	91D5R11	♦LXD	117-7	406	♦EII	550-0204	♦DIA	36-12	730-8020	♦DIA	98-93	
44BH05P	♦OCLI	55-15	91D7R11	♦LXD	117-8	408	♦EII	550-0205	♦DIA	36-13	730-8020	♦DIA	98-93	
44D5R03	♦LXD	107-11	100SS3-07DC	♦FPLC	110-103	410PE2-35	♦FPLC	550-0206	♦DIA	36-14	730-8023	♦DIA	103-17	
44D7R03	♦LXD	107-12	100SS3-07SC	♦FPLC	110-104	410XY3-35SC	♦FPLC	550-0304	♦DIA	32-97	730-8025	♦DIA	103-18	
44PB05M	♦OCLI	55-13	100SS4-07SC	♦FPLC	110-105	420	♦EII	550-0305	♦DIA	32-98	730-8029	♦DIA	98-94	
44PBF7C	♦OCLI	55-42	101SS2-07DC	♦FPLC	110-106	424SPFE1	♦SSCF	550-0306	♦DIA	32-99	734	♦BECK	105-65	
44PD05M	♦OCLI	55-19	101SS2-07SC	♦FPLC	110-107	424SPFS1	♦SSCF	550-0404	♦DIA	28-71	735	♦BECK	107-52	
44PD05P	♦OCLI	55-20	104-2	♦HEI	115-81	434TS1	♦SSCF	550-0405	♦DIA	28-72	737-01010	♦BECK	106-48	
44PH05M	♦OCLI	55-16	107-1	♦HEI	57-79	501	♦BAR	550-0406	♦DIA	28-73	737-01020	♦BECK	106-49	
44PH05P	♦OCLI	55-17	107-2	♦HEI	60-50	502	♦BAR	550-0504	♦DIA	29-68	737-01030	♦BECK	106-50	
45D5R03	♦LXD	106-103	107-3	♦HEI	60-54	503	♦BAR	550-0505	♦DIA	29-69	737-01040	♦BECK	106-51	
45D7R03	♦LXD	106-104	107-4	♦HEI	62-100	507-4756-3331-500	♦DIA	550-0506	♦DIA	29-70	737-01050	♦BECK	106-52	
45PQU5M	♦OCLI	55-35	108-1	♦HEI	115-14		♦DIA	550-0604	♦DIA	29-99	739-0261-601	♦DIA	101-45	
46D5R03	♦LXD	105-66	108-2	♦HEI	115-13	507-4757-3331-500	♦DIA	550-0605	♦DIA	29-100	739-0261-602	♦DIA	100-104	
46D7R03	♦LXD	105-4	110B	♦OCLI	73-21		♦DIA	550-0606	♦DIA	29-101	739-0361-601	♦DIA	101-71	
47D5R03	♦LXD	104-57	110BL	♦OCLI	73-22	507-4758-3331-500	♦DIA	550-2204	♦DIA	36-54	739-0361-602	♦DIA	101-61	
47D7R03	♦LXD	104-58	110CL	♦OCLI	75-40		♦DIA	550-2205	♦DIA	36-55	739-0461-601	♦DIA	102-97	
49-2591	♦INR	82-47	110CL	♦OCLI	75-41	507-4759-3331-500	♦DIA	550-2206	♦DIA	36-56	739-0461-602	♦DIA	102-83	
49-2653	♦INR	82-39	110P1	♦OCLI	74-106		♦DIA	550-2304	♦DIA	32-68	739-0561-601	♦DIA	103-15	
49-2666	♦INR	82-38	110P2	♦OCLI	74-107	507-4760-3331-500	♦DIA	550-2305						

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840PE2-98	†FPLC	111- 2	1792R	†IEE	101- 21	3000-01-032G	†IEE	109- 15	3624-28	†UCE	107- 29	5301A-6	†CRS	107- 89
841XY2-35SC	†FPLC	110- 98	1800R	†IEE	96- 79	3000-01-032N	†IEE	109- 16	3626	†UCE	104- 68	5371	†UCE	107-102
932	†MII	103- 57	1800XY2-35SC	†FPLC	110-101	3000-01-064G	†IEE	109- 17	3627	†UCE	104- 69	5623	†UCE	104- 31
1024M11	†PI	117- 80	1801R	†IEE	96- 80	3000-01-064N	†IEE	109- 18	3682	†UCE	104- 81	5626-31	†UCE	107-103
1024M	†PI	117- 81	1801XY2-35SC	†FPLC	110-102	3000-01-128G	†IEE	109- 40	3702-210	†HAM	107- 80	5635	†IRI	47- 19
1101	†IRI	48- 42	1802R	†IEE	98-103	3000-01-128N	†IEE	109- 41	3702-312	†HAM	107- 81	5637	†IRI	47- 20
1102	†IRI	48- 43	1803R	†IEE	98-104	3000-01-256G	†IEE	109- 42	3702-313	†HAM	107- 82	5644	†UCE	104- 38
1103	†IRI	48- 44	1804R	†IEE	96- 73	3000-01-256N	†IEE	109- 43	3703	†UCE	104- 32	5655	†IRI	47- 21
1104	†IRI	48- 45	1805R	†IEE	96- 74	3000-01-320G	†IEE	109- 58	3736-8	†UCE	104- 72	5657	†IRI	47- 22
1105	†IRI	48- 46	1806R	†IEE	98- 98	3000-01-320N	†IEE	109- 59	3736-18	†UCE	104- 73	5665	†IRI	47- 23
1106	†IRI	48- 47	1807R	†IEE	98- 99	3000-01-384G	†IEE	109- 44	3801-210	†HAM	106- 68	5667	†IRI	47- 24
1107	†IRI	48- 48	1808R	†IEE	96- 75	3000-01-384N	†IEE	109- 45	3801-312	†HAM	106- 69	5735	†IRI	51- 61
1108	†IRI	48- 49	1809R	†IEE	96- 76	3000-01-480G	†IEE	109- 60	3801-313	†HAM	106- 70	5737	†IRI	51- 62
1109	†IRI	48- 50	1810R	†IEE	98- 99	3000-01-480N	†IEE	109- 61	3802-210	†HAM	106- 71	5755	†IRI	51- 63
1110	†IRI	48- 51	1811R	†IEE	98-100	3000-01-512G	†IEE	109- 46	3802-312	†HAM	106- 72	5757	†IRI	51- 64
1111	†IRI	48- 52	1812R	†IEE	96- 81	3000-01-512N	†IEE	109- 47	3802-313	†HAM	106- 73	5765	†IRI	51- 65
1112	†IRI	48- 53	1813R	†IEE	96- 82	3000-01-960G	†IEE	109- 62	3803-210	†HAM	106- 76	5767	†IRI	51- 66
1113	†IRI	48- 54	1814R	†IEE	98-105	3000-01-960N	†IEE	109- 63	3803-312	†HAM	106- 77	5800	†IRI	48- 14
1114	†IRI	48- 55	1815R	†IEE	98-106	3001-01-032G	†IEE	109- 19	3803-313	†HAM	106- 78	5802	†IRI	48- 17
1114E1	SSCF	66- 1	1816R	†IEE	100- 15	3001-01-032N	†IEE	109- 20	3804	†UCE	104- 51	5804	†IRI	48- 18
1115	†IRI	48- 56	1817R	†IEE	100- 16	3015FBM10	†REA	110- 44	3804-210	†HAM	106- 79	5805	†IRI	48- 19
1121	†IRI	48- 57	1818R	†IEE	99- 82	3015FBM15	†REA	110- 45	3804-312	†HAM	106- 80	5832-32	†UCE	107-100
1200XY2-35SC	†FPLC	110- 99	1819R	†IEE	99- 83	3015FBM20	†REA	110- 46	3804-313	†HAM	106- 81	5840	†IRI	48- 15
1201	†IRI	49- 19	1820R	†IEE	100- 13	3015FBM	†REA	110- 47	3805-210	†HAM	106- 82	5842	†IRI	48- 20
1201XY2-35SC	†FPLC	110-100	1821R	†IEE	100- 14	3015FBN10	†REA	110- 48	3805-312	†HAM	106- 83	5844	†IRI	48- 21
1202	†IRI	49- 20	1824R	†IEE	99- 80	3015FBN15	†REA	110- 49	3805-313	†HAM	106- 84	5845	†IRI	48- 22
1203	†IRI	49- 21	1825R	†IEE	99- 81	3015FBN20	†REA	110- 50	3806-210	†HAM	106- 85	6080-002-304	†CHM	26- 9
1204	†IRI	49- 22	1920A	†IEE	30- 36	3015FBN	†REA	110- 51	3806-312	†HAM	106- 86	6080-004-304	†CHM	31- 78
1205	†IRI	49- 23	1920A	†IEE	34- 49	3015G10	†REA	110- 52	3806-313	†HAM	106- 87	6080-005-304	†CHM	34- 45
1206	†IRI	49- 24	1920P	†IEE	26- 62	3015G	†REA	110- 53	3807-210	†HAM	106- 88	6080-900-304	†CHM	26- 10
1207	†IRI	49- 25	1920R	†IEE	23- 25	3100-01-032G	†IEE	109- 21	3807-312	†HAM	106- 89	6081-900-304	†CHM	29- 75
1208	†IRI	49- 26	1922A	†IEE	30- 37	3100-01-032N	†IEE	109- 22	3807-313	†HAM	106- 90	6082-002-304	†CHM	29- 80
1209	†IRI	49- 27	1922G	†IEE	34- 50	3100-01-064G	†IEE	109- 23	3808-210	†HAM	106- 91	6082-004-304	†CHM	34- 4
1210	†IRI	49- 28	1922P	†IEE	26- 63	3100-01-064N	†IEE	109- 24	3808-312	†HAM	106- 92	6082-005-304	†CHM	37- 69
1211	†IRI	49- 29	1922R	†IEE	23- 26	3100-01-128G	†IEE	109- 48	3808-313	†HAM	106- 93	6340-001-505A	†CHM	30- 33
1212	†IRI	49- 30	2101	†IRI	48- 58	3100-01-128N	†IEE	109- 49	3809	†HAM	107- 49		†CHM	
1213	†IRI	49- 31	2102	†IRI	48- 59	3100-01-256G	†IEE	109- 50	3812	†UCE	104- 22	6340-002-505R	†CHM	26- 11
1214	†IRI	49- 32	2103	†IRI	48- 60	3100-01-256N	†IEE	109- 51	3902-210	†HAM	105- 9		†CHM	
1215	†IRI	49- 33	2104	†IRI	48- 61	3102	†UCE	104- 23	3902-312	†HAM	105- 10	6340-005-505G	†CHM	34- 46
1221	†IRI	49- 34	2105	†IRI	48- 62	3103	†UCE	104- 33	3902-313	†HAM	105- 11		†CHM	
1301	†IRI	50- 31	2106	†IRI	48- 63	3104	†UCE	104- 53	3906-110	†HAM	105- 28	6340-301-505A	†CHM	30- 34
1302	†IRI	50- 32	2107	†IRI	48- 64	3124	†UCE	104- 54	3906-210	†HAM	105- 37		†CHM	
1303	†IRI	50- 33	2108	†IRI	48- 65	3124-45	†UCE	104- 52	3906-312	†HAM	105- 38	6340-302-505R	†CHM	26- 12
1304	†IRI	50- 34	2109	†IRI	48- 66	3125	†UCE	104- 60	3906-313	†HAM	105- 39		†CHM	
1305	†IRI	50- 35	2112	†IRI	48- 67	3126	†UCE	104- 77	3909-210	†HAM	105- 29	6340-305-505G	†CHM	34- 47
1306	†IRI	50- 36	2113	†IRI	48- 68	3135	†UCE	104- 61	3909-312	†HAM	105- 30		†CHM	
1307	†IRI	50- 37	2114	†IRI	48- 69	3200-01-032G	†IEE	109- 37	3909-313	†HAM	105- 31	6342-001-505A	†CHM	31- 67
1308	†IRI	50- 38	2115	†IRI	48- 70	3200-01-032N	†IEE	109- 38	3918-110	†HAM	105- 56		†CHM	
1309	†IRI	50- 39	2121	†IRI	48- 71	3200-01-080G	†IEE	109- 64	3918-210	†HAM	105- 57	6342-002-505R	†CHM	29- 81
1310	†IRI	50- 40	2201	†IRI	49- 35	3200-01-080N	†IEE	109- 65	3918-312	†HAM	105- 58		†CHM	
1311	†IRI	50- 41	2202	†IRI	49- 36	3200-01-120G	†IEE	109- 66	3918-313	†HAM	105- 59	6342-005-505G	†CHM	37- 70
1312	†IRI	50- 42	2203	†IRI	49- 37	3200-01-120N	†IEE	109- 67	3927-110	†HAM	105- 17		†CHM	
1313	†IRI	50- 43	2204	†IRI	49- 38	3200-01-320G	†IEE	109- 68	3927-210	†HAM	105- 18	6342-301-505A	†CHM	31- 68
1314	†IRI	50- 44	2205	†IRI	49- 39	3200-01-320N	†IEE	109- 69	3927-312	†HAM	105- 19		†CHM	
1315	†IRI	50- 45	2206	†IRI	49- 40	3202	†UCE	104- 25	3927-313	†HAM	105- 20	6342-302-505R	†CHM	29- 82
1319	†IRI	46- 14	2207	†IRI	49- 41	3203	†UCE	104- 35	3929-210	†HAM	105- 34		†CHM	
1319BB	†IRI	46- 15	2208	†IRI	49- 42	3204	†UCE	104- 55	3929-312	†HAM	105- 35	6342-305-505G	†CHM	37- 71
1319M	†IRI	46- 16	2209	†IRI	49- 43	3206	†UCE	105- 60	3929-313	†HAM	105- 36		†CHM	
1319MF	†IRI	46- 17	2212	†IRI	49- 44	3222	†UCE	104- 24	3930-210	†HAM	105- 5	6464	†UCE	107-101
1321	†IRI	50- 46	2213	†IRI	49- 45	3233-9	†UCE	104- 36	3930-312	†HAM	105- 6	6800	†IRI	49- 93
1351G	†IEE	97- 46	2214	†IRI	49- 46	3291	†UCE	104- 20	3930-313	†HAM	105- 7	6802	†IRI	49- 94
1352G	†IEE	96- 22	2215	†IRI	49- 47	3306	†UCE	104- 78	3947-210	†HAM	107- 94	6804	†IRI	49- 95
1353G	†IEE	99- 96	2220-29	†UCE	104- 3	3324-30	†UCE	104- 59	3947-312	†HAM	107- 95	6840	†IRI	49- 96
1354G	†IEE	97- 47	2221	†IRI	49- 48	3334	†UCE	104- 37	3947-313	†HAM	107- 96	6842	†IRI	49- 97
1361E	†IEE	97- 48	2301	†IRI	50- 47	3353	†UCE	104- 28	4003	†IRI	46- 81	6844	†IRI	49- 98
1362E	†IEE	96- 23	2302	†IRI	50- 48	3391	†UCE	104- 13	4005	†IRI	46- 82	7016	†IRI	46- 52
1363E	†IEE	99- 97	2303	†IRI	50- 49	3402	†UCE	104- 26	4006	†IRI	46- 83	7016-L	†IRI	46- 53
1364E	†IEE	97- 49	2304	†IRI	50- 50	3402-110	†HAM	105- 23	4007	†IRI	46- 84	7025	†IRI	46- 60
1371R	†IEE	97- 77	2305	†IRI	50- 51	3402-210	†HAM	105- 24	4080	†IRI	46- 85	7058	†IRI	46- 62
1372R	†IEE	96- 41	2306	†IRI	50- 52	3402-312	†HAM	105- 25	4134	†UCE	107- 97	7110	†IRI	46- 67
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8258	†IRI	46-28	AND105GK	†AND	35-87	AND720Y	†AND	33-39	B10M	†INR	79-36	BPX60	†LIX	54-15
9001	†IRI	52-88	AND105P	†AND	28-14	AND723A	†AND	31-37	INRB	†INRI		†SIEG		
9002	†IRI	53-1	AND105RK	†AND	28-15	AND723G	†AND	36-75		†INRJ		BPX61	†LIX	45-95
36316	UCJ	104-82	AND106P	†AND	28-16	AND723H	†AND	29-1	B17	†INR	74-85	†SIEG		
56016	†REC	107-99	AND106RK	†AND	28-17	AND723J	†AND	31-38	INRB	†INRI		BPX63	†CENB	54-38
61025	†REC	104-110	AND107G	†AND	35-88	AND723P	†AND	36-76		†INRJ		†FERB		
161050	†REC	105-12	AND107GK	†AND	35-89	AND723R	†AND	26-51	B20	†INR	74-89	BPX65	†LIX	45-92
61075	†REC	105-21	AND107P	†AND	35-88	AND723Y	†AND	33-40	INRB	†INRI		†CENB		
61100	†REC	105-22	AND107RK	†AND	28-19	AND724A	†AND	31-39		†INRJ		†SIEG		
65025	†REC	105-102	AND108G	†AND	34-101	AND724G	†AND	36-77	B5853	†BUR	108-13	BPX66	†CENB	45-93
65050	†REC	106-2	AND108GKB	†AND	34-102	AND724H	†AND	29-2	B5853S	†BUR	108-14	†LIX		
65075	†REC	106-11	AND108GKW	†AND	34-103	AND724O	†AND	31-40	B5853ST	†BUR	108-15	BPX69	†RTCF	46-56
65100	†REC	106-15	AND108R	†AND	27-76	AND724P	†AND	36-78	B5866	†BUR	108-16	BPX70	†APX	58-11
A1	†SOL	79-47	AND108RKB	†AND	27-77	AND724R	†AND	26-52	B5866S	†BUR	108-17	†MULB	†PHIN	
A1%	†MELJ	73-71	AND108RKW	†AND	27-78	AND724Y	†AND	33-41	B5866ST	†BUR	108-18	BPX70C	†APX	58-12
A2	†INR	72-100	AND108RKB	†AND	27-79	AND726A	†AND	31-41	B5870	†BUR	108-19	†PHIN	†RTCF	
	INRB		AND109RKB	†AND	27-80	AND726G	†AND	36-79	B5870S	†BUR	108-20	BPX70D	†APX	58-13
	INRJ		AND109RKW	†AND	27-81	AND726H	†AND	29-3	B5870ST	†BUR	108-21	†PHIN	†RTCF	
A3Δ	INRB	73-7	AND110R	†AND	28-20	AND726I	†AND	31-42	BA13400-08R	†BUR	108-22	BPX70E	†APX	58-14
	INRJ		AND110RK	†AND	28-21	AND726P	†AND	36-80	BA16701	†BUR	108-23	†PHIN	†RTCF	
	INRJ		AND113G	†AND	35-52	AND726R	†AND	26-53	BDS40832-200	†BUR	108-3	BPX71	†PHIN	57-103
A3□	†SOL	79-45	AND113P	†AND	27-84	AND726Y	†AND	33-42	BDS40832-201	†BUR	108-35	†MULB	†PHIN	
A3%	†MELJ	73-44	AND113Y	†AND	32-22	AND728H	†AND	29-4	BDS40832-205	†BUR	108-5	BPX71-201	†APX	56-79
A5	INRB	74-30	AND114G	†AND	35-53	AND740A	†AND	31-43	BDS40832-206	†BUR	108-53	†PHIN	†RTCF	
	INRJ		AND114R	†AND	27-85	AND740G	†AND	36-81	BDS40832-208	†BUR	108-5	BPX71-202	†APX	56-80
	INRJ		AND114Y	†AND	32-23	AND740H	†AND	29-5	BDS40832-209	†BUR	108-36	†PHIN	†RTCF	
A5M	†INR	79-35	AND115G	†AND	35-54	AND740O	†AND	31-44	BDS40832PD2	†BUR	108-2	BPX71-203	†APX	56-81
	INRB		AND115P	†AND	27-86	AND740P	†AND	36-82	BDS40832S20	†BUR	108-6	†PHIN	†RTCF	
	INRJ		AND116R	†AND	27-87	AND740R	†AND	26-54	BF06570	†BUR	108-93	BPX71-204	†APX	56-82
A10M	†INR	79-37	AND120R	†AND	27-88	AND740Y	†AND	33-43	BF08771	†BUR	108-98	†PHIN	†RTCF	
	INRB		AND121G	†AND	34-94	AND743A	†AND	31-45	BG08120K	†BUR	117-11	BPX72	†APX	58-15
	INRJ		AND121P	†AND	27-27	AND743G	†AND	36-83	BG12201-2	†BUR	117-12	†MULB	†PHIN	
A15	INRB	79-39	AND122G	†AND	34-95	AND743H	†AND	29-6	BG12203-2	†BUR	117-13	BPX72C	†APX	58-16
	INRJ		AND122R	†AND	27-28	AND743O	†AND	31-46	BG12205-2	†BUR	117-14	†PHIN	†RTCF	
	INRJ		AND123G	†AND	35-27	AND743P	†AND	36-84	BG16101-2	†BUR	117-15	BPX72D	†APX	58-17
A15M	†INR	79-38	AND123R	†AND	27-70	AND743S	†AND	28-55	BG25201002	†PAN	117-16	†PHIN	†RTCF	
	INRJ		AND123Y	†AND	32-12	AND743Y	†AND	33-44	BOT521XXX	†HEI	115-74	BPX72E	†APX	58-18
	INRJ		AND124G	†AND	35-28	AND744A	†AND	31-47	BOT522XXX	†HEI	115-75	†PHIN	†RTCF	
A100U	†BAR	49-15	AND124R	†AND	27-71	AND744G	†AND	36-85	BP100	†SIEG	72-64	BPX79	†LIX	72-94
A200	†BAR	47-5	AND124Y	†AND	32-13	AND744H	†AND	29-7	BP103B1	†SIEG	58-84	†SIEG		
AE960	†AMEN	45-5	AND202G	†AND	34-104	AND744O	†AND	31-48	BP103B11	†SIEG	58-85	BPX80	†LIX	64-98
AE961	†AMEN	45-6	AND202R	†AND	27-31	AND744P	†AND	36-86	BP103B111	†SIEG	58-86	†SIEG		
AE962	†AMEN	45-9	AND205G	†AND	35-29	AND744R	†AND	26-56	BP103B1V	†SIEG	58-87	BPX811	†SIEG	57-91
AE963	†AMEN	45-11	AND205P	†AND	27-69	AND744Y	†AND	33-45	BP103I	†SIEG	59-48	BPX8111	†SIEG	57-92
AE964	†AMEN	45-14	AND205Y	†AND	32-14	AND746A	†AND	31-49	BP103II	†SIEG	59-49	BPX81111	†SIEG	57-93
AL102A	†USSR	29-44	AND370R	†AND	100-37	AND746G	†AND	36-87	BP103III	†SIEG	59-50	BPX811V	†SIEG	57-84
AL102B	†USSR	29-58	AND371R	†AND	100-38	AND746H	†AND	29-8	BP103IV	†SIEG	59-51	BPX82	†LIX	64-38
AL102V	†USSR	37-65	AND516	†AND	92-25	AND746O	†AND	31-50	BP104	†LIX	45-23	†SIEG		
AL103A	†USSR	39-40	AND600G	†AND	117-9	AND746P	†AND	36-88	†SIEG			BPX83	†LIX	64-44
AL103B	†USSR	39-21	AND600R	†AND	117-10	AND746R	†AND	26-57	BPW12	†ALGG	72-95	†SIEG		
AL106A	†USSR	38-83	AND700A	†AND	31-19	AND746Y	†AND	33-46	BPW13A	†ALGG	59-62	BPX84	†LIX	64-50
AL106B	†USSR	38-103	AND700G	†AND	36-57	AND748H	†AND	29-9	BPW13B	†ALGG	59-63	†SIEG		
AL106V	†USSR	39-24	AND700H	†AND	28-100	AND750A	†AND	31-51	BPW13C	†ALGG	59-64	BPX85	†LIX	64-56
AL107A	†USSR	40-103	AND700O	†AND	31-20	AND750G	†AND	36-89	BPW14A	†ALGG	59-65	†SIEG		
AL107B	†USSR	41-19	AND700P	†AND	36-58	AND750H	†AND	29-10	BPW14B	†ALGG	59-66	BPX86	†LIX	64-62
AL109A	†USSR	38-76	AND700R	†AND	26-42	AND750O	†AND	31-52	BPW14C	†ALGG	59-67	†SIEG		
AL112A	†USSR	23-70	AND700Y	†AND	33-31	AND750P	†AND	36-90	BPW16	†ALGG	57-15	BPX87	†LIX	64-68
AL112B	†USSR	23-71	AND703A	†AND	31-21	AND750R	†AND	26-58	BPW16/9	†ALGG	64-86	†SIEG		
AL112D	†USSR	23-72	AND703G	†AND	36-59	AND750Y	†AND	33-47	BPW17	†ALGG	57-16	BPX88	†LIX	64-74
AL112E	†USSR	23-73	AND703H	†AND	28-101	AND753A	†AND	31-53	BPW17/9	†ALGG	64-87	†SIEG		
AL112G	†USSR	23-74	AND703O	†AND	31-22	AND753G	†AND	36-91	BPW19	†ALGG	64-96	BPX89	†LIX	64-90
AL112I	†USSR	23-75	AND703P	†AND	36-60	AND753H	†AND	29-11	BPW20	†ALGG	73-11	†SIEG		
AL112SZ	†USSR	23-76	AND703R	†AND	26-43	AND753O	†AND	31-54	BPW21	†ALGG	72-78	BPX90	†LIX	54-14
AL112V	†USSR	23-77	AND703Y	†AND	33-32	AND753P	†AND	36-92	†CENB			†SIEG		
AL113A	†USSR	95-41	AND704A	†AND	31-23	AND753R	†AND	26-59	BPW21M	†ALGG	72-80	BPX91	†LIX	54-16
AL113B	†USSR	95-42	AND704G	†AND	36-61	AND753Y	†AND	33-48	BPW22	†APX	57-14	†SIEG		
AL113D	†USSR	95-43	AND704H	†AND	28-102	AND754A	†AND	31-55	†MULB	†PHIN		BPX91B	†SIEG	54-17
AL113E	†USSR	95-44	AND704O	†AND	31-24	AND754G	†AND	36-93	†RTCF			BPX92	†LIX	54-12
AL113G	†USSR	95-45	AND704P	†AND	36-62	AND754H	†AND	29-12	BPW23	†MULB	56-96	†SIEG		
AL113I	†USSR	95-46	AND704R	†AND	26-44	AND754O	†AND	31-56	BPW24	†ALGG	45-32	BPX93	†LIX	54-3
AL113K	†USSR	95-35	AND704Y	†AND	33-33	AND754P	†AND	36-94	BPW26	†RTCF	64-75	†SIEG		
AL113L	†USSR	95-36	AND706A	†AND	31-25	AND754R	†AND	26-60	BPW27	†RTCF	64-103	BPX94	†APX	53-38
AL113M	†USSR	95-37	AND706G	†AND	36-63	AND754Y	†AND	33-49	BPW28	†ALGG	46-4	†MULB	†PHIN	
AL113N	†USSR	95-38	AND706H	†AND	28-103	AND756A	†AND	31-57	BPW30	†ALGG	60-99	BPX94A	†MULB	53-39
AL113R	†USSR	95-39	AND706P	†AND	31-26	AND756G	†AND	36-95	BPW32	†SIEG	54-39	BPX95	†APX	57-83
AL113S	†USSR	95-40	AND706P	†AND	36-64	AND756H	†AND	29-13	BPW33	†SIEG	54-40	†MULB	†PHIN	
AL113SZ	†USSR	95-47	AND706P	†AND	26-45	AND756O	†AND	31-58	BPW34	†ALGG	45-94	BPX95B	†RTCF	57-88
AL113V	†USSR	95-48	AND706Y	†AND	33-34	AND756P	†AND	36-96	†APX	†FERB		BPX98	†MULB	54-27
AL304A	†USSR	96-106	AND708H	†AND	28-104	AND756R	†AND	26-61	†MULB	†RTCF		BPX99	†ALGG	60-100
AL304B	†USSR	96-107	AND710A	†AND	31-27	AND756Y	†AND	33-50	†SIEG			BPY11	†SIEG</	



# 1. TYPE No. CROSS INDEX

IN TYPE NUMBER SEQUENCE

TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line
BR09471C	*BUR	108-96	C86005E-TS	*RCA	119-102	CK1275	*RTN	70-53	CL7P7HL	*CLA	68-80	CLM3120A	*CLA	86-97
BR10250M	*BUR	108-105	C86006E	*RCA	39-68	CK1276	*RTN	70-86	CL7P7HM	*CLA	68-83	CLM3500	*CLA	86-88
BR11470C	*BUR	108-108	C86007E	*RCA	40-10	CK1277	*RTN	70-79	CL7P9L	*CLA	68-55	CLM4006A	*CLA	86-98
BR12250	*BUR	108-109	C86008E	*RCA	38-48	CK1278	*RTN	70-54	CL9P4L	*CLA	66-89	CLM4012A	*CLA	86-99
BR12259	*BUR	108-102	CA3062	*RCA	63-11	CK1279	*RTN	70-55	CL9P5	*CLA	66-50	CLM4120A	*CLA	86-100
BR12261	*BUR	108-106	CCD110FC	*FSC	117-82	CK1280	*RTN	69-33	CL9P5HL	*CLA	66-26	CLM6000	*CLA	86-21
BR13251	*BUR	108-110	CCD121HC	*FSC	117-83	CK1281	*RTN	69-27	CL9P7HL	*CLA	66-27	CLM6200	*CLA	86-101
BR13451	*BUR	109-3	CCD131DC	*FSC	117-84	CK1282	*RTN	69-24	CL9P7HL	*CLA	66-73	CLM6500	*CLA	86-102
BR16252	*BUR	109-5	CCD202ADC	*FSC	118-35	CK1283	*RTN	69-9	CL9P7HLL	*CLA	66-72	CLM8000	*CLA	86-103
BR16254	*BUR	109-1	CCD202BDC	*FSC	118-36	CK1284	*RTN	69-34	CL9P9L	*CLA	66-28	CLM8200	*CLA	86-104
BR16452	*BUR	109-6	CCD211ADC	*FSC	118-37	CK1285	*RTN	70-38	CL9P9LL	*CLA	66-19	CLM8200-2	*CLA	86-105
BS100C	*SRPJ	53-27	CCD211BDC	*FSC	118-38	CK1286	*RTN	71-80	CL602	*CLA	67-40	CLM8500	*CLA	86-106
BS100D	*SRPJ	53-37	CCD211CDC	*FSC	118-39	CK1287	*RTN	71-77	CL603	*CLA	67-63	CLM8500/2	*CLA	86-107
BS112	*SRPJ	54-10	CCPD256	*RET	117-85	CK1288	*RTN	71-75	CL603A	*CLA	67-64	CLM8500HV	*CLA	86-108
BS142	*SRPJ	54-11	CCPD1024	*RET	117-86	CK1289	*RTN	71-68	CL603AL	*CLA	67-62	CLM8600	*CLA	86-109
BS530F	*SRPJ	53-51	CCPD1728	*RET	117-87	CK1290	*RTN	71-94	CL604	*CLA	67-54	CLM9000	*CLA	87-14
BS530G	*SRPJ	53-52	CG512	LAFB	46-3	CK1291	*RTN	71-95	CL604L	*CLA	67-52	CLR2049	*CLA	59-10
BS530UV	*SRPJ	54-2	CG540	LAFB	45-110	CK1292	*RTN	71-100	CL604M	*CLA	67-53	CLR2050	*CLA	60-90
BS2030	*SRPJ	53-53	CG5500A	*LAFB	45-17	CK1293	*RTN	71-106	CL605	*CLA	67-44	CLR2060	*CLA	60-91
BS2030A	*SRPJ	53-54	CG5600A	*LAFB	45-18	CK2000	*RTN	85-86	CL605L	*CLA	67-43	CLR2170	*CLA	60-92
C1BF0	*SNI	118-48	CG7000A	*LAFB	38-36	CK2000B	*RTN	85-22	CL607	*CLA	67-49	CLR2180	*CLA	60-93
C1BF3	*SNI	118-49	CG7010A	*LAFB	39-85	CK2003	*RTN	85-23	CL607L	*CLA	67-48	CLR3180	*CLA	60-46
C1CF0	*SNI	118-50	CHS70ANE1	SSCF	87-21	CK2008P	*RTN	86-7	CL702	*CLA	68-43	CLR5101	*CLA	60-48
C1CF3	*SNI	118-51	CHS70BGE1	SSCF	87-39	CK2013	*RTN	85-24	CL702L2	*CLA	68-37	CLR5101-2	*CLA	60-49
C1GE0	*SNI	118-52	CHS70GE1	SSCF	87-15	CK2015	*RTN	85-87	CL702L	*CLA	68-38	CLT2010	*CLA	59-26
C1GE3	*SNI	118-53	CHS74GS2	SSCF	85-16	CK2018	*RTN	85-88	CL703	*CLA	68-108	CLT2020	*CLA	59-1
C1I2-0	*SNI	118-54	CK1101	*RTN	85-103	CK2019	*RTN	85-89	CL703/2	*CLA	68-109	CLT2030	*CLA	59-2
C1I2-3	*SNI	118-55	CK1102	*RTN	85-104	CK2025P	*RTN	86-8	CL703A	*CLA	68-110	CLT2130	*CLA	59-27
C1KB0	*SNI	118-56	CK1101P	*RTN	85-105	CK2028	*RTN	85-90	CL703L2	*CLA	68-101	CLT2140	*CLA	59-13
C1KB3	*SNI	118-57	CK1102P	*RTN	85-106	CK2028A	*RTN	85-91	CL703L	*CLA	68-102	CLT2150	*CLA	59-14
C1KR0	*SNI	118-58	CK1103	*RTN	85-107	CK2028B	*RTN	85-25	CL703M	*CLA	68-107	CLT2160	*CLA	59-3
C1KR3	*SNI	118-59	CK1103P	*RTN	85-108	CK2029	*RTN	87-22	CL704	*CLA	68-98	CLT2164	*CLA	60-84
C1S00	*SNI	118-60	CK1104	*RTN	85-109	CK2030	*RTN	87-35	CL704/2	*CLA	68-35	CLT2165	*CLA	60-85
C1S03	*SNI	118-61	CK1104P	*RTN	85-110	CK2032	*RTN	87-23	CL704L2	*CLA	68-94	CLT3020	*CLA	57-62
C533A-1	*CRS	105-1	CK1105	*RTN	87-32	CK2033	*RTN	86-9	CL704L	*CLA	68-95	CLT3030	*CLA	57-21
C533A-5	*CRS	105-2	CK1106	*RTN	87-33	CK2034	*RTN	87-24	CL705	*CLA	68-59	CLT3160	*CLA	57-63
C533A-6	*CRS	105-3	CK1108	*RTN	87-34	CK2035	*RTN	87-25	CL705/2	*CLA	68-60	CLT3170	*CLA	57-22
C4101A	*BUR	109-52	CK1111	*RTN	86-1	CK2037	*RTN	86-10	CL705HL2	*CLA	68-48	CLT5160	*CLA	57-23
C4101B	*BUR	109-39	CK1111P	*RTN	86-2	CK2038	*RTN	86-11	CL705HL	*CLA	68-49	CLT5170	*CLA	57-24
C4101C	*BUR	109-28	CK1112	*RTN	86-3	CK2039	*RTN	85-26	CL705L2	*CLA	68-50	CM4-20%	*CHM	25-33
C4103	*BUR	109-25	CK1112P	*RTN	86-4	CK2040	*RTN	86-12	CL705L	*CLA	68-51	CM4-21	*CHM	25-34
C5335-1	*CRS	107-30	CK1113	*RTN	86-5	CK2041	*RTN	86-13	CL707	*CLA	68-78	CM4-22%	*CHM	25-35
C5335-5	*CRS	107-31	CK1113P	*RTN	86-6	CK2042	*RTN	86-14	CL707H	*CLA	68-82	CM4-23%	*CHM	25-36
C5335-6	*CRS	107-32	CK1114	*RTN	85-17	CK2043	*RTN	86-15	CL707HL	*CLA	68-79	CM4-24%	*CHM	25-110
C6009	*BUR	108-94	CK1115	*RTN	85-18	CK2046	*RTN	85-27	CL707HM	*CLA	68-81	CM4-25	*CHM	26-1
C30002	*RCA	42-18	CK1116	*RTN	85-19	CK2051	*RTN	85-92	CL707L	*CLA	68-75	CM4-43%	*CHM	23-105
C30003	*RCA	42-26	CK1117	*RTN	85-20	CK2052	*RTN	85-93	CL709L	*CLA	68-52	CM4-43	*CHM	23-106
C30004	*RCA	42-24	CK1121	*RTN	85-80	CK2053	*RTN	85-94	CL902	*CLA	66-11	CM4-43B	*CHM	24-28
C30005	*RCA	42-36	CK1121W	*RTN	85-21	CK2060	*RTN	85-1	CL902L	*CLA	66-8	CM4-73A	*CHM	24-29
C30006	*RCA	42-37	CK1122	*RTN	85-81	CK2065	*RTN	87-36	CL903	*CLA	67-9	CM4-80B	*CHM	25-37
C30007	*RCA	42-46	CK1122B	*RTN	85-82	CK2066	*RTN	87-37	CL903A	*CLA	67-10	CM4-81B	*CHM	25-38
C30008	*RCA	42-47	CK1122W	*RTN	85-83	CK2067	*RTN	87-38	CL903L	*CLA	67-2	CM4-82B	*CHM	25-39
C30009	*RCA	42-54	CK1123	*RTN	85-84	CK2070	*RTN	85-28	CL903N	*CLA	67-2	CM4-83-1	*CHM	26-72
C30012	*RCA	41-82	CK1124	*RTN	85-85	CK2071	*RTN	85-29	CL904	*CLA	66-92	CM4-83-2	*CHM	26-73
C30013	*RCA	41-102	CK1201	*RTN	67-59	CK2072	*RTN	85-30	CL904L	*CLA	66-90	CM4-83-3	*CHM	26-74
C30038	*RCA	42-33	CK1202	*RTN	68-17	CK2078	*RTN	85-95	CL904N	*CLA	66-91	CM4-83%	*CHM	26-75
C30041	*RCA	42-25	CK1203	*RTN	68-22	CK2080	*RTN	85-31	CL905	*CLA	66-51	CM4-84	*CHM	25-40
C30042	*RCA	42-41	CK1204	*RTN	68-100	CK2086	*RTN	85-96	CL905HL	*CLA	66-29	CM4-84B-0	*CHM	26-76
C30099	*RCA	42-5	CK1205	*RTN	68-84	CK2095	*RTN	85-32	CL905HLL	*CLA	66-38	CM4-84B-1	*CHM	25-41
C30116	*RCA	38-64	CK1206	*RTN	69-35	CK2101	*RTN	85-33	CL905HN	*CLA	66-30	CM4-84B-2	*CHM	26-77
C30116F	*RCA	38-65	CK1207	*RTN	69-36	CK2112	*RTN	85-34	CL905HL	*CLA	66-31	CM4-85B	*CHM	26-78
C30119	*RCA	39-91	CK1208	*RTN	67-46	CK2118	*RTN	85-35	CL905L	*CLA	66-32	CM4-85B	*CHM	26-79
C30121	*RCA	39-30	CK1209	*RTN	67-41	CK2124	*RTN	85-36	CL907	*CLA	66-74	CM4-24A	*CHM	28-74
C30123	*RCA	39-34	CK1210	*RTN	67-60	CK2127	*RTN	85-37	CL907HL	*CLA	66-74	CM4-244B	*CHM	28-78
C30127	*RCA	40-91	CK1211	*RTN	67-50	CK2129	*RTN	87-26	CL907HN	*CLA	66-75	CM4-264	*CHM	28-79
C30130	*RCA	41-4	CK1212	*RTN	67-45	CK2132	*RTN	85-97	CL907L	*CLA	66-65	CM4-262B	*CHM	28-80
C30133	*RCA	38-68	CK1213	*RTN	67-42	CK2137	*RTN	85-98	CL907L	*CLA	66-70	CM4-262B-2	*CHM	28-81
C30801	*RCA	45-66	CK1214	*RTN	67-34	CK2139	*RTN	85-99	CL909L	*CLA	66-39	CM4-263B	*CHM	28-82
C30802	*RCA	45-63	CK1216	*RTN	68-18	CK2140	*RTN	85-38	CLA7	*CLA	88-70	CM4-264B	*CHM	28-83
C30805	*RCA	45-76	CK1217	*RTN	68-4	CK2141	*RTN	85-39	CLA7D	*CLA	91-30	CM4-264B-2	*CHM	28-84
C30807	*RCA	45-48	CK1218	*RTN	68-2	CK2142	*RTN	85-40	CLCR5590	*CLA	80-83	CM4-344A	*CHM	28-85
C30808	*RCA	45-54	CK1219	*RTN	67-105	CK2143	*RTN	85-41	CLCT5320	*CLA	59-8	CM4-344B	*CHM	36-16
C30809	*RCA	45-59	CK1220	*RTN	68-36	CK2145	*RTN	86-16	CLCT5511	*CLA	59-9	CM4-344B	*CHM	36-17
C30810	*RCA	45-75	CK1221	*RTN	67-35	CK2146	*RTN	86-17	CLD31	*CLA	73-98	CM4-382B-2	*CHM	36-18
C30812	*RCA	45-45	CK1222	*RTN	67-36	CK2147	*RTN	85-100	CLD41	*CLA	72-96	CM4-383B	*CHM	36-19
C30815	*RCA	62-56	CK1223	*RTN	67-39	CK2148	*RTN	85-101	CLD42	*CLA	73-36	CM4-384B	*CHM	36-20
C30816	*RCA	62-57	CK1224	*RTN	67-51	CK2149	*RTN	85-102	CLD56	*CLA	73-74	CM4-384B-2		

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TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line
CNY17III	◆OPI	89-91	CQY17IV	◆SIEG	40-18	CQY99	◆ALGG	41-33	DCC10018LR	◆DCO	26-100	DLY7663	◆LIX	98-21
	◆SIEG		CQY17V	◆SIEG	40-55	CR212C	◆HEI	64-109	DCC10018LY	◆DCO	31-83	DLY7666	◆LIX	100-12
CNY17IIIΔ	◆GESY	89-95	CQY24A	◆APX	24-34	CR218C	◆HEI	65-9	DCC10030	◆DCO	44-8	DM80X80A	◆NEIJ	111-10
CNY17IV	◆OPI	89-92		◆PHIN		CR224C	◆HEI	65-13	DCP102	◆DCO	56-77	DM258X26B	◆NEIJ	111-8
	◆SIEG			◆RTCF		CR612C	◆HEI	64-110	DDK528P	◆MER	62-22	DM400B	◆NEIJ	111-9
CNY17IVΔ	◆GESY	89-96	CQY24A-I	◆APX	24-35	CR618C	◆HEI	65-10	DDV325	◆MER	62-44	DP2	◆INR	79-33
CNY18-1	◆LIX	88-3		◆PHIN		CR624C	◆HEI	65-14	DE210	◆DECO	111-67		INRB	INRI
CNY18-2	◆LIX	88-7	CQY24A-II	◆APX	24-36	CR712C	◆HEI	65-1	DE220	◆DECO	111-107			INRJ
CNY18-3	◆LIX	88-8		◆PHIN		CR718C	◆HEI	65-11	DE232	◆DECO	112-3	DP3	INRB	INRI
CNY18-4	◆LIX	88-12	CQY24A-III	◆APX	24-37	CR724C	◆HEI	65-15	DE240	◆DECO	112-7			INRI
CNY18I	◆SIEG	88-42		◆PHIN		CR812C	◆HEI	65-2	DE320	◆DECO	108-1			INRJ
CNY18II	◆SIEG	88-46	CQY24B	◆MULB	24-38	CR818C	◆HEI	65-12	DIP630	REC	110-26	DT25	◆EGG	45-44
CNY18III	◆ALGG	88-50	CQY24B-I	◆MULB	24-39	CR824C	◆HEI	65-16	DIP630PM	REC	109-86	DT110	◆EGG	45-62
	◆SIEG		CQY24B-II	◆MULB	24-40	CS-127	◆CHE	63-42	DIP631L	REC	110-27	DV45	◆MER	119-5
CNY18IV	◆ALGG	88-51	CQY24B-III	◆MULB	24-41	CS-129	◆CHE	63-39	DIP631R	REC	110-28	E1000	◆MAI	23-24
	◆SIEG		CQY24B-IV	◆MULB	24-42	CS-130	◆CHE	63-40	DIP632	REC	110-29	E1010	◆MAI	23-30
CNY21	◆ALGG	89-83	CQY31	◆ALGG	38-34	CS-131	◆CHE	63-38	DIP640	REC	110-30	E1020	◆MAI	26-25
CNY22	◆APX	88-65	CQY32	◆ALGG	38-35	CS-132	◆CHE	63-37	DIP640PM	REC	109-87	E1100	◆MAI	30-30
	◆MULB		CQY33A	◆ALGG	40-56	CS-180	◆CHE	62-41	DIP641L	REC	110-31	E1200	◆MAI	31-10
CNY23	◆MULB	88-68	CQY33B	◆ALGG	40-57	CS-401	◆CHE	63-2	DIP641R	REC	110-32	E1300	◆MAI	34-93
	◆PHIN		CQY33C	◆ALGG	40-58	CS-402	◆CHE	63-57	DIP642	REC	110-33	E1500	◆MAI	23-1
CNY26	◆RTCF	113-2	CQY34A	◆ALGG	40-104	CS-450	◆CHE	62-8	DIP650	REC	110-34	E1510	◆MAI	23-4
CNY27	◆RTCF	113-6	CQY34B	◆ALGG	40-105	CS-460	◆CHE	63-52	DIP650PM	REC	109-88	E1510F	◆MAI	23-5
CNY28	◆GESY	113-71	CQY34C	◆ALGG	40-106	CS-461	◆CHE	63-53	DIP651L	REC	110-35	E1520	◆MAI	23-6
CNY29	◆GESY	114-50	CQY35A	◆ALGG	40-80	CS-462	◆CHE	63-54	DIP651R	REC	110-36	E1520F	◆MAI	23-7
CNY30	◆GESY	92-13	CQY35B	◆ALGG	40-81	CS-463	◆CHE	63-55	DIP652	REC	110-37	E2000	◆MAI	40-92
CNY31	◆GESY	91-54	CQY35C	◆ALGG	40-82	CS-464	◆CHE	63-56	DIP850	REC	110-58	E2004	◆MAI	41-23
CNY32	◆GESY	89-88	CQY36	◆ALGG	38-32	CS-480	◆CHE	63-43	DIP850PM	REC	109-101	E2500	◆MAI	41-103
CNY33	◆GESY	90-44	CQY36/9	◆ALGG	43-78	CS-481	◆CHE	63-44	DIP851L	REC	110-59	E2502	◆MAI	41-110
CNY34	◆GESY	92-18	CQY37	◆ALGG	38-33	CS-482	◆CHE	63-45	DIP851R	REC	110-60	E2525	◆MAI	43-34
CNY35	◆GESY	90-43	CQY37/9	◆ALGG	43-79	CS-483	◆CHE	63-46	DIP852	REC	110-61	E5100	◆MAI	54-42
CNY36	◆ALGG	113-59	CQY38HA	◆ALGG	41-10	CS-484	◆CHE	63-47	DIP1050	REC	110-77	E5102	◆MAI	54-43
	◆OPI		CQY38HB	◆ALGG	41-29	CS-486	◆CHE	63-48	DIP1050A	REC	110-78	E5103	◆MAI	54-44
CNY37	◆ALGG	113-91	CQY38HC	◆ALGG	41-20	CS-487	◆CHE	63-49	DIP1050PM-1	REC	110-79	E7460	◆MAI	54-87
CNY42	◆APX	88-66	CQY39	◆ALGG	43-89	CS-488	◆CHE	63-50	DIP1051L	REC	110-80	EA7E1	◆OCLI	74-41
	◆MULB		CQY40L	◆ALGG	24-43	CS-489	◆CHE	63-51	DIP1051R	REC	110-81	EA7E2	◆OCLI	74-42
CNY43	◆APX	88-69	CQY41	◆ALGG	24-44	CS-489	◆CHE	63-51	DIP1052	REC	110-82	EA7E3	◆OCLI	74-33
	◆MULB		CQY41N	◆ALGG	24-45	CS-489	◆CHE	63-51	DK48	◆MER	119-4	EA7E5	◆OCLI	74-5
CNY44	◆APX	88-17	CQY46	◆APX	24-46	CSL300L	◆OPC	27-8	DL10	◆LIX	96-7	ED50	◆EEP	37-97
	◆MULB			◆PHIN		CSL310L#1	◆OPC	27-9	DL10A	◆LIX	96-5	ED50-01	◆EEP	23-107
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	◆MULB		CQY47	◆APX	24-47	CSP4.7	◆OCLI	82-24	DL44M	◆OCLI	100-107	ED50-03	◆EEP	37-98
	◆PHIN			◆PHIN		CSP7	◆OCLI	82-25	DL57	◆LIX	101-55	ED209G	◆EEP	34-67
CNY47	◆APX	88-36	CQY49B	◆APX	39-35	CSP14	◆OCLI	82-26	DL101	◆LIX	99-95	ED209R	◆EEP	26-102
	◆MULB			◆PHIN		CSP16.5	◆OCLI	82-27	DL101A	◆LIX	99-94	ED209Y	◆EEP	31-84
CNY47Δ	◆GESY	89-69	CQY49C	◆APX	38-6	CSP28	◆OCLI	82-28	DL301	◆LIX	99-103	ED216G	◆EEP	34-68
CNY47A	◆APX	88-37		◆PHIN		D5340-1	◆CRS	105-74	DL304	◆LIX	97-74	ED216R	◆EEP	26-103
	◆MULB			◆RTCF		D5340-5	◆CRS	105-75	DL307	◆LIX	96-35	ED216Y	◆EEP	31-85
CNY47AΔ	◆GESY	89-71	CQY50	◆APX	38-72	D5340-6	◆CRS	105-76	DL330M	◆LIX	101-66	ED220G	◆EEP	37-63
CNY48	◆APX	91-55		◆PHIN		D5345-1	◆CRS	106-19	DL340M	◆LIX	102-86	ED220R	◆EEP	29-57
	◆MULB			◆RTCF		D5345-5	◆CRS	106-20	DL416	◆LIX	102-109	ED220Y	◆EEP	34-1
	◆PHIN		CQY52	◆APX	38-95	D5345-6	◆CRS	106-21	DL430M	◆LIX	101-70	ED226A	◆EEP	30-42
	◆RTCF			◆PHIN		D5360-1	◆CRS	104-63	DL440M	◆LIX	100-106	ED226G	◆EEP	34-69
CNY48Δ	◆GESY	91-96		◆PHIN		D5360-5	◆CRS	104-64	DL500	◆LIX	98-64	ED226R	◆EEP	26-104
CNY51	◆GESY	90-47		◆RTCF		D5360-6	◆CRS	104-65	DL507	◆LIX	98-65	ED226Y	◆EEP	31-86
CQX10	◆ALGG	24-30	CQY53	◆APX	23-27	DA1300	◆IEE	110-62	DL521	◆LIX	100-100	ED553G	◆EEP	37-15
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CQX12	◆ALGG	33-89	CQY54	◆APX	24-48	DA1320	◆IEE	110-64	DL527	◆LIX	100-102	ED553Y	◆EEP	33-64
CQX13	◆SIEG	37-16		◆PHIN		DA2000	◆IEE	110-71	DL528	◆LIX	100-103	ED5053A	◆EEP	30-43
CQX13-1	◆LIX	35-107		◆RTCF		DA2010	◆IEE	110-72	DL701	◆LIX	100-3	ED5053G	◆EEP	34-70
CQX13-2	◆LIX	35-108	CQY58	◆APX	38-105	DA2020	◆IEE	110-73	DL702	◆LIX	96-36	ED5053R	◆EEP	26-105
CQX13I	◆SIEG	37-17		◆PHIN		DA2100	◆IEE	110-54	DL704	◆LIX	97-75	ED5053Y	◆EEP	31-87
CQX13II	◆SIEG	37-18		◆RTCF		DA2110	◆IEE	110-55	DL707	◆LIX	96-37	EL74A	◆EEP	88-22
CQX14	◆GESY	40-93	CQY61B	◆RTCF	24-49	DA2120	◆IEE	110-56	DL707R	◆LIX	97-76	EM1502	◆RTN	68-8
CQX15	◆GESY	40-94	CQY63	◆RTCF	43-73	DA2300	◆IEE	110-65	DL721	◆LIX	98-66	EM1507	◆RTN	67-93
CQX16	◆GESY	39-93	CQY64	◆RTCF	43-99	DA2310	◆IEE	110-66	DL722	◆LIX	98-67	EM1508	◆RTN	68-9
CQX17	◆GESY	39-94	CQY65	◆ITT	24-50	DA2320	◆IEE	110-67	DL727	◆LIX	101-24	EO52A1	◆HEI	113-60
CQX23-1	◆LIX	28-63	CQY66	◆ITT	37-58	DC95A2	◆NEIJ	111-57	DL728	◆LIX	101-25	EO52A2	◆HEI	113-46
CQX23-2	◆LIX	28-64	CQY72L	◆ALGG	37-46	DC165A2	◆NEIJ	111-99	DL746	◆LIX	100-26	EO58B1	◆HEI	114-51
CQX23I	◆SIEG	29-29	CQY73	◆ALGG	37-64	DC169A2	◆NEIJ	111-101	DL747	◆LIX	96-75	EO58B2	◆HEI	113-100
CQX25	◆ALGG	24-31	CQY73N	◆ALGG	37-47	DC205A2	◆NEIJ	111-105	DL749	◆LIX	100-27	EOT521XXX	◆HEI	115-76
CQX25N	◆ALGG	24-32	CQY75	◆ALGG	33-93	DC209A2	◆NEIJ	111-108	DL750	◆LIX	96-72	EOT522XXX	◆HEI	115-77
CQX26	◆ALGG	37-43	CQY75N	◆ALGG	33-94	DC326A2	◆NEIJ	112-1	DL846	◆LIX	100-27	EP21G	◆EEP	95-72
CQX26N	◆ALGG	37-44	CQY77I	◆SIEG	39-101	DC405A2	◆NEIJ	112-4	DL847	◆LIX	96-93	EP21R	◆EEP	95-73
CQX27	◆ALGG	33-90	CQY77II	◆SIEG	40-25	DC406A2	◆NEIJ	112-5	DL849	◆LIX	100-28	EP21Y	◆EEP	95-74
CQX27N	◆ALGG	33-91	CQY77III	◆SIEG	40-70	DC409A2	◆NEIJ	112-6	DL850	◆LIX	96-94	EP62G	◆EEP	96-85
CQX28	◆ALGG	25-32	CQY78I	◆SIEG	39-102	DC809A2	◆NEIJ	112-8	DL1414	◆LIX	102-106	EP62R	◆EEP	96-86
CQX29	◆ALGG	37-52	CQY78II	◆SIEG	40-26	DC1015A2	◆NEIJ	112-11	DL1416	◆LIX	102-110	EP62Y	◆EEP	96-87
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TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line
FCDB30	♦FSC	89-40	FG619B1	♦NEIJ	111-24	FPT520	♦FSC	59-83	GL3AR1	♦SRPJ	23-49	H11A3	♦FSC	88-48
FCDB30C	♦FSC	89-41	FG713ES1	♦NEIJ	111-45	FPT520A	♦FSC	59-84	GL3AR2	♦SRPJ	23-50		♦GESY	
FCDB31	♦FSC	89-38	FG715RS1	♦NEIJ	111-46	FPT530	♦FSC	59-85	GL3AR3	♦SRPJ	23-44	H11A4	♦FSC	88-43
FCDB31C	♦FSC	89-39	FG912E1	♦NEIJ	111-44	FPT530A	♦FSC	59-86	GL3PG1	♦SRPJ	35-31		♦GESY	
FCDB36	♦FSC	89-36	FG913ES1	♦NEIJ	111-60	FPT540	♦FSC	59-78	GL3PG2	♦SRPJ	35-32	H11A5	♦GESY	88-44
FCDB36C	♦FSC	89-37	FG914RB	♦NEIJ	111-62	FPT540A	♦FSC	59-79	GL3PG3	♦SRPJ	35-33	H11A10	♦GESY	90-53
FCDB50	♦FSC	91-78	FG915R1	♦NEIJ	111-63	FPT550	♦FSC	59-80	GL3PR1	♦SRPJ	26-84	H11A520	♦GESY	90-45
FCDB50C	♦FSC	91-79	FG1013RS1	♦NEIJ	111-71	FPT550A	♦FSC	59-81	GL3PR2	♦SRPJ	26-85	H11A5100	♦GESY	90-48
FCDB55	♦FSC	91-80	FG1213A1	♦NEIJ	111-87	FPT560	♦FSC	60-104	GL3PR3	♦SRPJ	26-86	H11A5100	♦GESY	90-55
FCDB55C	♦FSC	91-81	FG1215RB6	♦NEIJ	111-88	FPT570	♦FSC	60-105	GL3PY1	♦SRPJ	32-18	H11AA1	♦GESY	90-54
FCDB60	♦FSC	91-77	FIO01R	♦DNPJ	107-51	FRA000	♦IAV	40-19	GL3PY2	♦SRPJ	32-19	H11AA2	♦FSC	91-21
FCDB60C	♦FSC	91-75	FIP307	♦MER	117-70	FR8000	♦IAV	41-55	GL3PY3	♦SRPJ	35-42	H11B1	♦FSC	91-24
FCDB60D	♦FSC	91-41	FIP325	♦MER	117-71	FR8150	♦FERB	80-31	GL4AR2	♦SRPJ	23-54		♦GESY	
FCDB65	♦FSC	91-76	FIP574	♦MER	117-72	FRD1-0	CENB	119-29	GL4NG2	♦SRPJ	35-43	H11B2	♦FSC	91-20
FCDB65C	♦FSC	91-77	FLV104A	♦FSC	27-26	FRD1-2	CENB	119-30	GL4PG2	♦SRPJ	35-44		♦GESY	
FCDB65D	♦FSC	91-47	FLV110Δ	♦FSC	25-26	FRD1-3	CENB	119-31	GL4PR2	♦SRPJ	26-87	H11B3	♦FSC	91-19
FCDB80	♦FSC	89-70	FLV111	♦FSC	28-74	FRD1-3HSA	CENB	119-32	GL4PY2	♦SRPJ	35-45	H11B255	♦FSC	91-71
FCDB85	♦FSC	89-68	FLV112	♦FSC	28-75	FRD1-4	CENB	119-33	GL4R04A	♦SRPJ	99-26	H11BX522	♦FSC	91-53
FCDB85C	♦FSC	89-68	FLV117Δ	♦FSC	28-76	FRD1-4HSA1	CENB	119-34	GL4R06A	♦SRPJ	99-40	H11C1	♦FSC	92-14
FCDB85D	♦FSC	89-70	FLV118Δ	♦FSC	28-77	FRD1-4HSA2	CENB	119-35	GL4R10A	♦SRPJ	99-42	H11C2	♦FSC	92-15
FE0101	♦AND	105-68	FLV119Δ	♦FSC	25-27	FRI1K1	♦CENB	119-36	GL5AR1	♦SRPJ	23-55	H11C3	♦FSC	92-17
FE0201	♦AND	104-107	FLV1140	♦FSC	25-28	FRI1K2	♦CENB	119-37	GL5AR2	♦SRPJ	23-56	H11C4	♦FSC	92-19
FE0202	♦AND	104-90	FLV12	♦FSC	24-55	FRI1KXSA1	♦CENB	119-38	GL5NG6	♦SRPJ	35-46	H11C5	♦FSC	92-20
FE0203	♦AND	104-106	FLV150	♦FSC	25-29	FRI1KXSA2	♦CENB	119-39	GL5PG1	♦SRPJ	35-34	H11C6	♦FSC	92-22
FE0301	♦AND	104-102	FLV152	♦FSC	36-97	FRI1L	♦CENB	119-40	GL5PG2	♦SRPJ	35-35	H11D1	♦FSC	90-14
FE0401	♦AND	104-98	FLV160	♦FSC	36-98	FRI1LHSA	♦CENB	119-41	GL5PG5	♦SRPJ	35-47		♦FSC	
FE0402	♦AND	105-72	FLV310	♦FSC	36-99	FRL4403	♦LIX	118-104	GL5PR1	♦SRPJ	26-88	H11D2	♦FSC	90-15
FE0403	♦AND	105-73	FLV311	♦FSC	36-100	FTIR1	♦CENB	119-48	GL5PR2	♦SRPJ	26-89		♦FSC	
FE0501	♦AND	104-84	FLV350	♦FSC	36-101	FTIR2	♦CENB	119-49	GL5PR5	♦SRPJ	26-90	H11D3	♦FSC	90-16
FE0502	♦AND	104-99	FLV360	♦FSC	33-51	FTVR1	♦CENB	119-50	GL5PR6	♦SRPJ	26-91		♦FSC	
FE0601	♦AND	104-85	FLV410	♦FSC	32-100	FTVR2	♦CENB	119-51	GL5PY1	♦SRPJ	32-20	H11D4	♦FSC	90-13
FE0701	♦AND	104-85	FLV410	♦FSC	33-52	FW002R	♦DNPJ	105-71	GL5PY2	♦SRPJ	32-21		♦FSC	
FF102	♦TCY	59-68	FLV411	♦FSC	33-53	FW003R	♦DNPJ	106-41	GL5PY5	♦SRPJ	35-48	H11F1	♦FSC	63-14
FF108	♦TCY	59-69	FLV440	♦FSC	33-54	FW005R	♦DNPJ	106-42	GL5R04A	♦SRPJ	99-27	H11F2	♦FSC	63-15
FF409	♦TCY	59-37	FLV450	♦FSC	29-31	FW006R	♦DNPJ	106-43	GL5R06A	♦SRPJ	99-41	H11F3	♦FSC	63-13
FF411	♦TCY	59-38	FLV460	♦FSC	28-37	FW014R	♦DNPJ	106-45	GL5R10A	♦SRPJ	99-43	H11G1	♦FSC	91-25
FF412	♦TCY	59-39	FLV510	♦FSC	29-32	FW3005R	♦DNPJ	106-39	GL6P201	♦SRPJ	100-98	H11G2	♦FSC	91-26
FF413	♦TCY	59-40	FLV511	♦FSC	29-33	FW3006R	♦DNPJ	106-40	GL6P202	♦SRPJ	100-80	H11G3	♦FSC	91-27
FF600	♦TCY	59-32	FLV540	♦FSC	28-38	FW3014R	♦DNPJ	106-44	GL6R201	♦SRPJ	100-99	H13A1	♦FSC	91-28
FF617	♦TCY	59-33	FLV550	♦FSC	29-34	FWC9801	♦SIEG	70-99	GL6R202	♦SRPJ	100-82	H13A2	♦FSC	113-72
FF626	♦TCY	59-70	FLV551	♦FSC	117-17	FWC9802	♦SIEG	70-100	GL7P201	♦SRPJ	100-92	H13B1	♦FSC	113-47
FF627	♦TCY	59-71	FLV560	♦FSC	54-13	FX41	♦MER	119-6	GL7P202	♦SRPJ	100-81	H13B2	♦FSC	113-52
FFD11	♦IEE	110-68	FNA12	♦FSC	97-86	FX45	♦MER	119-7	GL7R201	♦SRPJ	100-93	H15A1	♦FSC	113-101
FFD12	♦IEE	110-69	FND100	♦EGG	97-87	FX47	♦MER	119-8	GL7R202	♦SRPJ	100-83	H15A2	♦FSC	88-49
FFD21	♦IEE	110-74	FND350	♦FSC	99-25	GAC100	♦PLOB	40-31	GL8G03	♦SRPJ	95-56	H15B1	♦FSC	88-45
FFD22	♦IEE	110-75	FND357	♦FSC	97-88	GAL10	♦PLOB	41-43	GL8G04	♦SRPJ	95-62	H15B2	♦FSC	91-24
FFD41	♦IEE	110-70	FND358	♦FSC	97-89	GAL11	♦PLOB	41-44	GL8P03	♦SRPJ	95-54	H17A1	♦FSC	91-23
FFD51	♦IEE	110-76	FND360	♦FSC	99-24	GAL32A	♦PLOB	39-41	GL8P04	♦SRPJ	95-60	H17B1	♦FSC	113-24
FG46A5	♦NEIJ	111-14	FND367	♦FSC	98-33	GAL32B	♦PLOB	40-27	GL8P06	♦SRPJ	98-109	H20A1	♦FSC	113-29
FG48C2	♦NEIJ	111-15	FND368	♦FSC	99-29	GAL32C	♦PLOB	40-100	GL8R03	♦SRPJ	95-58	H20A2	♦FSC	113-48
FG48D6	♦NEIJ	111-21	FND500	♦FSC	98-34	GB100-1	♦INR	73-38	GL8R04	♦SRPJ	97-98	H20B1	♦FSC	114-53
FG48E1	♦NEIJ	111-16	FND501	♦FSC	99-30	GB100-2	♦INR	73-39	GL8R06	♦SRPJ	98-96	H20B2	♦FSC	113-102
FG48K6	♦NEIJ	111-17	FND507	♦FSC	98-35	GB100-3	♦INR	73-107	GL8R10	♦SRPJ	99-11	H21A1	♦FSC	113-103
FG48P2	♦NEIJ	111-18	FND508	♦FSC	99-31	GB100-4	♦INR	74-52	GL9G03	♦SRPJ	95-57	H21A2	♦FSC	114-33
FG48SA1	♦NEIJ	111-3	FND530	♦FSC	98-36	GB100-5	♦INR	73-4	GL9G04	♦SRPJ	95-63	H21A3	♦FSC	114-65
FG85A1	♦NEIJ	111-47	FND531	♦FSC	99-32	GB100-8	♦INR	73-42	GL9P03	♦SRPJ	95-55	H21A4	♦FSC	113-104
FG85C1	♦NEIJ	111-48	FND537	♦FSC	98-37	GB100-18	♦INR	72-86	GL9P04	♦SRPJ	95-61	H21A5	♦FSC	114-34
FG85D2	♦NEIJ	111-49	FND538	♦FSC	99-33	GeAu-1-40A	♦SBR	47-6	GL9P06	♦SRPJ	98-110	H21A6	♦FSC	114-66
FG95B1	♦NEIJ	111-55	FND540	♦FSC	98-38	GeAu-1-60A	♦SBR	47-7	GL9PG2	♦SRPJ	35-49	H21B1	♦FSC	114-26
FG95H6	♦NEIJ	111-56	FND541	♦FSC	99-34	GeAu-1-40742HS	♦SBR	46-95	GL9PG3	♦SRPJ	35-50	H21B2	♦FSC	114-107
FG97D6	♦NEIJ	111-59	FND547	♦FSC	98-39	GeAu-1-44782HS	♦SBR	46-96	GL9PG4	♦SRPJ	35-51	H21B3	♦FSC	115-6
FG99A2	♦NEIJ	111-51	FND548	♦FSC	99-35	GeAu-2-40A	♦SBR	47-8	GL9PR2	♦SRPJ	26-92	H21B4	♦FSC	114-27
FG99C1	♦NEIJ	111-52	FND550	♦FSC	98-40	GeAu-2-60A	♦SBR	47-9	GL9PR3	♦SRPJ	26-93	H21B5	♦FSC	114-108
FG99E1	♦NEIJ	111-53	FND551	♦FSC	99-36	GeAu-2-60A	♦SBR	47-8	GL9PR4	♦SRPJ	26-94	H21B6	♦FSC	115-7
FG100SA1	♦NEIJ	111-4	FND552	♦FSC	98-41	GeAu-2-40742HS	♦SBR	46-97	GL9R03	♦SRPJ	95-59	H22A1	♦FSC	113-105
FG100SB1	♦NEIJ	111-5	FND558	♦FSC	98-42	GeAu-2-40742HS	♦SBR	46-98	GL9R04	♦SRPJ	97-99	H22A2	♦FSC	114-35
FG108M1	♦NEIJ	111-68	FND560	♦FSC	99-38	GeAu-2-44782HS	♦SBR	46-98	GL9R06	♦SRPJ	98-97	H22A3	♦FSC	114-67
FG115E7	♦NEIJ	111-64	FND561	♦FSC	99-39	GeAu-5-40A	♦SBR	47-10	GL9R10	♦SRPJ	99-12	H22A4	♦FSC	113-106
FG116A6	♦NEIJ	111-65	FND567	♦FSC	99-2	GeAu-5-60A	♦SBR	47-11	GL30PG8	♦SRPJ	35-36	H22A5	♦FSC	114-36
FG116C6	♦NEIJ	111-73	FND568	♦FSC	99-3	GeAu-5-60A	♦SBR	47-11	GL30PRR	♦SRPJ	26-95	H22A6	♦FSC	114-68
FG117C7	♦NEIJ	111-66	FND800	♦FSC	101-30	GeAu-5-40742HS	♦SBR	46-99	GL30PR	♦SRPJ	26-96	H22B1	♦FSC	114-28
FG118A1	♦NEIJ	111-69	FND807	♦FSC	119-28	GeAu-5-44782HS	♦SBR	46-100	GL31AR8	♦SRPJ	23-79	H22B2	♦FSC	114-109
FG119A1	♦NEIJ	111-70	FND8710	♦FSC	115-43	GeCd-1-9145-1	♦SBR	48-23	GL52AR	♦SRPJ	23-57	H22B3	♦FSC	115-8
FG120S1	♦NEIJ	111-6	FND6740	♦FSC	115-67	GeCd-2-9145-1	♦SBR	48-24	GL52PG	♦SRPJ	35-37	H22B4	♦FSC	114-29
FG124B2	♦NEIJ	111-74	FOD100	♦EGG	115-65	GeCd-5-9145-1	♦SBR	48-25	GL52RG#1	♦SRPJ	26-97			

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HCPL-2731	HPA	93-14	HP5082-4468	HPA	29-93	HP5082-7650	HPA	96-60	IP4L128	PI	117-94	L39UR-G24-2112		37-89
HCPL-2770	HPA	93-29	HP5082-4480	HPA	24-60	HP5082-7651	HPA	98-22	IP4L256	PI	117-95		LEE	
HDSP-2000	HPA	103-1	HP5082-4483	HPA	24-61	HP5082-7653	HPA	98-23	IP7L050	PI	117-96	L39UR-G24-2312		37-90
HDSP-3400	HPA	96-91	HP5082-4484	HPA	24-62	HP5082-7656	HPA	99-61	IP7L064	PI	117-97		LEE	
HDSP-3401	HPA	99-4	HP5082-4486	HPA	24-63	HP5082-7660	HPA	96-61	IP7L100	PI	117-98	L39UR-R2-2111		27-16
HDSP-3403	HPA	99-5	HP5082-4487	HPA	24-64	HP5082-7661	HPA	98-24	IP7L256	PI	117-99		LEE	
HDSP-3405	HPA	96-92	HP5082-4488	HPA	24-65	HP5082-7663	HPA	98-25	IP7L128	PI	117-100	L39UR-R2-2311		27-17
HDSP-3406	HPA	95-28	HP5082-4494	HPA	24-66	HP5082-7666	HPA	99-62	IRE10	LAD	41-11		LEE	
HDSP-3530	HPA	96-14	HP5082-4520	HPA	33-55	HP5082-7670	HPA	96-62	IRE20	LAD	41-32	L39UR-R6-2111		29-85
HDSP-3531	HPA	97-30	HP5082-4550	HPA	32-75	HP5082-7671	HPA	98-26	IRE-11	LAD	40-86		LEE	
HDSP-3533	HPA	97-31	HP5082-4555	HPA	32-76	HP5082-7673	HPA	98-27	IRE-21	LAD	40-107	L39UR-R6-2311		29-86
HDSP-3536	HPA	95-24	HP5082-4557	HPA	32-77	HP5082-7676	HPA	99-63	IRE-150	LAD	39-51		LEE	
HDSP-3730	HPA	96-50	HP5082-4558	HPA	32-78	HP5082-7730	HPA	96-17	IRE-151	LAD	39-25	L39UR-R12-2111		29-103
HDSP-3731	HPA	97-110	HP5082-4570	HPA	33-82	HP5082-7736	HPA	99-47	IRE-152#1	LAD	39-9		LEE	
HDSP-3733	HPA	98-1	HP5082-4584	HPA	32-79	HP5082-7740	HPA	97-36	IRE-152#2	LAD	39-10	L39UR-R12-2311		29-104
HDSP-3736	HPA	95-26	HP5082-4587	HPA	94-40	HP5082-7750	HPA	96-54	IRE-160	LAD	40-87		LEE	
HDSP-4030	HPA	96-15	HP5082-4590	HPA	32-80	HP5082-7756	HPA	99-59	IRE-160FA	LAD	38-90	L39UR-R24-2111		30-6
HDSP-4031	HPA	97-32	HP5082-4592	HPA	32-81	HP5082-7760	HPA	98-8	IRE-160FB	LAD	38-60		LEE	
HDSP-4033	HPA	97-33	HP5082-4595	HPA	32-82	HP2	OCLI	82-61	IRL60	LIX	39-16	L39UR-R24-2311		30-7
HDSP-4036	HPA	95-25	HP5082-4597	HPA	32-83	HP3	OCLI	82-62	IS005	SRPJ	63-9		LEE	
HDSP-4130	HPA	96-51	HP5082-4620	HPA	29-15	HP4	OCLI	82-63	IS006	SRPJ	62-64	L39UR-Y2-2116		31-97
HDSP-4131	HPA	98-2	HP5082-4650	HPA	28-48	HP5	OCLI	82-64	IS007	SRPJ	62-65		LEE	
HDSP-4133	HPA	98-3	HP5082-4655	HPA	28-49	HP6	OCLI	82-65	IS008	SRPJ	63-10	L39UR-Y2-2316		31-98
HDSP-4136	HPA	95-27	HP5082-4657	HPA	28-50	HP7	OCLI	82-66	IS106	SRPJ	62-76		LEE	
HDSP-6504	HPA	102-108	HP5082-4658	HPA	28-51	HP8	OCLI	82-67	IS206	SRPJ	62-77	L39UR-Y6-2116		34-8
HDSP-6508	HPA	103-36	HP5082-4670	HPA	29-43	HP9	OCLI	82-68	ISC302A	FACC	49-13		LEE	
HE500	HEI	39-36	HP5082-4684	HPA	28-52	HP10	OCLI	82-69	ISC302B	FACC	49-49	L39UR-Y6-2316		34-9
HEMT-3300	HPA	27-14	HP5082-4687	HPA	94-41	HR700	PLOB	39-15	ISC302C	FACC	50-11		LEE	
HEMT-6000	HPA	23-38	HP5082-4690	HPA	28-53	HR800	PLOB	39-69	ISC302D	FACC	50-89	L39UR-Y12-2116		34-18
HEP312-RT	MOTA	57-82	HP5082-4693	HPA	28-54	HR801	PLOB	40-52	ISC302E	FACC	51-3		LEE	
HEPPO001-RT	MOTA	59-72	HP5082-4694	HPA	28-55	HR932	PLOB	38-9	ISC302F	FACC	51-58	L39UR-Y12-2316		34-19
HEPPO002-RT	MOTA	56-88	HP5082-4695	HPA	28-56	HR952	PLOB	38-9	ISC363	FACC	49-14		LEE	
HEPP1001-RT	MOTA	60-65	HP5082-4732	HPA	94-7	HR952F	PLOB	38-74	ISC363A	FACC	49-50	L39UR-Y24-2116		34-26
HFBR-0010	HPA	119-103	HP5082-4787	HPA	94-17	HR953	PLOB	38-10	ISC363B	FACC	50-12		LEE	
HFBR-1001	HPA	119-52	HP5082-4790	HPA	24-67	HR953F	PLOB	38-94	ISC363C	FACC	50-90	L39UR-Y24-2316		34-27
HFBR-2001	HPA	119-42	HP5082-4791	HPA	24-68	HR954	PLOB	38-11	ISC363D	FACC	51-4		LEE	
HFBR-3001	HPA	119-68	HP5082-4850	HPA	24-69	HR954F	PLOB	39-26	ISC363E	FACC	51-59	L45RN-G2-2112		34-80
HFBR-3002	HPA	119-69	HP5082-4855	HPA	24-70	HR982	PLOB	38-12	ISC386	FACC	50-91		LEE	
HFBR-3003	HPA	119-70	HP5082-4860	HPA	29-94	HR982F-1	PLOB	38-75	ISC386A	FACC	51-5	L45RN-G2-2312		34-81
HFBR-3004	HPA	119-71	HP5082-4880	HPA	24-71	HR982F-2	PLOB	38-41	K5560-1	CRS	105-89		LEE	
HFBR-3005	HPA	119-72	HP5082-4881	HPA	24-72	HSSP2-40	OCLI	36-8	K5560-5	CRS	105-90	L45RN-G6-2112		37-75
HgCdTe-1.40A	SBR	48-26	HP5082-4882	HPA	24-73	HT700	HEI	56-83	KL101A	USSR	34-5	L45RN-G6-2312		37-76
HgCdTe-1.40AS	SBR	48-27	HP5082-4883	HPA	24-74	HT800	HEI	56-94	KL101B	USSR	34-7		LEE	
HgCdTe-1.40742	SBR	48-28	HP5082-4884	HPA	24-75	HUV1000B	EGG	62-36	KL101V	USSR	34-6	L45RN-G12-2112		37-83
HgCdTe-1.44782	SBR	48-29	HP5082-4885	HPA	24-76	HUV2000B	EGG	62-37	KL105A	USSR	95-50		LEE	
HgCdTe-1.520AS	SBR	48-30	HP5082-4887	HPA	24-77	HUV4000B	EGG	62-38	KL105B	USSR	95-51	L45RN-G12-2312		37-84
HgCdTe-1.60A	SBR	48-31	HP5082-4888	HPA	24-78	IL1	LIX	88-107	KL105V	USSR	95-52		LEE	
HgCdTe-1.60AS	SBR	48-32	HP5082-4920	HPA	36-107	IL12	LIX	88-16	KO20-01	OPE	50-92	L45RN-G24-2112		37-91
HgCdTe-5.40A	SBR	48-33	HP5082-4950	HPA	36-108	IL15	LIX	88-108	KO20-02	OPE	50-93		LEE	
HgCdTe-5.40AS	SBR	48-34	HP5082-4955	HPA	36-109	IL16	LIX	88-100	KO20-03	OPE	50-94	L45RN-G24-2312		37-92
HgCdTe-5.40742	SBR	48-35	HP5082-4957	HPA	36-110	IL74	LIX	88-56	KO25-51	OPE	50-95		LEE	
HgCdTe-5.44782	SBR	48-36	HP5082-4958	HPA	37-1	IL100	LIX	93-5	KO25-52	OPE	50-96	L45RN-R2-2111		27-18
HgCdTe-5.520AS	SBR	48-37	HP5082-4984	HPA	37-2	ILA30	LIX	91-72	KO25-53	OPE	50-97		LEE	
HgCdTe-5.60A	SBR	48-38	HP5082-4987	HPA	94-42	ILA55	LIX	91-73	KP20-181	OPE	51-1	L45RN-R2-2311		27-19
HgCdTe-5.60AS	SBR	48-39	HP5082-4990	HPA	37-3	LCA2-30	LIX	91-82	KP20-01	OPE	48-72		LEE	
HLMF-0300	HPA	29-41	HP5082-4992	HPA	37-4	LCA2-55	LIX	91-83	KP20-03	OPE	48-74	L45RN-R6-2111		29-87
HLMF-0301	HPA	29-42	HP5082-4995	HPA	37-5	LCA-30	LIX	91-3	KQ20-01	OPE	50-13		LEE	
HLMF-0400	HPA	33-80	HP5082-4997	HPA	37-6	LCT6	LIX	90-4	KQ20-02	OPE	50-14	L45RN-R6-2311		29-88
HLMF-0401	HPA	33-81	HP5082-4998	HPA	100-75	IL74	LIX	90-41	KQ20-03	OPE	50-15		LEE	
HLMF-0500	HPA	37-31	HP5082-7010	HPA	100-76	ILQ74	LIX	90-37	L8A	GESY	61-18	L45RN-R12-2111		29-105
HLMF-0501	HPA	37-32	HP5082-7011	HPA	100-77	InAs-1.40742	SBR	92-49	L8B	GESY	61-22		LEE	
HLMF-1300	HPA	28-44	HP5082-7100	HPA	103-2	InAs-1.44782	SBR	52-53	L8F	GESY	61-16	L45RN-R12-2311		29-106
HLMF-1301	HPA	28-45	HP5082-7102	HPA	103-3	InAs-2.40742	SBR	52-54	L8G	GESY	61-20		LEE	
HLMF-1302	HPA	28-46	HP5082-7103	HPA	103-4	InAs-2.40742	SBR	52-55	L8U	GESY	61-14	L45RN-R24-2111		30-8
HLMF-1400	HPA	32-71	HP5082-7241	HPA	103-5	InAs-5.40742	SBR	52-56	L9A	GESY	61-19		LEE	
HLMF-1401	HPA	32-72	HP5082-7245	HPA	103-6	InAs-5.40742	SBR	52-57	L9B	GESY	61-23	L45RN-R24-2311		30-9
HLMF-1402	HPA	32-73	HP5082-7275	HPA	103-7	InAs-5.40742	SBR	52-58	L9F	GESY	61-17		LEE	
HLMF-1500	HPA	36-104	HP5082-7276	HPA	103-8	InAs-5.40742	SBR	52-59	L9G	GESY	61-21	L45RN-Y2-2116		31-99
HLMF-1501	HPA	36-105	HP5082-7285	HPA	103-9	InAs-5.40742	SBR	52-60	L9U	GESY	61-15		LEE	
HLMF-1502	HPA	36-106	HP5082-7295	HPA	103-10	InAs-5.40742	SBR	52-61	L12-12	REC	109-73	L45RN-Y2-2316		31-100
HLMF-6203	HPA	43-19	HP5082-7302	HPA	100-47	InSb-1.40A	SBR	49-67	L14F1	GESY	60-102		LEE	
HLMF-6204	HPA	43-20	HP5082-7303	HPA	100-48	InSb-1.40AS	SBR	49-68	L14F2	GESY	60-103	L45RN-Y6-2116		34-10
HLMF-6205	HPA	43-40	HP5082-7304	HPA	100-50	InSb-1.60A	SBR	49-69	L14G1	GESY	59-93		LEE	
HLMF-6600	HPA	29-84	HP5082-7340	HPA	100-39	InSb-1.80AS	SBR	49-70	L14G2	GESY	59-94	L45RN-Y6-2316		34-11
HLMF-6620	HPA	29-83	HP5082-7357	HPA	100-53	InSb-1.520A	SBR	49-71	L14H1	GESY	59-95		LEE	
HLSN221	OCLI	117-1	HP5082-7358	HPA	100-48	InSb-1.520AS	SBR	49-72	L14H3	GESY	59-95	L45RN-Y12-2116		34-20
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L46RN-R24-2311	LEE	30-11	LA163	LAD	42-15	LD30II	SIEG	25-104	LD265	LIX	43-37	LED56F	GESY	39-96
L46RN-Y2-2116	LEE	31-101	LA167	LAD	42-34	LD32-1	LIX	28-65	LD266	SIEG	43-47	LGC600A	PLOB	48-40
L46RN-Y2-2316	LEE	31-102	LA200	HEI	57-84	LD32-2	LIX	28-68	LD267	SIEG	43-56	LGC600B	PLOB	47-50
L46RN-Y6-2116	LEE	34-12	LA202SN	HEI	64-34	LD32C	SIEG	27-57	LD268	LIX	43-65	LGC600C	PLOB	47-15
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LRT1739Y	IEE	100-2	LT236CG	TWLT	35-68	LT1806	TWLT	98-101	MAN4610	MTO	97-102	MD100-1	CENB	64-28
LRT1740R	IEE	99-84	LT237GW	TWLT	35-69	LT1807	TWLT	98-102	MAN4630	MTO	100-6	MD100-2	CENB	64-29
LRT1743R	IEE	99-85	LT238CG	TWLT	35-70	LT2201R	TWLT	23-101	MAN4640	MTO	97-103	MD100-3	CENB	64-30
LRT1784R	IEE	101-52	LT251Y	TWLT	32-26	LT2203R	TWLT	23-102	MAN4705	MTO	100-8	MD100-4	CENB	64-31
LRT1785R	IEE	101-53	LT252YT	TWLT	32-27	LT2211R	TWLT	27-82	MAN4710	MTO	97-104	MD630	REC	110-38
LRT1794R	IEE	100-88	LT253Y	TWLT	32-28	LT2213R	TWLT	27-83	MAN4740	MTO	97-105	MD640	REC	110-39
LRT1795R	IEE	100-89	LT254YT	TWLT	32-29	LT2231G	TWLT	35-39	MAN4805	MTO	100-9	MD650	REC	110-40
LRT1826E	IEE	98-51	LT255YW	TWLT	32-30	LT2233G	TWLT	35-40	MAN4810	MTO	97-106	MDA431	MER	62-39
LRT1826G	IEE	98-52	LT256YC	TWLT	32-31	LT2251Y	TWLT	32-16	MAN4840	MTO	97-107	MDA431SMA	MER	62-39
LRT1826HR	IEE	98-53	LT257YW	TWLT	32-32	LT2253Y	TWLT	32-17	MAN6610	MTO	101-36	MDA435	MER	62-40
LRT1826R	IEE	98-54	LT258YC	TWLT	32-33	LT2291E	TWLT	30-55	MAN6630	MTO	99-76	MDA435BNC	MER	62-41
LRT1826Y	IEE	98-55	LT271A	TWLT	30-63	LT2293E	TWLT	30-56	MAN6640	MTO	101-37	MDA435SMA	MER	62-42
LRT1827G	IEE	98-56	LT272AT	TWLT	30-64	LT3201R	TWLT	24-90	MAN6650	MTO	98-77	MDA438	MER	62-45
LRT1827R	IEE	98-57	LT273A	TWLT	30-65	LT3203R	TWLT	24-91	MAN6660	MTO	98-78	MDA438SMA	MER	62-41
LRT1827HR	IEE	98-58	LT274AT	TWLT	30-66	LT3211R	TWLT	27-109	MAN6680	MTO	98-79	MDA7705	MER	62-12
LRT1827R	IEE	98-50	LT3219E	TWLT	30-67	LT3213R	TWLT	27-110	MAN6710	MTO	98-73	MDA7705SMA	MER	62-16
LRT1827Y	IEE	98-58	LT3292ET	TWLT	30-68	LT3231G	TWLT	35-71	MAN6730	MTO	101-38	MDA7708SMA	MER	62-13
LRT1828E	IEE	99-65	LT3293E	TWLT	30-69	LT3233G	TWLT	35-72	MAN6740	MTO	98-78	MDA7708	MER	62-14
LRT1828G	IEE	99-66	LT3294ET	TWLT	30-70	LT3251Y	TWLT	32-34	MAN6750	MTO	101-39	MDA7708SMA	MER	62-15
LRT1828HR	IEE	99-67	LT3295EW	TWLT	30-71	LT3253Y	TWLT	32-35	MAN6760	MTO	99-17	MDA7709SMA	MER	62-16
LRT1828R	IEE	99-73	LT3296EC	TWLT	30-72	LT3291E	TWLT	30-75	MAN6780	MTO	98-74	MDA7710	MER	62-17
LRT1828Y	IEE	99-68	LT3297EW	TWLT										

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IN TYPE NUMBER SEQUENCE

TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line
MFOE100	♦MOTA	38-96	MILSB5358	MEHK	33-13	MPB2-4H59%	♦MELJ	67-24	MS4A	♦FERR	75-29	MV5094	♦MTO	26-30
MFOE200	♦MOTA	39-73	MILSB5359	MEHK	33-14	MPB2-5H49	♦SOL	68-31	MS4B	♦FERR	75-30	MV5152	♦FSC	31-12
MFPT100	♦MEHK	58-55	MILSB5451	MEHK	31-9	MPB2-5H49	♦MELJ	68-32	MS5A	♦FERR	75-34		♦MTO	
MFPT100A	♦MEHK	58-56	MILSB5452	MEHK	31-9	MPB2-5H59	♦SOL	68-33	MS5B	♦FERR	75-35	MV5153	♦FSC	31-13
MFPT100B	♦MEHK	58-57	MILSB5458	MEHK	31-10	MPB2-5H59%	♦MELJ	68-34	MS6A	♦FERR	75-36		♦MTO	
MG7712	♦MER	119-13	MILSB5459	MEHK	31-11	MPB2-7C39	♦SOL	69-18	MS6B	♦FERR	75-37	MV5154	♦FSC	31-14
MH-163	♦LAD	42-19	MIR30	♦MEHK	38-107	MPB2-7C39%	♦MELJ	69-19	MS7A	♦FERR	75-42		♦MTO	
MH-166	♦LAD	42-28	MIR50	♦MEHK	38-108	MPB2-7C49	♦SOL	69-20	MS7B	♦FERR	75-43	MV5174B	♦MTO	31-15
MH-167	♦LAD	42-35	MIRB50	♦MEHK	38-109	MPB2-7C49%	♦MELJ	69-21	MS9A	♦FERR	80-49	MV5174C	♦MTO	31-16
MHZ016	♦EGG	62-53	MIR550	MEHK	38-110	MPB2-7H39	♦SOL	69-108	MS9AE	♦FERR	80-50	MV5177B	♦MTO	31-17
MHZ018	♦EGG	62-54	MIR5B50	MEHK	39-1	MPB2-7H39%	♦MELJ	69-109	MS9B	♦FERR	80-51	MV5177C	♦MTO	31-18
MHZ018Y	♦EGG	62-55	MKB1-7H26P	♦SOL	66-3	MPB2-7H49	♦SOL	69-110	MS9BE	♦FERR	80-52	MV5252	♦FSC	36-39
MID46-A2	♦MEHK	102-68	MKB1-7H28P	♦SOL	67-26	MPB2-7H49%	♦MELJ	70-1	MS10A	♦FERR	75-16		♦MTO	
MID46-A4	♦MEHK	102-69	MKB1-7H28P%	♦MELJ	67-27	MPB2-12H49	♦SOL	70-101	MS11A	♦FERR	79-98	MV5253	♦FSC	36-40
MID46-K2	♦MEHK	102-70	MKB2-12H49	♦SOL	70-2	MPB2-12H49%	♦MELJ	70-102	MS11AE	♦FERR	79-103		♦MTO	
MID46-K4	♦MEHK	102-71	MKB4H38	♦SOL	66-101	MPC1001	♦SOL	117-24	MS11B	♦FERR	79-104	MV5254	♦FSC	36-41
MIDS46-A2	MEHK	102-72	MKB4H38%	♦MELJ	66-102	MPC1001%	♦MELJ	117-25	MS11BE	♦FERR	80-2		♦MTO	
MIDS46-A4	MEHK	102-73	MKB5H38	♦SOL	67-55	MPC1051	♦SOL	117-26	MS12	♦FERR	80-24	MV5274B	♦MTO	36-42
MIDS46-K2	MEHK	102-74	MKB5H38%	♦MELJ	67-56	MPC1051%	♦MELJ	117-27	MS15	♦FERR	72-1	MV5274C	♦MTO	36-43
MIDS46-K4	MEHK	102-75	MKB5H69	♦SOL	67-57	MPC1052	♦SOL	117-28	MS59B	♦FERR	73-58	MV5277B	♦MTO	36-44
MIL31	♦MEHK	24-100	MKB5H69%	♦MELJ	69-28	MPC1053	♦SOL	117-29	MS59BE	♦FERR	73-59	MV5277C	♦MTO	36-45
MIL32	♦MEHK	24-101	MKB7H38	♦SOL	69-29	MPC1054	♦SOL	117-30	MS59PCD	♦FERR	73-60	MV5352	♦FSC	33-15
MIL38	MEHK	24-102	MKB7H38%	♦MELJ	69-30	MPC1055	♦MELJ	117-31	MS59PCDE	♦FERR	73-61		♦MTO	
MIL39	♦MEHK	24-103	MKB7H69	♦SOL	69-31	MPDA	♦IPI	119-14	MS600	♦FERR	45-21	MV5353	♦FSC	33-16
MIL51	♦MEHK	25-43	MKB7H69%	♦MELJ	69-32	MPS1A	♦FERR	80-61	MS601	♦FERR	45-22		♦MTO	
MIL52	♦MEHK	25-44	MKY1-4H37	♦SOL	66-42	MPS1AE	♦FERR	80-62	MS602	♦FERR	45-19	MV5354	♦FSC	33-17
MIL58	MEHK	25-45	MKY1-4H37%	♦MELJ	66-43	MPS1B	♦FERR	80-63	MS600	♦FERR	72-62		♦MTO	
MIL59	♦MEHK	25-46	MKY1-4H48	♦SOL	66-44	MPS1BE	♦FERR	80-64	MS601	♦FERR	72-61	MV5374B	♦MTO	33-18
MIL317	♦MEHK	24-104	MKY1-4H48%	♦MELJ	66-45	MPY4H69	♦SOL	67-17	MS610	♦FERR	72-83	MV5374C	♦MTO	33-19
MIL327	♦MEHK	24-105	MKY1-5C38E	♦SOL	66-4	MPY4H69%	♦MELJ	67-18	MS611	♦FERR	72-25	MV5377B	♦MTO	33-20
MIL387	MEHK	24-106	MKY1-5C38E%	♦MELJ	66-5	MPY4H79	♦SOL	67-19	MS612	♦FERR	72-26	MV5377C	♦MTO	33-21
MIL397	♦MEHK	24-107	MKY1-5H26	♦SOL	66-34	MPY4H79%	♦MELJ	67-20	MSD161	♦MEHK	98-87	MV5491#1	♦MTO	25-95
MIL517	♦MEHK	25-47	MKY1-5H26%	♦MELJ	66-78	MPY5C69	♦SOL	67-96	MSD162	♦MEHK	100-34	MV5491#2	♦MTO	37-34
MIL527	♦MEHK	25-48	MKY1-5H37	♦SOL	66-44	MPY5C69%	♦MELJ	67-97	MSD165	♦MEHK	98-88	MV5752	♦FSC	28-86
MIL587	MEHK	25-49	MKY1-5H37%	♦MELJ	66-45	MPY5C79	♦SOL	67-98	MSD261	MEHK	101-44		♦MTO	
MIL597	♦MEHK	25-50	MKY1-5H38	♦SOL	66-46	MPY5C79%	♦MELJ	67-99	MSL5	LAD	26-27	MV5753	♦FSC	28-87
MIL3231	MEHK	36-3	MKY1-5H38%	♦MELJ	66-80	MPY5C89	♦SOL	67-100		♦OPC			♦MTO	
MIL3232	♦MEHK	36-4	MKY1-5H48	♦SOL	66-46	MPY5H69	♦SOL	68-23	MSL7	♦OPC	28-59	MV5754	♦FSC	28-88
MIL3238	MEHK	36-5	MKY1-5H48%	♦MELJ	66-81	MPY5H69%	♦MELJ	68-24	MSL15	LAD	34-74		♦MTO	
MIL3239	MEHK	36-6	MKY1-5H49	♦SOL	66-47	MPY5H79	♦SOL	68-25		♦OPC			♦MTO	
MIL3331	♦MEHK	32-91	MKY1-5H49%	♦MELJ	66-82	MPY5H79%	♦MELJ	68-26	MSL17	♦OPC	37-60	MV5774B	♦MTO	28-90
MIL3332	♦MEHK	32-92	MKY1-7C38E	♦SOL	67-31	MPY5H89	♦SOL	68-27	MSL25	LAD	31-96	MV5777B	♦MTO	28-91
MIL3338	♦MEHK	32-93	MKY1-7C38E%	♦MELJ	67-32	MPY7C59	♦SOL	69-12		♦OPC			♦MTO	
MIL3339	♦MEHK	32-94	MKY1-7H26	♦SOL	67-68	MPY7C59%	♦MELJ	69-13	MSL27	♦OPC	33-108	MV50152	♦MTO	23-84
MIL3431	MEHK	30-92	MKY1-7H26%	♦MELJ	67-80	MPY7C59E	♦SOL	69-14	MSP01A05	♦MOTA	82-49	MV50154	♦MTO	23-85
MIL3432	MEHK	30-93	MKY1-7H37	♦SOL	67-69	MPY7C59E%	♦MELJ	69-15	MSP01A10	♦MOTA	82-53	MV52124	♦MTO	36-46
MIL3438	MEHK	30-94	MKY1-7H38	♦SOL	67-70	MPY7C69	♦SOL	69-16	MSP01A30	♦MOTA	82-57	MV52152	♦MTO	35-99
MIL3439	MEHK	30-95	MKY1-7H38%	♦MELJ	67-81	MPY7C69%	♦MELJ	69-16	MSP01B05	♦MOTA	82-50	MV52154	♦MTO	35-100
MIL5251	♦MEHK	38-23	MKY1-7H39	♦SOL	67-71	MPY7C69%	♦SOL	69-17	MSP01B10	♦MOTA	82-54	MV53124	♦MTO	33-22
MIL5252	♦MEHK	38-24	MKY1-7H39%	♦MELJ	67-82	MPY7H59	♦SOL	69-66	MSP01B30	♦MOTA	82-58	MV53152	♦MTO	32-53
MIL5258	MEHK	38-25	MKY1-7H48	♦SOL	67-72	MPY7H59%	♦MELJ	69-67	MSP01D05	♦MOTA	82-51	MV53154	♦MTO	32-54
MIL5259	MEHK	38-26	MKY1-7H49	♦SOL	67-73	MPY7H69	♦MELJ	69-68	MSP01D10	♦MOTA	82-55	MV57124	♦MTO	28-93
MIL5351	♦MEHK	32-109	MKY1-7H49%	♦MELJ	67-83	MPY7H69%	♦MELJ	69-69	MSP01D30	♦MOTA	82-59	MV57152	♦MTO	30-90
MIL5352	♦MEHK	32-110	ML25	♦MER	119-53	MPY7H79	♦SOL	69-70	MSP01E05	♦MOTA	82-52	MV57154	♦MTO	30-91
MIL5358	♦MEHK	33-1	ML25P	♦MER	119-54	MPY7H79%	♦SOL	69-71	MSP01E10	♦MOTA	82-56	N120CG8	♦OCLI	79-96
MIL5359	♦MEHK	33-2	ML25P-SF3	♦MER	119-55	MPY12C28	♦SOL	69-72	MSP01E30	♦MOTA	82-60	N120CG9	♦OCLI	79-101
MIL5451	MEHK	30-106	ML25P-TS	♦MER	119-56	MPY12C28%	♦MELJ	70-91	MSP02A05	♦MOTA	82-45	N120CG10	♦OCLI	79-107
MIL5452	MEHK	30-107	ML32	♦MER	119-57	MPY12C39	♦MELJ	70-92	MSP02A10	♦MOTA	82-46	N120CG11	♦OCLI	80-5
MIL5458	MEHK	30-108	ML32-TS	♦MER	119-58	MPY12C49	♦MELJ	70-93	MSP02A30	♦MOTA	82-48	N120CG18	♦OCLI	79-97
MIL5459	MEHK	30-109	ML33	♦MER	119-59	MPY12C49%	♦MELJ	70-98	MSP26A05	♦MOTA	82-40	N120CG19	♦OCLI	79-102
MILB51	♦MEHK	25-51	ML33-TS	♦MER	119-60	MPY12C49E	♦SOL	70-94	MSP26A30	♦MOTA	82-41	N120CG10	♦OCLI	79-108
MILB52	♦MEHK	25-52	ML37	♦MER	119-61	MPY12H28	♦MELJ	70-95	MSP26A05	♦MOTA	82-42	N120CG11	♦OCLI	80-6
MILB58	MEHK	25-53	MLA12	♦MEHK	117-18	MPY12H28%	♦MELJ	70-96	MSR1E	♦FERR	75-3	N210CG8	♦OCLI	79-99
MILB59	♦MEHK	25-54	MLC200	♦MOTA	105-69	MPY12H39	♦MELJ	70-97	MSR1E	♦FERR	75-4	N210CG9	♦OCLI	79-105
MILB517	♦MEHK	25-55	MLC200TW	♦MOTA	105-70	MPY12H39%	♦MELJ	71-7	MST10	♦FERR	80-37	N210CG10	♦OCLI	80-3
MILB527	♦MEHK	25-56	MLC210-00	♦MOTA	107-17	MPY12H46	♦SOL	71-8	MST12	♦FERR	80-43	N210CG11	♦OCLI	80-7
MILB587	♦MEHK	25-57	MLC210-01	♦MOTA	107-18	MPY12H46%	♦SOL	71-9	MT1	♦MTO	58-64	N210CG18	♦OCLI	79-100
MILB597	♦MEHK	25-58	MLC210-02	♦MOTA	107-19	MPY12H46%	♦MELJ	71-10	MT2	♦MTO	58-65	N210CG19	♦OCLI	79-106
MILB5251	♦MEHK	36-27	MLC250	♦MOTA	104-104	MPY12H49	♦MELJ	71-11	MTB020	♦MTO	58-66	N210CG10	♦OCLI	80-4
MILB5252	♦MEHK	36-28	MLC250TW	♦MOTA	104-105	MPY12H49%	♦MELJ	71-12	MTD533	♦SOL	85-56	N210CG11	♦OCLI	80-8
MILB5258	MEHK	36-29	MLC400	♦MOTA	104-103	MPY12H59	♦SOL	71-13	MTD533-6	♦SOL	85-57	N220CG8	♦OCLI	80-20
MILB5259	MEHK	36-30	MLC410-00	♦MOTA	107-20	MPY25C39E	♦MELJ	71-14	MTD533-6%	♦MELJ	85-15	N220CG9	♦OCLI	80-23
MILB5351	MEHK	33-3	MLC410-01	♦MOTA	107-21	MPY25C38%	♦SOL	71-82	MTD733-5	♦SOL	85-58	N220CG10	♦OCLI	80-27
MILB5352	MEHK	33-4	MLC410-02	♦MOTA	107-22	MPY25C49	♦MELJ	71-83	MTL703C	♦MELJ	85-10	N220CG11	♦OCLI	80-29
MILB5358	MEHK	33-5	MLC410-03	♦MOTA	107-23	MPY25H38	♦SOL	71-84						

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TYPE No.				IN TYPE NUMBER SEQUENCE										
TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line			
NL8502	NAT	108-11	NSL701-8A	NSL	64-10	NSL5058	NSC	25-92	OP190A	OP	41-38	OPB823	OP	113-83
NL8502/4021	NAT	108-12	NSL701-9	NSL	64-13	NSL5072A	NSC	25-4	OP195	OP	41-53	OPB824	OP	113-108
NL8754/840	NAT	108-44	NSL701-9A	NSL	64-14	NSL5076A	NSC	25-5	OP195A	OP	41-39	OPB825	OP	113-84
NL50911	NAT	108-45	NSL702	NSL	74-73	NSL5077A	NSC	25-6	OP300	OP	60-43	OPC60X	OP	56-41
NORP11	NSL	70-69	NSL703	NSL	74-104	NSL5080	NSC	25-7	OP301	OP	60-11	OPC116	OP	39-104
NORP12	NSL	70-70	NSL705	NSL	75-27	NSL5081	NSC	25-8	OP302	OP	60-12	OPC123	OP	39-105
NORP13	NSL	70-71	NSL706	NSL	75-21	NSL5082	NSC	25-9	OP303	OP	60-13	OPC300	OP	60-41
NSA0038	NSC	101-65	NSL707	NSL	74-100	NSL5086	NSC	25-10	OP304	OP	60-14	OPC300L	OP	60-42
NSA598	NSC	103-38	NSL708	NSL	73-86	NSL5252	NSC	35-82	OP305	OP	60-15	OPC600	OP	56-78
NSA1198	NSC	103-39	NSL710	NSL	73-85	NSL5253	NSC	35-83	OP500	OP	56-97	OPC600L	OP	56-42
NSA1541A	NSC	102-89	NSL751	NSL	74-105	NSL5352	NSC	31-93	OP500SL	OP	56-98	OP1102	OP	90-2
NSA1588A	NSC	103-33	NSL751	NSL	73-24	NSL5931	NSL	70-108	OP500SLA	OP	56-99	OP1103	OP	90-9
NSA5140	NSC	103-52	NSL781	NSL	74-59	NSL5932	NSL	70-109	OP500SLB	OP	56-100	OP1110	OP	88-23
NSA7120	NSC	103-49	NSL782	NSL	74-74	NSL8932	NSL	72-4	OP500SLC	OP	56-101	OP1113	OP	91-12
NSB3382	NSC	102-90	NSL791	NSL	74-90	NSL41385	NSL	70-52	OP500SLD	OP	56-102	OP1120	OP	90-35
NSB3881	NSC	102-91	NSL792	NSL	74-53	NSL41386	NSL	70-60	OP500SLE	OP	56-103	OP1123	OP	91-95
NSB3882	NSC	102-92	NSL801	NSL	74-77	NSL41387	NSL	70-61	OP500W	OP	56-104	OP1130	OP	91-70
NSB3882	NSC	102-94	NSL802	NSL	74-110	NSL41388	NSL	70-62	OP501	OP	56-31	OP1140	OP	88-64
NSB3882	NSC	102-94	NSL802	NSL	75-28	NSLA1	OPC	96-49	OP507	OP	56-32	OP1150	OP	88-55
NSB3882	NSC	102-94	NSL802	NSL	75-22	NSLA1C	OPC	95-82	OP530W	OP	56-105	OP1264A	OP	91-28
NSB3882	NSC	102-96	NSL807	NSL	75-24	NSLA1R	OPC	97-85	OP537	OP	56-25	OP1264B	OP	88-24
NSB3882	NSC	102-96	NSL807	NSL	74-102	NSLN334	NSC	100-108	OP550	OP	56-26	OP1264C	OP	88-25
NSB3882	NSC	102-96	NSL807	NSL	73-104	NSLN373	NSC	100-109	OP550A	OP	56-106	OP1264C	OP	88-26
NSB3882	NSC	102-82	NSL810	NSL	73-88	NSLN374	NSC	100-110	OP550B	OP	56-107	OP12150	OP	89-72
NSB5917	NSC	103-13	NSL820	NSL	75-1	NSLN381	NSC	101-1	OP550C	OP	56-108	OP12151	OP	89-74
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# 1. TYPE No. CROSS INDEX

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	◆PHIN		OSD50-0	◆CENB	54-18	OTC12-82TC	◆OPE	47-79	PbSATO-1-10A	◆SBR	50-61	PbSLTO-2-60A	◆SBR	51-42
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PINSPT4D	♦UDT	117- 38	R1LB	♦VAC	74- 21	RPY18	♦PHIN	70-104
PINSPT8D	♦UDT	117- 39	R5LB	♦VAC	74- 56	RPY19	♦PHIN	70-106
PINSPT9D	♦UDT	117- 40	R10EB	♦VAC	72- 27	RPY20	♦PHIN	71- 93
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PL3A33-1	♦NSL	87- 8	R75EB	♦VAC	72- 29	RPY33	♦PHIN	67- 33
PL3A36-1	♦NSL	87- 9	R75LB	♦VAC	74- 67	RPY35	♦MULB	49- 18
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PL5S36-1	♦NSL	87- 11	R100KB	♦VAC	72- 31	RPY52	♦MULB	49- 83
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PLM5S310	♦NSL	87- 16	R1101	♦MER	62- 47		♦RTCF	
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PN107F	MATJ	57- 107	RL2-02Δ	♦LIX	26- 17	RPY78	♦MULB	46- 76
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PN121S	MATJ	56- 85	RL21-03	♦LIX	26- 19		♦RTCF	
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S0520GA6PL INRB	◆INR INRI INRJ	76-19	S1005A11PL INRB	◆INR INRI INRJ	76-57	S1010E9PL INRB	◆INR INRI INRJ	76-95	S1020A7PL INRB	◆INR INRI INRJ	77-23	S1020GA12PL INRB	◆INR INRI INRJ	77-61
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S0520GE10PL INRB	◆INR INRI INRJ	76-41	S1010A8PL INRB	◆INR INRI INRJ	76-79	S1010GE6PL INRB	◆INR INRI INRJ	77-7	S1020E11PL INRB	◆INR INRI INRJ	77-45	S2005A9PL INRB	◆INR INRI INRJ	77-83
S0520GE11 INRB	◆INR INRI INRJ	76-42	S1010A9 INRB	◆INR INRI INRJ	76-80	S1010GE7 INRB	◆INR INRI INRJ	77-8	S1020E12 INRB	◆INR INRI INRJ	77-46	S2005A10 INRB	◆INR INRI INRJ	77-84
S0520GE11PL INRB	◆INR INRI INRJ	76-43	S1010A9PL INRB	◆INR INRI INRJ	76-81	S1010GE7PL INRB	◆INR INRI INRJ	77-9	S1020E12PL INRB	◆INR INRI INRJ	77-47	S2005A10PL INRB	◆INR INRI INRJ	77-85
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SPR5-10B	◆INR	84-2	SPX314-3B	◆SPT	91-33	SS200C	◆SOL	80-26	STD1840-4	◆STE	53-102	STPD2010-12	◆STE	56-40
INRB	INRI		SPX314-4A	◆SPT	89-14	SS200D	◆SOL	80-32	STD1840-5	◆STE	53-74	STPD2010-13	◆STE	56-40
	INRJ		SPX314-5A	◆SPT	88-103	SS202MG	◆SRPJ	80-30	STD2040-1	◆STE	53-103	STPD2010-14	◆STE	56-40
SPR5-10BPL	◆INR	84-3	SPX314-6A	◆SPT	91-34	SS300-1	◆SOL	79-49	STD2040-2	◆STE	53-104	STPD2010-15	◆STE	56-40
INRB	INRI		SPX314-7B	◆SPT	91-38	SS300-2	◆SOL	79-50	STD2040-3	◆STE	53-105	STPD2010-16	◆STE	56-40
	INRJ		SPX314-8A	◆SPT	91-39	SS300-3	◆SOL	79-51	STD2040-4	◆STE	53-106	STPD2010-17	◆STE	56-40
SPR5-10PL	◆INR	84-4	SPX502	◆SPT	98-44	SS300-4	◆SOL	79-52	STD2040-5	◆STE	53-107	STPD2010-18	◆STE	56-40
INRB	INRI		SPX503	◆SPT	98-44	SS400-1	◆SOL	74-43	STD2040-6	◆STE	53-108	STPD2010-19	◆STE	56-40
	INRJ		SPX504	◆SPT	99-39	SS400-2	◆SOL	74-44	STD2040-7	◆STE	53-109	STPD2010-20	◆STE	56-40
SPR6-08B	◆INR	83-55	SPX766	◆SPT	102-49	SS400-3	◆SOL	73-8	STD2040-8	◆STE	53-110	STPD2010-21	◆STE	56-40
INRB	INRI		SPX767	◆SPT	102-50	SS400-4	◆SOL	73-9	STD2040-9	◆STE	53-111	STPD2010-22	◆STE	56-40
	INRJ		SPX1003-1	◆SPT	88-19	SS400-5	◆SOL	74-34	STD2040-10	◆STE	53-112	STPD2010-23	◆STE	56-40
SPR6-08BPL	◆INR	83-56	SPX1003-2	◆SPT	88-20	SS400-6	◆SOL	74-6	STD2040-11	◆STE	53-113	STPD2010-24	◆STE	56-40
INRB	INRI		SPX1160-1	◆SPT	115-83	SS400-7	◆SOL	74-7	STD2040-12	◆STE	53-114	STPD2010-25	◆STE	56-40
	INRJ		SPX1160-2	◆SPT	115-103	SS500	◆SOL	74-58	STD2040-13	◆STE	53-115	STPD2010-26	◆STE	56-40
SPR6-08PL	◆INR	83-57	SPX1160-3	◆SPT	116-2	SS2020G	◆SRPJ	80-28	STD2040-14	◆STE	53-116	STPD2010-27	◆STE	56-40
INRB	INRI		SPX1396-1	◆SPT	115-82	SS9102	◆SOL	29-62	STD2040-15	◆STE	53-117	STPD2010-28	◆STE	56-40
	INRJ		SPX1396-2	◆SPT	115-104	SSD0132-0030	◆BUR	109-29	STD2040-16	◆STE	53-118	STPD2010-29	◆STE	56-40
SPR6-10B	◆INR	84-5	SPX1396-3	◆SPT	115-107	SSD0132-0039	◆BUR	109-30	STD2040-17	◆STE	53-119	STPD2010-30	◆STE	56-40
INRB	INRI		SPX1404-1	◆SPT	115-72	SSD0132-0040	◆BUR	109-31	STD2040-18	◆STE	53-120	STPD2010-31	◆STE	56-40
	INRJ		SPX1404-2	◆SPT	115-80	SSD0132-0060								

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IN TYPE NUMBER SEQUENCE

TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line
STR850B	♦STE	115-45	TIES13A	♦TII	41-47	TIL127	♦TII	91-45	TIL272	♦TII	43-12	TIL621	♦TII	64-32
STR850BF	♦STE	115-46		♦TII			♦TII			♦TII			♦TII	
STR850F	♦STE	115-30	TIES14	♦TII	41-62	TIL128	♦TII	91-46	TIL273	♦TII	43-22	TIL622	♦TII	64-33
STR900-1	♦STE	115-33		♦TII			♦TII			♦TII			♦TII	
STR910-2	♦STE	115-52	TIES15	♦TII	41-54	TIL131	♦TII	43-76	TIL274	♦TII	43-32	TIL623	♦TII	64-39
STR920-3	♦STE	115-105		♦TII			♦TII			♦TII			♦TII	
SX10LB	♦VAC	73-25	TIES16A	♦TII	41-65	TIL132	♦TII	64-80	TIL275	♦TII	43-43	TIL624	♦TII	64-45
SX135-1	♦CRS	105-53		♦TII			♦TII			♦TII			♦TII	
SX135-5	♦CRS	105-54	TIES16B	♦TII	41-66	TIL133	♦TII	113-13	TIL276	♦TII	43-52	TIL625	♦TII	64-51
SX135-6	♦CRS	105-55		♦TII			♦TII			♦TII			♦TII	
SX140-1	♦CRS	105-106	TIES16C	♦TII	41-67	TIL134	♦TII	43-101	TIL277	♦TII	43-61	TIL626	♦TII	64-57
SX140-5	♦CRS	105-108		♦TII			♦TII			♦TII			♦TII	
SX140-6	♦CRS	105-110	TIES27	♦TII	41-35	TIL135	♦TII	64-108	TIL278	♦TII	43-70	TIL627	♦TII	64-63
SX147-1	♦CRS	107-105		♦TII			♦TII			♦TII			♦TII	
SX147-5	♦CRS	107-104	TIES35	♦TII	39-37	TIL136	♦TII	113-18	TIL279	♦TII	43-85	TIL628	♦TII	64-69
SX147-6	♦CRS	107-106		♦TII			♦TII			♦TII			♦TII	
SX162-1	♦CRS	106-16	TIES36	♦TII	39-49	TIL138	♦TII	113-97	TIL280	♦TII	43-96	TIL629	♦TII	64-81
SX162-5	♦CRS	106-17		♦TII			♦TII			♦TII			♦TII	
SX162-6	♦CRS	106-18	TIES471	♦TII	39-7	TIL139	♦TII	115-29	TIL281	♦TII	43-3	TIL630	♦TII	64-91
SX172-1	♦CRS	104-45		♦TII			♦TII			♦TII			♦TII	
SX172-5	♦CRS	104-46	TIES472	♦TII	119-64	TIL141	♦TII	113-20	TIL282	♦TII	43-10	TIL804	♦TII	103-50
SX172-6	♦CRS	104-47		♦TII			♦TII			♦TII			♦TII	
SX177-1	♦CRS	106-25	TIL23	♦TII	38-101	TIL142	♦TII	113-21	TIL283	♦TII	43-20	TIL807	♦TII	100-84
SX177-5	♦CRS	106-27		♦TII			♦TII			♦TII			♦TII	
SX177-6	♦CRS	106-29	TIL24	♦TII	39-50	TIL143	♦TII	113-63	TIL284	♦TII	43-30	TIL808	♦TII	100-85
SX179-1	♦CRS	104-74		♦TII			♦TII			♦TII			♦TII	
SX179-5	♦CRS	104-75	TIL25	♦TII	39-31	TIL144	♦TII	113-50	TIL285	♦TII	43-41	TIL829	♦TII	101-58
SX179-6	♦CRS	104-76		♦TII			♦TII			♦TII			♦TII	
SX181-1	♦CRS	104-48	TIL26	♦TII	39-39	TIL145	♦TII	114-31	TIL286	♦TII	43-50	TIL830	♦TII	101-59
SX181-5	♦CRS	104-49		♦TII			♦TII			♦TII			♦TII	
SX181-6	♦CRS	104-50	TIL31	♦TII	40-39	TIL146	♦TII	114-24	TIL287	♦TII	43-59	TIL831	♦TII	101-60
SX208-1	♦CRS	107-108		♦TII			♦TII			♦TII			♦TII	
SX208-5	♦CRS	107-107	TIL32	♦TII	39-5	TIL147	♦TII	114-70	TIL288	♦TII	43-68	TIL832	♦TII	102-58
SX208-6	♦CRS	107-109		♦TII			♦TII			♦TII			♦TII	
SY403D	♦NECJ	30-44	TIL33	♦TII	40-21	TIL148	♦TII	113-109	TIL289	♦TII	43-83	TIL833	♦TII	102-59
SY403T	♦NECJ	30-45		♦TII			♦TII			♦TII			♦TII	
SY404D	♦NECJ	30-46	TIL34	♦TII	39-97	TIL149	♦TII	115-32	TIL290	♦TII	43-94	TIL834	♦TII	102-60
SY404T	♦NECJ	30-47		♦TII			♦TII			♦TII			♦TII	
SY405D	♦NECJ	30-48	TIL38	♦TII	41-1	TIL153	♦TII	88-32	TIL302	♦TII	95-89	TIL835	♦TII	101-62
SY405T	♦NECJ	30-49		♦TII			♦TII			♦TII			♦TII	
SY406D	♦NECJ	30-50	TIL41	♦TII	43-1	TIL154	♦TII	88-34	TIL303	♦TII	97-3	TIL836	♦TII	101-63
SY406T	♦NECJ	30-51		♦TII			♦TII			♦TII			♦TII	
T300	♦BAR	62-98	TIL42	♦TII	43-5	TIL155	♦TII	88-35	TIL304	♦TII	99-91	TIL837	♦TII	103-12
T301	♦BAR	46-45		♦TII			♦TII			♦TII			♦TII	
T302	♦BAR	46-46	TIL43	♦TII	43-14	TIL156	♦TII	91-17	TIL305	♦TII	100-66	TIL838	♦TII	103-5
T5135-1	♦CRS	106-12		♦TII			♦TII			♦TII			♦TII	
T5135-5	♦CRS	106-13	TIL44	♦TII	43-24	TIL157	♦TII	91-18	TIL306	♦TII	96-1	TIL839	♦TII	101-12
T5135-6	♦CRS	106-14		♦TII			♦TII			♦TII			♦TII	
T5140-1	♦CRS	105-86	TIL45	♦TII	43-35	TIL209A	♦FSC	23-97	TIL307	♦TII	97-4	TIL840	♦TII	101-13
T5140-5	♦CRS	105-87		♦TII			♦TII			♦TII			♦TII	
T5140-6	♦CRS	105-88	TIL46	♦TII	43-45	TIL211	♦FSC	37-72	TIL308	♦TII	96-2	TIL841	♦TII	101-14
T5145-1	♦CRS	106-35		♦TII		TIL212-1	♦TII	33-83		♦TII			♦TII	
T5145-5	♦CRS	106-36	TIL47	♦TII	43-54		♦TII		TIL309	♦TII	97-5	TIL842	♦TII	101-15
T5145-6	♦CRS	106-37		♦TII		TIL212-2	♦TII	33-84		♦TII			♦TII	
TIED55	♦TII	45-100	TIL48	♦TII	43-63		♦TII		TIL311	♦TII	100-36	TIL843	♦TII	101-16
	♦TII			♦TII		TIL213	♦FSC	33-79		♦TII		TIXL474	♦TII	38-30
TIED56	♦TII	45-101	TIL49	♦TII	43-74	TIL216-1	♦TII	29-45	TIL312	♦TII	95-67	TIXL474A	♦TII	38-31
	♦TII			♦TII			♦TII			♦TII		TLG102	♦TOSJ	34-105
TIED59	♦TII	45-105	TIL50	♦TII	43-87	TIL216-2	♦TII	29-46	TIL313	♦TII	97-29	TLG102KB	♦TOSJ	34-106
	♦TII			♦TII			♦TII			♦TII		TLG103	♦TOSJ	34-107
TIED69	♦TII	46-1	TIL63	♦TII	57-41	TIL220	♦TII	23-98	TIL321A	♦TII	98-45	TLG103K	♦TOSJ	35-90
	♦TII			♦TII			♦TII			♦TII		TLG105	♦TOSJ	35-91
TIED80	♦TII	54-25	TIL64	♦TII	57-42	TIL221	♦TII	23-99	TIL322A	♦TII	98-46	TLG105K	♦TOSJ	35-92
	♦TII			♦TII			♦TII			♦TII		TLG107	♦TOSJ	35-93
TIED82	♦TII	117-69	TIL65	♦TII	57-43	TIL224-1	♦TII	33-85	TIL327	♦TII	99-104	TLG107K	♦TOSJ	35-94
	♦TII			♦TII			♦TII			♦TII		TLG108	♦TOSJ	35-95
TIED83	♦TII	45-102	TIL66	♦TII	57-44	TIL224-2	♦TII	33-86	TIL330A	♦TII	99-64	TLG108K	♦TOSJ	34-108
	♦TII			♦TII			♦TII			♦TII		TLG108KB	♦TOSJ	34-109
TIED84	♦TII	45-106	TIL67	♦TII	57-45	TIL227-1	♦TII	33-87	TIL360	♦TII	103-20	TLG108KW	♦TOSJ	34-110
	♦TII			♦TII			♦TII			♦TII		TLG113	♦TOSJ	35-59
TIED85	♦TII	45-103	TIL78	♦TII	57-46	TIL227-2	♦TII	33-88	TIL393-6	♦TII	103-21	TLG115	♦TOSJ	35-60
	♦TII			♦TII			♦TII			♦TII		TLG202	♦TOSJ	35-1
TIED86	♦TII	45-107	TIL81	♦TII	58-105	TIL228-1	♦TII	29-47	TIL393-8	♦TII	103-29	TLG312	♦TOSJ	97-83
	♦TII			♦TII			♦TII			♦TII		TLG313	♦TOSJ	97-84
TIED87	♦TII	45-104	TIL99	♦TII	58-106	TIL228-2	♦TII	29-48	TIL393-9	♦TII	103-40	TLG314	♦TOSJ	95-22
	♦TII			♦TII			♦TII			♦TII		TLG315	♦TOSJ	95-23
TIED88	♦TII	45-108	TIL100	♦TII	54-47	TIL231-1	♦TII	29-49	TIL401	♦TII	57-47	TLN101	♦TOSJ	39-8
	♦TII			♦TII			♦TII			♦TII		TLN103	♦TOSJ	38-84
TIED89	♦TII	46-2	TIL102	♦TII	90-3	TIL231-2	♦TII	29-50	TIL402	♦TII	57-48	TLP501	♦TOSJ	88-21
	♦TII			♦TII			♦TII			♦TII		TLP503	♦TOSJ	88-57
TIED90	♦TII	63-32	TIL103	♦TII	90-10	TIL232-1	♦TII	37-36	TIL403	♦TII	57-49	TLP504	♦TOSJ	90-38
	♦TII			♦TII			♦TII			♦TII		TLP505D	♦TOSJ	92-1
TIED91	♦TII	63-33	TIL107	♦TII	88-31	TIL232-2	♦TII	37-37	TIL404	♦TII	57-50	TLP505G	♦TOSJ	92-5
	♦TII			♦TII			♦TII			♦TII		TLP506D	♦TOSJ	92-2
TIED92	♦TII	63-28	TIL108	♦TII	88-33	TIL234-1	♦TII	37-38	TIL405	♦TII	57-51	TLP506G	♦TOSJ	92-6
	♦TII			♦TII			♦TII			♦TII		TLR101	♦TOSJ	113-27
TIED93	♦TII	63-29	TIL111	♦TII	88-98	TIL234-2	♦TII	37-39	TIL406	♦TII	57-52	TLR102	♦TOSJ	28-22
	♦TII			♦TII			♦TII							

# 1. TYPE No. CROSS INDEX

IN TYPE NUMBER SEQUENCE

TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line
TLR306	♦TOSJ	98-83	VR100GB	♦VAC	72-47	VT272	♦VAC	66-68	VTA1112	♦VAC	60-82	VTL9A10	♦VAC	85-75
TLR307	♦TOSJ	95-30	VR100KB	♦VAC	72-48	VT301	♦VAC	68-62	VTA1121	♦VAC	60-89	VTL9A11	♦VAC	85-76
TLR308	♦TOSJ	98-84	VR100LB	♦VAC	74-88	VT301/2	♦VAC	68-63	VTA1122	♦VAC	60-80	VTL9B6	♦VAC	85-77
TLR309	♦TOSJ	95-31	VR100MB	♦VAC	72-49	VT301H	♦VAC	68-64	VTA3121	♦VAC	60-47	VTL9B7	♦VAC	85-78
TLR312	♦TOSJ	97-81	VRX5LB	♦VAC	72-106	VT302	♦VAC	68-67	VTA3122	♦VAC	60-45	VTL9B8	♦VAC	85-79
TLR313	♦TOSJ	97-82	VRX10LB	♦VAC	73-13	VT302/2	♦VAC	68-65	VTA9311	♦VAC	60-62	VTP1012	♦VAC	53-75
TLR314	♦TOSJ	97-17	VRX15LB	♦VAC	73-41	VT302L	♦VAC	68-68	VTA9312	♦VAC	60-60	VTP1013	♦VAC	53-49
TLR315	♦TOSJ	97-18	VRX80EB	♦VAC	72-50	VT303	♦VAC	68-69	VTA9313	♦VAC	60-55	VTP1112	♦VAC	53-76
TLR320	♦TOSJ	100-96	VRX80HB	♦VAC	72-51	VT303L2	♦VAC	68-66	VTA9321	♦VAC	60-63	VTP1113	♦VAC	53-50
TLR321	♦TOSJ	100-97	VRX80LB	♦VAC	73-110	VT303L	♦VAC	68-70	VTA9322	♦VAC	60-61	VTP5040	♦VAC	53-91
TLR322	♦TOSJ	100-86	VRX80TB	♦VAC	72-52	VT304	♦VAC	68-71	VTA9323	♦VAC	60-56	VTP5041	♦VAC	53-59
TLR323	♦TOSJ	100-87	VS1LB	♦VAC	73-70	VT305	♦VAC	68-72	VTB1012	♦VAC	53-44	VTP5050	♦VAC	53-92
TLR324	♦TOSJ	101-16	VS2LB	♦VAC	73-84	VT311	♦VAC	68-103	VTB1013	♦VAC	53-30	VTP5051	♦VAC	53-63
TLR325	♦TOSJ	101-17	VS3LB	♦VAC	74-3	VT311L	♦VAC	68-104	VTB1112	♦VAC	53-45	VTP6060	♦VAC	53-109
TLR326	♦TOSJ	101-18	VS4LB	♦VAC	74-15	VT312	♦VAC	69-1	VTB1113	♦VAC	53-31	VTP6061	♦VAC	53-77
TLR327	♦TOSJ	101-19	VS5LB	♦VAC	73-96	VT312/2	♦VAC	68-105	VTB5040	♦VAC	53-55	VTS1076	♦VAC	72-87
TLR2037	♦TOSJ	102-6	VS7LB	♦VAC	74-10	VT312H	♦VAC	69-2	VTB5040B	♦VAC	53-56	VTS1086	♦VAC	73-54
TLR2047	♦TOSJ	102-78	VS8LB	♦VAC	74-16	VT312L	♦VAC	69-3	VTB5041	♦VAC	53-34	VTS2011	♦VAC	79-54
TLR2057	♦TOSJ	102-54	VS10LB	♦VAC	74-19	VT313L2	♦VAC	68-106	VTB5041B	♦VAC	53-35	VTS2012	♦VAC	79-57
TLR2087	♦TOSJ	102-51	VS11LB	♦VAC	74-25	VT313L	♦VAC	69-4	VTB5050	♦VAC	53-60	VTS2013	♦VAC	79-62
TLR4030	♦TOSJ	102-7	VS13LB	♦VAC	74-70	VT314	♦VAC	69-5	VTB5050B	♦VAC	53-61	VTS2014	♦VAC	79-68
TLR4032	♦TOSJ	102-8	VS14LB	♦VAC	72-53	VT321	♦VAC	68-41	VTB5050UV	♦VAC	53-62	VTS2018	♦VAC	79-77
TLR4040	♦TOSJ	102-79	VS17LB	♦VAC	72-54	VT321H	♦VAC	68-42	VTB5051	♦VAC	53-40	VTS2020	♦VAC	79-80
TLR4042	♦TOSJ	102-80	VS50LB	♦VAC	72-55	VT322	♦VAC	68-44	VTB5051B	♦VAC	53-41	VTS2022	♦VAC	79-84
TLR4050	♦TOSJ	102-55	VS55LB	♦VAC	72-56	VT322L	♦VAC	68-45	VTB6060	♦VAC	53-64	VTS2024	♦VAC	79-90
TLR4052	♦TOSJ	102-56	VS56LB	♦VAC	72-57	VT325	♦VAC	68-46	VTB6060B	♦VAC	53-65	VTS2026	♦VAC	79-94
TLR4080	♦TOSJ	102-52	VS100EB	♦VAC	72-58	VT333	♦VAC	68-56	VTB6060UV	♦VAC	53-66	VTS2028	♦VAC	80-11
TLR4082	♦TOSJ	102-53	VS100LB	♦VAC	72-59	VT333/2	♦VAC	68-57	VTB6061	♦VAC	53-57	VTS2050	♦VAC	80-21
TLRG101#1	♦TOSJ	27-42	VS150LB	♦VAC	72-60	VT332L	♦VAC	68-58	VTB6061B	♦VAC	53-58	VTS2060	♦VAC	81-3
TLRG101#2	♦TOSJ	34-97	VSX10LB	♦VAC	73-26	VT334/21	♦VAC	68-28	VTB9412	♦VAC	53-46	VTS2061	♦VAC	81-19
TP60	♦LIX	73-65	VT10L	♦VAC	69-100	VT334/21A	♦VAC	68-29	VTB9412B	♦VAC	53-47	VTS2062	♦VAC	81-27
TP61	♦SIEG		VT14L	♦VAC	69-55	VT334/21B	♦VAC	68-30	VTB9413	♦VAC	53-32	VTS2063	♦VAC	81-92
	♦LIX	73-66	VT21K	♦VAC	67-15	VT341	♦VAC	68-87	VTB9413B	♦VAC	53-33	VTS2064	♦VAC	81-11
	♦SIEG		VT21M	♦VAC	67-16	VT341/2	♦VAC	68-88	VTB9414	♦VAC	53-28	VTS2065	♦VAC	81-62
TPS601	♦TOSJ	58-5	VT23L	♦VAC	66-36	VT341H	♦VAC	68-89	VTB9415B	♦VAC	53-26	VTS2066	♦VAC	81-70
TPS603	♦TOSJ	57-68	VT30L	♦VAC	68-61	VT342	♦VAC	68-90	VTB9416B	♦VAC	53-24	VTS2067	♦VAC	82-9
TPS604	♦TOSJ	58-6	VT31K	♦VAC	69-6	VT342L	♦VAC	68-91	VTL1A1	♦VAC	85-59	VTS2070	♦VAC	74-28
TPS605	♦TOSJ	56-93	VT31M	♦VAC	69-7	VT343	♦VAC	68-92	VTL1A2	♦VAC	85-60	VTS2071	♦VAC	73-76
TPS701	♦TOSJ	53-43	VT32L	♦VAC	68-40	VT343L	♦VAC	68-93	VTL1A3	♦VAC	85-61	VTS2072	♦VAC	73-49
TS322-3	♦SAM	115-94	VT34L2	♦VAC	68-85	VT401	♦VAC	71-78	VTL1A4	♦VAC	85-62	VTS2073	♦VAC	73-46
TS322-3-0	♦SAM	115-95	VT34L	♦VAC	68-86	VT402	♦VAC	71-79	VTL1B5	♦VAC	85-63	VTS2074	♦VAC	73-19
TS322-3IR	♦SAM	115-96	VT50L	♦VAC	71-42	VT431	♦VAC	71-69	VTL1B6	♦VAC	85-64	VTS2075	♦VAC	72-101
TS322-3LED	♦SAM	115-59	VT51L	♦VAC	71-62	VT432	♦VAC	71-70	VTL2C1	♦VAC	85-65	VTS2076	♦VAC	72-88
TXED453C025	♦TII	46-49	VT54L	♦VAC	71-21	VT433	♦VAC	71-71	VTL2C2	♦VAC	85-66	VTS2077	♦VAC	72-81
	♦TII		VT70L	♦VAC	70-73	VT434	♦VAC	71-72	VTL2C3	♦VAC	85-67	VTS2080	♦VAC	75-17
TXED453C050	♦TII	46-50	VT74L	♦VAC	70-59	VT435	♦VAC	71-73	VTL2C4	♦VAC	85-68	VTS2081	♦VAC	74-93
	♦TII		VT82L	♦VAC	69-39	VT436	♦VAC	71-74	VTL3A11	♦VAC	86-25	VTS2081N	♦VAC	74-94
TXED453C100	♦TII	46-51	VT93L	♦VAC	67-65	VT471	♦VAC	71-76	VTL3A12	♦VAC	86-26	VTS2082	♦VAC	74-75
	♦TII		VT101	♦VAC	69-101	VT501	♦VAC	71-43	VTL3A13	♦VAC	86-27	VTS2083	♦VAC	74-71
TXEF402M001	♦TII	119-89	VT101H	♦VAC	69-102	VT501H	♦VAC	71-44	VTL3A14	♦VAC	86-28	VTS2084	♦VAC	74-36
	♦TII		VT102	♦VAC	69-103	VT502	♦VAC	71-45	VTL3A15	♦VAC	86-29	VTS2085	♦VAC	73-101
TXEF402M003	♦TII	119-90	VT102L	♦VAC	69-104	VT502L	♦VAC	71-46	VTL3A16	♦VAC	86-30	VTS2086	♦VAC	73-56
	♦TII		VT103	♦VAC	69-105	VT503	♦VAC	71-47	VTL3A17	♦VAC	86-31	VTS2087	♦VAC	73-51
TXEF402M006	♦TII	119-91	VT103L	♦VAC	69-106	VT503L	♦VAC	71-48	VTL3A21	♦VAC	86-32	VTS3011	♦VAC	79-55
	♦TII		VT104	♦VAC	69-107	VT511	♦VAC	71-63	VTL3A22	♦VAC	86-33	VTS3012	♦VAC	79-58
TXEF402M010	♦TII	119-92	VT111	♦VAC	70-40	VT511H	♦VAC	71-66	VTL3A23	♦VAC	86-34	VTS3013	♦VAC	79-63
	♦TII		VT111H	♦VAC	70-41	VT511L	♦VAC	71-64	VTL3A24	♦VAC	86-35	VTS3014	♦VAC	79-69
TXEF402M020	♦TII	119-93	VT112	♦VAC	70-44	VT512L	♦VAC	71-67	VTL3A25	♦VAC	86-36	VTS3018	♦VAC	79-78
	♦TII		VT112L	♦VAC	70-45	VT521	♦VAC	71-1	VTL3A26	♦VAC	86-37	VTS3020	♦VAC	79-81
TXEF402M030	♦TII	119-94	VT113	♦VAC	70-46	VT521H	♦VAC	71-3	VTL3A27	♦VAC	86-38	VTS3020N	♦VAC	79-82
	♦TII		VT113L	♦VAC	70-47	VT522	♦VAC	71-4	VTL3A31	♦VAC	86-39	VTS3022	♦VAC	79-85
TXEF402M040	♦TII	119-95	VT121	♦VAC	70-42	VT522L	♦VAC	71-5	VTL3A31/2	♦VAC	86-40	VTS3024	♦VAC	79-91
	♦TII		VT121H	♦VAC	70-43	VT523L	♦VAC	71-6	VTL3A32	♦VAC	86-41	VTS3026	♦VAC	79-95
TXEF402M050	♦TII	119-96	VT122	♦VAC	70-48	VT533	♦VAC	71-22	VTL3A32/2	♦VAC	86-42	VTS3028	♦VAC	80-12
	♦TII		VT122L	♦VAC	70-49	VT533L	♦VAC	71-23	VTL3A33	♦VAC	86-43	VTS3050	♦VAC	80-22
TXES37	♦TII	41-59	VT123	♦VAC	70-50	VT541	♦VAC	71-24	VTL3A33/2	♦VAC	86-44	VTS3060	♦VAC	81-4
	♦TII		VT123L	♦VAC	70-51	VT541H	♦VAC	71-25	VTL3A34	♦VAC	86-45	VTS3061	♦VAC	81-20
TXES475C025	♦TII	38-61	VT124	♦VAC	69-61	VT542	♦VAC	71-27	VTL3A34/2	♦VAC	86-46	VTS3062	♦VAC	81-28
	♦TII		VT132	♦VAC	69-56	VT542L	♦VAC	71-28	VTL3A35	♦VAC	86-47	VTS3063	♦VAC	81-93
TXES475C050	♦TII	38-59	VT133	♦VAC	69-57	VT701	♦VAC	70-74	VTL3A35/2	♦VAC	86-48	VTS3064	♦VAC	81-12
	♦TII		VT133L	♦VAC	69-58	VT701E	♦VAC	70-72	VTL3A36	♦VAC	86-49	VTS3065	♦VAC	81-63
TXES475C100	♦TII	38-55	VT141	♦VAC	69-59	VT702E	♦VAC	70-75	VTL3A36/2	♦VAC	86-50	VTS3066	♦VAC	81-71
	♦TII		VT141H	♦VAC	69-60	VT712E	♦VAC	70-88	VTL3A37	♦VAC	86-51	VTS3067	♦VAC	82-10
TXES476C025	♦TII	38-73	VT142	♦VAC	69-62	VT721	♦VAC	70-56	VTL3A37/2	♦VAC	86-52	VTS3070	♦VAC	74-29
	♦TII		VT142L	♦VAC	69-63	VT721H	♦VAC	70-57	VTL3A41	♦VAC	86-53	VTS3071	♦VAC	73-77
TXES476C050	♦TII	38-71	VT143	♦VAC	69-64	VT721HE	♦VAC	70-58	VTL3A41/2	♦VAC	86-54	VTS3072	♦VAC	73-70
	♦TII		VT143L	♦VAC	69-65	VT732	♦VAC	70-67	VTL3A42	♦VAC	86-55	VTS3073	♦VAC	73-47
TXES476C100	♦TII	38-69	VT201	♦VAC	66-59	VT732E	♦VAC	70-68	VTL3A42/2	♦VAC	86-56	VTS3074	♦VAC	73-47
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UDT600	♦UDT	62-30	VT203H	♦VAC	66-63	VT773	♦VAC	70-89	VTL3A44/2	♦VAC	86-60	VTS3080	♦VAC	75-18
US322-3	♦SAM	115-97	VT204	♦VAC	66-64	VT801	♦VAC	69-43	VTL3A45	♦VAC	86-61	VTS3081	♦VAC	74-95
US322-3-0	♦SAM	115-98	VT204L	♦VAC	66-65	VT804	♦VAC	69-44	VTL3A45/2	♦VAC	86-62	VTS3082	♦VAC	74-76
US322-3IR	♦SAM	115-99	VT205	♦VAC										

# 1. TYPE No. CROSS INDEX

IN TYPE NUMBER SEQUENCE

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VTT3121	♦VAC	57- 61	XC556Y3	♦XCI	32- 7									
VTT3122	♦VAC	57- 20	XC556Y4	♦XCI	32- 8									
VTT3123	♦VAC	57- 13	XC556Y	♦XCI	32- 64									
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VTT9012	♦VAC	58- 79	XC1209	♦XCI	39- 6									
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VTT9320	♦VAC	57-104	XC4850R	♦XCI	27- 43									
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XC520Y	♦XCI	32- 4	ZS4LB	♦VAC	74- 11									
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XC526G	♦XCI	35- 13	ZS17LB	♦VAC	72- 18									
XC526R2	♦XCI	27- 52	ZS50LB	♦VAC	72- 19									
XC526R	♦XCI	27- 53	ZS55LB	♦VAC	72- 20									
XC526Y2	♦XCI	32- 60	ZS56LB	♦VAC	72- 21									
XC526Y	♦XCI	32- 61	ZS100EB	♦VAC	72- 22									
XC554G6	♦XCI	35- 14	ZS100LB	♦VAC	72- 23									
XC554G15	♦XCI	35- 15	ZS150LB	♦VAC	72- 24									
XC554G24	♦XCI	35- 16	ZSX10LB	♦VAC	73- 23									
XC554G	♦XCI	35- 17												
XC554R9	♦XCI	27- 54												
XC554R12	♦XCI	27- 55												
XC554R	♦XCI	27- 56												
XC554RWC	♦XCI	26-107												
XC554Y6	♦XCI	32- 62												
XC554Y12	♦XCI	32- 5												
XC554Y	♦XCI	32- 6												
XC556G2	♦XCI	35- 18												
XC556G3	♦XCI	35- 19												
XC556G4	♦XCI	35- 20												
XC556G	♦XCI	35- 21												
XC556R2	♦XCI	27- 57												
XC556R3	♦XCI	27- 58												
XC556R	♦XCI	27- 59												



## 2. EMITTER: LIGHT EMITTING DIODE

IN ORDER OF: (1) COLOR CODE (2) MAX. FWD. VOLT-VF  
(3) IF TEST (4) PWR DISS-Pcase & (5) TYPE No.

LINE No.	TYPE No.	COLOR CODE	MAXIMUM FORWARD		MAX. RATINGS @ 25°C		TEMP RNG. CODE	PEAK WAVE-LENGTH λp (nm)	LUMINOUS INTENSITY IF (cd)	BEAM ANGLE θHI (°)	SPECTRAL BAND WIDTH Δλ (nm)	RESP. TIME (S)	CAPAC C (F)	MATERIAL & FEATURES MAT	LEAD CODE	DRAWING	
			VOLT VF (V)	IF TEST (A)	MAX. PWR. DISS. Pcase (W)	DC FWD CURR. IF (A)											REV. VOLT VR (V)
1▼	E1500		1.3	100m	10m	100m											
2▼	DCC10018AIR	1	2.3	10m	80m*	30m	15	58*	890n							TO18	
3▼	DCC10018LIR	1	2.3	10m	80m*	30m	15	58*	690n	1.0m	10m	180				PD20	
4▼	E1510	1	2.5	1.0	3.5m	100m			690n							PD419	
5▼	E1510F	1	2.5	1.0	3.5m	100m			940n							TO18	
6▼	E1520	1	2.5	1.0	7.0m	100m			940n							TO18	
7▼	E1520F	1	2.5	1.0	7.0m	100m			940n							TO18	
8▼	LLT201R	2#		100m	50m	3.0		5A		500u	20m					TO18	
9▼	LLT202RT	2Δ		100m	50m	3.0		5A		1.0m	20m					PD257a	
10▼	LLT203R	2#		100m	50m	3.0		5A		500u	20m					PD257a	
11▼	LLT204RT	2Δ		100m	50m	3.0		5A		1.0m	20m					PD28t	
12▼	LLT205RW	2#		100m	50m	3.0		5A		500u	20m					PD28t	
13▼	LLT206RC	2#		100m	50m	3.0		5A		1.0m	20m					PD257a	
14▼	LLT207RW	2#		100m	50m	3.0		5A		500u	20m					PD257a	
15▼	LLT208RC	2#		100m	50m	3.0		5A		1.0m	20m					PD28t	
16▼	LLT211R	2#		120m	20m	5.0		5A		500u	20m					PD257a	
17▼	LLT212RT	2Δ		120m	20m	5.0		5A		1.0m	20m					PD257a	
18▼	LLT213R	2#		120m	20m	5.0		5A		500u	20m					PD28t	
19▼	LLT214RT	2Δ		120m	20m	5.0		5A		1.0m	20m					PD28t	
20▼	LLT215RW	2#		120m	20m	5.0		5A		500u	20m					PD257a	
21▼	LLT216RC	2#		120m	20m	5.0		5A		1.0m	20m					PD257a	
22▼	LLT217RW	2#		120m	20m	5.0		5A		500u	20m					PD28t	
23▼	LLT218RC	2#		120m	20m	5.0		5A		1.0m	20m					PD28t	
24▼	E1000	2	1.2	20m		50m			660n	150u		10n				PD16f	
25	1920R	2	1.6 †	35m	90m	45m	3.0	26	660n	10m†	35m					PD289	
26	1922R	2	1.6 †	35m	90m	45m	3.0	26	660n	10m†	35m					PD290	
27#	COY53	2	1.7 †	10m	125m*%	70m	3.0	48#	690n	115u	10m	110	20n			PD12e	
28	521-9181	2#	1.7 †	20m		50m			665n	2.0m†						PD208	
29	521-9223	2#	1.7 †	20m		50m			665n	2.0m†						PD208	
30▼	E1010	2	1.7 †	20m		50m			660n	800u		10n				PD16f	
31	555-2001	2#	1.7 †	20m	80m	40m	3.0	57	650n	2.0m	20m	70	20n	20p		PD380	
32	555-3001	2#	1.7 †	20m	80m	40m	3.0	57	650n	2.0m	20m	70	20n	20p		PD381	
33#	LN15BP	2#	1.7 †	30m	60m	30m	4.0	28*	660n	700u†	20m	35	20m	20ps		PD211	
34#	LN15WP	2#	1.7 †	30m	60m	30m	4.0	28*	660n	600u†	20m	35	20m	20ps		PD211	
35#	LN16BP	2#	1.7 †	30m	60m	30m	4.0	28*	660n	200u†	20m	15	20m	20ps		PD321	
36#	LN25	2#	1.7 †	30m	60m*	30m	3.0	27*	660n	1.5m	20m	35	20m	20ps		PD212	
37#	LN25D	2#	1.7 †	30m	60m*	30m	3.0	27*	660n	1.0m	20m	70	20m	20p		PD212	
38	HEMT-6000	2	1.8 †	10m	50m*	20m	5.0	5A	700n	625u	10m	16	10m	70n#		PD180	
39	NSL5050	2	1.8 †	20m	180m		5.0	4A*	660n	1.8m	20m	50	40n	50n		PD28b	
40	NSL5052	2*	1.8 †	20m	180m		5.0	4A*	660n	1.3m	20m	50	40n	50n		PD28b	
41	NSL5053	2#	1.8 †	20m	180m		5.0	4A*	660n	800u	20m	65	40n	50n		PD28b	
42	NSL5056	2#	1.8 †	20m	180m		5.0	4A*	660n	1.3m	20m	55	40n	50n		PD28b	
43	NSL5057	2#	1.8 †	20m	180m		5.0	4A*	660n	2.0m	20m	10	40n	50n		PD28b	
44#	GL3AR3	2	1.9 †	10m	80m*	40m	4.0	27*	655n	200u	10m		10m	40p		PD279	
45#	LN23SCP	2	1.9 †	20m	75m	25m	4.0	16	700n	700u†	10m		100n			PD118a	
46#	LN23SRP	2#	1.9 †	20m	75m*	25m	4.0	17*	700n	100u	10m		10m	100n		PD118a	
47#	LN23SWP	2#	1.9 †	20m	75m*	25m	4.0	17*	700n	100u	10m		10m	100n		PD118a	
48#	GL2AR1	2	1.9 †	20m	80m*	40m	4.0	28*	655n	120u	20m			40p		PD333	
49#	GL3AR1	2#	1.9 †	20m	80m	40m	4.0	27*	655n	500u	20m			40p		PD279	
50#	GL3AR2	2#	1.9 †	20m	80m	40m	4.0	27*	655n	500u	20m			40p		PD279a	
51#	SR105C	2	1.9 †	30m	80m*	40m	3.0	X8#	660n	4.0m†	20m			35n		PD255	
52#	SR105D	2#	1.9 †	30m	80m*	40m	3.0	X8#	660n	4.0m†	20m			35n		PD255	
53#	SR105W	2	1.9 †	30m	80m*	40m	3.0	X8#	660n	4.0m†	20m			35n		PD255	
54#	GL4AR2	2	1.9 †	30m	100m*	50m	4.0	28*	655n	700u	20m		30m	40p		PD279b	
55#	GL5AR1	2#	1.9 †	30m	100m	50m	4.0	28*	655n	1.0m	30m		30m	40p		PD280	
56#	GL5AR2	2#	1.9 †	30m	100m	50m	4.0	28*	655n	1.0m	30m		30m	40p		PD280a	
57#	GL5AR	2	1.9 †	30m	100m	50m	4.0	28*	655n	1.0m	30m	80				PD128b	
58#	SR101C	2	1.9 †	30m	100m*	50m	3.0	X8#	660n	2.0m†	30m	30	35n	100p		PD12t	
59#	SR102	2	1.9 †	30m	100m*	50m	3.0	X8#	660n	3.0m†	30m	20	35n	5.0n		PD12u	
60#	SR103C	2#	1.9 †	30m	100m*	50m	3.0	X8#	660n	3.0m†	30m		35n			PD254	
61#	SR103D	2#	1.9 †	30m	100m*	50m	3.0	X8#	660n	3.0m†	30m		35n			PD254	
62#	SR103W	2	1.9 †	30m	100m*	50m	3.0	X8#	660n	3.0m†	30m		35n			PD254	
63#	SR104D	2#	1.9 †	30m	100m	50m	3.0	X8#	660n	2.0m†	30m	80	35n	100p		PD12t	
64#	SR104DA	2#	1.9 †	30m	100m	50m	3.0	X8#	660n	500u	30m	80	30m	35n		PD373	
65	MV55	2	2.0	3.0m	6.0m*	4.0m	3.0	5A*	660n	100 ∅	3.0m		20n	20p		PD64	
66	521-9195	2#	2.0	3.0m	80m	40m	3.0	5A*	650n	200u	3.0m	40	3.0m	20n	1.0n#	PD64	
67	547-2001	2#	2.0	3.0m	80m	40m	3.0	5A	650n	2.0m	20m	70	20n	20p		PD378	
68	RL55	2#	2.0	3.0m	80m	40m	3.0	5A	660n	200u	3.0m		20n	20p		PD64	
69#	COY88	2	2.0	5.0m	20m*	10m	3.0	XA#	650n	500u	5.0m	50	20n	30p		PD120b	
70#	AL112A	2	2.0	10m		11m			67*	1.0k\$	10m					PD310	
71#	AL112B	2	2.0	10m		11m			67*	600 \$	10m					PD310	
72#	AL112D	2	2.0	10m		11m			67*	150 \$	10m					PD310	
73#	AL112E	2	2.0	10m		11m			67*	1.0k\$	10m					PD310	
74#	AL112G	2	2.0	10m		11m			67*	350 \$	10m					PD310	
75#	AL112I	2	2.0	10m		11m			67*	250 \$	10m					PD310	
76#	AL112SZ	2	2.0	10m		11m			67*	600 \$	10m					PD310	
77#	AL112V	2	2.0	10m		11m			67*	250 \$	10m					PD310	
78#	AL307	2	2.0	10m		40m	2.0		67*	660n	600u	10m	20			CE	
79#	GL31AR8	2*	2.0	10m	60m	30m	4.0	28*	655n	50u	10m	120	10m			PD118b	
80	HP5082-4100	2#	2.0	10m	100m	50m	3.0	5A*	655n	700u†	10m	45	25n	100p		PD180	
81	HP5082-4101	2#	2.0	10m	100m	50m	3.0	5A*	655n	500u	10m	45	25n	15n	100p		PD180
82	OPL270	2#	2.0 †	10m	150m	50m	3.0			3.0m†	10m					PD50q	
83	OPL1270	2#	2.0 †	10m	150m	50m	3.0			3.0m†	10m					PD15c	
84	MV50152	2*	2.0	10m	180m*	100m*	5.0	5A*	660n	600u	10m	70	10m	20n	30p	CA	
85	MV50154	2#	2.0	10m	180m*	100m*	5.0	5A*	660n	400u	10m	80	10m	20n	30p	CA	
86	NSL5027Δ	2#	2.0	10m	180m		5.0	4A*	660n	2.0m	10m		50n			PD47a	
87	RL20-03	2#	2.0	20m		100m				800u	20m					PD50f	
88	RL21-03	2#	2.0	20m		100m				800u	20m					PD16a	
89	RL50-03	2#	2.0	20m		40m				300u	20m					PD81	
90	RL55-5	2#	2.0	20m		40m				800u	20m					PD64	
91	RL4480	2#	2.0	20m		40m				300u	20m					PD82	
92	RL4480-1	2#	2.0	20m		40m				1.0m	20m					PD82	
93	RL4480-2	2#	2.0	20m		40m				2.0m	20m					PD82	
94	RL4480-5	2#	2.0	20m													

## 2. EMITTER: LIGHT EMITTING DIODE

IN ORDER OF: (1) COLOR CODE (2) MAX. FWD. VOLT-VF  
(3) IF TEST (4) PWR DISS-Pcase & (5) TYPE No.

LINE No.	TYPE No.	COLOR CODE	MAXIMUM RATINGS @ 25°C			TEMP. RNG. CODE	PEAK WAVE-LENGTH λp (m)	LUMINOUS INTENSITY		BEAM ANGLE θHI (°)	SPECTRAL BAND WIDTH Δλ (m)	RESP. TIME (S)	CAPAC. C (F)	MATERIAL & FEATURES MAT	LEAD CODE	DRAWING Ø-RND. Δ-RECT. *-CHIP		
			FORWARD VOLT VF (V)	IF TEST (A)	MAX. PWR. DISS. Pcase (W)			DC FWD CURR. IF (A)	REV. VOLT VR (V)								(cd)	IF TEST (A)
1	MV50	2S 2.0	20m	80m*	40m	5.0	5A*	660n	1.4m†	20m	80	20m	20n	50n#	CA	B	PD88Ø	
2	MV54	2S 2.0	20m	80m*	40m	5.0	5A*	660n	1.0m†	20m	20m	20m	20n	50n#	CA	B	PD88Ø	
3	RL50	2* 2.0	20m	80m	40m	3.0	5A	650n	300u	20m	20m	20m	1.0n	90p	CA	A	PD81Ø	
4	RL50-01	2S 2.0	20m	80m	40m	3.0	5A	650n	300u	20m	20m	20m	1.0n	90p	CA	A	PD81Ø	
5	RL54	2S 2.0	20m	80m	40m	3.0	5A	650n	800u†	20m	20m	20m	1.0n	90p	CA	A	PD82Ø	
6	RL209	2S 2.0	20m	80m*	40m	3.0	5A	650n	300u	20m	20m	20m	1.0n	90p	CA	A	PD82Ø	
7	RL209Δ	2S 2.0	20m	80m	40m	3.0	5A	650n	300u	20m	20m	20m	1.0n	90p	CA	A	PD82Ø	
8	RL209-1	2S 2.0	20m	80m*	40m	3.0	5A	650n	1.0m	20m	20m	20m	1.0n	90p	CA	A	PD82Ø	
9	RL209-02	2* 2.0	20m	80m	40m	3.0	5A	650n	300u	20m	20m	20m	1.0n	90p	CA	A	PD82Ø	
10	RL209-2	2S 2.0	20m	80m*	40m	3.0	5A	650n	2.0m	20m	20m	20m	1.0n	90p	CA	A	PD82Ø	
11	RL209-04	2* 2.0	20m	80m*	40m	3.0	5A	650n	300u	20m	20m	20m	1.0n	90p	CA	A	PD82Ø	
12	RL209A	2S 2.0	20m	80m*	40m	3.0	5A	650n	500u	20m	20m	20m	1.0n	90p	CA	A	PD82Ø	
13	RL4484	2S 2.0 †	20m	80m	40m	3.0	5A*	650n	800u†	20m	20m	20m	1.0n	90p	CA	A	PD82Ø	
14	RLT1	2S 2.0	20m	80m	40m	3.0	5A	650n	300u	20m	20m	20m	1.0n	90p	CA	A	PD15aØ	
15	RLT1-02	2* 2.0	20m	80m	40m	3.0	5A	650n	300u	20m	20m	20m	1.0n	90p	CA	A	PD15aØ	
16#	SR106C	2* 2.0	20m	80m*	40m	3.0	X8S	660n	1.5m†	20m	20m	20m	35n	50p	CA	A	PD256Ø	
17#	SR106D	2S 2.0	20m	80m*	40m	3.0	X8S	660n	1.5m†	20m	20m	20m	35n	50p	CA	A	PD256Ø	
18	1N5765	2 2.0	20m	85m	50m	4.0	5A*	630nØ	500u	20m	20m	20m	300p	50p	CA	B	PD84Ø	
19	HP5082-4420	2S 2.0	20m	90m*	50m*	4.0	5A*	655n	500u	20m	60	10m	23n	10n	200p	CA	B	PD84Ø
20#	LN21CP	2* 2.0 †	20m	90m*	20m	4.0	17*	700n	500u	15m	10m	100n	100n	10n	200p	BD	A	PD215Ø
21#	LN21RCP	2* 2.0 †	20m	90m*	20m	4.0	17*	700n	500u	15m	10m	100n	100n	10n	200p	BD	A	PD215Ø
22#	LN21RP	2S 2.0 †	20m	90m*	20m	4.0	17*	700n	400u	15m	10m	100n	100n	10n	200p	BD	A	PD215Ø
23#	LN21WP	2S 2.0 †	20m	90m*	20m	4.0	17*	700n	400u	15m	10m	100n	100n	10n	200p	BD	A	PD215Ø
24	521-9216	2S 2.0	20m	100m	50m	3.0	5A*	655n	300u	20m	60	10m	100n	10n	200p	CA	B	PD77Ø
25	551-0405	2S 2.0	20m	100m	50m	3.0	5A	655n	300u†	20m	60	25n	25n	10n	200p	CA	B	PD84Ø
26	5082-4420	2S 2.0	20m	100m	50m	4.0	5A	655n	500u	20m	60	25n	25n	10n	200p	CA	B	PD369Ø
27	5082-4787	2S 2.0	20m	100m	50m	4.0	5A	655n	500u	20m	60	25n	25n	10n	200p	CA	B	PD16kØ
28	CM4-43B	2S 2.0	20m	100m	50m	5.0	5A*	660n	300u	20m	90	20m	20m	50n	23p	CA	A	PD33aØ
29	CM4-73A	2S 2.0	20m	100m	50m	5.0	5A*	660n	800u	20m	70	20m	20m	50n	35p	CA	A	PD231Ø
30#	CQ10	2S 2.0	20m	100m*	50m	5.0	XA*	660n	3.5m	20m	50	20m	20m	80p	50p	CA	B	PD231Ø
31#	CQX25	2 2.0	20m	100m*	30m	5.0	2A*	660n	1.3m	20m	30	20m	20m	50p	50p	CA	A	PD120cØ
32#	CQX25N	2 2.0	20m	100m*	50m	5.0	2A*	660n	1.3m	20m	25	20m	20m	50p	50p	CA	A	PD393Ø
33#	CQX35	2 2.0	20m	100m*	30m	5.0	2A*	660n	6.0m	20m	30	20m	20m	50p	50p	CA	A	PD232bØ
34#	CQY24A	2 2.0	20m	100m*	50m	3.0	5A*	650n	500u	20m	70	20m	20m	60p	60p	CA	B	PD196aØ
35#	CQY24A-I	2S 2.0	20m	100m	50m	3.0	5A*	650n	500u	20m	70	20m	20m	60p	60p	CA	B	PD196aØ
36#	CQY24A-II	2S 2.0	20m	100m	50m	3.0	5A*	650n	1.0m	20m	70	20m	20m	60p	60p	CA	B	PD196aØ
37#	CQY24A-III	2S 2.0	20m	100m	50m	3.0	5A*	650n	1.6m	20m	70	20m	20m	60p	60p	CA	B	PD196aØ
38#	CQY24B	2 2.0	20m	100m*	50m	3.0	XA*	650n	500u	20m	55	20m	20m	60p	60p	CA	†	PD406
39#	CQY24B-I	2 2.0	20m	100m*	50m	3.0	XA*	650n	700u	20m	55	20m	20m	60p	60p	CA	†	PD406
40#	CQY24B-II	2 2.0	20m	100m*	50m	3.0	XA*	650n	1.0m	20m	55	20m	20m	60p	60p	CA	†	PD406
41#	CQY24B-III	2 2.0	20m	100m*	50m	3.0	XA*	650n	1.6m	20m	55	20m	20m	60p	60p	CA	†	PD406
42#	CQY24B-IV	2 2.0	20m	100m*	50m	3.0	XA*	650n	3.0m	20m	55	20m	20m	60p	60p	CA	†	PD406
43#	CQY40L	2S 2.0	20m	100m	50m	5.0	2A*	660n	800u	20m	80	20m	20m	80p	130p	BC	B	PD232Ø
44#	CQY41	2 2.0	20m	100m	50m	3.0	2A*	660n	400u	20m	40	20m	20m	130p	130p	CA	A	PD11Ø
45#	CQY41N	2 2.0	20m	100m	50m	5.0	2A*	660n	800u	20m	40	20m	20m	50p	50p	CA	A	PD394Ø
46#	CQY46	2 2.0	20m	100m*	50m	3.0	4A*	650n	400u	20m	100	20m	20m	60p	60p	CA	A	PD119Ø
47#	CQY47	2 2.0	20m	100m*	50m	3.0	4A*	650n	400u	20m	100	20m	20m	60p	60p	CA	A	PD119Ø
48#	CQY54	2S 2.0	20m	100m*	50m	3.0	5A*	650n	900u	20m	80	20m	20m	60p	60p	CA	B	PD120bØ
49#	CQY61B	2 2.0	20m	100m*	50m	3.0	5A*	650n	1.5m	20m	70	20m	20m	60p	60p	CA	A	PD33f
50#	CQY65	2 2.0	20m	100m*	40m	3.0	4A*	650n	1.2m	20m	20m	20m	20m	10n	10n	CA	M	PD228Ø
51#	CQY79	2* 2.0	20m	100m*	50m	3.0	XA*	650n	400u†	5.0m	140	20m	20m	20m	20m	CA	A	PD228Ø
52#	CQY85	2S 2.0	20m	100m*	50m	5.0	2A*	660n	800u	20m	90	20m	20m	80p	80p	CA	B	PD13cØ
53#	CQY85NA	2 2.0	20m	100m	50m	5.0	2A*	660n	800u	20m	60	20m	20m	50p	50p	CA	A	PD393Ø
54#	CQY85NB	2 2.0	20m	100m	50m	5.0	2A*	660n	2.0m	20m	60	20m	20m	50p	50p	CA	A	PD393Ø
55	FLV152	2 2.0	20m	100m	50m	3.0	5C*	665n	2.0m	10m	70	20m	20m	15n	200p	CA	A	PD50aØ
56	HP5082-4403	2S 2.0	20m	100m	50m	3.0	5A*	655n	800u	20m	70	20m	20m	15n	200p	CA	B	PD13dØ
57	HP5082-4415	2S 2.0	20m	100m	50m	3.0	5A*	655n	800u	20m	70	20m	20m	15n	200p	CA	B	PD80aØ
58	HP5082-4440	2S 2.0	20m	100m	50m	3.0	5A*	655n	300u	20m	70	20m	20m	15n	200p	CA	B	PD13dØ
59	HP5082-4444	2S 2.0	20m	100m	50m	3.0	5A*	655n	300u	20m	70	20m	20m	15n	200p	CA	B	PD80aØ
60	HP5082-4480	2S 2.0	20m	100m*	50m	3.0	5A*	655n	300u	20m	130	20m	20m	15n	200p	CA	B	PD77aØ
61	HP5082-4483	2S 2.0	20m	100m*	50m	3.0	5A*	655n	300u	20m	130	20m	20m	15n	200p	CA	B	PD77aØ
62	HP5082-4484	2S 2.0	20m	100m*	50m*	3.0	5A*	655n	800u†	20m	130	20m	20m	10n	100p	CA	B	PD77Ø
63	HP5082-4486	2* 2.0	20m	100m*	50m	3.0	5A*	655n	300u	20m	40	20m	20m	15n	200p	CA	B	PD77aØ
64	HP5082-4487	2* 2.0	20m	100m*	50m*	3.0	5A*	655n	800u†	20m	120	20m	20m	10n	100p	CA	B	PD13bØ
65	HP5082-4488	2* 2.0	20m	100m*	50m*	3.0	5A*	655n	800u†	20m	120	20m	20m	10n	100p	CA	B	PD13bØ
66	HP5082-4494	2S 2.0	20m	100m*	50m*	3.0	5A*	655n	800u	20m	130	20m	20m	10n	100p	CA	B	PD77Ø
67	HP5082-4790	2S 2.0	20m	100m*	50m*	3.0	5A*	655n	800u	20m	60	19n	19n	15n	100p	CA	A	PD50kØ
68	HP5082-4791	2S 2.0	20m	100m*	50m*	3.0	5A*	655n	1.6m	20m	60	19n	19n	15n	100p	CA	A	PD50kØ
69	HP5082-4850	2S 2.0	20m	100m*	50m*	3.0	5A*	655n	800u†	20m	100	20m	20m	10n	100p	CA	A	PD62Ø
70	HP5082-4855	2S 2.0	20m	100m*	50m*	3.0	5A*	655n	800u	20m	100	20m	20m	10n	100p	CA	A	PD62Ø
71	HP5082-4880	2S 2.0	20m	100m	50m	3.0	5A*	655n	500u	20m	70	20m	20m	10n	200p	CA	B	PD13Ø
72	HP5082-4881	2S 2.0	20m	100m	50m	3.0	5A*	655n	1.0m	20m	70	20m	20m	10n	200p	CA	B	PD13Ø
73	HP5082-4882	2S 2.0	20m	100m	50m	3.0	5A*	655n	1.6m	20m	70	20m	20m	10n	200p	CA	B	PD13Ø
74	HP5082-4883	2* 2.0	20m	100m	50m	3.0	5A*	655n	500u	20m	50	20m	20m	10n	200p	CA	B	PD13Ø
75	HP5082-4884	2* 2.0	20m	100m	50m	3.												

## 2. EMITTER: LIGHT EMITTING DIODE

IN ORDER OF: (1) COLOR CODE (2) MAX. FWD. VOLT. VF  
(3) IF TEST (4) PWR DISS. Pcase & (5) TYPE No.

LINE No.	TYPE No.	COLOR CODE	1		2		MAX. RATINGS @ 25°C			TEMP. RING. CODE	PEAK WAVE-LENGTH (nm)	LUMINOUS INTENSITY (cd)	BEAM ANGLE (°)	SPECTRAL BAND WIDTH (nm)	RESPI. TIME (S)	CAPAC. C (F)	MATERIAL & FEATURES MAT	LEAD CODE	DRAWING Δ-RECT. Δ-STRIP * CHIP
			FORWARD VOLT (V)	IF TEST (A)	MAX. PWR. DISS. Pcase (W)	DC FWD CURR. IF (A)	REV. VOLT VR (V)	MAX. FWD. REV. VOLT (V)	TEMP. RING. CODE										
1	MV5075C	2	2.0	20m	100m*	50m	5.0	5A*	660n	1.0m†	20m	90	20n	23p	CA	A	PD16s		
2	MV5077B	2	2.0	20m	100m*	50m	5.0	5A*	660n	1.7m†	20m	110	20n	23p	CA	A	PD16s		
3	MV5077C	2	2.0	20m	100m*	50m	5.0	5A*	660n	1.7m†	20m	110	20n	23p	CA	A	PD16s		
4	NLS5072A	2Δ	2.0	20m	100m	50m	5.0	5A	660n	150u	20m	60	20m	40n	50n	75p	CA	A	PD403s
5	NLS5076A	2S	2.0	20m	100m	50m	5.0	5A	660n	150u	20m	60	20m	40n	50n	75p	CA	A	PD403s
6	NLS5077A	2S	2.0	20m	100m	50m	5.0	5A	660n	150u	20m	50	20m	40n	50n	75p	CA	A	PD403s
7	NLS5080	2*	2.0	20m	100m	1.0 §	3.0	4A*	660n	300u	20m	50	20m	50n	50n	75p	CA	B	PD77b
8	NLS5081	2S	2.0	20m	100m	1.0 §	3.0	4A*	660n	300u	20m	60	20m	50n	50n	75p	CA	B	PD77b
9	NLS5082	2*	2.0	20m	100m	1.0 §	3.0	4A*	660n	300u	20m	50	20m	50n	50n	75p	CA	B	PD77b
10	NLS5086	2S	2.0	20m	100m	1.0 §	3.0	4A*	660n	300u	20m	60	20m	50n	50n	75p	CA	B	PD77b
11#	V168P	2S	2.0	20m	100m*	50m	5.0	XA§	660n	2.0m	20m	80	20n	200p	EA	A	PD18s		
12	XC1170	2S	2.0	20m	100m*	50m	5.0	5A*	655n	500u	20m	70	40n	15n	200p	EA	B	PD232s	
13	XC2090	2S	2.0	20m	100m*	50m	5.0	5A*	655n	600u	20m	70	40n	15n	200p	EA	B	PD18s	
14	XC4850-5VR	2S	2.0	20m	100m*	50m	5.0	5A*	655n	400u	20m	80	40n	15n	200p	EA	B	PD340s	
15	XC5054-1	2S	2.0	20m	100m*	50m	5.0	5A*	655n	1.0m	10m	30	40n	15n	200p	EA	A	PD18s	
16	XC5054-2	2S	2.0	20m	100m*	50m	5.0	5A*	655n	2.0m	10m	30	40n	15n	200p	EA	A	PD18s	
17	XC5210	2S	2.0	20m	100m*	50m	5.0	5A*	655n	600u	20m	70	40n	15n	200p	EA	A	PD17s	
18	XC5260	2S	2.0	20m	100m*	50m	5.0	5A*	655n	600u	20m	70	40n	15n	200p	EA	B	PD17s	
19	XC5560	2S	2.0	20m	100m*	50m	5.0	5A*	655n	600u	20m	30	40n	15n	200p	EA	A	PD18s	
20	521-9165	2S	2.0	20m	120m	50m	3.0	5A*	665n	2.0m†	20m	100	20m	50n	10n#	CA	A	PD50c	
21	521-9166	2S	2.0	20m	120m	50m	3.0	5A*	665n	2.0m†	20m	100	20m	50n	10n#	CA	A	PD50c	
22	521-9180	2S	2.0	20m	120m	50m	3.0	5A*	665n	2.0m†	20m	100	20m	50n	10n#	CA	A	PD15d	
23	521-9190	2	2.0	20m	120m	50m	3.0	5A*	665n	800u	20m	100	20m	50n	10n#	CA	A	PD50c	
24	521-9212	2S	2.0	20m	120m	50m	3.0	5A*	665n	800u	20m	100	20m	50n	10n#	CA	A	PD52d	
25	549-0101	2S	2.0	20m	120m	50m	3.0	4A	655n	2.0m†	20m	70	20m	25n	25n	CA	A	PD379s	
26	FLV110Δ	2S	2.0	20m	120m*	50m	3.0	5C§	665n	800u	20m	70	20m	25n	25n	CA	A	PD50w	
27	FLV140	2S	2.0	20m	120m*	50m	3.0	5C§	665n	800u	20m	70	20m	25n	25n	CA	A	PD50w	
28	FLV150	2S	2.0	20m	120m*	50m	3.0	5C§	665n	800u	20m	70	20m	25n	25n	CA	A	PD50w	
29	FLV160	2S	2.0	20m	120m*	50m	3.0	5C§	665n	800u	20m	70	20m	25n	25n	CA	A	PD50w	
30	MV5094	2	2.0	20m	140m*	70m	5.0	5A*	660n	800u	20m	70	20m	25n	25n	CA	A	PD52b	
31	JAN1N5765	2	2.0	20m	150m*	50m	5.0	6A§	665n	500u	20m	70	20m	300p	CA	B	PD84s		
32	CQX28	2	2.0	20m	150m	50m	5.0	5A%	660n	800u	20m	50	20m	80p	CA	A	PD395s		
33	CM4-20%	2*	2.0	20m	180m	100m	5.0	5A*	660n	600u	20m	90	20m	35p	CA	A	PD28s		
34	CM4-21	2S	2.0	20m	180m	100m	5.0	5A*	660n	400u	20m	90	20m	50n	35p	CA	A	PD28s	
35	CM4-22%	2*	2.0	20m	180m	100m	5.0	5A*	660n	600u	20m	90	20m	50n	35p	CA	A	PD28s	
36	CM4-23%	2S	2.0	20m	180m	100m	5.0	5A*	660n	100u	20m	180	20m	50n	35p	CA	A	PD28s	
37	CM4-80B	2*	2.0	20m	180m	100m	5.0	5A*	660n	400u	20m	70	20m	50n	30p	CA	A	PD33d	
38	CM4-81B	2S	2.0	20m	180m	100m	5.0	5A*	660n	300u	20m	80	20m	50n	30p	CA	A	PD33d	
39	CM4-82B	2*	2.0	20m	180m	100m	5.0	5A*	660n	400u	20m	70	20m	50n	30p	CA	A	PD33d	
40	CM4-84B	2S	2.0	20m	180m	100m	5.0	5A*	660n	800u	20m	80	20m	50n	30p	CA	A	PD33d	
41	CM4-84B-1	2	2.0	20m	180m	100m	5.0	5A	660n	1.0m	20m	80	20m	50n	30p	CA	A	PD33d	
42	ED553R	2	2.0	20m	180m*	100m*	3.0	58§	665n	450u	30m	90	28n	50n#	80p	CA	A	PD28d	
43#	MIL51	2S	2.0	20m	180m*	70m	5.0	4A	660n	500u	20m	65	20m	40n	30p	CA	A	PD258s	
44#	MIL52	2*	2.0	20m	180m*	70m	5.0	4A	660n	500u	20m	50	20m	40n	30p	CA	A	PD258s	
45#	MIL58	2Δ	2.0	20m	180m*	70m	5.0	4A	660n	500u	20m	50	20m	40n	30p	CA	A	PD258s	
46#	MIL59	2	2.0	20m	180m*	70m	5.0	4A	660n	500u	20m	50	20m	40n	30p	CA	A	PD258s	
47#	MIL517	2S	2.0	20m	180m*	70m	5.0	4A	660n	2.0m	20m	65	20m	40n	30p	CA	A	PD258s	
48#	MIL527	2*	2.0	20m	180m*	70m	5.0	4A	660n	2.0m	20m	65	20m	40n	30p	CA	A	PD258s	
49#	MIL587	2Δ	2.0	20m	180m*	70m	5.0	4A	660n	2.0m	20m	50	20m	40n	30p	CA	A	PD258s	
50#	MIL597	2	2.0	20m	180m*	70m	5.0	4A	660n	2.0m	20m	65	20m	40n	30p	CA	A	PD258s	
51#	MILB51	2S	2.0	20m	180m*	70m	5.0	4A	660n	500u	20m	40	20m	40n	30p	CA	A	PD258s	
52#	MILB52	2*	2.0	20m	180m*	70m	5.0	4A	660n	500u	20m	40	20m	40n	30p	CA	B	PD16j	
53#	MILB58	2Δ	2.0	20m	180m*	70m	5.0	4A	660n	500u	20m	20	20m	40n	30p	CA	B	PD16j	
54#	MILB59	2S	2.0	20m	180m*	70m	5.0	4A	660n	500u	20m	20	20m	40n	30p	CA	B	PD16j	
55#	MILB517	2S	2.0	20m	180m*	70m	5.0	4A	660n	2.0m	20m	40	20m	40n	30p	CA	A	PD16z	
56#	MILB527	2*	2.0	20m	180m*	70m	5.0	4A	660n	2.0m	20m	20	20m	40n	30p	CA	A	PD16z	
57#	MILB587	2Δ	2.0	20m	180m*	70m	5.0	4A	660n	2.0m	20m	20	20m	40n	30p	CA	A	PD16z	
58#	MILB597	2#	2.0	20m	180m*	70m	5.0	4A	660n	2.0m	20m	20	20m	40n	30p	CA	A	PD16z	
59#	MILS51	2S	2.0	20m	180m*	70m	5.0	4A	660n	2.0m	20m	40	20m	40n	30p	CA	A	PD16z	
60#	MILS52	2*	2.0	20m	180m*	70m	5.0	4A	660n	500u	20m	65	20m	40n	30p	CA	A	PD258a	
61#	MILS58	2Δ	2.0	20m	180m*	70m	5.0	4A	660n	500u	20m	50	20m	40n	30p	CA	A	PD258a	
62#	MILS59	2	2.0	20m	180m*	70m	5.0	4A	660n	500u	20m	50	20m	40n	30p	CA	A	PD258a	
63#	MILS517	2S	2.0	20m	180m*	70m	5.0	4A	660n	2.0m	20m	65	20m	40n	30p	CA	A	PD258a	
64#	MILS527	2*	2.0	20m	180m*	70m	5.0	4A	660n	2.0m	20m	65	20m	40n	30p	CA	A	PD258a	
65#	MILS587	2Δ	2.0	20m	180m*	70m	5.0	4A	660n	2.0m	20m	50	20m	40n	30p	CA	A	PD258a	
66#	MILS597	2#	2.0	20m	180m*	70m	5.0	4A	660n	2.0m	20m	50	20m	40n	30p	CA	A	PD258a	
67#	MILB51	2S	2.0	20m	180m*	70m	5.0	4A	660n	500u	20m	40	20m	40n	30p	CA	A	PD50n	
68#	MILB52	2*	2.0	20m	180m*	70m	5.0	4A	660n	500u	20m	20	20m	40n	30p	CA	A	PD50n	
69#	MILB58	2Δ	2.0	20m	180m*	70m	5.0	4A	660n	500u	20m	20	20m	40n	30p	CA	A	PD50n	
70#	MILB59	2	2.0	20m	180m*	70m	5.0	4A	660n	500u	20m	20	20m	40n	30p	CA	A	PD50n	
71#	MILB517	2S	2.0	20m	180m*	70m	5.0	4A	660n	500u	20m	40	20m	40n	30p	CA	A	PD50z	
72#	MILB527	2*	2.0	20m	180m*	70m	5.0	4A	660n	2.0m	20m	40	20m	40n	30p	CA	A	PD50z	
73#	MILB587	2Δ	2.0	20m	180m*	70m	5.0	4A	660n	2.0m	20m	20	20m	40n	30p	CA	A	PD50z	
74#	MILB597	2#	2.0	20m	180m*	70m	5.0	4A	660n	2.0m	20m	20	20m	40n	30p	CA	A	PD50z	
75	MV5020Δ	2*	2.0	20m	180m*	70m	5.0	5A*	660n	2.0m	20m	90	20m	20n	50n#	35p	CA	A	PD89z
76	MV5021	2S	2.0	20m	180m*	100m	5.0	5A*	660n	1.6m†	20m	90	20m	20n	50n#	35p	CA	A	PD89z
77	MV5022A	2																	



## 2. EMITTER: LIGHT EMITTING DIODE

IN ORDER OF: (1) COLOR CODE (2) MAX. FWD. VOLT-VF  
(3) IF TEST (4) PWR DISS-Peak & (5) TYPE No.

LINE No.	TYPE No.	MAXIMUM RATINGS @ 25°C			TEMP RNG.	PEAK WAVE-LENGTH	LUMINOUS INTENSITY	BEAM ANGLE	SPECTRAL BAND	RESP. TIME	CAPAC C	MATERIAL & FEATURES	LEAD CODE	DRAWING					
		1. COLOR CODE	2. FORWARD VOLT VF (V)	3. IF TEST (A)											4. PWR. DC FWD CURR. IF (A)				
1	CM4-25	2s	2.0	20m	180	100m	5.0	5A*	660n	400u	20m	90	20m	20n	50n	CA	A	PD28e0	
2#	LN22	2	2.0	25m	50m*	25m	3.0	2A*	670n	3.0k0	20m	40	20m	20n		CA	A	PD1240	
3#	LN23	2	2.0	25m	50m*	25m	3.0	2A*	670n	1.5k0	20m	60	20m	20n		CA	A	PD1240	
4#	LN26D	2	2.0	30m	60m*	30m	3.0	28	660n	1.2m†	20m	15	20m	20n		CA	A	PD222	
5#	LN27CP	2*	2.0	30m	100m*	35m	4.0	17*	700n	500u	15m		10m	100n		BD	A	PD1226	
6#	LN27RCP	2*	2.0	30m	100m*	35m	4.0	17*	700n	500u	15m		10m	100n		BD	A	PD1260	
7#	LN27WP	2s	2.0	30m	100m*	35m	4.0	17*	700n	300u	15m		10m	100n		BD	A	PD1260	
8#	LN27WP	2s	2.0	30m	100m*	35m	4.0	17*	700n	300u	15m		10m	100n		BD	A	PD1260	
9	6080-002-304	2	2.0	40m			5.0		8.0m	40m		140	40m					PD2260	
10	6080-900-304	2	2.0	40m			5.0		3.2m	40m		140	40m					PD2260	
11	6340-002-505R	2	2.0	40m			5.0		13m	40m		140	40m			Lug Wire		PD2270	
12	6340-302-505R	2	2.0	40m			5.0		13m	40m		140	40m					PD2270	
13	RL4484Δ	2s	2.0	50m	80m	40m	3.0	5A	650n	800u	20m		40n		115p	CA	A	PD820	
14#	QV46A	2s	2.0	50m	100m	50m	3.0		650n	800u	20m	100						PD1960	
15	MV10B	2s	2.0	50m	175m*	70m	3.0	5A*	660n	800u†	10m	90	20n	50n	135p	CA	A	PD12c0	
16	RL2Δ	2s	2.0	50m	200m	100m	3.0	5A	650n	1.5m†	50m		40n		115p	CA	A	PD50e0	
17	RL2-02Δ	2s	2.0	50m	200m	100m	3.0	5A	650n	1.5m†	50m		40n		115p	CA	A	PD50e0	
18	RL20-02	2*	2.0	50m	200m	100m	3.0	5A	650n	1.2m†	20m		40n		115p	CA	A	PD50f0	
19	RL21-02	2*	2.0	50m	200m	100m	3.0	5A	650n	800u†	20m		40n		115p	CA	A	PD830	
20	RL200Δ	2s	2.0	50m	200m	100m	3.0	5A	650n	2.0m	20m		40n		35p	CA	A	PD830	
21	RL5054-1Δ	2s	2.0	50m	200m	100m	3.0	5A	650n	1.0m	10m		40n		35p	CA	A	PD830	
22	RL5054-2Δ	2s	2.0	50m	200m	100m	3.0	5A	650n	2.0m	10m		40n		35p	CA	A	PD830	
23#	LN21	2	2.0	65m	130m*	65m	3.0	2A*	670n	6.0k0	50m	55	50m	20n		CA	A	PD62a0	
24#	LN21W	2	2.0	65m	130m*	65m	3.0	2A*	670n	6.0k0	50m	55	50m	20n		CA	A	PD62a0	
25	E1020	2	2.0	100m					660n	50m				10n	100p			TO150	
26	LLL3	2	2.1	12m	100m	30m	3.0			1.0m†	12m							PD540	
27	MSL5	2	2.1	12m	100m	30m	3.0			2.0m†	12m							PD2130	
28	OPO04-30	2s	2.1	15m	225m	80m	4.0			800u†	15m								
29	OPO04-60	2s	2.1	15m	225m	80m	4.0			2.0m†	15m								
30	ORL6	2s	2.1	15m	225m	80m	3.0			2.0m†	15m								
31#	LN25CP	2	2.1	20m	70m	25m	4.0	28	700n	4.0m†	15m					BD	A	PD2120	
32#	LN25RCP	2	2.1	20m	70m*	25m	4.0	28*	700n	500u	15m	35	20m	100n		BD	A	PD2120	
33#	LN25RP	2s	2.1	20m	70m*	25m	4.0	28*	700n	400u	15m	70	20m	100n		BD	A	PD2120	
34#	LN26RP	2s	2.1	20m	70m*	25m	4.0	28*	700n	400u	15m	15	20m	100n		BD	A	PD222	
35#	LN28RP	2s	2.1	20m	70m	25m	4.0	28*	700n	1.5m†	15m		20m	100n				PD322	
36#	LN29RP	2	2.1	20m	70m	25m	4.0	28	700n	1.0m†	15m			100n		BD	A	PD322a0	
37#	LN210RP	2s	2.1	20m	70m	25m	4.0	28*	700n	400u†	15m		20m	100n				PD323	
38#	LN211RP	2	2.1	20m	70m	25m	4.0	28	700n	300u†	15m			100n		BD	A	PD361a0	
39#	LN211WP	2	2.1	20m	70m	25m	4.0	28	700n	400u†	15m			100n		BD	A	PD361a0	
40#	LN212RP	2	2.1	20m	70m	25m	4.0	28	700n	400u†	15m			100n		BD	A	PD362	
41#	LN213RP	2	2.1	20m	70m	25m	4.0	28	700n	400u†	15m			100n		BD	A	PD361	
42	AND700R	2Δ	2.1	20m	120m*	20m	5.0	48	650n	800u†	20m		20m	20n		CA	A	PD3920	
43	AND703R	2*	2.1	20m	120m*	20m	5.0	48	650n	800u†	20m		20m	20n		CA	A	PD3920	
44	AND704R	2s	2.1	20m	120m*	20m	5.0	48	650n	800u†	20m		20m	20n		CA	A	PD3920	
45	AND706R	2#	2.1	20m	120m*	20m	5.0	48	650n	800u†	20m		20m	20n		CA	A	PD3920	
46	AND710R	2Δ	2.1	20m	120m*	20m	5.0	48	650n	800u†	20m		20m	20n		CA	A	PD28r0	
47	AND713R	2*	2.1	20m	120m*	20m	5.0	48	650n	800u†	20m		20m	20n		CA	A	PD28r0	
48	AND714R	2s	2.1	20m	120m*	20m	5.0	48	650n	800u†	20m		20m	20n		CA	A	PD28r0	
49	AND716R	2#	2.1	20m	120m*	20m	5.0	48	650n	800u†	20m		20m	20n		CA	A	PD28r0	
50	AND720R	2Δ	2.1	20m	120m*	20m	5.0	48	650n	800u†	20m		20m	20n		CA	A	PD257c0	
51	AND723R	2*	2.1	20m	120m*	20m	5.0	48	650n	800u†	20m		20m	20n		CA	A	PD257c0	
52	AND724R	2s	2.1	20m	120m*	20m	5.0	48	650n	800u†	20m		20m	20n		CA	A	PD257c0	
53	AND726R	2#	2.1	20m	120m*	20m	5.0	48	650n	800u†	20m		20m	20n		CA	A	PD257c0	
54	AND740R	2Δ	2.1	20m	120m*	20m	5.0	48	650n	800u†	20m		20m	20n		CA	A	PD257b0	
55	AND743R	2*	2.1	20m	120m*	20m	5.0	48	650n	800u†	20m		20m	20n		CA	A	PD257b0	
56	AND744R	2s	2.1	20m	120m*	20m	5.0	48	650n	800u†	20m		20m	20n		CA	A	PD257b0	
57	AND746R	2#	2.1	20m	120m*	20m	5.0	48	650n	800u†	20m		20m	20n		CA	A	PD257b0	
58	AND750R	2Δ	2.1	20m	120m*	20m	5.0	48	650n	800u†	20m		20m	20n		CA	A	PD16v0	
59	AND753R	2*	2.1	20m	120m*	20m	5.0	48	650n	800u†	20m		20m	20n		CA	A	PD16v0	
60	AND754R	2s	2.1	20m	120m*	20m	5.0	48	650n	800u†	20m		20m	20n		CA	A	PD16v0	
61	AND756R	2#	2.1	20m	120m*	20m	5.0	48	650n	800u†	20m		20m	20n		CA	A	PD16v0	
62	1920P	2	2.1	25m	80m	30m	3.0	26	700n	10m†	25m					BD	A	PD2890	
63	1922P	2	2.1	25m	80m	30m	3.0	26	700n	10m†	25m					BD	A	PD2900	
64	MV5054-1Δ	2s	2.2	10m	125m	100m	5.0	5A*	660n	1.0m	10m	24		50n#	35p	CA	A	PD900	
65	MV5054-2Δ	2s	2.2	10m	125m	100m	5.0	5A*	660n	2.0m	10m	24		50n#	35p	CA	A	PD900	
66	MV5054-3Δ	2s	2.2	10m	125m	100m	5.0	5A*	660n	3.0m	10m	24		50n#	35p	CA	A	PD900	
67	MV5050	2s	2.2	20m	125m	100m	5.0	5A*	670n	2.0m†	20m	50	20m	20n	50n#	30p	CA	A	PD16a0
68	MV5051	2s	2.2	20m	125m	100m	5.0	5A*	670n	1.6m†	20m	72	20m	20n	50n#	30p	CA	A	PD16a0
69	MV5052	2s	2.2	20m	125m	100m	5.0	5A*	670n	2.0m†	20m	72	20m	20n	50n#	30p	CA	A	PD16a0
70	MV5053Δ	2s	2.2	20m	125m	100m	5.0	5A*	670n	1.6m†	20m	80	20m	20n	50n#	30p	CA	A	PD16a0
71	OPL1209	2s	2.2	20m	150m	50m	3.0			1.0m†	20m							PD15c0	
72	CM4-83-1	2s	2.2	20m	180m	100m	5.0	5A	660n	1.0m	10m	24	20m		50n				
73	CM4-83-2	2s	2.2	20m	180m	100m	5.0	5A*	660n	2.0m	10m	24		50n	35p	CA	A	PD900	
74	CM4-83-3	2s	2.2	20m	180m	100m	5.0	5A*	660n	3.0m	10m	24		50n	35p	CA	A	PD900	
75	CM4-83-3	2s	2.2	20m	180m	100m	5.0	5A*	660n	1.0m	10m	24	20m		50n	35p	CA	B	PD900
76	CM4-84B-0	2s	2.2	20m	180m	100m	5.0	5A*	660n	300u	20m	80		50n	30p	CA	A	PD160	
77	CM4-84B-2	2s	2.2	20m	180m	100m	5.0	5A*	660n	200u	20m	110		50n	30p	CA	A	PD160	
78	CM4-85B	2s	2.2	20m	180m	100m	5.0	5A*	660n	200u	20m	110		50n	30p	CA	A	PD160	
79	CM4-86B	2s	2.2	20m	180m	100m	5.0	5A*	660n	100u	20m	150		50n	30p	CA	A	PD160	
80	MV5055Δ	2s	2.2	20m	180m*	100m	5.0	5A*	670n	600u†	20m	150	20m	20n	50n#	30p	CA	A	PD16a0
81	MV5056Δ	2s	2.2	20m	180m*	100m	5.0	5A*	670n	800u†	20m	110	20m	20n	50n#	30p			

## 2. EMITTER: LIGHT EMITTING DIODE

IN ORDER OF: (1) COLOR CODE (2) MAX. FWD. VOLT. VF  
(3) IF TEST (4) PWR DISS. P<sub>case</sub> & (5) TYPE No.

LINE No.	TYPE No.	COLOR CODE	2 MAXIMUM FORWARD VOLT VF (V)	3 IF TEST (A)	MAX. RATINGS @ 25°C			TEMP RNG. CODE	PEAK WAVE-LENGTH (m)	LUMINOUS INTENSITY (cd)	BEAM ANGLE θHI (°)	SPECTRAL BANDWIDTH Δλ (m)	RESP. TIME (S)	CAPAC (F)	MATERIAL & FEATURES MAT	LEAD CODE	DRAWING NO. Δ-RECT. Δ-STRIP *-CHIP		
					4 PWR. DISS. P <sub>case</sub> (W)	DC FWD CURR. IF (A)	REV. VOLT VR (V)												
1	NSL5024%		2.4	10m	120m	50m	5.0	5A	697n	250u	10m	80			BD	A	PD170		
2	NSL5026%		2.4	10m	120m	50m	5.0	5A	697n	250u	10m	80			BD	A	PD170		
3	NSL5027%		2.4	10m	120m	50m	5.0	5A	697n	2.0m	10m	14			BD	A	PD170		
4	XC01		2.4	10m	150m*	50m	5.0	4A*	697n			95n	500n#		BD	A	PD3380		
5#	LD32C		2.4	20m	60m	25m			645n	2.5m	10m	50			A	B	PD770		
6#	LD1211		2.4	20m	25m				645n	500u	10m	70			A	B	PD3540		
7#	LD1211H		2.4	20m	25m				645n	800u	10m	70			A	A	PD3540		
8	CSL300L		2.4	25m	225m	80m				2.0m†	25m				BD	A	PD3300		
9	CSL310L#1		2.4	25m	225m	80m				2.0m†	25m				BD	A	PD3300		
10#	GPL2		2.5	10m		25m	6.0	X6*	700n	2.4m‡	10m		90n	300n#	BD	A	PD7k0		
11#	GPL100		2.5	10m		50m	6.0	X7‡	650n					300n#	BD	B	PD2450		
12#	GPL101		2.5	10m		50m	6.0	X7‡	650n					300n#	BD	B	PD2450		
13#	GPL102		2.5	10m		50m	6.0	X7‡	650n	2.3m†	10m			300n#	BD	B	PD2450		
14	HEMT-3300		2.5	10m	120m*	30m	5.0	5A	670n	4.4m	10m	22	10m	42n	CA	NearIR	PD160		
15#	SG204D		2.5	20m	100m*	50m	4.0	X8‡	565n	3.0m†	20m			120n#	BD	A	PD120		
16#	L39UR-R2-2111		2.5	35m	100m	35m	5.0	5A		3.0m†							PD3980		
17#	L39UR-R2-2311		2.5	35m	100m	35m	5.0	5A		3.0m†							PD3980		
18#	L45RN-R2-2111		2.5	35m	100m	35m	5.0	5A		3.0m†							PD3980		
19#	L45RN-R2-2311		2.5	35m	100m	35m	5.0	5A		3.0m†							PD3990		
20#	L46RN-R2-2111		2.5	35m	100m	35m	5.0	5A		3.0m†							PD3990		
21#	L46RN-R2-2311		2.5	35m	100m	35m	5.0	5A		3.0m†							PD3990		
22#	L58-R2-T		2.5	35m	100m	35m	5.0	5A		3.0m†							PD4000		
23#	L58-R2-W		2.5	35m	100m	35m	5.0	5A		3.0m†							PD4000		
24#	L59-R2-T		2.5	35m	100m	35m	5.0	5A		3.0m†							PD4010		
25#	L59-R2-W		2.5	35m	100m	35m	5.0	5A		3.0m†							PD4010		
26	FLV104A		2.5	100m	200m*	100m	3.0	5C*	670n	50m	100m	4.3	100m	20n	10n#	100p	CA	BD	PD470
27	AND121R		2.6	15m	60m*	15m	4.0	57*	700n	100u	10m	50	10m	100n			BD	A	PD3310
28	AND122R		2.6	15m	60m*	15m	4.0	57*	700n	100u	10m	50	10m	100n			BD	A	PD3310
29#	TLR121		2.6	15m	60m*	15m	4.0	27*	700n	100u	10m			100n			BD	A	PD3310
30#	AND101RG#1		2.6	20m	75m*	25m	4.0	57*	700n	300u	20m	180	20m	100n			BD	A	PD3320
31	AND202R		2.6	20m	75m*	25m	4.0	57*	700n	100u	10m	200	10m	100n			BD	A	PD3300
32#	TLR102		2.6	20m	75m*	25m	4.0	27*	700n	100u	10m	220	10m	100n	1.0n‡		BD	A	PD1180
33#	TLR102KB		2.6	20m	75m*	25m	4.0	27*	700n	100u	10m	200	10m	100n			BD	A	PD3590
34#	TLR102KW		2.6	20m	75m*	25m	4.0	27*	700n	100u	10m	200	10m	100n			BD	A	PD3590
35#	TLR108		2.6	20m	75m*	25m	4.0	27*	700n	150u	10m	220	10m	100n	1.0n‡		BD	A	PD1180
36#	TLR108KB		2.6	20m	75m*	25m	4.0	27*	700n	150u	10m	200	10m	100n			BD	A	PD3590
37#	TLR108KW		2.6	20m	75m*	25m	4.0	27*	700n	150u	10m	200	10m	100n			BD	A	PD3590
38#	TLR109		2.6	20m	75m*	25m	4.0	27*	700n	100u	10m	220	10m	100n	1.0n‡		BD	A	PD1180
39#	TLR109KB		2.6	20m	75m*	25m	4.0	27*	700n	100u	10m	200	10m	100n			BD	A	PD3590
40#	TLR109KW		2.6	20m	75m*	25m	4.0	27*	700n	100u	10m	200	10m	100n			BD	A	PD3590
41#	TLR202		2.6	20m	75m*	25m	4.0	27*	700n	100u	10m			100n			BD	A	PD3300
42#	TLRG101#1		2.6	20m	75m*	25m	4.0	27*	700n	300u	20m	180	20m	100n			BD	A	PD3320
43	XC4850R		2.8	10m	100m	40m	5.0	5A	635n	600u	10m	80		100n	50p	EA	A	PD3400	
44	XC110		2.8	10m	100m	40m	5.0	5A	697n	400u	10m	75		50p	50p	BD	A	PD180	
45	XC110R		2.8	10m	100m	40m	5.0	5A*	697n	500u	10m	75		95n	500n	50p	BD	A	PD180
46	XC111		2.8	10m	100m	40m	5.0	5A	697n	400u	10m	45		50p	50p	BD	A	PD180	
47	XC111R		2.8	10m	100m	40m	5.0	5A*	697n	500u	10m	45		95n	500n	50p	BD	A	PD180
48	XC209R		2.8	10m	100m	40m	5.0	5A*	697n	600u	10m	75		50p	50p	BD	A	PD160	
49	XC520R		2.8	10m	100m	40m	5.0	5A*	697n	1.0m	10m	55		95n	500n	50p	BD	A	PD170
50	XC521R		2.8	10m	100m	40m	5.0	5A*	697n	500u	10m	70		95n	500n	50p	BD	A	PD170
51	XC522R		2.8	10m	100m	40m	5.0	5A*	697n	1.0m	10m	55		95n	500n	50p	BD	A	PD170
52	XC526R2		2.8	10m	100m	40m	5.0	5A*	697n	2.0m	10m	70		95n	500n	50p	BD	A	PD170
53	XC526R		2.8	10m	100m	40m	5.0	5A*	697n	500u	10m	70		95n	500n	50p	BD	A	PD170
54	XC554R9		2.8	10m	100m	40m	5.0	5A*	697n	9.0m	10m	24		95n	500n	50p	BD	A	PD180
55	XC554R12		2.8	10m	100m	40m	5.0	5A*	697n	1.2m	10m	24		95n	500n	50p	BD	A	PD180
56	XC554R		2.8	10m	100m	40m	5.0	5A*	697n	2.0m	10m	24		95n	500n	50p	BD	A	PD180
57	XC556R2		2.8	10m	100m	40m	5.0	5A*	697n	2.0m	10m	30		95n	500n	50p	BD	A	PD180
58	XC556R3		2.8	10m	100m	40m	5.0	5A*	697n	3.0m	10m	30		95n	500n	50p	BD	A	PD180
59	XC556R		2.8	10m	100m	40m	5.0	5A*	697n	600u	10m	30		95n	500n	50p	BD	A	PD180
60	XC5053-5VR		2.8	10m	100m	20m	5.0	5A*	697n	1.5m	10m	80		95n	500n	50p	BD	A	PD180
61	XC5053R2		2.8	10m	100m	20m	5.0	5A*	697n	1.5m	10m	80		95n	500n	50p	BD	A	PD180
62	XC5053R		2.8	10m	100m	20m	5.0	5A*	697n	400u	10m	80		95n	500n	50p	BD	A	PD180
63	XC5055		2.8	10m	100m	40m	5.0	5A	697n	300u	10m	120					BD	A	PD180
64	XC5055R		2.8	10m	100m	40m	5.0	5A*	697n	300u	10m	120		95n	500n	50p	BD	A	PD180
65	XC309R2		2.8	10m	115m*	40m	5.0	5A*	635n	2.0m	10m	75		40n	100n	50p	EB	A	PD160
66	XC309R		2.8	10m	115m*	40m	5.0	5A*	635n	1.0m	10m	75		40n	100n	50p	EB	A	PD160
67	XC4651R		2.8	10m	115m*	40m	5.0	5A*	635n	1.0m	10m	80		40n	100n	50p	EB	A	PD3400
68	XC4656R3		2.8	10m	115m*	40m	5.0	5A*	635n	3.0m	10m	80		40n	100n	50p	EB	A	PD3400
69#	AND205R		2.8	20m	56m	20m	4.0	27*	700n	400u	15m		15m	100n			BD	A	PD3300
70	AND123R		2.8	20m	60m*	20m	4.0	57*	700n	500u	20m	40	20m	100n			BD	A	PD2790
71	AND124R		2.8	20m	60m*	20m	4.0	57*	700n	400u	20m	50	20m	100n			BD	A	PD3300
72#	LT1213R		2.8	20m	70m	20m	5.0	48	697n	300u	20m			90n			BD	A	PD1180
73	AND102R		2.8	20m	75m*	25m	4.0	57*	700n	100u	10m	200	10m	100n			BD	A	PD3590
74	AND102RKB		2.8	20m	75m*	25m	4.0	57*	700n	100u	10m	200	10m	100n			BD	A	PD3590
75	AND102RKBW		2.8	20m	75m*	25m	4.0	57*	700n	100u	10m	200	10m	100n			BD	A	PD3590
76	AND108R		2.8	20m	75m*	25m	4.0	57*	700n	150u	10m	200	10m	100n			BD	A	PD1180
77	AND108RKB		2.8	20m	75m*	25m	4.0	57*	700n	150u	10m	200	10m	100n			BD	A	PD3590
78	AND108RKBW		2.8	20m	75m*	25m	4.0	57*	700n	150u	10m	200	10m	100n			BD	A	PD3590
79	AND109R		2.8	20m	75m*	25m	4.0	57*	700n	100u	10m	200	10m	100n			BD	A	PD1180
80	AND109RKB		2.8	20m	75m*	25m	4.0	57*	700n	100u	10m	200	10m	100n			BD	A	PD3590
81	AND109RKBW		2.8	20m	75m*	25m	4.0	57*	700n	100u	10m	200	10m	100n					

## 2. EMITTER: LIGHT EMITTING DIODE

IN ORDER OF: (1) COLOR CODE (2) MAX. FWD. VOLT-VF  
(3) IF TEST (4) PWR DISS-Pcase & (5) TYPE No.

LINE No.	5	TYPE No.	1 COLOR CODE	2 MAXIMUM FORWARD VOLT VF (V)	3 IF TEST (A)	4 MAX. RATINGS @ 25°C PWR. DISS. Pcase (W)	DC FWD CURR. IF (A)	TEMP. RING. CODE	PEAK WAVE-LENGTH (nm)	LUMINOUS INTENSITY (cd)	BEAM ANGLE (°)	SPECTRAL BAND		RESP. TIME (S)	CAPAC. C (F)	MATERIAL & FEATURES MAT	LEAD CODE	DRAWING Ø-RND. Δ-STRIP *CHIP
												IF TEST (A)	WIDTH Δλ (nm)					
1▼	#	LT4211R	25	2.8	20m	120m	20m	5.0	48	697n	800u	20m	20m	90n		BD		PD16w0
2▼	#	LT4212RT	2Δ	2.8	20m	120m	20m	5.0	48	697n	1.5m	20m	20m	90n		BD		PD16w0
3▼	#	LT4213R	25	2.8	20m	120m	20m	5.0	48	697n	800u	20m	20m	90n		BD		PD16x0
4▼	#	LT4214RT	2Δ	2.8	20m	120m	20m	5.0	48	697n	1.5m	20m	20m	90n		BD		PD16x0
5▼	#	LT4215RW	2#	2.8	20m	120m	20m	5.0	48	697n	800u	20m	20m	90n		BD		PD16w0
6▼	#	LT4216RC	2*	2.8	20m	120m	20m	5.0	48	697n	1.5m	20m	20m	90n		BD		PD16w0
7▼	#	LT4217RW	2#	2.8	20m	120m	20m	5.0	48	697n	800u	20m	20m	90n		BD		PD16x0
8▼	#	LT4218RC	2*	2.8	20m	120m	20m	5.0	48	697n	1.5m	20m	20m	90n		BD		PD16x0
9▼	#	AND101R	25	2.8	30m	100m*	35m	3.0	27*	700n	150u	15m	220	10m	100n		A	PD373a0
10		AND103R	2*	2.8	30m	100m*	35m	4.0	57*	700n	500u	15m	50	10m	100n		A	PD1260
11		AND103RK	2*	2.8	30m	100m*	35m	4.0	57*	700n	500u	15m	50	10m	100n		A	PD3280
12		AND104R	25	2.8	30m	100m*	35m	4.0	57*	700n	300u	15m	60	10m	100n		A	PD1260
13		AND104RK	25	2.8	30m	100m*	35m	4.0	57*	700n	300u	15m	60	10m	100n		A	PD3280
14		AND105R	2*	2.8	30m	100m*	35m	4.0	57*	700n	500u	15m	60	10m	100n		A	PD1270
15		AND105RK	2*	2.8	30m	100m*	35m	4.0	57*	700n	500u	15m	60	10m	100n		A	PD3270
16		AND106R	2#	2.8	30m	100m*	35m	4.0	57*	700n	300u	15m	60	10m	100n		A	PD1260
17		AND106RK	2#	2.8	30m	100m*	35m	4.0	57*	700n	300u	15m	60	10m	100n		A	PD3280
18		AND107R	2*	2.8	30m	100m*	35m	4.0	57*	700n	300u	15m	75	10m	100n		A	PD1280
19		AND107RK	2*	2.8	30m	100m*	35m	4.0	57*	700n	300u	15m	75	10m	100n		A	PD3290
20		AND110R	2Δ	2.8	30m	100m*	35m	4.0	57*	700n	500u	15m	50	10m	100n		A	PD1260
21		AND110RK	2Δ	2.8	30m	100m*	35m	4.0	57*	700n	500u	15m	50	10m	100n		A	PD3280
22#		TLR101	25	2.8	30m	100m*	35m	3.0	27*	700n	150u	15m	220	10m	100n	1.0n	A	PD12h0
23#		TLR103	2*	2.8	30m	100m*	35m	4.0	27*	700n	500u	15m	46	10m	100n	1.0n	A	PD1260
24#		TLR104	25	2.8	30m	100m*	35m	4.0	27*	700n	300u	15m	56	10m	100n	1.0n	A	PD1260
25#		TLR105	2*	2.8	30m	100m*	35m	4.0	27*	700n	500u	15m	56	10m	100n	1.0n	A	PD1270
26#		TLR106	25	2.8	30m	100m*	35m	4.0	27*	700n	300u	15m	56	10m	100n	1.0n	A	PD1260
27#		TLR107	2*	2.8	30m	100m*	35m	4.0	27*	700n	300u	15m	74	10m	100n	1.0n	A	PD1280
28#		TLR110	2*	2.8	30m	100m*	35m	4.0	27*	700n	500u	15m	46	10m	100n	1.0n	A	PD1260
29#		TLR103K	2*	2.8	30m	125m*	45m	4.0	27*	700n	500u	15m		100n	1.0n	A	PD3280	
30#		TLR104K	25	2.8	30m	125m*	45m	4.0	27*	700n	300u	15m		100n	1.0n	A	PD3280	
31#		TLR105K	2*	2.8	30m	125m*	45m	4.0	27*	700n	500u	15m		100n	1.0n	A	PD3270	
32#		TLR106K	25	2.8	30m	125m*	45m	4.0	27*	700n	300u	15m		100n	1.0n	A	PD3280	
33#		TLR107K	2*	2.8	30m	125m*	45m	4.0	27*	700n	300u	15m		100n	1.0n	A	PD3290	
34#		TLR110K	2*	2.8	30m	125m*	45m	4.0	27*	700n	500u	15m		100n	1.0n	A	PD3280	
35▼		5082-4650	25	3.0	10m		50m	5.0	5A	635n	1.0m	10m	90			BD		PD4150
36▼		5082-4655	25	3.0	10m		50m	5.0	5A	635n	3.0m	10m	90			BD		PD4150
37▼		FLV511	2	3.0	10m	100m*	35	5.0	XF	570n	1.6m	20m				BD		PD50v
38▼		FLV551	2	3.0	10m	100m*	35	5.0	XF	570n	1.6m	20m				BD		PD50x
39		521-9246	25	3.0	10m	120m	20m	5.0	5A*	635n	3.0m	10m	90	10m		CA	A	PD62c0
40		521-9247	2	3.0	10m	120m	20m	5.0	5A*	635n	1.5m	10m	35	10m		CA	A	PD62c0
41		550-2404	2	3.0	10m	120m	30m	5.0	5A	635n	3.0m	10m				CA	A	PD66b0
42		550-2405	2	3.0	10m	120m	30m	5.0	5A	635n	3.0m	10m				CA	A	PD67b0
43		550-2406	2	3.0	10m	120m	30m	5.0	5A	635n	3.0m	10m				CA	A	PD68b0
44		HLMF-1300	25	3.0	10m	120m*	20m*	5.0	5A*	635n	500u	10m	70		45n	CA	B	PD770
45		HLMF-1301	25	3.0	10m	120m*	20m*	5.0	5A*	635n	1.0m	10m	70		45n	CA	B	PD770
46		HLMF-1302	25	3.0	10m	120m*	20m*	5.0	5A*	635n	2.0m	10m	70		45n	CA	B	PD770
47		HP5082-4160	25	3.0	10m	120m*	20m	5.0	5A*	635n	1.0m	10m	80		43n	CA	A	PD1800
48		HP5082-4650	25	3.0	10m	120m*	20m	5.0	5A*	635n	1.0m	10m	90	10m	41n	CA	A	PD50u0
49		HP5082-4655	25	3.0	10m	120m*	20m	5.0	5A*	635n	3.0m	10m	90	10m	41n	CA	A	PD50u0
50		HP5082-4657	25	3.0	10m	120m*	20m	5.0	5A*	635n	9.0m	10m	35	10m	41n	CA	A	PD50u0
51		HP5082-4658	25	3.0	10m	120m*	20m	5.0	5A*	635n	1.5m	10m	35	10m	41n	CA	A	PD50u0
52		HP5082-4684	25	3.0	10m	120m*	20m*	5.0	5A*	635n	1.0m	10m	70		45n	CA	B	PD770
53		HP5082-4690	25	3.0	10m	120m*	20m*	5.0	5A*	635n	1.5m	10m	50		44n	CA	A	PD50k0
54		HP5082-4693	25	3.0	10m	120m*	20m*	5.0	5A*	635n	5.0m	10m	50		44n	CA	A	PD50k0
55		HP5082-4694	2	3.0	10m	120m*	20m*	5.0	5A*	635n	4.0m	10m	45		44n	CA	A	PD50k0
56		HP5082-4695	2	3.0	10m	120m*	20m*	5.0	5A*	635n	8.0m	10m	45		44n	CA	A	PD50k0
57▼		LST4054-1	25	3.0	10m	120m	40m	5.0	5A	690n	1.0m	10m	65	10m	85n	BD	A	PD4040
58		LLL7	2	3.0	12m	150m	40m	3.0	48	690n	800u	12m	30	12m	85n	BD	A	PD540
59		MSL7	25	3.0	12m	150m	40m	3.0	48	690n	800u	12m	30	12m	85n	BD	A	PD550
60		521-9242#1	25	3.0	15m	112m	40m	5.0	2A*	690n	1.4m	15m			90n			PD224b0
61		521-9244#1	25	3.0	15m	112m	40m	5.0	2A*	690n	1.4m	15m			90n			PD2240
62		521-9245#1	25	3.0	15m	112m	40m	5.0	2A*	690n	1.7m	15m			90n			PD224a0
63		CQX23-1	25	3.0	20m		60m				2.0m	20m	140				A	PD28k0
64		CQX23-2	25	3.0	20m		60m				3.2m	20m	140				A	PD28k0
65		LD32-1	25	3.0	20m		60m				1.2m	10m	70				B	PD77d0
66		LD32-2	25	3.0	20m		60m				2.0m	10m	70				B	PD77d0
67		LD52-1	25	3.0	20m		60m				1.2m	10m	80				B	PD3250
68		LD52-2	25	3.0	20m		60m				2.0m	10m	80				B	PD3250
69		LD121	2*	3.0	20m		25m				500u	10m					A	PD354
70		521-9214	2	3.0	20m	100m	50m	3.0	5A*	665n	200u	20m	50	20m		CA	A	PD630
71		550-0404	25	3.0	20m	100m	50m	3.0	4A*	655n	2.0m	20m	70	20m	25n	CA	A	PD660
72		550-0405	25	3.0	20m	100m	50m	3.0	4A*	655n	2.0m	20m	70	20m	25n	CA	A	PD670
73		550-0406	25	3.0	20m	100m	50m	3.0	4A*	655n	2.0m	20m	70	20m	25n	CA	A	PD680
74		FLV111	2	3.0	20m	100m*	50m	3.0	XC5	665n	800u	20m	70	20m	25n	CA	A	PD50v0
75		FLV112	25	3.0	20m	100m*	50m	3.0	XC5	665n	800u	20m	70	20m	25n	CA	A	PD50v0
76		FLV117A	25	3.0	20m	100m*	50m	3.0	XC5	665n	800u	20m	40	20m	25n	CA	A	PD50v0
77		FLV118A	2	3.0	20m	100m*	50m	3.0	XC5	665n	800u	20m	40	20m	25n	CA	A	PD50v0
78		CM4-244A	2	3.0	20m	105m	35m	5.0	5A	635n	1.0m	20m	90	20m		CA	A	PD160
79		CM4-244B	25	3.0	20m	105m	35m	5.0	5A*	635n	1.0m	20m	90	20m		CA	A	PD160
80		CM4-264	2	3.0	20m	105m	35m	5.0	5A	635n	1.0m	20m	28	20m		CA	A	PD160
81		CM4-282B	2*	3.0	20m	105m	35m	5.0	5A*	635n								

## 2. EMITTER: LIGHT EMITTING DIODE

IN ORDER OF: (1) COLOR CODE (2) MAX. FWD. VOLT-VF  
(3) IF TEST (4) PWR DISS-P<sub>case</sub> & (5) TYPE No.

LINE No.	TYPE No.	COLOR CODE	MAXIMUM		MAX. RATINGS @ 25°C			TEMP RING. CODE	PEAK WAVE-LENGTH (m)	LUMINOUS INTENSITY (cd)	BEAM ANGLE (°)	SPECTRAL BAND WIDTH (nm)		RESP. TIME (S)	CAPAC. C (F)	MATERIAL & FEATURES MAT	LEAD CODE	DRAWING NO. & RND. Δ-STRIP *-CHIP	
			FORW. VOLT (V)	IF TEST (A)	PWR. DISS. P <sub>case</sub> (W)	DC FWD CURR. IF (A)	REV. VOLT VR (V)					IF TEST (A)	IF TEST (A)						Δλ (nm)
1▼	AND723H	2#	3.0	20m	120m*	20m	5.0	48	630n	1.5m†	20m	20m	40n			BD		PD257c	
2▼	AND724H	2#	3.0	20m	120m*	20m	5.0	48	630n	1.5m†	20m	20m	40n			BD		PD257c	
3▼	AND726H	2#	3.0	20m	120m*	20m	5.0	48	630n	1.5m†	20m	20m	40n			BD		PD257c	
4▼	AND728H	2#	3.0	20m	120m*	20m	5.0	48	630n	1.5m†	20m	20m	40n			BD		PD257c	
5▼	AND740H	2Δ	3.0	20m	120m*	20m	5.0	48	630n	1.5m†	20m	20m	40n			BD		PD257b	
6▼	AND743H	2*	3.0	20m	120m*	20m	5.0	48	630n	1.5m†	20m	20m	40n			BD		PD257b	
7▼	AND744H	2#	3.0	20m	120m*	20m	5.0	48	630n	1.5m†	20m	20m	40n			BD		PD257b	
8▼	AND746H	2#	3.0	20m	120m*	20m	5.0	48	630n	1.5m†	20m	20m	40n			BD		PD257b	
9▼	AND748H	2#	3.0	20m	120m*	20m	5.0	48	630n	1.5m†	20m	20m	40n			BD		PD257b	
10▼	AND750H	2Δ	3.0	20m	120m*	20m	5.0	48	630n	1.5m†	20m	20m	40n			BD	A	PD16y	
11▼	AND753H	2*	3.0	20m	120m*	20m	5.0	48	630n	1.5m†	20m	20m	40n			BD	A	PD16y	
12▼	AND754H	2#	3.0	20m	120m*	20m	5.0	48	630n	1.5m†	20m	20m	40n			BD	A	PD16y	
13▼	AND756H	2#	3.0	20m	120m*	20m	5.0	48	630n	1.5m†	20m	20m	40n			BD	A	PD16y	
14▼	AND758H	2#	3.0	20m	120m*	20m	5.0	48	630n	1.5m†	20m	20m	40n			BD	A	PD16y	
15	HP5082-4620	2#	3.0	20m	120m*	35m*	5.0	5A	635n	1.0m	20m	20m	41n	200n	35p	BD	A	PD16y	
16▼	LST4053	2#	3.0	20m	120m	40m	5.0	5A	690n	500u	20m	80	20m	85n	35p	BD	A	PD404	
17▼	LST4753	2#	3.0	20m	120m	40m	5.0	5A	635n	2.5m	20m	80	20m	45n	35p	BD	A	PD404	
18▼	LST4754	2#	3.0	20m	120m	40m	5.0	5A	635n	3.0m	20m	65	20m	45n	35p	BD	A	PD404	
19▼	LST5053	2#	3.0	20m	120m	35m	5.0	5A	690n	500u	20m	80	20m	85n	450n	35p	BD	A	PD50r
20▼	LST5053R	2#	3.0	20m	120m	35m	5.0	5A	690n	1.0m†	20m	80	20m	85n	35p	BD	RES	PD50r	
21▼	LST5054-1	2#	3.0	20m	120m	35m	5.0	5A	690n	1.0m	20m	40	20m	85n	35p	BD	A	PD50r	
22▼	LST5054R	2#	3.0	20m	120m	35m	5.0	5A	690n	2.0m†	10m	40	20m	85n	35p	BD	A	PD50r	
23▼	LST5752	2*	3.0	20m	120m	35m	5.0	5A	635n	1.7m	20m	28	20m	45n	100n	35p	BD	RES	PD50r
24▼	LST5752R	2*	3.0	20m	120m	35m	5.0	5A	635n	4.0m†	20m	28	20m	45n	45p	BD	RES	PD50r	
25▼	LST5753	2#	3.0	20m	120m	35m	5.0	5A	635n	2.5m	20m	65	20m	45n	100n	35p	BD	RES	PD50r
26▼	LST5753R	2#	3.0	20m	120m	35m	5.0	5A	635n	6.0m†	20m	65	20m	45n	35p	BD	RES	PD50r	
27▼	LST5754	2#	3.0	20m	120m	35m	5.0	5A	635n	3.0m	20m	24	20m	45n	35p	BD	RES	PD50r	
28▼	LST5754R	2#	3.0	20m	120m	35m	5.0	5A	635n	8.0m†	20m	24	20m	45n	100n	35p	BD	RES	PD50r
29#	COX231	2#	3.0	20m	200m	60m	5.0	5A	645n	2.0m	20m	140	20m	40n	100n#	22p	BD	RES	PD50r
30#	COX231I	2#	3.0	20m	200m	60m	5.0	5A	645n	3.2m	20m	140	20m	40n	100n#	22p	BD	RES	PD325a
31	FLV510	2#	3.0	20m	200m	35m	5.0	5A*	640n	2.0m	20m	70	20m	35n		CA		PD50w	
32	FLV540	2#	3.0	20m	200m	35m	5.0	5A*	640n	2.0m	20m	70	20m	35n		CA		PD50w	
33	FLV550	2#	3.0	20m	200m	35m	5.0	5A*	640n	2.0m	20m	70	20m	35n		CA		PD50w	
34	FLV560	2#	3.0	20m	200m	35m	5.0	5A*	640n	2.0m	20m	70	20m	35n		CA		PD50w	
35#	LD32I	2#	3.0	20m	200m	60m	5.0	5A*	645n	1.2m	10m	70	20m	35n	100n#	22p	B		PD52b
36#	LD32II	2#	3.0	20m	200m	60m	5.0	5A*	645n	2.0m	10m	70	20m	40n	100n#	22p	B		PD77d
37#	LD52C	2*	3.0	20m	200m	60m	5.0	5A*	645n	1.5m	10m	24	35n	100n#	22p	B		PD325b	
38#	LD52CA	2*	3.0	20m	200m	60m	5.0	5A*	645n	9.0m	10m	24	35n	100n#	22p	B		PD325b	
39#	LD52I	2#	3.0	20m	200m	60m	5.0	5A*	645n	1.2m	10m	80	35n	100n#	22p	B		PD325b	
40#	LD52II	2#	3.0	20m	200m	60m	5.0	5A*	645n	2.0m	10m	80	35n	100n#	22p	B		PD325b	
41	HLMP-0300	2#	3.0	25m	120m*	30m*	5.0	5A*	635n	800u	25m	100	45n	90n	17p	CA	A	PD262	
42	HLMP-0301	2#	3.0	25m	120m*	30m*	5.0	5A*	635n	1.5m	25m	100	45n	90n	17p	CA	A	PD262	
43	HP5082-4670	2#	3.0	25m	120m*	30m*	5.0	5A	635n	800u	1.5m	100	45n	90n	17p	CA	A	PD262	
44#	AL102A	2	3.2	5.0m	10m	6.0	67*	5.0	5.0	5.0	5.0	100				CA	A	PD262	
45▼	TIL216-1	2#	3.2	20m	50m	5.0	5A	620n	2.1m	20m	60	20m				BD		PD235	
46▼	TIL216-2	2#	3.2	20m	50m	5.0	5A	620n	6.0m	20m	60	20m				BD		PD416	
47▼	TIL228-1	2#	3.2	20m	50m	5.0	5A	620n	2.1m	20m	60	20m				BD		PD415	
48▼	TIL228-2	2#	3.2	20m	50m	5.0	5A	620n	6.0m	20m	60	20m				BD		PD415	
49▼	TIL231-1	2*	3.2	20m	50m	5.0	5A	620n	6.0m	20m	25	20m				BD		PD415	
50▼	TIL231-2	2*	3.2	20m	50m	5.0	5A	620n	1.5m	20m	25	20m				BD		PD415	
51	OSL5	2	3.2	20m	150m	50m	4.0	5A	690n	360u	20m	100	20m	85n	450n#	100p	BD	A	PD58
52	547-2002	2#	3.6	20m	135m		3.0	57	650n	2.0m	20m	70	20n	20p	CA	A		PD378	
53	555-2002	2#	3.6	20m	135m		3.0	57	650n	2.0m	20m	70	20n	20p	CA	A		PD380	
54	555-3002	2#	3.6	20m	135m		3.0	57	650n	2.0m	20m	70	20n	20p	CA	A		PD381	
55	OSL1	2	3.7	40m	150m	50m	4.0	5A	560n	1.2m	40m	100	40m	35n	50p	BD	A	PD59	
56	OSL1S	2	3.7	40m	150m	50m	4.0	5A	560n	1.2m	40m	100	40m	35n	50p	BD	A	PD58	
57	ED220R	2#	3.8	20m	225m	80m	3.0	5A	609n	2.3m	20m	60	20m			BD	A	PD56a	
58#	AL102B	2	4.5	20m	10m	6.0	67*	4.0	4.0	4.0	20m					BD		PD235	
59	547-2007	2#	5.0	3.0m		3.0	3.0	57	650n	400u†	3.0m	80	20n	20p	CA	A		PD378	
60	555-2007	2#	5.0	3.0m		3.0	3.0	57	650n	600u†	3.0m	80	20n	20p	CA	A		PD380	
61	555-3007	2#	5.0	3.0m		3.0	3.0	57	650n	400u†	3.0m	70	20n	20p	CA	A		PD381	
62	SS9102	2	5.0	3.2m		3.2m	3.0	57	700n		4.0	40				BC	A	PD69	
63	547-2003	2#	5.0	6.5m		3.0	3.0	57	650n	800u†	6.0m	80	20n	1.0p	BC	A		PD378	
64	555-2003	2#	5.0	6.5m		3.0	3.0	57	650n	1.2m†	6.0m	80	20n	20p	CA	A		PD380	
65	555-3003	2#	5.0	6.5m		3.0	3.0	57	650n	800u†	6.0m	70	20n	20p	CA	A		PD381	
66	521-9222	2	5.0	15m		20m	3.0	57	655n	2.0m†	15m	90	20n	20p	CA	A		PD208a	
67	551-0505	2#	5.0	15m		20m	7.0	5A	655n	300u†	15m	60				CA	A	PD382	
68	550-0504	2#	5.0	15m		100m	7.0	4A*	655n	2.0m†	15m	70	20m	25n	10n#	CA	A	PD66a	
69	550-0505	2#	5.0	15m		100m	7.0	4A*	655n	2.0m†	15m	70	20m	25n	10n#	CA	A	PD67a	
70	550-0506	2#	5.0	15m		100m	7.0	4A*	655n	2.0m†	15m	70	20m	25n	10n#	CA	A	PD68a	
71	547-2004	2#	5.0	16m		20m	3.0	57	650n	2.0m†	16m	70	20n	20p	CA	A		PD378	
72	549-0104	2#	5.0	16m		20m	3.0	4A	655n	2.0m†	15m	120	20n	20p	CA	A		PD379	
73	555-2004	2#	5.0	16m		3.0	3.0	57	650n	2.0m†	16m	70	20n	20p	CA	A		PD380	
74	555-3004	2#	5.0	16m		3.0	3.0	57	650n	2.0m†	16m	70	20n	20p	CA	A		PD381	
75	6081-900-304	2	5.0	16m		5.0	5.0	57	650n	1.3m	16m	90	16m	20n	20p	CA	A	PD226	
76	521-9183	2#	5.0	20m		20m	7.0	5A*	655n	800u	20m	150		15n		CA	A	PD62	
77	521-9184	2*	5.0	20m		20m	7.0	5A*	655n	800u	20m	150		15n		CA	A	PD62	
78	521-9215	2#	5.0	20m		100m	7.0	5A*	655n	300u	20m	150		15n		CA	A	PD77e	
79	XC209																		



## 2. EMITTER: LIGHT EMITTING DIODE

IN ORDER OF: (1) COLOR CODE (2) MAX. FWD. VOLT-VF  
(3) IF TEST (4) PWR DISS-Peace & (5) TYPE No.

LINE No.	TYPE No.	COLOR CODE	MAXIMUM FORWARD			MAX. RATINGS @ 25°C			TEMP RNG. CODE	PEAK WAVE-LENGTH λp (m)	LUMINOUS INTENSITY IF (cd)	BEAM ANGLE ØH1 (°)	SPECTRAL BAND WIDTH Δλ (m)	RESP. TIME (S)	CAPAC C (F)	MATERIAL & FEATURES MAT	LEAD CODE	DRAWING Ø-RND. Δ-RECT. Δ-STRIP *-CHIP
			VOLT VF (V)	IF TEST (A)	PWR. DISS. Pease (W)	DC FWD CURR. IF (A)	REV. VOLT VR (V)	DC FWD CURR. IF (A)										
1	547-2006	2s	14 s	10m			3.0	57	650n	1.0m	8.0m	70		20p	CA	A	PD378	
2	555-2006	2s	14 s	10m			3.0	57	650n	1.0m	8.0m	70		20p	CA	A	PD380	
3	555-3006	2s	14 s	10m			3.0	57	650n	1.0m	8.0m	70		20p	CA	A	PD381	
4	RLC201	2s	16 s	14m	300m	14m	3.0	5A	650n	400u					CA	A	PD830	
5	NSL4944	2s	18 s	18m	300m		18	5A*	660n	200u	12m	55			CA	A	PD28b	
6	L39UR-R24-2111	2	24	35m	100m	35m	5.0	5A		3.0m					CA	A	PD398a	
7	L39UR-R24-2311	2	24	35m	100m	35m	5.0	5A		3.0m					CA	A	PD399a	
8	L45RN-R24-2111	2	24	35m	100m	35m	5.0	5A		3.0m					CA	A	PD399b	
9	L45RN-R24-2311	2	24	35m	100m	35m	5.0	5A		3.0m					CA	A	PD399c	
10	L46RN-R24-2111	2	24	35m	100m	35m	5.0	5A		3.0m					CA	A	PD399d	
11	L46RN-R24-2311	2	24	35m	100m	35m	5.0	5A		3.0m					CA	A	PD400a	
12	L58-R24-W	2	24	35m	100m	35m	5.0	5A		3.0m					CA	A	PD401a	
13	L59-R24-W	2	24	35m	100m	35m	5.0	5A		3.0m					CA	A	PD257a	
14	LLT221R	3s	2.0	20m	105m	30m	5.0	5A		1.5m	20m				EB Red L	A	PD257a	
15	LLT222RT	3s	2.0	20m	105m	30m	5.0	5A		2.0m	20m				EB Red L	A	PD257a	
16	LLT223R	3s	2.0	20m	105m	30m	5.0	5A		1.5m	20m				EB Red L	A	PD28t	
17	LLT224RT	3s	2.0	20m	105m	30m	5.0	5A		2.0m	20m				EB Red L	A	PD28t	
18	LLT271A	3s	2.1	20m	105m	30m	5.0	5A		500u	20m				BD	A	PD257a	
19	LLT272AT	3s	2.1	20m	105m	30m	5.0	5A		1.0m	20m				BD	A	PD28t	
20	LLT273A	3s	2.1	20m	105m	30m	5.0	5A		500u	20m				BD	A	PD28t	
21	LLT274AT	3s	2.1	20m	105m	30m	5.0	5A		1.0m	20m				BD	A	PD28t	
22	LLT291E	3s	2.1	20m	105m	30m	5.0	5A		1.5m	20m				EB	A	PD257a	
23	LLT292ET	3s	2.1	20m	105m	30m	5.0	5A		2.0m	20m				EB	A	PD257a	
24	LLT293E	3s	2.1	20m	105m	30m	5.0	5A		1.5m	20m				EB	A	PD28t	
25	LLT294ET	3s	2.1	20m	105m	30m	5.0	5A		2.0m	20m				EB	A	PD257a	
26	LLT295EW	3s	2.1	20m	105m	30m	5.0	5A		1.5m	20m				EB	A	PD257a	
27	LLT296EC	3s	2.1	20m	105m	30m	5.0	5A		2.0m	20m				EB	A	PD257a	
28	LLT297EW	3s	2.1	20m	105m	30m	5.0	5A		1.5m	20m				EB	A	PD28t	
29	LLT298EC	3s	2.1	20m	105m	30m	5.0	5A		2.0m	20m				EB	A	PD28t	
30	E1100	3s	2.0	20m	80m	40m	3.0	5A	635n	17m			50n	45p	CA	A	PD16t	
31	OL31A	3s	2.0	20m	100m	25m	4.0	27*	590n	300u	20m	20m	40n	90p	CA	A	PD820	
32	LN41YP	3s	2.0	20m	100m	25m	4.0	27*	590n	2.0m	15m	140	40m	32n	CA	A	PD215	
33	6340-001-505A	3s	2.0	40m			5.0			10m	40m	140	40m		Lug Wire	A	PD2270	
34	6340-301-505A	3s	2.0	40m			5.0			10m	40m	140	40m		Lug Wire	A	PD2270	
35	OL30A	3s	2.1	25m	200m	100m	3.0	26	590n	800u	20m	84	20m	40n	CA	A	PD830	
36	1920A	3s	2.1	50m	80m	30m	3.0	5A	590n	10m	25m				CA	A	PD2890	
37	1922A	3s	2.1	25m	80m	30m	3.0	26	590n	10m	25m				CA	A	PD2900	
38	LN435YP	3s	2.1	30m	60m	25m	4.0	28*	590n	600u	20m	35	20m	30n	BD	A	PD118c	
39	LN45YP	3s	2.1	30m	70m	30m	4.0	28*	590n	1.5m	20m	60	20m	30n	BD	A	PD212	
40	LN45YP	3s	2.1	30m	80m	30m	4.0	28*	590n	800u	20m	15	20m	30n	BD	A	PD222	
41	LN46YP	3s	2.1	30m	80m	30m	4.0	28*	590n	500u	20m	15	20m	30n	BD	A	PD190	
42	ED226A	3s	2.4	10m	100m*	50m*	5.0	5A	600n	600u	10m	80		50p	BD	A	PD18a	
43	ED5053A	3s	2.4	10m	100m*	50m*	5.0	5A	600n	400u	10m	80		60p	CA	A	PD2540	
44	SY403D	3s	2.5	20m	100m	40m	5.0	X8S	590n	2.0m	20m	26	35n	60p	CA	A	PD2540	
45	SY403T	3s	2.5	20m	100m	40m	5.0	X8S	590n	4.0m	20m		35n	80p	CA	A	PD120	
46	SY404D	3s	2.5	20m	100m	40m	5.0	X8S	590n	2.0m	20m		35n	80p	CA	A	PD120	
47	SY404T	3s	2.5	20m	100m	40m	5.0	X8S	590n	4.0m	20m		35n	80p	CA	A	PD2850	
48	SY405D	3s	2.5	20m	100m	40m	5.0	X8S	590n	2.0m	20m	20	35n	60p	CA	A	PD2850	
49	SY405T	3s	2.5	20m	100m	40m	5.0	X8S	590n	4.0m	20m	16	35n	60p	CA	A	PD2560	
50	SY406D	3s	2.5	20m	100m	40m	5.0	X8S	590n	2.0m	20m	42	35n	60p	CA	A	PD2560	
51	SY406T	3s	2.5	20m	100m	40m	5.0	X8S	590n	4.0m	20m	38	35n	60p	CA	A	PD2560	
52	#CQX41NA	3s	2.7	10m	100m	30m	5.0	2A	630n	1.0m	10m	60	40n	50p	EB	A	PD3930	
53	#CQX42NA	3s	2.7	10m	100m	30m	5.0	2A	630n	1.3m	10m	25	40n	50p	EB	A	PD3930	
54	#LT1293E	3s	2.8	20m	70m	30m	5.0	48	635n	800u	20m		20m	45n	EB	A	PD3900	
55	#LT2291E	3s	2.8	20m	75m	30m	5.0	28	635n	500u	20m		20m	45n	EB	A	PD3910	
56	#LT2293E	3s	2.8	20m	75m	30m	5.0	28	635n	500u	20m		20m	45n	EB	A	PD391a	
57	#LT191E	3s	2.8	20m	105m*	30m*	5.0	48	635n	1.0m	20m		20m	45n	EB	A	PD3890	
58	#LT196EC	3s	2.8	20m	105m*	30m*	5.0	48	635n	1.5m	20m		20m	45n	EB	A	PD389a	
59	#LT221R	3s	2.8	20m	105m*	30m*	5.0	48		1.5m	20m				EB	A	PD2920	
60	#LT222RT	3s	2.8	20m	105m*	30m*	5.0	48		2.0m	20m				EB	A	PD2920	
61	#LT223R	3s	2.8	20m	105m*	30m*	5.0	48		1.5m	20m				EB	A	PD28s	
62	#LT224RT	3s	2.8	20m	105m*	30m*	5.0	48		2.0m	20m				EB	A	PD28s	
63	#LT271A	3s	2.8	20m	105m*	30m*	5.0	48	600n	500u	20m				BD AMBER	A	PD2920	
64	#LT272AT	3s	2.8	20m	105m*	30m*	5.0	48	600n	1.0m	20m				BD AMBER	A	PD2920	
65	#LT273A	3s	2.8	20m	105m*	30m*	5.0	48	600n	500u	20m				BD AMBER	A	PD28s	
66	#LT274AT	3s	2.8	20m	105m*	30m*	5.0	48	600n	1.0m	20m				BD AMBER	A	PD28s	
67	#LT291E	3s	2.8	20m	105m*	30m*	5.0	48	635n	1.5m	20m	20m	45n		EB	A	PD2920	
68	#LT292ET	3s	2.8	20m	105m*	30m*	5.0	48	635n	2.0m	20m	20m	45n		EB	A	PD2920	
69	#LT293E	3s	2.8	20m	105m*	30m*	5.0	48	635n	1.5m	20m	20m	45n		EB	A	PD28s	
70	#LT294ET	3s	2.8	20m	105m*	30m*	5.0	48	635n	2.0m	20m	20m	45n		EB	A	PD28s	
71	#LT295EW	3s	2.8	20m	105m*	30m*	5.0	48	635n	1.5m	20m	20m	45n		EB	A	PD2920	
72	#LT296EC	3s	2.8	20m	105m*	30m*	5.0	48	635n	2.0m	20m	20m	45n		EB	A	PD2920	
73	#LT297EW	3s	2.8	20m	105m*	30m*	5.0	48	635n	1.5m	20m	20m	45n		EB	A	PD28s	
74	#LT298EC	3s	2.8	20m	105m*	30m*	5.0	48	635n	2.0m	20m	20m	45n		EB	A	PD28s	
75	#LT3291E	3s	2.8	20m	105m	30m	5.0	48	635n	1.2m	20m		20m	45n	EB	A	PD262a	
76	#LT3293E	3s	2.8	20m	105m	30m	5.0	48	635n	1.2m	20m		20m	45n	EB	A	PD262b	
77	#LT4271A	3s	2.8	20m	105m	30m	5.0	48	600n	800u	20m				BD	A	PD16w	
78	#LT4272AT	3s	2.8	20m	105m	30m	5.0	48	600n	1.5m	20m				BD	A	PD16w	
79	#LT4273A	3s	2.8	20m	105m	30m	5.0	48	600n	800u	20m				BD	A	PD16x	
80	#LT4274AT	3s	2.8	20m	105m	30m	5.0	48	600n	1.5m	20m				BD	A	PD16x	
81	#LT4291E	3s	2.8	20m	105m	30m	5.0	48	635n	2.0m	20m	20m	45n		EB	A	PD16w	
82	#LT4292ET	3s	2.8	20m	105m	30m	5.0	48	635n	2.5m	20m	20m	45n		EB	A	PD16w	
83	#LT4293E	3s	2.8	20m	105m	30m	5.0	48	635n	2.0m	20m	20m	45n		EB	A	PD16x	
84	#LT4294ET	3s	2.8	20m	105m	30m	5.0	48	635n	2.5m	20m	20m	45n		EB	A	PD16x	
85	#LT4295EW	3s	2.8	20m	105m	30m	5.0	48	635n	2.0m	20m	20m	45n		EB	A	PD16w	
86	#LT4296EC	3s	2.8	20m	105m	30m	5.0	48	635n	2.5m</								

## 2. EMITTER: LIGHT EMITTING DIODE

IN ORDER OF: (1) COLOR CODE (2) MAX. FWD. VOLT-VF  
(3) IF TEST (4) PWR DISS-Pcase & (5) TYPE No.

LINE No.	TYPE No.	COLOR CODE	MAXIMUM FORWARD VOLTAGE		MAX. RATINGS @ 25°C			TEMP. RING. CODE	PEAK WAVELENGTH (nm)	LUMINOUS INTENSITY		BEAM ANGLE (°)	SPECTRAL BANDWIDTH (nm)	RESP. TIME (S)	CAPACITANCE (pF)	MATERIAL & FEATURES	LEAD CODE	DRAWING
			VF (V)	IF (A)	PWR. DISS. Pcase (W)	DC FWD CURR. IF (A)	REV. VOLT VR (V)			(mcd)	(cd)							
1▼	MILB5452	3A	3.0	20m	105m*	35m	5.0	5A	635n	800u	20m	20	20m					PD0
2▼	MILB5458	3A	3.0	20m	105m*	35m	5.0	5A	635n	800u	20m	20	20m					PD0
3▼	MILB5459	3#	3.0	20m	105m*	35m	5.0	5A	635n	800u	20m	40	20m					PD0
4▼	MILS5451	3#	3.0	20m	105m*	35m	5.0	5A	635n	800u	20m	40	20m					PD0
5▼	MILS5452	3#	3.0	20m	105m*	35m	5.0	5A	635n	800u	20m	65	20m					PD0
6▼	MILS5458	3A	3.0	20m	105m*	35m	5.0	5A	635n	800u	20m	50	20m					PD0
7▼	MILS5459	3#	3.0	20m	105m*	35m	5.0	5A	635n	800u	20m	50	20m					PD0
8▼	MILSB5451	3#	3.0	20m	105m*	35m	5.0	5A	635n	800u	20m	65	20m					PD0
9▼	MILSB5452	3#	3.0	20m	105m*	35m	5.0	5A	635n	800u	20m	40	20m					PD0
10▼	MILSB5458	3A	3.0	20m	105m*	35m	5.0	5A	635n	800u	20m	20	20m					PD0
11▼	MILSB5459	3#	3.0	20m	105m*	35m	5.0	5A	635n	800u	20m	20	20m					PD0
12	MV5152	3	3.0	20m	105m*	35m	5.0	5A*	635n	40m†	20m	28	20m				A	PD16n0
13	MV5153	3	3.0	20m	105m*	35m	5.0	5A*	635n	4.0m†	20m	64	20m				A	PD16p0
14	MV5154	3	3.0	20m	105m*	35m	5.0	5A*	635n	8.0m†	20m	24	20m				A	PD16n0
15	MV5174B	3	3.0	20m	105m*	35m	5.0	5A*	635n	5.0m†	20m	90	20m				A	PD16b0
16	MV5174C	3	3.0	20m	105m*	35m	5.0	5A*	635n	5.0m†	20m	90	20m				A	PD16c0
17	MV5177B	3	3.0	20m	105m*	35m	5.0	5A*	635n	3.0m†	20m	180	20m				A	PD16d0
18	MV5177C	3	3.0	20m	105m*	35m	5.0	5A*	635n	3.0m†	20m	180	20m				A	PD16c0
19▼	AND700A	3A	3.0	20m	120m*	20m	5.0	48	590n	1.5m†	20m	20	20m					PD3920
20▼	AND7000	3A	3.0	20m	120m*	20m	5.0	48	600n	1.5m†	20m	40	20m					PD3920
21▼	AND703A	3#	3.0	20m	120m*	20m	5.0	48	590n	1.5m†	20m	40	20m					PD3920
22▼	AND7030	3#	3.0	20m	120m*	20m	5.0	48	590n	1.5m†	20m	40	20m					PD3920
23▼	AND704A	3#	3.0	20m	120m*	20m	5.0	48	600n	1.5m†	20m	40	20m					PD3920
24▼	AND7040	3#	3.0	20m	120m*	20m	5.0	48	590n	1.5m†	20m	40	20m					PD3920
25▼	AND706A	3#	3.0	20m	120m*	20m	5.0	48	600n	1.5m†	20m	40	20m					PD3920
26▼	AND7060	3#	3.0	20m	120m*	20m	5.0	48	590n	1.5m†	20m	40	20m					PD3920
27▼	AND710A	3#	3.0	20m	120m*	20m	5.0	48	600n	1.5m†	20m	40	20m					PD3920
28▼	AND7100	3A	3.0	20m	120m*	20m	5.0	48	590n	1.5m†	20m	40	20m				A	PD28r0
29▼	AND713A	3#	3.0	20m	120m*	20m	5.0	48	600n	1.5m†	20m	40	20m					PD28r0
30▼	AND7130	3#	3.0	20m	120m*	20m	5.0	48	590n	1.5m†	20m	40	20m					PD28r0
31▼	AND714A	3#	3.0	20m	120m*	20m	5.0	48	600n	1.5m†	20m	40	20m					PD28r0
32▼	AND7140	3#	3.0	20m	120m*	20m	5.0	48	590n	1.5m†	20m	40	20m					PD28r0
33▼	AND716A	3#	3.0	20m	120m*	20m	5.0	48	600n	1.5m†	20m	40	20m					PD28r0
34▼	AND7160	3#	3.0	20m	120m*	20m	5.0	48	590n	1.5m†	20m	40	20m					PD28r0
35▼	AND720A	3#	3.0	20m	120m*	20m	5.0	48	600n	1.5m†	20m	40	20m					PD28r0
36▼	AND7200	3A	3.0	20m	120m*	20m	5.0	48	590n	1.5m†	20m	40	20m					PD257c0
37▼	AND723A	3#	3.0	20m	120m*	20m	5.0	48	600n	1.5m†	20m	40	20m					PD257c0
38▼	AND7230	3#	3.0	20m	120m*	20m	5.0	48	590n	1.5m†	20m	40	20m					PD257c0
39▼	AND724A	3#	3.0	20m	120m*	20m	5.0	48	600n	1.5m†	20m	40	20m					PD257c0
40▼	AND7240	3#	3.0	20m	120m*	20m	5.0	48	590n	1.5m†	20m	40	20m					PD257c0
41▼	AND726A	3#	3.0	20m	120m*	20m	5.0	48	600n	1.5m†	20m	40	20m					PD257c0
42▼	AND7260	3#	3.0	20m	120m*	20m	5.0	48	590n	1.5m†	20m	40	20m					PD257c0
43▼	AND740A	3#	3.0	20m	120m*	20m	5.0	48	600n	1.5m†	20m	40	20m					PD257b0
44▼	AND7400	3A	3.0	20m	120m*	20m	5.0	48	590n	1.5m†	20m	40	20m					PD257b0
45▼	AND743A	3#	3.0	20m	120m*	20m	5.0	48	600n	1.5m†	20m	40	20m					PD257b0
46▼	AND7430	3#	3.0	20m	120m*	20m	5.0	48	590n	1.5m†	20m	40	20m					PD257b0
47▼	AND744A	3#	3.0	20m	120m*	20m	5.0	48	600n	1.5m†	20m	40	20m					PD257b0
48▼	AND7440	3#	3.0	20m	120m*	20m	5.0	48	590n	1.5m†	20m	40	20m					PD257b0
49▼	AND746A	3#	3.0	20m	120m*	20m	5.0	48	600n	1.5m†	20m	40	20m					PD257b0
50▼	AND7460	3#	3.0	20m	120m*	20m	5.0	48	590n	1.5m†	20m	40	20m					PD257b0
51▼	AND750A	3#	3.0	20m	120m*	20m	5.0	48	600n	1.5m†	20m	40	20m					PD257b0
52▼	AND7500	3A	3.0	20m	120m*	20m	5.0	48	590n	1.5m†	20m	40	20m				A	PD16v0
53▼	AND753A	3#	3.0	20m	120m*	20m	5.0	48	600n	1.5m†	20m	40	20m					PD16v0
54▼	AND7530	3#	3.0	20m	120m*	20m	5.0	48	590n	1.5m†	20m	40	20m					PD16v0
55▼	AND754A	3#	3.0	20m	120m*	20m	5.0	48	600n	1.5m†	20m	40	20m					PD16v0
56▼	AND7540	3#	3.0	20m	120m*	20m	5.0	48	590n	1.5m†	20m	40	20m					PD16v0
57▼	AND756A	3#	3.0	20m	120m*	20m	5.0	48	600n	1.5m†	20m	40	20m					PD16v0
58▼	AND7560	3#	3.0	20m	120m*	20m	5.0	48	590n	1.5m†	20m	40	20m					PD16v0
59▼	LST415	3#	3.0	20m	120m*	20m	5.0	48	600n	1.5m†	20m	40	20m					PD16v0
60▼	LST415A	3#	3.0	20m	120m*	40m	5.0	5A	635n	2.5m†	20m	80	20m		40p			PD4040
61▲	LST512	3#	3.0	20m	120m	40m	5.0	5A	635n	3.0m†	20m	65	20m		40p			PD4040
62▼	LST512R	3#	3.0	20m	120m	35m	5.0	5A	635n	17m	20m	28	20m		100n			PD5000
63▲	LST513	3#	3.0	20m	120m	35m	5.0	5A	635n	40m†	20m	28	20m		45p		RES	PD5000
64▲	LST513R	3#	3.0	20m	120m	35m	5.0	5A	635n	3.0m†	20m	65	20m		100n		A	PD5000
65▲	LST515A	3#	3.0	20m	120m	35m	5.0	5A	635n	6.0m†	20m	65	20m		40p		RES	PD5000
66▲	LST515R	3#	3.0	20m	120m	35m	5.0	5A	635n	3.0m†	20m	24	20m		40p		A	PD5000
67	8342-001-505A	3	5.0	40m			5.0	5A	635n	8.0m†	20m	24	20m		40p		RES	PD5000
68	8342-301-505A	3	5.0	40m			5.0	5A		10m	40m	140	40m		40p			PD2270
69▼	LLT251Y	4#			105m	30m	5.0	5A		1.0m	20m							PD2270
70▼	LLT252Y	4#			105m	30m	5.0	5A		2.0m	20m							PD257a0
71▼	LLT253Y	4#			105m	30m	5.0	5A		1.0m	20m							PD257a0
72▼	LLT254Y	4#			105m	30m	5.0	5A		2.0m	20m							PD2800
73▼	LLT255Y	4#			105m	30m	5.0	5A		1.0m	20m							PD2800
74▼	LLT256Y	4#			105m	30m	5.0	5A		2.0m	20m							PD257a0
75▼	LLT257Y	4#			105m	30m	5.0	5A		1.0m	20m							PD257a0
76▼	LLT258Y	4#			105m	30m	5.0	5A		2.0m	20m							PD2800
77	521-9208	4	2.0	10m			5.0	5A		2.0m	20m							PD2800
78	8080-004-304	4	2.0	40m			5.0		580n	2.0m†	20m							PD2080
79	OPL272	4#	2.2	20m	150m	50m	3.0			12m	40m	160	40m					PD2280
80	OPL212	4#	2.2	20m	150m	50m	3.0			2.5m†	20m							PD5000
81	OPL1272	4#	2.2	20m	150m	50m	3.0			1.0m†	20m							PD15c0
82▼	DCC10018AY	4	2.3	10m	80m*	30m	15	58*	690n	1.0m	10m	180						PD2000
83▼	DCC10018LY	4	2.3	10m	80m*	30m	15	58*	690n	1.0m	10m	180	50n	50n	80p	BD		

## 2. EMITTER: LIGHT EMITTING DIODE

IN ORDER OF: (1) COLOR CODE (2) MAX. FWD. VOLT-VF  
(3) IF TEST (4) PWR DISS-Pcase & (5) TYPE No.

LINE No.	TYPE No.	COLOR CODE	MAXIMUM FORWARD			MAX. RATINGS @ 25°C			TEMP. RING. CODE	PEAK WAVE-LENGTH λp (m)	LUMINOUS INTENSITY (MIN) Iv (cd)	IF TEST (A)	BEAM ANGLE ΘHI (°)	SPECTRAL BAND WIDTH Δλ (m)	RESP. TIME (S)	CAPAC. C (F)	MATERIAL & FEATURES MAT	LEAD CODE	DRAWING
			VOLT VF (V)	IF TEST (A)	DISS. Pcase (W)	DC FWD CURR. IF (A)	REV. VOLT VR (V)	DC FWD CURR. IF (A)											
1	OP004-260	4S 2.6	40m	225m	80m	4.0	80m	4.5m	40m	4.5m	40m					EB	A	PD340	
2	ORL26	4S 2.6	40m	225m	80m	3.0	3.0	4.5m	40m	4.5m	40m					EB	A	PD17	
3	XC4850Y	4S 2.8	10m			3.0	3.0	635n	10m	600u	10m	80		40n	50p	EB	A	PD18a	
4	XC520Y	4* 2.8	10m	115m*	30m	5.0	5.0	5A* 585n	1.0m	10m	55		40n	100n	50p	EB	A	PD18a	
5	XC554Y12	4* 2.8	10m	115m*	30m	5.0	5.0	5A* 585n	1.2m	10m	24		40n	100n	50p	EB	A	PD18a	
6	XC554Y	4* 2.8	10m	115m*	30m	5.0	5.0	5A* 585n	2.0m	10m	24		40n	100n	50p	EB	A	PD18a	
7	XC556Y3	4S 2.8	10m	115m*	40m	5.0	5.0	5A* 585n	3.0m	10m	30		40n	100n	50p	EB	A	PD18a	
8	XC556Y4	4S 2.8	10m	115m*	40m	5.0	5.0	5A* 585n	4.0m	10m	30		40n	100n	50p	EB	A	PD18a	
9	XC4850-5VY	4S 2.8	10m	115m*	20m	5.0	5.0	5A* 585n	400u		80			40n	100n	50p	EB	A	PD340
10	XC5053Y2	4S 2.8	10m	115m*	30m	5.0	5.0	5A* 585n	1.5m	10m	80		40n	100n	50p	EB	A	PD18a	
11	XC5055Y	4 2.8	10m	115m*	30m	5.0	5.0	5A* 585n	300u	10m	120		40n	100n	50p	EB	A	PD18a	
12	AND123Y	4* 2.8	20m	70m*	25m	4.0	4.0	57* 585n	500u	20m	40	10m	35n			BD	A	PD279c	
13	AND124Y	4S 2.8	20m	70m*	25m	4.0	4.0	57* 585n	400u	20m	50	10m	35n			BD	A	PD279c	
14	AND205Y	4 2.8	20m	70m*	25m	4.0	4.0	27 585n	400u	15m		15m	32n			BD	A	PD383	
15	LT1253Y	4S 2.8	20m	70m*	30m	5.0	5.0	48 585n	500u	20m		20m	35n			BD	A	PD390	
16	LT2251Y	4S 2.8	20m	75m*	30m	5.0	5.0	28 585n	500u	20m		20m	35n			EB	A	PD391	
17	LT2253Y	4S 2.8	20m	75m*	30m	5.0	5.0	28 585n	500u	20m		20m	35n			EB	A	PD391a	
18	GL3PY1	4S 2.8	20m	85m*	30m	4.0	4.0	27* 575n	1.0m	20m		20m	45n		30p	BD	A	PD279	
19	GL3PY2	4S 2.8	20m	85m*	30m	4.0	4.0	27* 575n	1.0m	20m		20m	45n		30p	BD	A	PD279a	
20	GL5PY1	4S 2.8	20m	85m*	30m	4.0	4.0	28* 575n	1.0m	20m		20m	45n		30p	BD	A	PD280	
21	GL5PY2	4S 2.8	20m	85m*	30m	4.0	4.0	28* 575n	1.0m	20m		20m	45n		30p	BD	A	PD280a	
22	AND113Y	4* 2.8	20m	100m*	25m	4.0	4.0	57* 590n	1.0m	15m	55	20m	35n			BD	A	PD215	
23	AND114Y	4S 2.8	20m	100m*	25m	4.0	4.0	57* 590n	800u	15m	85	20m	35n			BD	A	PD215	
24	LT151Y	4S 2.8	20m	105m*	30m*	5.0	5.0	48 585n	800u	20m		20m	35n			EB	A	PD389	
25	LT156YC	4* 2.8	20m	105m*	30m*	5.0	5.0	48 585n	1.0m	20m		20m	35n			EB	A	PD389a	
26	LT251Y	4S 2.8	20m	105m*	30m*	5.0	5.0	48 585n	1.0m	20m		20m	35n			EB	A	PD292	
27	LT252YT	4A 2.8	20m	105m*	30m*	5.0	5.0	48 585n	2.0m	20m		20m	35n			EB	A	PD292	
28	LT253Y	4S 2.8	20m	105m*	30m*	5.0	5.0	48 585n	1.0m	20m		20m	35n			EB	A	PD288	
29	LT254YT	4A 2.8	20m	105m*	30m*	5.0	5.0	48 585n	2.0m	20m		20m	35n			EB	A	PD288	
30	LT255YW	4# 2.8	20m	105m*	30m*	5.0	5.0	48 585n	1.0m	20m		20m	35n			EB	A	PD292	
31	LT256YC	4* 2.8	20m	105m*	30m*	5.0	5.0	48 585n	2.0m	20m		20m	35n			EB	A	PD292	
32	LT257YW	4# 2.8	20m	105m*	30m*	5.0	5.0	48 585n	1.0m	20m		20m	35n			EB	A	PD288	
33	LT258YC	4* 2.8	20m	105m*	30m*	5.0	5.0	48 585n	2.0m	20m		20m	35n			EB	A	PD288	
34	LT3251Y	4S 2.8	20m	105m*	30m*	5.0	5.0	48 585n	1.0m	20m		20m	35n			EB	A	PD262a	
35	LT3253Y	4S 2.8	20m	105m*	30m*	5.0	5.0	48 585n	1.0m	20m		20m	35n			EB	A	PD262b	
36	LT4251Y	4S 2.8	20m	105m*	30m*	5.0	5.0	48 585n	1.5m	20m		20m	35n			EB	A	PD16w	
37	LT4252YT	4A 2.8	20m	105m*	30m*	5.0	5.0	48 585n	2.5m	20m		20m	35n			EB	A	PD16w	
38	LT4253Y	4S 2.8	20m	105m*	30m*	5.0	5.0	48 585n	1.5m	20m		20m	35n			EB	A	PD16x	
39	LT4254YT	4A 2.8	20m	105m*	30m*	5.0	5.0	48 585n	2.5m	20m		20m	35n			EB	A	PD16x	
40	LT4255YW	4# 2.8	20m	105m*	30m*	5.0	5.0	48 585n	1.5m	20m		20m	35n			EB	A	PD16w	
41	LT4256YC	4* 2.8	20m	105m*	30m*	5.0	5.0	48 585n	2.5m	20m		20m	35n			EB	A	PD16w	
42	LT4257YW	4# 2.8	20m	105m*	30m*	5.0	5.0	48 585n	1.5m	20m		20m	35n			EB	A	PD16x	
43	LT4258YC	4* 2.8	20m	105m*	30m*	5.0	5.0	48 585n	2.5m	20m		20m	35n			EB	A	PD16x	
44	LST4353F	4S 2.8	20m	120m	40m	5.0m	5.0m	5A 585n	500u	10m	80	10m	35n			BD	A	PD404	
45	5082-4550	4S 3.0	10m		50m	5.0	5.0	5A 583n	1.0m	10m	90					BD	A	PD415	
46	5082-4555	4S 3.0	10m		50m	5.0	5.0	5A 583n	2.2m	10m	90					BD	A	PD415	
47	CQY96	4S 3.0	10m	60m*	20m	3.0	3.0	5A% 580n	500u	10m	60					BD	A	PD232c	
48	CQY97	4S 3.0	10m	60m*	20m	3.0	3.0	5A% 580n	300u	10m	60		38n			BD	A	PD120b	
49	YL1212	4S 3.0	10m	80m	40m	3.0	3.0	5A 585n	1.0m	10m	80					BD	A	PD82	
50	YL4484	4S 3.0	10m	80m	40m	3.0	3.0	5A 585n	1.6m	10m	80					BD	A	PD82	
51	521-9211	4 3.0	10m	100m	30m	3.0	3.0	5A 580n	800u	10m	60			90n		BD	A	PD77e	
52	551-0305	4S 3.0	10m	100m	30m	3.0	3.0	5A 580n	800u	10m	60					EB	A	PD382	
53	MV53152	4* 3.0	10m	105m*	35m*	5.0	5.0	5A* 585n	3.0m	10m	70	10m	35n		45p	CA	A	PD47a	
54	MV53154	4S 3.0	10m	105m*	35m*	5.0	5.0	5A* 585n	1.5m	10m	80	10m	35n		45p	CA	A	PD47a	
55	XC110Y	4S 3.0	10m	115m	25m	5.0	5.0	5A 585n	400u	10m	75				50p	BD	A	PD18	
56	XC111Y	4* 3.0	10m	115m	25m	5.0	5.0	5A 585n	400u	10m	45				50p	BD	A	PD18	
57	XC209Y	4S 3.0	10m	115m	25m	5.0	5.0	5A 585n	600u	10m	75				50p	BD	A	PD16	
58	XC521Y	4S 3.0	10m	115m	25m	5.0	5.0	5A 585n	500u	10m	70				10p	CA	A	PD17	
59	XC522Y	4* 3.0	10m	115m	25m	5.0	5.0	5A 585n	1.0m	10m	55				50p	BD	A	PD17	
60	XC526Y2	4S 3.0	10m	115m	25m	5.0	5.0	5A 585n	1.5m	10m	70				50p	BD	A	PD17	
61	XC526Y	4S 3.0	10m	115m	25m	5.0	5.0	5A 585n	500u	10m	70				50p	BD	A	PD17	
62	XC554Y6	4* 3.0	10m	115m	25m	5.0	5.0	5A 585n	6.0m	10m	24				50p	BD	A	PD18a	
63	XC556Y2	4S 3.0	10m	115m	25m	5.0	5.0	5A 585n	2.0m	10m	30				50p	BD	A	PD18a	
64	XC556Y	4S 3.0	10m	115m	25m	5.0	5.0	5A 585n	600u	10m	30				50p	BD	A	PD18a	
65	XC5053Y	4S 3.0	10m	115m	25m	5.0	5.0	5A 585n	400u	10m	80				50p	BD	A	PD18a	
66	521-9248	4S 3.0	10m	120m	20m	5.0	5.0	5A* 585n	2.2m	10m	90	10m		90n	18p	CA	A	PD62c	
67	521-9249	4 3.0	10m	120m	20m	5.0	5.0	5A* 585n	1.2m	10m	35			90n	18p	CA	A	PD62c	
68	550-2304	4 3.0	10m	120m	30m	5.0	5.0	5A 585n	2.2m	10m				90n#	18p	CA	A	PD66b	
69	550-2305	4 3.0	10m	120m	30m	5.0	5.0	5A 585n	2.2m	10m				90n#	18p	CA	A	PD67b	
70	550-2306	4 3.0	10m	120m	30m	5.0	5.0	5A 585n	2.2m	10m				90n#	18p	CA	A	PD68b	
71	HLMP-1400	4S 3.0	10m	120m*	20m*	5.0	5.0	5A* 583n	500u	10m	60		38n	90n	15p	CA	B	PD77	
72	HLMP-1401	4S 3.0	10m	120m*	20m*	5.0	5.0	5A* 583n	1.0m	10m	60		38n	90n	15p	CA	A	PD77	
73	HLMP-1402	4S 3.0	10m	120m*	20m*	5.0	5.0	5A* 583n	1.0m	10m	60		38n	90n	15p	CA	A	PD180	
74	HP5082-4150	4S 3.0	10m	120m	20m	5.0	5.0	5A* 583n	2.5m	10m	90	10m	27	90n	18p	CA	A	PD50u	
75	HP5082-4550	4S 3.0	10m	120m	20m	5.0	5.0	5A* 583n	1.0m	10m	90	10m	27	90n	18p	CA	A	PD50u	
76	HP5082-4555	4S 3.0	10m	120m	20m	5.0	5.0	5A* 583n	2.2m	10m	90	10m	27	90n	18p	CA	A	PD50u	
77	HP5082-4557	4 3.0	10m	120m	20m	5.0	5.0	5A* 583n	6.0m	10m	35	10m	27	90n	18p	CA	A	PD50u	
78	HP5082-45																		

## 2. EMITTER: LIGHT EMITTING DIODE

IN ORDER OF: (1) COLOR CODE (2) MAX. FWD. VOLT-VF  
(3) IF TEST (4) PWR DISS-Pcase & (5) TYPE No.

LINE No.	TYPE No.	COLOR CODE	MAXIMUM FORWARD		MAX. RATINGS @ 25°C			TEMP RING. CODE	PEAK WAVELENGTH λp (nm)	LUMINOUS INTENSITY		BEAM ANGLE ΘHI (°)	SPECTRAL BANDWIDTH Δλ (nm)		RESP. TIME (S)	CAPAC. C (pF)	MATERIAL & FEATURES MAT	LEAD CODE	DRAWING Ø-RND. Δ-STRIP Δ-CHIP
			VOLT VF (V)	IF TEST (A)	PWR. DISS. CURR. (W)	DC FWD. CURR. (A)	REV. VOLT VR (V)			(mcd)	(A)		IF TEST (A)	(m)					
1#	MIL5358	4Δ	3.0	20m	105m*	35m	5.0	5A	585n	800u	20m	50	20m	35n			BD	A	PD2580
2#	MIL5359	4Δ	3.0	20m	105m*	35m	5.0	5A	585n	800u	20m	65	20m	35n			BD	A	PD2580
3#	MILB5351	4Δ	3.0	20m	105m*	35m	5.0	5A	585n	800u	20m	40	20m	35n			BD	B	PD1610
4#	MILB5352	4*	3.0	20m	105m*	35m	5.0	5A	585n	800u	20m	20	20m	35n			BD	B	PD1610
5#	MILB5358	4Δ	3.0	20m	105m*	35m	5.0	5A	585n	800u	20m	20	20m	35n			BD	B	PD1610
6#	MILB5359	4Δ	3.0	20m	105m*	35m	5.0	5A	585n	800u	20m	40	20m	35n			BD	B	PD1610
7#	MILS5351	4Δ	3.0	20m	105m*	35m	5.0	5A	585n	800u	20m	50	20m	35n			BD		PD0
8#	MILS5352	4*	3.0	20m	105m*	35m	5.0	5A	585n	800u	20m	65	20m	35n			BD		PD0
9#	MILS5358	4Δ	3.0	20m	105m*	35m	5.0	5A	585n	800u	20m	50	20m	35n			BD		PD0
10#	MILS5359	4#	3.0	20m	105m*	35m	5.0	5A	585n	800u	20m	65	20m	35n			BD		PD0
11#	MILSB5351	4Δ	3.0	20m	105m*	35m	5.0	5A	585n	800u	20m	40	20m	35n			BD		PD0
12#	MILSB5352	4*	3.0	20m	105m*	35m	5.0	5A	585n	800u	20m	20	20m	35n			BD		PD0
13#	MILSB5358	4Δ	3.0	20m	105m*	35m	5.0	5A	585n	800u	20m	20	20m	35n			BD		PD0
14#	MILSB5359	4#	3.0	20m	105m*	35m	5.0	5A	585n	800u	20m	40	20m	35n			BD		PD0
15#	MV5352	4	3.0	20m	105m*	35m	5.0	5A*	585n	45m†	20m	28	20m	35n			CA	A	PD16a0
16#	MV5353	4	3.0	20m	105m*	35m	5.0	5A*	585n	6.0m†	20m	65	20m	35n			CA	A	PD16a0
17#	MV5354	4Δ	3.0	20m	105m*	35m	5.0	5A*	585n	1.0m†	20m	24	20m	35n			CA	A	PD16n0
18#	MV5374B	4	3.0	20m	105m*	35m	5.0	5A*	585n	4.0m†	20m	90	20m	35n			CA	A	PD16b0
19#	MV5374C	4	3.0	20m	105m*	35m	5.0	5A*	585n	4.0m†	20m	90	20m	35n			CA	A	PD16c0
20#	MV5377B	4	3.0	20m	105m*	35m	5.0	5A*	585n	2.0m†	20m	180	20m	35n			CA	A	PD16d0
21#	MV5377C	4	3.0	20m	105m*	35m	5.0	5A*	585n	2.0m†	20m	180	20m	35n			CA	A	PD16e0
22#	MV53124	4	3.0	20m	105m*	35m*	5.0	5A*	585n	1.0m	20m	70	20m	35n				B	PD3197
23#	1N6093	4	3.0	20m	120m*	35m	5.0	5A*	585n	1.0m	20m	70	20m	35n				B	PD840
24#	JAN1N6093	4	3.0	20m	120m*	35m	5.0	5A*	605n▼	1.0m	20m	60	20m	35n			CA	B	PD3760
25#	521-9174	4Δ	3.0	20m	120m*	35m	5.0	5A*	580n	1.6m	20m	100	40n	90n			CA	A	PD50c0
26#	521-9176	4Δ	3.0	20m	120m*	35m	5.0	5A*	580n	1.6m	20m	100	40n	90n			CA	A	PD52d0
27#	521-9254	4	3.0	20m	120m*	35m	5.0	5A*	580n	1.6m	20m	45	100	200n			CA	A	PD50c0
28#	549-0301	4Δ	3.0	20m	120m*	35m	5.0	4A	585n	3.2m†	20m	70	40n	90n			EB	A	PD3790
29#	5082-4520	4Δ	3.0	20m	120m*	35m	5.0	5A	583n	1.0m	20m	70	40n	200n			EB	B	PD840
30#	5082-4587	4Δ	3.0	20m	120m*	35m	5.0	5A	583n	1.0m	20m	70	40n	200n			EB	B	PD3690
31▼	AND700Y	4Δ	3.0	20m	120m*	20m	5.0	48	580n	1.5m†	20m	20m	40n				BD		PD3920
32▼	AND703Y	4*	3.0	20m	120m*	20m	5.0	48	580n	1.5m†	20m	20m	40n				BD		PD3920
33▼	AND704Y	4Δ	3.0	20m	120m*	20m	5.0	48	580n	1.5m†	20m	20m	40n				BD		PD3920
34▼	AND706Y	4#	3.0	20m	120m*	20m	5.0	48	580n	1.5m†	20m	20m	40n				BD		PD3920
35▼	AND710Y	4Δ	3.0	20m	120m*	20m	5.0	48	580n	1.5m†	20m	20m	40n				BD		PD28r0
36▼	AND713Y	4*	3.0	20m	120m*	20m	5.0	48	580n	1.5m†	20m	20m	40n				BD	A	PD28r0
37▼	AND714Y	4Δ	3.0	20m	120m*	20m	5.0	48	580n	1.5m†	20m	20m	40n				BD	A	PD28r0
38▼	AND716Y	4#	3.0	20m	120m*	20m	5.0	48	580n	1.5m†	20m	20m	40n				BD	A	PD28r0
39▼	AND720Y	4Δ	3.0	20m	120m*	20m	5.0	48	580n	1.5m†	20m	20m	40n				BD		PD257c0
40▼	AND723Y	4*	3.0	20m	120m*	20m	5.0	48	580n	1.5m†	20m	20m	40n				BD		PD257c0
41▼	AND724Y	4Δ	3.0	20m	120m*	20m	5.0	48	580n	1.5m†	20m	20m	40n				BD		PD257c0
42▼	AND726Y	4#	3.0	20m	120m*	20m	5.0	48	580n	1.5m†	20m	20m	40n				BD		PD257c0
43▼	AND740Y	4Δ	3.0	20m	120m*	20m	5.0	48	580n	1.5m†	20m	20m	40n				BD		PD257b0
44▼	AND743Y	4*	3.0	20m	120m*	20m	5.0	48	580n	1.5m†	20m	20m	40n				BD		PD257b0
45▼	AND744Y	4Δ	3.0	20m	120m*	20m	5.0	48	580n	1.5m†	20m	20m	40n				BD		PD257b0
46▼	AND746Y	4#	3.0	20m	120m*	20m	5.0	48	580n	1.5m†	20m	20m	40n				BD		PD257b0
47▼	AND750Y	4Δ	3.0	20m	120m*	20m	5.0	48	580n	1.5m†	20m	20m	40n				BD		PD16y0
48▼	AND753Y	4*	3.0	20m	120m*	20m	5.0	48	580n	1.5m†	20m	20m	40n				BD	A	PD16y0
49▼	AND754Y	4Δ	3.0	20m	120m*	20m	5.0	48	580n	1.5m†	20m	20m	40n				BD	A	PD16y0
50▼	AND756Y	4#	3.0	20m	120m*	20m	5.0	48	580n	1.5m†	20m	20m	40n				BD	A	PD16y0
51	FLV410	4Δ	3.0	20m	120m*	10m	5.0	5A*	585	1.6m	20m	50	20m	40n			BD	A	PD50w0
52	FLV440	4Δ	3.0	20m	120m*	10m	5.0	5A*	585	1.6m	20m	50	20m	40n			BD	A	PD50w0
53	FLV450	4Δ	3.0	20m	120m*	10m	5.0	5A*	585	1.6m	20m	50	20m	40n			BD	A	PD50w0
54	FLV460	4Δ	3.0	20m	120m*	10m	5.0	5A*	585	1.6m	20m	50	20m	40n			BD	A	PD52b0
55	HP5082-4520	4Δ	3.0	20m	120m*	35m*	5.0	5A*	583n	1.0m	20m	70	20m	35n	200n		CA	B	PD1810
56▼	LST4353	4Δ	3.0	20m	120m*	40m	5.0	5A	585n	2.5m	20m	80	20m	35n			BD	A	PD4040
57▼	LST4354	4Δ	3.0	20m	120m*	40m	5.0	5A	585n	3.0m	20m	65	20m	35n			BD	A	PD4040
58▼	LST5352	4*	3.0	20m	120m	35m	5.0	5A	585n	1.0m	20m	28	20m	35n	100n		BD	RES	PD500
59▼	LST5352R	4*	3.0	20m	120m	35m	5.0	5A	585n	45m†	20m	28	20m	35n	100n		BD	RES	PD500
60▼	LST5353	4Δ	3.0	20m	120m	35m	5.0	5A	585n	2.5m	20m	65	20m	35n	100n		BD	RES	PD500
61▼	LST5353R	4Δ	3.0	20m	120m	35m	5.0	5A	585n	6.0m†	20m	65	20m	35n	100n		BD	RES	PD500
62▼	LST5354	4Δ	3.0	20m	120m	35m	5.0	5A	585n	3.0m	20m	24	20m	35n	100n		BD	RES	PD500
63▼	LST5354R	4Δ	3.0	20m	120m	35m	5.0	5A	585n	1.0m†	20m	24	20m	35n	100n		BD	RES	PD500
64	ED5531	4	3.0	20m	180m*	60m*	3.0	58	575n	450u	30m	90	28n	5.0n#	80p		CA	A	PD28d0
65#	CQX331	4Δ	3.0	20m	200m	60m	5.0	5A*	590n	1.6m	20m	140	35n	100n#	18p		B	B	PD325a0
66#	CQX331I	4Δ	3.0	20m	200m	60m	5.0	5A*	590n	2.5m	20m	140	35n	100n#	18p		B	B	PD325a0
67#	LD36	4Δ	3.0	20m	200m	60m	5.0	5A*	590n	1.0m	10m	70	35n	100n#	18p		B	B	PD77d0
68#	LD38I	4Δ	3.0	20m	200m	60m	5.0	5A*	590n	1.6m	10m	70	35n	100n#	18p		B	B	PD77d0
69#	LD56C	4*	3.0	20m	200m	60m	5.0	5A*	590n	1.0m	10m	24	35n	100n#	18p		B	B	PD325b0
70#	LD56CA	4*	3.0	20m	200m	60m	5.0	5A*	590n	6.0m	10m	24	35n	100n#	18p		B	B	PD325b0
71#	LD56I	4Δ	3.0	20m	200m	60m	5.0	5A*	590n	1.0m	10m	80	35n	100n#	18p		B	B	PD3250
72#	LD56II	4Δ	3.0	20m	200m	60m	5.0	5A*	590n	1.6m	10m	80	35n	100n#	18p		B	B	PD3250
73#	LD35A	4Δ	3.0	20m	210m	60m	3.0	5A‡	575n	600u	20m	70	20m	25n	50n#	45p	BD	B	PD77d0
74#	LD35I	4Δ	3.0	20m	210m	60m	3.0	5A‡	575n	2.5m	20m	70	20m	25n	50n#	45p	BD	B	PD77d0
75#	LD35II	4Δ	3.0	20m	210m	60m	3.0	5A‡	575n	4.0m	20m	70	20m	25n	50n#	45p	BD	B	PD77d0
76#	LD55A	4	3.0	20m	210m	60m	3.0	5A‡	575n	800u</									





## 2. EMITTER: LIGHT EMITTING DIODE

IN ORDER OF: (1) COLOR CODE (2) MAX. FWD. VOLT. VF  
(3) IF TEST (4) PWR DISS-Pcase & (5) TYPE No.

LINE No.	TYPE No.	COLOR CODE	MAXIMUM RATINGS @ 25°C			TEMP RNG.	PEAK WAVE-LENGTH λp	LUMINOUS INTENSITY		BEAM ANGLE θHI	SPECTRAL BAND		RESP. TIME	CAPAC C (F)	MATERIAL & FEATURES	LEAD CODE	DRAWING (Z-RECT. Δ-STRIP *CHIP)
			FORWARD VOLT VF (V)	IF TEST (A)	PWR. DISS. Pcase (W)			DC FWD CURR. IF (A)	REV. VOLT VR (V)		(m)	(cd)					
1#	TLG202	5*	2.6	20m	80m*	30m	4.0	27*	560n	50u	15m					PD330	
2#	LN32	5	2.6	30m	80m*	30m	3.0	28*	560n	1.2k	20m					PD124	
3	OP004-160	5*	2.6 †	40m	225m	80m	4.0			4.5m†	40m						
4	ORL16	5*	2.6 †	40m	225m	80m	3.0			4.5m†	40m						
5	XC4850G	5*	2.8	10m	115m	40m	5.0	5A	635n	600u	10m	80				PD340	
6	XC110G	5*	2.8	10m	115m	40m	5.0	5A	635n	400u	10m	75				PD18	
7	XC111G	5*	2.8	10m	115m	40m	5.0	5A	635n	400u	10m	45				PD18	
8	XC209G	5*	2.8	10m	115m	40m	5.0	5A	635n	600u	10m	75				PD16	
9	XC520G	5*	2.8	10m	115m*	40m	5.0	5A*	635n	1.0m	10m	55	30n	100n		PD17	
10	XC521G	5*	2.8	10m	115m	40m	5.0	5A	635n	500u	10m	70				PD17	
11	XC522G	5*	2.8	10m	115m	40m	5.0	5A	635n	1.0m	10m	55				PD17	
12	XC526G2	5*	2.8	10m	115m	40m	5.0	5A	635n	1.5m	10m	70				PD17	
13	XC526G	5*	2.8	10m	115m	40m	5.0	5A	635n	500u	10m	70				PD17	
14	XC554G6	5*	2.8	10m	115m	40m	5.0	5A	635n	6.0m	10m	24				PD17	
15	XC554G15	5*	2.8	10m	115m*	40m	5.0	5A*	635n	15m	10m	24				PD18a	
16	XC554G24	5*	2.8	10m	115m*	40m	5.0	5A*	635n	24m	10m	24	30n	100n		PD18a	
17	XC554G	5*	2.8	10m	115m*	40m	5.0	5A*	635n	2.0m	10m	24	30n	100n		PD18a	
18	XC556G2	5*	2.8	10m	115m*	40m	5.0	5A*	635n	2.0m	10m	30	30n	100n		PD18a	
19	XC556G3	5*	2.8	10m	115m*	40m	5.0	5A*	635n	3.0m	10m	30	30n	100n		PD18a	
20	XC556G4	5*	2.8	10m	115m*	40m	5.0	5A*	635n	3.0m	10m	30	30n	100n		PD18a	
21	XC556G	5*	2.8	10m	115m*	40m	5.0	5A*	635n	600u	10m	30				PD18a	
22	XC4850-5VG	5*	2.8	10m	115m*	20m	5.0	5A*	635n	400u	10m	80	30n	100n		PD340	
23	XC5053G2	5*	2.8	10m	115m*	20m	5.0	5A*	635n	1.5m	10m	80				PD18a	
24	XC5053G	5*	2.8	10m	115m*	20m	5.0	5A*	635n	400u	10m	80				PD18a	
25	XC5054G	5*	2.8	10m	115m	40m	5.0	5A	635n	200u	10m	30				PD18a	
26	XC5055G	5*	2.8	10m	115m	40m	5.0	5A	635n	300u	10m	30				PD18a	
27	AND123G	5*	2.8	20m	70m*	25m	4.0	57*	565n	300u	20m	40	10m	25n		PD279	
28	AND124G	5*	2.8	20m	70m*	25m	4.0	57*	565n	100u	20m	50	10m	25n		PD279	
29	AND208G	5*	2.8	20m	70m	25m	4.0	27	565n	500u	15m					PD383	
30	LT1233G	5*	2.8	20m	70m	30m	5.0	48	565n	300u	20m					PD390	
31	GL3PG	5*	2.8	20m	75m	30m	5.0	27*	555n	450u	20m					PD279	
32	GL3PG2	5*	2.8	20m	75m	30m	5.0	27*	555n	450u	20m					PD279	
33	GL3PG3	5*	2.8	20m	75m*	30m	5.0	27*	555n	300u	20m					PD279	
34	GL5PG	5*	2.8	20m	75m	30m	5.0	28*	555n	500u	20m					PD280	
35	GL5PG2	5*	2.8	20m	75m	30m	5.0	28*	555n	500u	20m					PD280	
36	GL30PG8	5*	2.8	20m	75m	30m	5.0	28*	555n	500u	20m	120	5.0m	100n		PD118	
37	GL52PG	5*	2.8	20m	75m	30m	5.0	28*	555n	500u	20m	80				PD218	
38	GL52PG#2	5*	2.8	20m	75m	30m	5.0	28*	555n	500u	20m	60	20m	100n		PD220	
39	LT2231G	5*	2.8	20m	75m	30m	5.0	28	565n	400u	20m					PD391	
40	LT2233G	5*	2.8	20m	75m	30m	5.0	28	565n	400u	20m					PD391	
41	GL2PG1	5*	2.8	20m	85m*	30m	5.0	28*	555n	90u	20m					PD333	
42	GL3PG3	5*	2.8	20m	85m*	30m	4.0	27*	575n	400u	20m					PD279	
43	GL4NG2	5*	2.8	20m	85m*	30m	5.0	28*	565n	1.0m	20m					PD279	
44	GL4PG2	5*	2.8	20m	85m*	30m	5.0	28*	555n	500u	20m					PD279	
45	GL4PY2	5*	2.8	20m	85m*	30m	4.0	28*	575n	700u	20m					PD279	
46	GL5NG6	5*	2.8	20m	85m*	30m	5.0	28*	565n	5.0m	20m					PD280	
47	GL5PG5	5*	2.8	20m	85m*	30m	5.0	28*	555n	1.5m	20m					PD280	
48	GL5PY5	5*	2.8	20m	85m*	30m	4.0	28*	575n	1.5m	20m					PD280	
49	GL9PG2	5*	2.8	20m	85m*	30m	5.0	28*	555n	150u	20m					PD334	
50	GL9PG3	5*	2.8	20m	85m*	30m	5.0	28*	555n	150u	20m					PD335	
51	GL9PG4	5*	2.8	20m	85m*	30m	5.0	28*	555n	150u	20m					PD336	
52	AND113G	5*	2.8	20m	100m*	25m	4.0	57*	565n	3.0m	15m	50	20m	25n		PD215	
53	AND114G	5*	2.8	20m	100m*	25m	4.0	57*	565n	800u	15m	80	20m	25n		PD215	
54	AND115G	5*	2.8	20m	100m*	25m	4.0	57*	565n	3.0m	15m	45	20m	25n		PD215	
55	SG203D	5*	2.8	20m	100m*	50m	5.0	X8*	565n	3.0m†	20m					PD254	
56	SG203T	5*	2.8	20m	100m*	50m	5.0	X8*	565n	3.0m†	20m					PD254	
57	SG206D	5*	2.8	20m	100m*	40m	4.0	X8*	565n	1.5m†	20m					PD256	
58	SG206T	5*	2.8	20m	100m*	40m	4.0	X8*	565n	1.5m†	20m					PD256	
59	TLG113	5*	2.8	20m	100m*	25m	4.0	27*	560n	3.5m†	15m					PD215	
60	TLG115	5*	2.8	20m	100m*	25m	4.0	27*	560n	3.0m†	15m					PD215	
61	LT131G	5*	2.8	20m	105m*	30m*	5.0	48	565n	500u	20m					PD389	
62	LT136GC	5*	2.8	20m	105m*	30m*	5.0	48	565n	800u	20m					PD389	
63	LT231G	5*	2.8	20m	105m*	30m*	5.0	48	565n	500u	20m					PD292	
64	LT232GT	5*	2.8	20m	105m*	30m*	5.0	48	565n	1.0m	20m					PD292	
65	LT233G	5*	2.8	20m	105m*	30m*	5.0	48	565n	500u	20m					PD288	
66	LT234GT	5*	2.8	20m	105m*	30m*	5.0	48	565n	1.0m	20m					PD288	
67	LT235GW	5*	2.8	20m	105m*	30m*	5.0	48	565n	1.0m	20m					PD292	
68	LT236GC	5*	2.8	20m	105m*	30m*	5.0	48	565n	1.5m	20m					PD292	
69	LT237GW	5*	2.8	20m	105m*	30m*	5.0	48	565n	1.0m	20m					PD288	
70	LT238GC	5*	2.8	20m	105m*	30m*	5.0	48	565n	1.5m	20m					PD288	
71	LT23231G	5*	2.8	20m	105m	30m	5.0	48	565n	800u	20m					PD262	
72	LT23233G	5*	2.8	20m	105m	30m	5.0	48	565n	800u	20m					PD262	
73	LT24231G	5*	2.8	20m	105m	30m	5.0	48	565n	2.5m	20m					PD16w	
74	LT4232GT	5*	2.8	20m	105m	30m	5.0	48	565n	800u	20m					PD16w	
75	LT4233G	5*	2.8	20m	105m	30m	5.0	48	565n	500u	20m					PD16w	
76	LT4234GT	5*	2.8	20m	105m	30m	5.0	48	565n	1.5m	20m					PD16w	
77	LT4235GW	5*	2.8	20m	105m	30m	5.0	48	565n	1.5m	20m					PD16w	
78	LT4236GC	5*	2.8	20m	105m	30m	5.0	48	565n	2.0m	20m					PD16w	
79	LT4237GW	5*	2.8	20m	105m	30m	5.0	48	565n	1.5m	20m					PD16w	
80	LT4238GC	5*	2.8	20m	105m	30m	5.0	48	565n	2.0m	20m					PD16w	
81	LS4253F	5*	2.8	20m	120m	40m	5.0m	5A	565n	200u	10m	80	10m	35n		PD404	
82	NSL5252	5*	2.8	20m	175m	50m	5.0	4A*	565n	500u	20m	15	20m	60n		PD50g	
83	NSL5253	5*	2.8	20m	175m	50m	5.0	4A*	565n	500u	20m	20	20m	60n		PD50g	
84	AND103G	5*	2.8	40m	125m*	45m	4.0	57*	565n	2.0m	20m	50	20m	25n		PD126	
85	AND103GK	5*	2.8	40m	125m*	45m	4.0	57*	565n	2.0m	20m	50	20m	25n		PD328	
86	AND105G	5*	2.8	40m	125m*	45m	4.0	57*	565n	1.0m	20m	60	20m	25n		PD127	
87	AND105GK	5*	2.8	40m	125m*	45m	4.0	57*	565n	1.0m	20m	60	20m	25n		PD327	
88	AND107G	5*	2.8	40m	125m*	45m	4.0	57*	565n	2.0m	20m	75	20m	25n		PD128	
89	AND107GK	5*	2.8	40m	125m*	45m	4.0	57*	565n	2.0m	20m	75	20m	25n		PD329	
90	TLG103	5*	2.8	40m	125m*	45m	4.0	27*	560n	300u	20m	46	20m	25n	1.0n	PD126	
91	TLG103K	5*	2.8	40m	125m*	45m	4.0	27*	560n	300u	20m	46	20m	25n	1.0n	PD328	

## 2. EMITTER: LIGHT EMITTING DIODE

IN ORDER OF: (1) COLOR CODE (2) MAX. FWD. VOLT-VF  
(3) IF TEST (4) PWR DISS. Pcase & (5) TYPE No.

LINE No.	TYPE No.	COLOR CODE	MAXIMUM FORWARD VOLT (V)	IF TEST (A)	MAX. PWR. DISS. Pcase (W)	DC FWD CURR. (A)	REV. VOLT VR (V)	TEMP. RNG. CODE	PEAK WAVE-LENGTH λp (m)	LUMINOUS INTENSITY (cd)	BEAM ANGLE °HI	SPECTRAL BAND WIDTH Δλ (m)	RESP. TIME (S)	CAPAC. C (F)	MATERIAL & FEATURES MAT	LEAD CODE	DRAWING Ø-RND. Δ-RECT. *-CHIP		
																		3	4
1	LD57-1	5 3	3.0	20m	60m*	60m			2.5m	20m						B	PD3250		
2	LD57-2	5 3	3.0	20m	60m	60m			4.0m	20m					B	PD3250			
3	MIL3231	5 3	3.0	20m	60m*	35m	5.0	5A	565n	800u	45	20m	35n	45p	BD	A	PD2570		
4	MIL3232	5 3	3.0	20m	60m*	35m	5.0	5A	565n	800u	40	20m	35n	45p	BD	A	PD2570		
5	MIL3238	5 3	3.0	20m	60m*	35m	5.0	5A	565n	800u	40	20m	35n	45p	BD	A	PD2570		
6	MIL3239	5 3	3.0	20m	60m*	35m	5.0	5A	565n	800u	45	20m	35n	45p	BD	A	PD2570		
7	GL211	5 3	3.0	20m	80m	40m	3.0	5A	565n	800u	20m				BD	A	PD820		
8	GL4484	5 3	3.0	20m	80m	40m	3.0	5A	565n	1.0m†	20m				BD	A	PD820		
9	LD471	5 3	3.0	20m	85m	25m	3.0	48	560n	3.2m	20m	100	20m	25n	50n#	50p	BD	PD146b	
10	LD471A	5 3	3.0	20m	85m	25m	3.0	48	560n	1.2m	20m	100	20m	25n	50n#	50p	BD	PD146b	
11	521-9210	5 3	3.0	20m	100m	30m	3.0	4A	565n	800u	20m	60		200n		BD	A	PD77e	
12	550-0204	5 3	3.0	20m	100m	40m	3.0	4A	565n	2.0m†	20m	70	20m	30n	10n#		BD	A	PD66
13	550-0205	5 3	3.0	20m	100m	40m	3.0	4A	565n	2.0m†	20m	70	20m	30n	10n#		BD	A	PD67
14	550-0206	5 3	3.0	20m	100m	40m	3.0	4A	565n	2.0m†	20m	70	20m	30n	10n#		BD	A	PD68
15	551-0205	5 3	3.0	20m	100m	30m	3.0	5A	565n	800u†	20m	60					BD	A	PD382
16	CM4-344A	5 3	3.0	20m	105m	35m	5.0	5A	565n	300u	20m	90	20m	50n	45p	CA	A	PD16k	
17	CM4-344B	5 3	3.0	20m	105m	35m	5.0	5A*	565n	300u	20m	90		50n	45p	BD	A	PD16k	
18	CM4-382B	5 3	3.0	20m	105m	35m	5.0	5A*	565n	5.0m	20m	28		50n	45p	BD	A	PD16k	
19	CM4-382B-2	5 3	3.0	20m	105m	35m	5.0	5A*	565n	1.2m	20m	28	20m	50n	45p	CA	A	PD16k	
20	CM4-383B	5 3	3.0	20m	105m	35m	5.0	5A*	565n	600u	20m	24	20m	50n	45p	BD	A	PD16k	
21	CM4-384B	5 3	3.0	20m	105m	35m	5.0	5A*	565n	500u	20m	65	20m	50n	45p	BD	A	PD16k	
22	CM4-384B-2	5 3	3.0	20m	105m	35m	5.0	5A	565n	2.2m	20m	65	20m	50n	45p	CA	A	PD258	
23	MIL5251	5 3	3.0	20m	105m*	35m	5.0	5A	565n	800u	20m	65	20m	35n	45p	BD	A	PD258	
24	MIL5252	5 3	3.0	20m	105m*	35m	5.0	5A	565n	800u	20m	50	20m	35n	45p	BD	A	PD258	
25	MIL5258	5 3	3.0	20m	105m*	35m	5.0	5A	565n	800u	20m	50	20m	35n	45p	BD		PD0	
26	MIL5259	5 3	3.0	20m	105m*	35m	5.0	5A	565n	800u	20m	65	20m	35n	45p	BD		PD0	
27	MILB5251	5 3	3.0	20m	105m*	35m	5.0	5A	565n	800u	20m	40	20m	35n	45p	BD	B	PD16	
28	MILB5252	5 3	3.0	20m	105m*	35m	5.0	5A	565n	800u	20m	20	20m	35n	45p	BD		PD0	
29	MILB5258	5 3	3.0	20m	105m*	35m	5.0	5A	565n	800u	20m	20	20m	35n	45p	BD		PD0	
30	MILB5259	5 3	3.0	20m	105m*	35m	5.0	5A	565n	800u	20m	40	20m	35n	45p	BD		PD0	
31	MILS5251	5 3	3.0	20m	105m*	35m	5.0	5A	565n	800u	20m	65	20m	35n	45p	BD		PD0	
32	MILS5252	5 3	3.0	20m	105m*	35m	5.0	5A	565n	800u	20m	50	20m	35n	45p	BD		PD0	
33	MILS5258	5 3	3.0	20m	105m*	35m	5.0	5A	565n	800u	20m	50	20m	35n	45p	BD		PD0	
34	MILS5259	5 3	3.0	20m	105m*	35m	5.0	5A	565n	800u	20m	65	20m	35n	45p	BD		PD0	
35	MILSB5251	5 3	3.0	20m	105m*	35m	5.0	5A	565n	800u	20m	40	20m	35n	45p	BD		PD0	
36	MILSB5252	5 3	3.0	20m	105m*	35m	5.0	5A	565n	800u	20m	20	20m	35n	45p	BD		PD0	
37	MILSB5258	5 3	3.0	20m	105m*	35m	5.0	5A	565n	800u	20m	20	20m	35n	45p	BD		PD0	
38	MILSB5259	5 3	3.0	20m	105m*	35m	5.0	5A*	565n	1.5m†	20m	28	20m	35n	45p	BD	A	PD16a	
39	MV5252	5 3	3.0	20m	105m*	35m	5.0	5A*	565n	1.5m†	20m	65	20m	35n	45p	BD	A	PD16a	
40	MV5253	5 3	3.0	20m	105m*	35m	5.0	5A*	565n	3.0m†	20m	24	20m	35n	45p	BD	A	PD16a	
41	MV5254	5 3	3.0	20m	105m*	35m	5.0	5A*	565n	1.0m†	20m	90	20m	35n	45p	BD	A	PD16a	
42	MV5274B	5 3	3.0	20m	105m*	35m	5.0	5A*	565n	1.0m†	20m	90	20m	35n	45p	BD	A	PD16a	
43	MV5274C	5 3	3.0	20m	105m*	35m	5.0	5A*	565n	1.0m†	20m	90	20m	35n	45p	BD	A	PD16a	
44	MV5277C	5 3	3.0	20m	105m*	35m	5.0	5A*	565n	600u†	20m	180	20m	35n	45p	BD	A	PD16a	
45	MV5277C	5 3	3.0	20m	105m*	35m	5.0	5A*	565n	600u†	20m	180	20m	35n	45p	BD	A	PD16a	
46	MV52124	5 3	3.0	20m	105m*	35m	5.0	5A*	565n	1.0m	20m	60	20m	45n	45p	B	B	PD319	
47	JAN1N6094	5 3	3.0	20m	120m*	30m	5.0	6A*	562n	800u	20m	60	20m	100p	100p	B	B	PD376	
48	521-9173	5 3	3.0	20m	120m	50m	5.0	5A*	565n	1.6m	20m	100	40n			A	A	PD50c	
49	521-9175	5 3	3.0	20m	120m	50m	5.0	5A*	565n	1.6m	20m	100	40n			A	A	PD52c	
50	521-9250	5 3	3.0	20m	120m	30m	5.0	5A*	565n	2.2m	20m	90	20m	200n	18p	CA	A	PD62c	
51	521-9251	5 3	3.0	20m	120m	30m	5.0	5A*	565n	1.2m	20m	35	20m	200n	18p	CA	A	PD62c	
52	521-9253	5 3	3.0	20m	120m	50m	5.0	5A	565n	1.6m	20m	45	70	200n	90n	CA	A	PD50c	
53	549-0201	5 3	3.0	20m	120m	40m	5.0	4A	565n	3.2m†	20m			90n		BD	A	PD379	
54	550-2204	5 3	3.0	20m	120m	30m	5.0	5A	565n	2.2m	20m			200n#	18p	CA	A	PD66b	
55	550-2205	5 3	3.0	20m	120m	30m	5.0	5A	565n	2.2m	20m			200n#	18p	CA	A	PD66b	
56	550-2206	5 3	3.0	20m	120m	30m	5.0	48	565n	1.5m†	20m			200n#	18p	CA	A	PD68b	
57	AND700G	5 3	3.0	20m	120m*	20m	5.0	48	550n	1.5m†	20m			20m	40n	BD		PD392	
58	AND700P	5 3	3.0	20m	120m*	20m	5.0	48	550n	1.5m†	20m			20m	40n	BD		PD392	
59	AND703G	5 3	3.0	20m	120m*	20m	5.0	48	550n	1.5m†	20m			20m	40n	BD		PD392	
60	AND703P	5 3	3.0	20m	120m*	20m	5.0	48	550n	1.5m†	20m			20m	40n	BD		PD392	
61	AND704G	5 3	3.0	20m	120m*	20m	5.0	48	565n	1.5m†	20m			20m	40n	BD		PD392	
62	AND704P	5 3	3.0	20m	120m*	20m	5.0	48	565n	1.5m†	20m			20m	40n	BD		PD392	
63	AND706G	5 3	3.0	20m	120m*	20m	5.0	48	550n	1.5m†	20m			20m	40n	BD		PD392	
64	AND706P	5 3	3.0	20m	120m*	20m	5.0	48	550n	1.5m†	20m			20m	40n	BD	A	PD28r	
65	AND710G	5 3	3.0	20m	120m*	20m	5.0	48	550n	1.5m†	20m			20m	40n	BD	A	PD28r	
66	AND710P	5 3	3.0	20m	120m*	20m	5.0	48	550n	1.5m†	20m			20m	40n	BD	A	PD28r	
67	AND713G	5 3	3.0	20m	120m*	20m	5.0	48	565n	1.5m†	20m			20m	40n	BD	A	PD28r	
68	AND713P	5 3	3.0	20m	120m*	20m	5.0	48	565n	1.5m†	20m			20m	40n	BD	A	PD28r	
69	AND714G	5 3	3.0	20m	120m*	20m	5.0	48	550n	1.5m†	20m			20m	40n	BD	A	PD28r	
70	AND714P	5 3	3.0	20m	120m*	20m	5.0	48	550n	1.5m†	20m			20m	40n	BD	A	PD28r	
71	AND716G	5 3	3.0	20m	120m*	20m	5.0	48	550n	1.5m†	20m			20m	40n	BD	A	PD28r	
72	AND716P	5 3	3.0	20m	120m*	20m	5.0	48	550n	1.5m†	20m			20m	40n	BD	A	PD28r	
73	AND720G	5 3	3.0	20m	120m*	20m	5.0	48	565n	1.5m†	20m			20m	40n	BD		PD257c	
74	AND720P	5 3	3.0	20m	120m*	20m	5.0	48	565n	1.5m†	20m			20m	40n	BD		PD257c	
75	AND723G	5 3	3.0	20m	120m*	20m	5.0	48	565n	1.5m†	20m			20m	40n	BD		PD257c	
76	AND723P	5 3	3.0	20m	120m*	20m	5.0	48	565n	1.5m†	20m			20m	40n	BD		PD257c	
77	AND724G	5 3	3.0	20m	120m*	20m	5.0	48	565n	1.5m†	20m			20m	40n	BD		PD257c	
78	AND724P	5 3	3.0	20m	120m*	20m	5.0	48	565n	1.5m†									

## 2. EMITTER: LIGHT EMITTING DIODE

IN ORDER OF: (1) COLOR CODE (2) MAX. FWD. VOLT-VF  
(3) IF TEST (4) PWR DISS-Pcase & (5) TYPE No.

LINE No.	TYPE No.	1 COLOR CODE	2 MAXIMUM FORWARD VOLT (V)	3 IF TEST (A)	4 MAX. PWR. DISS. Pcase (W)	DC CURR. IF (A)	MAX. RATINGS @ 25°C	TEMP RNG. CODE	PEAK WAVE-LENGTH λp (m)	LUMINOUS INTENSITY (cd)	BEAM ANGLE θHI	SPECTRAL BAND WIDTH Δλ (m)	RESP. TIME (S)	CAPAC C (F)	MATERIAL & FEATURES MAT	LEAD CODE	DRAWING Ø-RND. Δ-STRIP *-CHIP									
																		5 REV. VOLT (V)	5A*	5Bn	5C	5D	5E	5F	5G	5H
1	HP5082-4958	5	3.0	20m	120m*	30m	5.0	5A*	565n	12m	20m	30	20m	18n	200n	18p	BD	A	PD50u							
2	HP5082-4984	5	3.0	20m	120m*	30m*	5.0	5A*	565n	800u	20m	60	20m	22n	200n	8.0p	BD	B	PD77							
3	HP5082-4980	5	3.0	20m	120m*	30m*	5.0	5A*	565n	2.0m	20m	50	20m	31n	200n	12p	BD	A	PD50k							
4	HP5082-4982	5	3.0	20m	120m*	30m*	5.0	5A*	565n	6.0m	20m	50	20m	31n	200n	12p	BD	A	PD50k							
5	HP5082-4995	5	3.0	20m	120m*	30m*	5.0	5A*	565n	3.5m	20m	40	20m	31n	200n	12p	BD	A	PD50k							
6	HP5082-4997	5	3.0	20m	120m*	30m*	5.0	5A*	565n	8.0m	20m	40	20m	31n	200n	12p	BD	A	PD50k							
7▼	LST4253	5	3.0	20m	120m	40m	5.0	5A	565n	800u	20m	80	20m	35n	200n	40p	BD	A	PD404							
8▼	LST4254	5	3.0	20m	120m	40m	5.0	5A	565n	1.0m	20m	65	20m	35n	200n	40p	BD	A	PD404							
9▲	LST5252	5	3.0	20m	120m	35m	5.0	5A	565n	2.0m	20m	28	20m	35n	100n	45p	BD	A	PD50r							
10▼	LST5252R	5	3.0	20m	120m	35m	5.0	5A	565n	15m†	20m	28	20m	35n	100n	45p	BD RES	A	PD50r							
11▲	LST5253	5	3.0	20m	120m	35m	5.0	5A	565n	800u	20m	65	20m	35n	100n	40p	BD	A	PD50r							
12▼	LST5253R	5	3.0	20m	120m	35m	5.0	5A	565n	15m†	20m	65	20m	35n	100n	40p	BD RES	A	PD50r							
13▲	LST5254	5	3.0	20m	120m	35m	5.0	5A	565n	900u	20m	24	20m	35n	100n	40p	BD	A	PD50r							
14▼	LST5254R	5	3.0	20m	120m	35m	5.0	5A	565n	3.0m†	20m	24	20m	35n	100n	40p	BD RES	A	PD50r							
15	ED553G	5	3.0	20m	180m*	60m*	3.0	5B	560n	450u	30m	90	20m	28n	5.0n#	80p	CA	A	PD28d							
16#	CQX13	5	3.0	20m	210m	60m	3.0	5A	560n	2.5m	20m	160	20m	25n	50n#	45p	BD	B	PD325a							
17#	CQX131	5	3.0	20m	210m	60m	3.0	5A	560n	2.5m	20m	160	20m	25n	50n#	45p	BD	A	PD28k							
18#	CQX131I	5	3.0	20m	210m	60m	3.0	5A	560n	5.0m	20m	160	20m	25n	50n#	45p	BD	A	PD28k							
19#	LD37A	5	3.0	20m	210m	60m	3.0	5A	560n	500u	20m	70	20m	25n	50n#	45p	BD	B	PD77d							
20#	LD37C	5	3.0	20m	210m	60m	3.0	5A	560n	4.0m	20m	50	20m	25n	50n#	45p	BD	B	PD77d							
21#	LD37I	5	3.0	20m	210m	60m	3.0	5A	560n	2.0m	20m	70	20m	25n	50n#	45p	BD	B	PD77d							
22#	LD37II	5	3.0	20m	210m	60m	3.0	5A	560n	3.0m	20m	70	20m	25n	50n#	45p	BD	B	PD77d							
23#	LD57A	5	3.0	20m	210m	60m	3.0	5A	560n	600u	20m	50	20m	25n	50n#	45p	BD	A	PD28h							
24#	LD57C	5	3.0	20m	210m	60m	3.0	5A	560n	2.0m	10m	12	20m	25n	50n#	45p	BD	A	PD28h							
25#	LD57CA	5	3.0	20m	210m	60m	3.0	5A	560n	1.0m	10m	12	20m	25n	50n#	45p	BD	A	PD28h							
26#	LD57I	5	3.0	20m	210m	60m	3.0	5A	560n	2.0m	20m	50	20m	25n	50n#	45p	BD	A	PD28h							
27#	LD57II	5	3.0	20m	210m	60m	3.0	5A	560n	4.0m	20m	50	20m	25n	50n#	45p	BD	A	PD28h							
28	1N6094	5	3.0	25m	120m*	35m	5.0	5A*	560n	800u	25m	80	25m	30n	200n	35p	BD	B	PD84							
29	5082-4920	5	3.0	25m	120m	35m	5.0	5A	565n	800u	25m	70	20m	30n	200n	35p	BD	B	PD84							
30	5082-4987	5	3.0	25m	120m	35m	5.0	5A	565n	800u	25m	70	20m	30n	200n	35p	BD	B	PD369							
31	HLMP-0500	5	3.0	25m	120m*	30m*	5.0	5A*	565n	1.0m	25m	100	20m	22n	200n	17p	BD	A	PD262							
32	HLMP-0501	5	3.0	25m	120m*	30m*	5.0	5A*	565n	1.5m	25m	100	20m	22n	200n	17p	BD	A	PD262							
33	HP5082-4970	5	3.0	25m	120m*	30m*	5.0	5A*	565n	1.0m	20m	100	20m	22n	200n	17p	BD	A	PD262							
34	MV5491#2	5	3.0	30m	200m*	35m	5.0	5A	560n	500u	20m	60	20m	30n	100p	50p	EB	A	PD89a							
35#	LN31	5	3.0	40m	120m	40m	3.0	28	560n								BD	A	PD62a							
36▼	TIL232-1	5	3.2	20m	100m*	50m	5.0	5A	560n	500u	20m	60	20m	30n	50p		BD	▲	PD416							
37▼	TIL232-2	5	3.2	20m	100m*	50m	5.0	5A	560n	1.3m	20m	60	20m	30n	50p		BD	▲	PD416							
38▼	TIL234-1	5	3.2	20m	100m*	50m	5.0	5A	560n	800u	20m	60	20m	30n	50p		BD	▲	PD415							
39▼	TIL234-2	5	3.2	20m	100m*	50m	5.0	5A	560n	2.1m	20m	60	20m	30n	50p		BD	▲	PD415							
40▼	TIL236-1	5	3.2	20m	100m*	50m	5.0	5A	560n	6.0m	20m	25	20m	30n	50p		BD	▲	PD415							
41▼	TIL236-2	5	3.2	20m	100m*	50m	5.0	5A	560n	15m	20m	25	20m	30n	50p		BD	▲	PD415							
42#	CQX11	5	3.2	20m	100m*	50m	5.0	XA	560n	3.5m	20m	50	20m	40n	100p		CA	A	PD231							
43#	CQX26	5	3.2	20m	100m*	30m	5.0	2A	560n	1.3m	20m	30	40n	40n	50p		BD	B	PD120							
44#	CQX26N	5	3.2	20m	100m*	30m	5.0	2A	560n	1.3m	20m	25	40n	40n	50p		BD	A	PD393							
45#	CQX36	5	3.2	20m	100m*	30m	5.0	2A	560n	6.0m	20m	30	40n	40n	50p		BD	B	PD232b							
46#	CQY72L	5	3.2	20m	100m*	50m	5.0	2A	560n	1.0m	20m	80	40n	40n	100p		BD	A	PD232							
47#	CQY73N	5	3.2	20m	100m*	30m	5.0	2A	560n	1.0m	20m	40	40n	40n	50p		BD	A	PD394							
48#	CQY86	5	3.2	20m	100m*	50m	5.0	2A	560n	1.0m	20m	90	40n	40n	100p		BD	A	PD136							
49#	CQY86NA	5	3.2	20m	100m	30m	5.0	2A	560n	1.0m	20m	60	40n	40n	50p		BD	A	PD393							
50#	CQY86NB	5	3.2	20m	100m	30m	5.0	2A	560n	2.0m	20m	60	40n	40n	50p		BD	A	PD393							
51#	V189P	5	3.2	20m	100m*	50m	5.0	XA	560n	2.0m	20m	80	40n	40n	100p		BD	B	PD232							
52#	CQX29	5	3.2	20m	150m	50m	5.0	5A	560n	1.0m	20m	50	40n	40n	100p		BD	A	PD395							
53#	CQX31#2	5	3.2	20m	200m	50m	5.0	5A	560n	1.0m	20m	50	40n	40n	100p		BD	A	PD395							
54	GL56	5	3.5	20m	80m*	25m	3.0	5A*	565n	1.0m†	20m			1.0n	20p		BD	B	PD174							
55#	GPC140	5	3.5	40m			6.0		565n	875	40m			40n	40n#	10ps	BD	A	PD33							
56#	GPL140	5	3.5	40m					565n	7.0m†	40m						BD	A	PD33							
57#	GPL141	5	3.5	40m					565n	7.0m†	40m						BD	A	PD33							
58#	CQY66	5	3.6	20m	100m*	40m	3.0	4A*	565n	500u	20m		20m	40n			BD	A	PD33							
59	LLL17	5	3.6	25m	150m	40m	3.0	48	560n	800u	25m	30	25m	35n	35p		BD	A	PD55							
60	MSL17	5	3.6	25m	150m	40m	3.0	48	560n	800u	25m	30	25m	35n	35p		BD	A	PD55							
61	OSL11	5	3.7	40m	150m	50m	4.0	5A	560n	1.2m	40m	100	40m	35n	50p		BD	A	PD58							
62	OSL11S	5	3.7	40m	150m	50m	4.0	5A	560n	1.2m	40m	100	40m	35n	50p		BD	A	PD58							
63	ED220G	5	3.8	20m	225m	80m	3.0	5A	555n	1.5m	20m	60	20m	35n	50p		BD	A	PD56a							
64#	CQY73	5	4.0	20m	100m	50m	3.0	2A	560n	200u	20m	40	40n	40n			BD	B	PD11							
65#	AL102V	5	4.5	20m		20m	6.0	67*		20	20m						BD	B	PD235							
66	MV52	5	4.5	50m	225m*	50m	5.0	5A*	565n	1.5m†	50m		20m				BD	B	PD68							
67	XC5053-5VG	5	5.0	10m		20m	7.0	5A	565n	400u	10m	80					BD	A	PD18a							
68	XC209-5VY	5	5.0	20m	115m*	20m	5.0	5A*	585n	600u		75					BD	A	PD18							
69	6082-005-304	5	5.0	40m			5.0			3.0m	40m	120	40m	40n	100n	50p	EB	A	PD226							
70	6342-005-505G	5	5.0	40m			5.0			5.0m	40m	130	40m				Lug Wire	A	PD227							
71	6342-305-505G	5	5.0	40m			5.0			5.0m	40m	130	40m				Lug Wire	A	PD227							
72	TIL211	5	5.0	50m		50m	3.0	48	564n	800u	25m			300n#	100p		BD	A	PD33							
73▼	L39UR-G6-2112	5	6.0	35m	100m	35m	5.0	5A		3.0m†							BD	A	PD398a							
74▼	L39UR-G6-2312	5	6.0	35m	100m	35m	5.0	5A		3.0m†							BD	A	PD398							
75▼	L45RN-G6-2112	5	6.0	35																						



### 3. EMITTER: INFRARED EMITTING DIODE

IN ORDER OF: (1) MIN. PWR. OUTPUT (2) IF & (3) TYPE No.

LINE No.	TYPE No.	1 MIN. POWER OUTPUT		MAX FWD VOLTAGE		MAX RATINGS @ 25°C			TEMP RNG. CODE	PEAK WAVELENGTH	MIN AXIAL INTENSITY		BEAM ANGLE	SPECTRAL BAND		RESP. TIME	MATER. & FEATURE MAT	LEAD CODE	DRAWING
		Po (W)	IF (A)	Vf (V)	IF (A)	PWR. DISS. Pcase (W)	DC FWD CURR. IF (A)	REV. VOLT VR (V)			W/Sr	IF (A)		IF TEST (A)	WIDTH Δλ (m)				
1#	1A48FB			1.8	100m	180m	100m	7.0	5C3	940n	400u	100m	80	60n	500n	BC	E	PD42h	
2#	1A48FC			1.8	100m	180m	100m	7.0	5C3	940n	600u	100m	80	60n	500n	BC	E	PD42h	
3#	1A48PB			1.7	75m	130m	75m	7.0	493	940n	1.0m	75m	160	60n	500n	BC	E	PD27d	
4#	1A48PC			1.7	75m	130m	75m	7.0	493	940n	1.5m	75m	160	60n	500n	BC	E	PD27d	
5	1N6266			1.7	100m	170m*	100m*	3.0	6F*	945n	25m	100m	20	60n	500n	BC	E	PD171a	
6#	CQY49C			1.5	50m	150m	100m	2.0	4A%	930n	3.0m	50m	15	50n	600n	BC	E	PD197	
7#	FPE104			1.9	100m	200m	100m	3.0	5A*	890n	3.0m	100m	4.3	40n	10n	BC	B	PD47g	
8#	HR932			2.0	300m	300m	300m	2.0	05∅	900n	10 *	300m		30n	10n#	BC FO	♦	PD345∅	
9#	HR952			2.0	300m	300m	300m	3.0	4C	900n	10 *	300m		30n	20n#	BC FO	♦	PD345∅	
10#	HR953			2.0	300m	300m	300m	3.0	4C	900n	20 *	300m		30n	20n#	BC FO	♦	PD345∅	
11#	HR954			2.0	300m	300m	300m	3.0	4C	900n	35 *	300m		30n	20n#	BC FO	♦	PD345∅	
12#	HR982			2.5	300m	300m	300m	2.0	05∅	900n	10 *	300m		30n	1.0n#	BC FO	B	PD345∅	
13	OP140			1.7	10m	40m	2.0	48		50u	40m						A	PD320∅	
14	OP140A			1.7	10m	40m	2.0	48		900u	40m						A	PD320∅	
15	OP140B			1.7	10m	40m	2.0	48		700u	40m						A	PD320∅	
16	OP140C			1.7	10m	40m	2.0	48		450u	40m						A	PD320∅	
17	OP140D			1.7	10m	40m	2.0	48		220u	40m						A	PD320∅	
18	OP140E			1.7	10m	40m	2.0	48		50u	40m						A	PD320∅	
19	OP140SL			1.7	20m	40m	2.0	48		50u	40m						A	PD320∅	
20	OP140SLA			1.7	20m	40m	2.0	48		900u	40m						A	PD320∅	
21	OP140SLB			1.7	20m	40m	2.0	48		700u	40m						A	PD320∅	
22	OP140SLC			1.7	20m	40m	2.0	48		450u	40m						A	PD320∅	
23	OP140SLD			1.7	20m	40m	2.0	48		220u	40m						A	PD320∅	
24	OP140SLE			1.7	20m	40m	2.0	48		50u	40m						A	PD320∅	
25	OP160SL			1.6	20m	40m	2.0	48		20u	20m						B	PD232d∅	
26	OP160SLA			1.6	20m	40m	2.0	48		2.0m	20m						B	PD232d∅	
27	OP160SLB			1.6	20m	40m	2.0	48		1.4m	20m						B	PD232d∅	
28	OP160SLC			1.6	20m	40m	2.0	48		850u	20m						B	PD232d∅	
29	OP160SLD			1.6	20m	40m	2.0	48		280u	20m						B	PD232d∅	
30	TIXL474			2.0	100m	100m	2.0	5A%	903n	70u	100m		100m	28n	15n#	BC		PD29∅	
31	TIXL474A			2.0	100m	100m	2.0	5A%	903n	120u	100m		100m	28n	15n#	BC	A	PD100	
32#	CQY36	150n	20m	1.6	50m	80m	50m	5.0	2A%	925n	400u	50m	80	80n	500n#	BC	A	PD11∅	
33#	CQY37	150n	20m	1.6	50m	80m	50m	5.0	2A%	925n	2.2m	50m	25	80n	500n#	BC	A	PD11∅	
34#	CQY31	500n	100m	1.5	100m	150m	100m	4.0	2A%	910n	250u	100m	80	35n	100n#	BC	A	PD8∅	
35#	CQY32	500n	100m	1.5	100m	150m	100m	4.0	2A%	910n	4.5m	100m	10	35n	100n#	BC	A	PD7∅	
36#	C67000A	700n	50m	2.3	100m	100m	100m	3.0	05*	870n	7.0 *	50m		50m	45n	5.0n#	CE		∅
37	SE5650	1.5u	100m							3.8u							BF		PD96∅
38	SE5651	1.5u	100m							3.8u							BF		PD96∅
39	SE5652	5.8u	100m							3.4u							BF		PD96∅
40	SE8652	5.8u	100m							3.4u							BF		PD95∅
41#	HR982F-2	15u	300m	2.5	300m	300m	300m	2.0	05∅	900n	10 *	300m		30n	20n#	BC FO	B	PD346∅	
42	SE1550	20u	50m							1.06u				60n	20n#	BC		PD93∅	
43	SE2550	20u	50m							1.06u				60n	20n#	BC		PD25a∅	
44	SE3550	20u	50m							1.06u				60n	20n#	BC		PD95∅	
45	SE5550	20u	50m							1.06u				60n	20n#	BC		PD96∅	
46	SE6550	20u	50m							1.06u				60n	20n#	BC		PD29∅	
47	SE5751	33u	100m							6.0u						BG		PD96∅	
48#	C86008E	40u	200m	2.5	200m	200m	200m	2.0	46∅	820n			15	60n	3.0n	CE FO	♦	PD371	
49	XCO3	50u	10m	2.8	10m	100m	30m	5.0	58	697n			100	95n	500n	BD	B	PD368∅	
50	XCO4	50u	10m	2.8	10m	115m	40m	5.0	58	697n			100	95n	500n	BD	B	PD368∅	
51#	CQY11C	50u	20m	1.6	30m	50m	30m	2.0	5C3	880n	1.2m	20m	6.0	40n	30n#	BC	M	PD197a∅	
52	MLED92	50u	50m	1.5	50m	215m	100m	3.0	6A3	900n	660u			40n		BC PN	C	PD2∅	
53	MLED910	50u	50m	1.5	50m	350m	150m	3.0	6C3	900n	660u	50m		40n		BC PN	C	PD9∅	
54#	CQY11B	60u	20m	1.6	30m	50m	30m	2.0	5C3	880n	64u	20m		40n	30n#	BC	M	PD42d∅	
55	TXES475C100	60u	100m	2.0	100m	100m	100m	2.0	27∅	790n			50	100m	40n	CE FO	A	PD375b∅	
56	SE5653	62u	100m							3.2u						BF		PD96∅	
57	SE8653	62u	100m							3.2u						BF		PD95∅	
58	SD2231-012	70u	50m	1.5	100m	100m	100m	4.0	6C*	907n			30	22n	30n*	BC FO	A∅	PD95∅	
59	TXES475C050	70u	100m	2.0	100m	100m	100m	2.0	27∅	790n			50	100m	40n	CE FO	A	PD375a∅	
60	IRE-160FB	80u	100m	2.2	100m	150m	100m	3.0	48*	828n				40n	14n#	CE FO	A	PD357a	
61	TXES475C025	80u	100m	2.0	100m	100m	100m	2.0	27∅	790n			50	100m	40n	CE FO	A	PD375∅	
62	SD2231-013	90u	50m	1.5	100m	100m	100m	4.0	6C*	907n			30	22n	30n*	BC FO	A∅	PD95∅	
63#	GLE103	90u	30m	1.3	50m	80m	60m	6.0	4C*	950n			50	30m	45n	BC	A	PD263∅	
64	C3011B	100u	50m	3.0	50m	50m	50m		4C∅	1.06u				10n#	CJ	A	PD106∅		
65	C3011F	100u	50m	3.0	50m	50m	50m		4C∅	1.06u				10n#	CJ	Flat	A	PD106a∅	
66	SE2450-1	100u	50m	2.0	50m	120m	2.0	∅	6A*	930n			24	700n#	700n#	BC	A	PD25a∅	
67	STLD1600-1	100u	50m	2.0	50m	100m	2.0	∅	6A*	930n			24	700n#	700n#	BC	A	PD25a∅	
68	C30133	100u	200m	2.5	200m	200m	200m	2.0	47∅	820n			36	60n	3.0n#	CE FO	B	PD100b∅	
69	TXES476C100	130u	100m	2.0	100m	100m	100m	2.0	27∅	790n			50	100m	40n	CE FO	A	PD375b∅	
70#	GL504	140u	50m	1.4	50m	150m	100m	6.0	4C*	950n			20	45n	1.0u	BC	A	PD12m∅	
71	TXES476C050	150u	100m	2.0	100m	100m	100m	2.0	27∅	790n			50	100m	40n	CE FO	A	PD375a∅	
72#	CQY50	160u	20m	1.5	50m	100m	100m	2.0	6C3	930n	180u	20m	35	40n	600n#	BC	A	PD25c∅	
73	TXES476C025	160u	100m	2.0	100m	100m	100m	2.0	27∅	790n			50	100m	40n	CE FO	A	PD375∅	
74#	HR952F	175u	300m	2.0	300m	300m	300m	3.0	25	900n				30n	20n#	BC FO	♦	PD346∅	
75#	HR982F-1	175u	300m	2.5	300m	300m	300m	2.0	05∅	900n	10 *	300m		30n	20n#	BC FO	♦	PD346∅	
76#	AL109A	200u	20m	1.2	20m	120m	80m	3.0	48*	900n				40n		BC	A	PD239∅	
77	MLED90	200u	50m	1.5	50m	120m	80m	3.0	48*	900n	2.4m	10m		40n		BC PN	A	PD1a∅	
78	MLED900	200u	50m	1.5	50m	120m	80m	3.0	48*	900n	1.5m	100m		40n		BC PN	A	PD4∅	
79	MLED930	200u	50m	1.5	100m	250m	150m	3.0	6C3	900n			12	700n#	700n#	BC	B	PD93a∅	
80	SE1450-1	200u	50m	2.0	50m	100m	100m	2.0	6A*	930n			12	700n#	700n#	BC	B	PD93∅	
81	STLD1500-1	200u	50m	2.0	50m	100m	100m	2.0	6A*	930n			12	700n#	700n#	BC	B	PD93∅	
82#	ZME140	200u	50m	1.5	50m	75m	50m	3.0	18*	900n			60	1.0n		F		PD37∅	
83#	AL106A	200u	100m	1.7	100m	120m	80m	3.0	18*	900n						BC	A	PD238∅	
84#	TLN103	250u	20m	1.2	20m	75m*	40m	5.0											



### 3. EMITTER: INFRARED EMITTING DIODE

IN ORDER OF: (1) MIN. PWR. OUTPUT (2) IF  
& (3) TYPE No.

LINE No.	TYPE No.	MIN. POWER OUTPUT		MAX FWD VOLTAGE		MAX RATINGS @ 25°C			TEMP. RANG. CODE	PEAK WAVE-LENGTH λp (m)	MIN AXIAL INTENSITY		BEAM ANGLE θHI (°)	SPECTRAL BAND WIDTH Δλ (m)	RESP. TIME (S)	MATER. & FEATURE MAT	LEAD CODE	DRAWING Ø-RND Δ-RECT *-CHIP	
		Po (W)	IF (A)	VF (V)	IF (A)	PWR. DISS. Pcase (W)	DC FWD CURR. IF (A)	REV. VOLT VR (V)			IF (A)	IF (A)							IF (A)
1	MIRSB50	500u	20m	1.6	20m	75m*	50m	3.0	58	940n			20	20m	50n	300n	BC	A	PD0
2	OP160	500u	20m	1.6	20m		40m	2.0	48*	940n			32	20m	60n	600n#	BC	A	PD33g
3	OP160W	500u	20m	1.6	20m		40m	2.0	48	940n				20m	60n	600n#	BC	A	PD364
4	OP167	500u	20m	1.6	20m		40m	2.0	48	940n				20m	60n	600n#	BC	A	PD365
5	TIL32	500u	20m	1.6	20m		40m	2.0	58*	940n				20m	60n	600n#	BC	A	PD330
6	XC1209	500u	20m	1.6	20m	75m	50m	3.0	58*	940n			35	20m	50n	300n#	BC	A	PD160
7	TIES471	500u	50m	1.8	50m		150m	2.0	6A	910n			130	50m	23n	7.0n#	BC	A	PD410
8	TLN101	500u	50m	1.3	50m		100m	5.0	3C*	940n				50m	50n	300n#	BC	A	PD12j
9	IRE-152#1	500u	100m	3.4	100m		125m§		X5	820n				35n	7.0n#	CE	A	TO18	
10	IRE-152#2	500u	100m	3.4	100m		125m§		X5	820n				35n	7.0n#	CE	A	TO5	
11	LEA500	500u	100m	1.5	50m	150m*	50m	5.0	XC§	900n				50n	50n	700n#	BC	E	PD960
12	SE5450-1	500u	100m	2.0	100m		100m	2.0	6A*	935n			12	700n#	700n#	700n#	BC	E	PD960
13	STLD2000-1	500u	100m	2.0	100m		100m	2.0	6A*	935n			12	700n#	700n#	700n#	BC	E	PD960
14	SE2430-1	500u	150m	2.0	50m		120m	2.0	48*	907n			32	20n#	20n#	20n#	BC	E	PD940
15	HR700	500u	300m	2.0	300m		300m	2.0	27	900n			60	30n#	30n#	30n#	BC	A	PD414
16	IRL60	550u	50m	1.5	50m	75m*	50m	3.0	5A	900n			60	1.0n	1.0n	1.0n	BC	A	PD650
17	ME60	550u	50m	1.5	50m	75m*	50m	3.0	5A*	900n	250u§	50m		50n	1.0n	1.0n	BC	A	PD640
18	ME61	550u	50m	1.5	50m	75m*	50m	3.0	5A*	900n	250u§	50m		50n	1.0n	1.0n	BC	A	PD860
19	SE2450-3	550u	50m	1.5	50m		120m	6.0	6A*	930n			24	700n#	700n#	700n#	BC	A	PD25a0
20	STLD1800-3	550u	50m	1.5	50m		100m	6.0	6A*	930n			24	700n#	700n#	700n#	BC	A	PD25a0
21	AL103B	600u	50m	1.6	50m		52m%		48*								BC	A	PD2360
22	FPE106	600u	50m	1.5	50m	150m*	100m	3.0	48*	890n	35u	50m	80	50n	10n	10n	BC	A	PD2210
23	LN71	600u	75m	1.2	75m	125m*	75m*	3.0	29*	910n			6	75m	40n	40n	BC	A	PD7c0
24	AL106V	600u	100m	1.7	100m		120m*		68*								BC	A	PD2380
25	IRE-151	600u	200m	1.7	200m		200m	2.0	X5	820n				35n	8.0n#	CE	A	TO18	
26	HR954F	600u	300m	2.0	300m		300m	3.0	25	900n			115	20n#	20n#	20n#	BC	A	PD3460
27	TIES06	600u	500m	2.3	500m		500m	2.0	5C	910n				25n	25n	25n	BC	A	PD290
28	SE1450-3	700u	50m	1.5	50m		120m	6.0	6A*	930n			12	700n#	700n#	700n#	BC	A	PD93a0
29	STLD1500-3	700u	50m	1.5	50m		100m	6.0	6A*	930n			12	700n#	700n#	700n#	BC	A	PD930
30	SD2231-001	750u	25m	1.5	100m		100m	4.0	6C*	907n			30	22n	30n*	BC	A	PD950	
31	TIL25	750u	50m	1.5	50m		100m	2.0	6C	940n			35	50m	50n	50n	BC	A	PD250
32	SE2430-2	750u	150m	1.5	50m		120m	4.0	48*	907n			32	20n#	20n#	20n#	BC	A	PD940
33	ME7161	800u	50m	1.9	50m	75m*	50m	3.0	5A*	940n			10	50n	500n	500n	BC	A	PD860
34	C30123	800u	200m	3.0	50m		200m	2.0	49*	930n				40n	8.0n#	CE	A	PD223	
35	CQY49B	800u	300m	1.5	50m	150m*	100m	2.0	4A*	930n	300u	50m	80	50n	600n	600n	BC	A	PD42g
36	HF500	900u	50m	1.2	40m	150m*	40m	5.0	35*	900n	400u	100m		50n	50n	50n	BC	A	PD97j
37	TIES35	900u	50m	2.0	50m		200m	2.0	5A	910n			135	50m	30n	30n*	BC	A	PD310
38	SD2231-002	950u	30m	1.5	100m		100m	4.0	6C*	907n			30	22n	30n*	BC	A	PD950	
39	TIL26	1.0m	35m	1.9	35m		52m%	2.0	48*	940n			175	35m	50n	50n	BC	A	PD260
40	AL103A	1.0m	50m	1.6	50m		100m		48*								BC	A	PD2360
41	GAL32A	1.0m	50m	1.9	50m		100m	3.0	X7	940n	1.6m	50m		400n#	400n#	400n#	BC	A	PD28n0
42	ME7021	1.0m	50m	1.5	50m	150m*	100m	5.0	5A*	900n	3.6m	50m	15	50m	50n	100n	BC	A	PD890
43	ME7024	1.0m	50m	1.5	50m	150m*	100m	5.0	5A*	900n	81m	50m	4.0	50m	50n	100n	BC	A	PD89e0
44	OP124	1.0m	50m	1.6	50m		100m	2.0	6C*	930n			36	50m	50n	700n#	BC	A	PD25f0
45	SE302A	1.0m	50m	1.4	50m	75m*	50m	3.0	X8§	940n				50m	60n	1.0u	BC	A	PD2560
46	SE2460-3	1.0m	50m	1.5	50m		120m	6.0	6A*	930n			18	700n#	700n#	700n#	BC	A	PD25b0
47	SG1002	1.0m	50m	1.4	50m		50m	2.0	67*	940n			15	300n#	300n#	300n#	BC	A	PD990
48	STLD1700-3	1.0m	50m	1.5	50m		100m	6.0	6A*	930n			18	700n#	700n#	700n#	BC	A	PD25b0
49	TIES36	1.0m	50m	2.0	50m		150m	2.0	5A	910n			25	50m	30n	30n	BC	A	PD320
50	TIL24	1.0m	50m	1.5	50m		100m	2.0	6C	940n			35	50m	50n	50n	BC	A	PD250
51	IRE-150	1.0m	100m	5.0	100m		300m	3.0	X5*	820n			90	100m	35n	7.0n#	CE	A	TO50
52	OP130	1.0m	100m	1.7	100m	200m*	100m	2.0	5F*	940n			20	100m	60n	60n	BC	A	PD7g0
53	OP130W	1.0m	100m	1.7	100m	200m*	100m	2.0	5F*	940n			50	100m	60n	60n	BC	A	PD8k0
54	SE3450-1	1.0m	100m	2.0	100m		100m	2.0	6A*	935n			90	700n#	700n#	700n#	BC	A	PD950
55	SE3451-1	1.0m	100m	2.0	100m		100m	2.0	6A*	935n			90	700n#	700n#	700n#	BC	A	PD950
56	SE5450-2	1.0m	100m	1.7	100m		100m	6.0	6A*	935n			12	700n#	700n#	700n#	BC	A	PD960
57	SE5451-1	1.0m	100m	2.0	100m		100m	2.0	6A*	935n			16	700n#	700n#	700n#	BC	A	PD960
58	SE5453-1	1.0m	100m	1.5	100m	1.3	30 §	2.0	6C*	940n			20	1.0u#	1.0u#	1.0u#	BC	A	PD960
59	SPX2354-001	1.0m	100m	1.5	100m		4.0	0.0	6C*	900n				40n#	40n#	40n#	FO	A	PD3500
60	SPX2354-002	1.0m	100m	1.5	100m		4.0	0.0	6C*	900n				40n#	40n#	40n#	FO	A	PD3500
61	STLD1800-1	1.0m	100m	2.0	100m		100m	2.0	6A*	935n			90	700n#	700n#	700n#	BC	A	PD950
62	STLD1900-1	1.0m	100m	2.0	100m		100m	2.0	6A*	935n			90	700n#	700n#	700n#	BC	A	PD950
63	STLD2000-2	1.0m	100m	1.7	100m		100m	6.0	6A*	935n			12	700n#	700n#	700n#	BC	A	PD960
64	STLD2100-1	1.0m	100m	2.0	100m		100m	2.0	6A*	935n			16	700n#	700n#	700n#	BC	A	PD960
65	XC55A	1.0m	100m	1.7	100m	250m*	150m	3.0	6C*	940n			10	50n	300n#	300n#	BC	A	PD3390
66	XC55PA	1.0m	100m	1.7	100m	250m*	150m	3.0	6C*	940n			10	50n	300n#	300n#	BC	A	PD3390
67	LCW10F	1.0m	150m	1.8	250m		350m	0.6	06*	850n			56*	2.5n	100p#	CE	A	PD358	
68	C86006E	1.0m	300m	2.0	300m		400m	2.0	35*	820n			10	4.0n	1.0n#	CE	A	PD371	
69	HR800	1.0m	300m	2.0	300m		300m	2.0	07	900n	400m*			30n	30n#	30n#	BC	A	PD2700
70	SE6451-2	1.0m	300m	2.0	300m		160m	6.0	6A*	910n			120	20n#	20n#	20n#	BC	A	PD290
71	SD2231-003	1.2m	35m	1.5	100m		100m	4.0	6C*	907n			30	22n	30n*	BC	A	PD950	
72	LN53	1.2m	50m	1.5	50m	75m*	50m	3.0	3A*	950n				50m	50n	50n	BC	A	PD125
73	MFOE200	1.2m	50m	1.5	50m	250m*	100m	3.0	5C§	810n	9.0m	50m	24	250n	50n#	50n#	BC	A	PD7g
74	FPE100	1.2m	100m	1.9	100m	150m	100m	3.0	1A*	900n	100u	100m	75	100m	50n	50n	BC	A	PD480
75	FPE500	1.2m	100m	1.7	100m	250m	150m	3.0	6C*	900n	3.0m	100m	9.0	100m	50n	10n#	BC	A	PD7i0
76	FPE510	1.2m	100m	1.7	100m	250m	150m	3.0	6C*	900n	300u	100m	30	100m	50n	10n#	BC	A	PD27g0
77	SE2430-3	1.2m	150m	1.5	50m		120m	4.0	48*	90									

# 3. EMITTER: INFRARED EMITTING DIODE

IN ORDER OF: (1) MIN. PWR. OUTPUT (2) IF & (3) TYPE No.

LINE No.	TYPE No.	MIN. POWER OUTPUT		MAX FWD VOLTAGE		MAX RATINGS @ 25°C			TEMP RING. CODE	PEAK WAVE-LENGTH λp (m)	MIN AXIAL INTENSITY		BEAM ANGLE θHI (°)	SPECTRAL BAND WIDTH Δλ (m)		RESP. TIME (S)	MATER. & FEATURE MAT	LEAD CODE	DRAWING ∅-RECT Δ-STRIP *-CHIP
		Po (W)	IF (A)	Vf (V)	IF (A)	PWR. DISS. Pcase (W)	DC FWD CURR. IF (A)	REV. VOLT VR (V)			le (W/Sr)	IF (A)		IF TEST (A)					
1	SG1008	2.0m	100m	1.4 †	100m	100m	2.0	4C	940n			8.0		50n	900n#	BC	AZ	PD106∅	
2	SG1009F	2.0m	100m	1.4 †	100m	100m		4C	940n						900n#	BC	AZ	PD106a∅	
3	SG1010	2.0m	100m	1.3 †	100m	100m		4C	940n						900n#	BC	AZ	PD106∅	
4	SG1010F	2.0m	100m	1.3 †	100m	100m		4C	940n						900n#	BC	AZ	PD106a∅	
5	SFX1775	2.0m	100m	1.5	100m	100m	4.0 ∅	6C*	907n			15		22n	20n#	BC	FO	PD351∅	
6	STLD1900-2	2.0m	100m	1.7	100m	100m	6.0	6A*	935n			90			700n#	BC	E	PD95∅	
7	STLD2100-2	2.0m	100m	1.7	100m	100m	6.0	6A*	935n			16			700n#	BC	E	PD96∅	
8	5-L-D	2.0m	200m	1.4 †	100m	300m	7.0	6C*	880n					50n	35n#	CE	M∅	PD229a∅	
9	5-W-D	2.0m	200m	1.4 †	100m	300m	7.0	6C*	880n					50n	35n#	CE	M∅	PD229b∅	
10	C86007E	2.0m	300m†	2.0 †	300m†	400m	2.0	35	820n			36		4.0n	1.0n#	CE	FO	PD372	
11	SE6451-3	2.0m	300m	2.0	300m	160m	6.0 ∅	6A*	910n			120			20n#	BC	FO	PD29∅	
12#	1A48C	2.1m†	100m	1.8	100m	180m	100m	7.0	5C*	940n	32m†	100m	8.0		500n#	BC	E∅	PD27∅	
13	SE5450-3	2.2m	100m	1.7	100m	100m	6.0 ∅	6A*	935n			12			700n#	BC	E	PD96∅	
14	STLD2000-3	2.2m	100m	1.7	100m	100m	6.0	6A*	935n			12			700n#	BC	E	PD96∅	
15	SE2430-4	2.2m	150m	1.5	50m	120m	4.0 ∅	6A*	907n			32			20n#	BC	E	PD94∅	
16	SG1004	2.4m	50m	1.4 †	50m	50m	2.0	67	940n			15		50n	300n#	BC	A	PD99∅	
17	SE3453-2	2.4m	100m	1.5	100m	1.3	30 ∅	2.0	6C*	940n			80		1.0u#	BC	E	PD95∅	
18#	CQY171V	2.5m	100m	1.7	100m	180m	100m	4.0	5A*	950n			30	100m	40n	1.0u#	BC	A	PD7c∅
19#	FR4000	2.5m	100m	1.9	100m	100m	7.0	48	880n					50n	18n	EA	FO	PD396	
20	SE5453-3	2.5m	100m	1.5	100m	1.3	30 ∅	2.0	6C*	940n			20		1.0u#	BC	E∅	PD96∅	
21	TIL33	2.5m	100m	1.7	100m	200m	2.0	6F	940n			80	100m	50n	600n#	BC	P-N	PD271∅	
22	KC55B	2.5m	100m	1.7	100m	250m*	150m	3.0	6C*	940n			10		50n	300n#	B*	PD339∅	
23	XC55PB	2.5m	100m	1.7	100m	250m*	150m	3.0	6C*	940n			10		50n	300n#	B*	PD339∅	
24#	LD2611V	2.8m	50m	1.6	50m	85m	50m	4.0	48*	950n	2.0m	50m	58		40n	1.0u#	BC	PD146c†	
25#	CQY771I	2.8m	100m	1.7	100m	350m	230m	4.0	5A*	950n	1.2m	100m	12	100m	40n	1.0u#	BC	B	PD7f∅
26#	CQY781I	2.8m	100m	1.7	100m	350m	230m	4.0	5A*	950n	1.6m	100m	80	100m	40n	1.0u#	BC	B	PD8g∅
27#	GAL32B	3.0m	50m	1.9	50m	100m	3.0	X7	940n			4.8m	50m		400n#	BC	A	PD28n∅	
28	ME7121	3.0m†	50m	1.8	50m	150m*	100m	3.0	6A*	940n	10m†	50m	15	50m	50n	500n	B	PD85∅	
29	ME7124	3.0m†	50m	1.8	50m	150m*	100m	3.0	5A*	940n	243m†	50m	4.0	50m	50n	500n	B	PD85c∅	
30#	SE301A	3.0m	50m	2.0	50m	150m*	100m	5.0	XC*	940n				60n	1.0u	BC	B	PD12s∅	
31#	GAC100	3.0m	100m	2.0	100m	150m	3.0	5C	940n					55n	700n#	BC	B	PD241*	
32	OP131	3.0m	100m	1.7	100m	200m*	10 ∅	2.0	5F*	940n			20	100m	60n	600n#	BC	B	PD7g∅
33	OP131W	3.0m	100m	1.7	100m	200m*	10 ∅	2.0	5F*	940n			50	100m	60n	600n#	BC	B	PD8k∅
34	SE2231	3.0m†	100m	1.5	100m	690m	100m	4.0	6C*	907n	9.0m†		30		30n*	BC	FO	PT39∅	
35	SE3453-3	3.2m	100m	1.4 †	100m	1.3	30 ∅	2.0	6C*	940n			80		1.0u#	BC	E	PD95∅	
36	5-L-C	3.2m	200m	1.4 †	100m	300m	7.0	6C*	880n					50n	35n#	CE	M∅	PD229a∅	
37	5-W-C	3.2m	200m	1.4 †	100m	300m	7.0	6C*	880n					50n	35n#	CE	M∅	PD229b∅	
38#	GL514	3.3m	100m	1.6	100m	250m	150m	6.0	4C*	950n			10	100m	45n	BC	B	PD12w∅	
39	TIL31	3.3m	100m	1.7	100m	200m	2.0	6F	940n			10	100m	50n	600n#	BC	P-N	PD27f∅	
40	KC55C	3.3m	100m	1.7	100m	250m*	150m	3.0	6C*	940n			10		50n	300n#	B*	PD339∅	
41	XC55PC	3.3m	100m	1.7	100m	250m*	150m	3.0	6C*	940n			10		50n	300n#	B*	PD339∅	
42	SE6452-2	3.5m†	1.0	2.0	1.0	200m	6.0 ∅	6A*	910n			120			20n#	BC	DWB	PD29∅	
43#	LN55	3.5m†	50m	1.5	50m	75m	50m	3.0	28	950n			55	50m	50n	50n	BC	B	PD212
44#	LN62S	3.5m†	50m	1.2 †	50m	75m	50m	3.0	28*	950n				50m	50n	50n	BC	B	PD118d
45	LED55B	3.5m	100m	1.7	100m	100m	3.0	6F*	940n					60n	300n#	BC	E∅	PD171∅	
46	LED55BF	3.5m	100m	1.7	100m	1.3	100m	3.0	6F*	940n				60n	300n#	BC	E∅	PD172∅	
47#	LN52	3.5m	100m	1.6	100m	150m	100m	3.0	28*	950n			100	100m	50n	1.0u#	BC	B	PD12g∅
48	SE3455-2	3.5m	100m	1.7	100m	100m	2.0	6C*	930n			16			700n#	BC	B	PD8b∅	
49	SE5451-3	3.5m	100m	1.7	100m	100m	6.0 ∅	6A*	935n			90			700n#	BC	E	PD96∅	
50	SE5455-2	3.5m	100m	1.7	100m	100m	6.0	6C*	930n			20			700n#	BC	E	PD7a∅	
51	STLD2100-3	3.5m	100m	1.7	100m	100m	6.0	6A*	935n			16			700n#	BC	E	PD96∅	
52#	HR801	3.6m	300m	2.0	300m	300m	2.0	07	900n	1.4 *		20		30n	30n#	BC	†	PD270∅	
53	SE5453-4	3.8m	100m	1.5	100m	1.3	30 ∅	2.0	6C*	940n			20		1.0u#	BC	A	PD96∅	
54	LD261-4	4.0m	50m			60m					2.0m	50m	60			BC	B	PD146a	
55#	CQY17V	4.0m	100m	1.7	100m	180m	100m	4.0	5A*	950n			30	100m	40n	1.0u#	BC	B	PD7e∅
56#	CQY33A	4.0m	100m	1.7	100m	150m	100m	5.0	2A*	925n	1.2m	100m	80		80n	500n#	BC	B*	PD8∅
57#	CQY33B	4.0m	100m	1.7	100m	150m	100m	5.0	2A*	925n	1.2m	100m	80		80n	500n#	BC	B*	PD8∅
58#	CQY33C	4.0m	100m	1.7	100m	150m	100m	5.0	2A*	925n	1.2m	100m	80		80n	500n#	BC	B*	PD8∅
59	OP132	4.0m	100m	1.7	100m	200m*	10 ∅	2.0	5F*	940n			20	100m	60n	600n#	BC	B	PD7g∅
60	OP132W	4.0m	100m	1.7	100m	200m*	10 ∅	2.0	5F*	940n			50	100m	60n	600n#	BC	B	PD8k∅
61	SE3451-3	4.0m	100m	1.7	100m	100m	6.0 ∅	6A*	935n			90			700n#	BC	E	PD95∅	
62	SG1009A	4.0m	100m	1.4 †	100m	100m	2.0	4C	940n			8.0		50n	900n#	BC	AZ	PD106	
63	SG1009AF	4.0m	100m	1.4 †	100m	100m	2.0	4C	940n						900n#	BC	AZ	PD106a∅	
64	SG1010A	4.0m	100m	1.3 †	100m	100m		4C	940n						900n#	BC	AZ	PD106∅	
65	SG1010AF	4.0m	100m	1.3 †	100m	100m		4C	940n						900n#	BC	AZ	PD106a∅	
66	STLD1900-3	4.0m	100m	1.7	100m	100m	6.0	6A*	935n			90			700n#	BC	E	PD95∅	
67	5-E-D	4.0m	200m	1.4 †	100m	300m	7.0	6C*	880n					50n	35n#	CE	M∅	PD229∅	
68	5-H-D	4.0m	200m	1.4 †	100m	300m	7.0	6C*	880n					50n	35n#	CE	M∅	PD229c∅	
69	5-O-D	4.0m	200m	1.4 †	100m	300m	7.0	6C*	880n										

### 3. EMITTER: INFRARED EMITTING DIODE

IN ORDER OF: (1)MIN. PWR. OUTPUT (2) IF & (3) TYPE No.

LINE No.	TYPE No.	MIN. POWER OUTPUT		MAX FWD VOLTAGE		MAX RATINGS @ 25°C			TEMP. RING. CODE	PEAK WAVE-LENGTH λp (m)	MIN AXIAL INTENSITY		BEAM ANGLE ΘHI (°)	SPECTRAL BAND		RESP. TIME (S)	MATER. & FEATURE MAT	LEAD CODE	DRAWING Ø-RND. Δ-RECT *-CHIP	
		Po (W)	IF (A)	VF (V)	IF (A)	PWR. DISS. Pcase (W)	DC FWD CURR. IF (A)	REV. VOLT VR (V)			W/Sr	IF (A)		IF TEST (A)	WIDTH Δλ (m)					
1	TIL38	6.0m	100m	2.5	1.0	150m	100m	5.0	5A	940n	120m	1.0	60	100m	50n	600n	BC	M	PD415	
2	5-L-A	6.0m	200m	1.4	1.0	300m	300m	7.0	6C	880n				50n	35n	BC	M	PD229a		
3	5-W-A	6.0m	200m	1.4	1.0	300m	300m	7.0	6C	880n				50n	35n	CE	M	PD229b		
4	C30130	6.0m	400m	2.0	400m	400m	60m	2.0	35	820n				50n	1.0n	CE FO	A	PD100a		
5	LD261-5	6.3m	50m			300m	300m	7.0	6C	880n	3.2m	50m	60				A	PD146a		
6	5-E-C	6.5m	200m	1.4	1.0	300m	300m	7.0	6C	880n				50n	35n	CE	M	PD229		
7	5-H-C	6.5m	200m	1.4	1.0	300m	300m	7.0	6C	880n				50n	35n	CE	M	PD229c		
8	5-O-C	6.5m	200m	1.4	1.0	300m	300m	7.0	6C	880n				50n	35n	CE	M	PD229d		
9	SE6452-3	6.8m	1.0	2.0	1.0	200m	6.0	0	6A	910n						20n	BC	A	PD29	
10	COY38HA	8.0m	100m	1.7	100m	150m	100m	5.0	2A	925n	1.6m	100m	160		80n	500n	BC	B	PD12	
11	IRE10	8.0m	400m	1.7	100m	1.0	100m	3.0	6A	940n				100m	50n	400n	BC	E	PD7b	
12	F5D2	9.0m	100m	1.7	100m	1.3	100m	3.0	6F	880n				100m	80n	1.5u*	EC	E	PD171a	
13	F5E2	9.0m	100m	1.7	100m	1.3	100m	3.0	6F	880n				100m	80n	1.5u*	EC	E	PD172a	
14	5-E-B	9.0m	200m	1.4	1.0	300m	300m	7.0	6C	880n				50n	35n	CE	M	PD229		
15	5-H-B	9.0m	200m	1.4	1.0	300m	300m	7.0	6C	880n				50n	35n	CE	M	PD229c		
16	5-O-B	9.0m	200m	1.4	1.0	300m	300m	7.0	6C	880n				50n	35n	CE	M	PD229d		
17	LD261-6	10m	50m			300m	60m				5.0m	50m	60				A	PD146a		
18	LA83	10m	100m	1.8	100m	180m	100m	7.0	49	940n				60n	600n	BC	E	PD27		
19	AL107B	10m	100m	2.0	100m	100m	100m	5.0	48	925n	1.6m	100m	160		80n	500n	BC	B	PD237	
20	COY38HC	10m	100m	1.7	100m	150m	100m	5.0	2A	925n	4.0m	100m	120				A	PD12		
21	LD242-2	10m	100m			300m	300m										A	PD12p		
22	LCW10	10m	150m	1.8	250m				06*	850n				2.5n	100p	CE	T	PD115		
23	E2004	10m	300m	1.8	300m				07*	845n				2.5n	500p	CE	A	PD115		
24	SE6450-2	10m	300m	2.0	300m	100m	2.0	0	07*	935n					700n	BC	A	PD29		
25	SLC5010	10m	350m	1.8	400m	400m	3.0	06*	06*	845n					150n	CE FO	B	PD360		
26	5-E-A	11m	200m	1.4	1.0	300m	300m	7.0	6C	880n				50n	35n	CE	M	PD229		
27	5-H-A	11m	200m	1.4	1.0	300m	300m	7.0	6C	880n				50n	35n	CE	M	PD229c		
28	5-O-A	11m	200m	1.4	1.0	300m	300m	7.0	6C	880n				50n	35n	CE	M	PD229d		
29	COY38HB	12m	100m	1.7	100m	150m	100m	5.0	2A	925n	1.6m	100m	160		80n	500n	BC	B	PD12	
30	F5D1	12m	100m	1.7	100m	1.3	100m	3.0	6F	880n				100m	80n	1.5u*	EC	E	PD171a	
31	F5E1	12m	100m	1.7	100m	1.3	100m	3.0	6F	880n				100m	80n	1.5u*	EC	E	PD172a	
32	IRE20	12m	400m	1.7	100m	900m	3.0	0	6A	940n				180	50n	400n	BC	E	PD12d	
33	COY99	15m	100m	1.7	100m	210m*	150m	5.0	XA	925n	7.0m	100m	60		1.0u	BC	B	PD232a		
34	SE6450-3	15m	300m	2.0	300m	200m	2.0	0	07*	935n				135	700n	BC	A	PD29		
35	TIES27	15m	300m	2.2	300m	300m	2.0	0	07	940n				135	300m	BC	P-N	A	PD30	
36	OP135	15m	1.0	2.5	1.0	200m*	5.0	2.0	5F	940n				18	1.0	45n	BC	A	PD7r	
37	OP135W	15m	1.0	2.5	1.0	200m*	5.0	2.0	5F	940n				18	1.0	45n	BC	A	PD7r	
38	OP190A	15m	1.0	2.5	1.0	150m	100m	2.0	48	940n	10m	100m	64	1.0	60n	400n	BC	B	PD8n	
39	OP195A	15m	1.0	2.5	1.0	150m	100m	2.0	48	940n	32m	100m	40	1.0	40n	400n	BC	B	PD232e	
40	LD242-3	16m	100m			300m	300m										A	PD232e		
41	LD271	16m	100m	1.5	100m	210m	130m	4.0	5A	950n	8.0m	100m	120		1.0u	BC	A	PD12p		
42	TIES13	20m	300m	2.0	300m	300m	3.0	2.0	5A	930n	8.0m	100m	60		300m	BC	P-N	A	PD28p	
43	GAL10	20m	500m	1.6	500m	1.0	500m	3.0		940n					40n	400n	BC	A	PD29	
44	GAL11	20m	500m	1.6	500m	1.0	500m	3.0		940n					40n	400n	BC	A	PD29	
45	OP136	27m	1.0	2.5	1.0	200m*	5.0	2.0	5F	940n					50n	400n	BC	B	PD7r	
46	OP136W	27m	1.0	2.5	1.0	200m*	5.0	2.0	5F	940n					50n	400n	BC	B	PD7r	
47	TIES13A	30m	300m	2.0	1.0	300m	2.0	2.0	5A	930n				130	1.0	45n	BC	A	PD29	
48	1A65B	30m	500m	2.0	500m	1.0	500m	7.0	39	940n	6.0m	500m	120		60n	500n	BC	B	PD74	
49	1A65B	30m	500m	2.0	500m	1.0	500m	7.0	39	940n	4.0m	500m	120		60n	500n	BC	B	PD73	
50	1AX65A	30m	500m	2.0	500m	500m	7.0	39	940n	4.0m	500m	120		60n	500n	BC	B	PD74		
51	1AX65B	30m	500m	2.0	500m	500m	7.0	39	940n	4.0m	500m	120		60n	500n	BC	B	PD74		
52	OP190	30m	1.0	2.5	1.0	150m	100m	2.0	48	940n	15m	100m	40	100m	40n	400n	BC	B	PD232e	
53	OP195	30m	1.0	2.5	1.0	150m	100m	2.0	48	940n	50m	100m	15	100m	40n	400n	BC	A	PD232e	
54	TIES15	30m	1.0	2.0	1.0	1.0	2.0	2.0	5A	930n				130	1.0	45n	BC	P-N	A	PD29
55	FR600	35m	1.9	2.0	2.0	2.0	7.0	4.8	48	880n					50n	33n	BC	P-N	A	PD397
56	TIES12	40m	300m	2.0	300m	300m	2.0	5A	930n					130	300m	45n	BC	P-N	A	PD29
57	OP137	40m	1.0	2.5	1.0	200m*	5.0	2.0	5F	940n				18	1.0	60n	400n	BC	B	PD7r
58	OP137W	40m	1.0	2.5	1.0	200m*	5.0	2.0	5F	940n				18	1.0	60n	400n	BC	B	PD7r
59	TXES37	50m	1.0	1.5	1.0	1.0	2.0	2.0	07	940n				64	1.0	60n	400n	BC	B	PD8n
60	6-E-B	56m	2.5	1.4	1.0	2.5	7.0	6C	880n					180	1.0	45n	BC	A	PD417	
61	6-O-B	56m	2.5	1.4	1.0	2.5	7.0	6C	880n					180	1.0	45n	BC	A	PD417	
62	TIES14	60m	1.0	2.0	1.0	1.0	2.0	2.0	5A	930n				130	1.0	50n	35n	CE	M	PD230a
63	6-E-A	75m	2.5	1.4	1.0	2.5	7.0	6C	880n						50n	35n	CE	M	PD230	
64	6-O-A	75m	2.5	1.4	1.0	2.5	7.0	6C	880n						50n	35n	CE	M	PD230	
65	TIES16A	100m	2.0	2.0	2.0	2.0	2.0	2.0	5A	930n				150	2.0	45n	BC	P-N	A	PD39
66	TIES16B	200m	2.0	2.0	2.0	2.0	2.0	2.0	5A	930n				150	2.0	45n	BC	P-N	A	PD39
67	TIES16C	350m	3.0	2.2	2.2	3.0	2.0	2.0	5A	930n				150	3.0	45n	BC	P-N	A	PD39
68	LD90	500m	2.5	1.2	50m	2.5	5	KA*	890n					3.5n	500p	BC	A	PD116		
69	LD93	750m	4.0	1.2	50m	4.0	5	KA*	890n					3.5n	500p	BC	A	PD116		
70	LD95	1.0	6.0	1.2	50m	6.0	5	KA*	890n					3.5n	500p	BC	A	PD116		
71	LD61	1.0	10	1.2	50m	10	3.0	K7*	904n					3.5n	500n	BC	A	PD114a		
72	SG2001	1.0	10	4.5	10	10	2.0	57	904n				9.0	10	3.5n	1.0n	BC200ns	A	PD100	
73	SG2001A	1.0	10	4.5	10	10	2.0	57	904n								A	PD100c		
74	LD261V	1.8	50m	1.6	50m	85m	50m	4.0	37	950n	3.2m	50m	60	50m	20n	1.0u	CB	A	PD146a	
75	LD60	2.0	10	1.2	50m	10	3.0	K7*	904n						3.5n	500n	BC	A	PD114a	
76	SG2002	2.0	10	4.5	10	10	2.0	57	904n				9.0	10	3.5n	1.0n	BC200ns	A	PD100	
77	SG2002A	2.0	10	4.5	10	10	2.0	57	904n								A	PD100c		
78	LD261VI	2.8	50m	1.6	50m	85m	50m	4.0	37	950n	5.0m	50m	60	50m	20n	1.0u	CB	A	PD146a	
79	LD242I	3.0	100m	1.7	100m	470m	300m	4.0	5A	950n	2.5m	100m	120	100m	40n	1.0u	CB	A	PT34b	
80	LD242II	3.0	100m	1.7	100m	470m	300m	4.0	5A	950n	4.0m	100m	120	100m	40n	1.0u</				

### 3. EMITTER: INFRARED EMITTING DIODE

IN ORDER OF: (1) MIN. PWR. OUTPUT (2) IF  
& (3) TYPE No.

LINE No.	TYPE No.	1 MIN. POWER OUTPUT		MAX FWD VOLTAGE		MAX RATINGS @ 25°C			TEMP RING. CODE	PEAK WAVELENGTH λp (m)	MIN AXIAL INTENSITY		BEAM ANGLE θHI (°)	SPECTRAL BAND		RESP. TIME (S)	MATER. & FEATURE MAT	LEAD CODE	DRAWING Ø-RECT Δ-STRIP *-CHIP
		Po (W)	IF (A)	V (V)	IF (A)	PWR. DISS. Pcase (W)	DC FWD CURR. IF (A)	REV. VOLT VR (V)			W/Sr	IF (A)		IF TEST (A)	WIDTH Δλ (m)				
1	LD65♦	10♦	40♦	1.2†	50m	40\$	3.0	K7*	904n			9.0	40	3.5n	500n#	BC	A\$	PD114aØ	
2	SG2007♦	10♦	40	8.0	40	40\$	2.0	57□	904n						1.0n#	BC	A\$	PD100Ø	
3	SG2007A♦	10♦	40	8.0	40	40\$		57□	904n						1.0n#	BC	A\$	PD100cØ	
4	SLE9010-2♦	10♦	40	6.7	40	55\$	1.0	K7	904n			28			500p#	BC FO	B	PD349Ø	
5	C30099♦	10♦	75			75\$		K7□	850n						1.0n#	CE 100n	A\$	PD100Ø	
6	LA162♦	12♦	25\$	4.2†	50m	25\$		K7*	850n					3.5n	500n#	BC	A\$	PD114Ø	
7	LA68♦	12♦	75	1.4†	50m	75\$		K7*	850n					3.5n	500n#	CE	A\$	PD114aØ	
8	SG2009♦	12♦	75	10	75	75\$	2.0	57□	904n			9.0	75	3.5n	1.0n#	BC	A\$	PD100Ø	
9	SG2009A♦	12♦	75	10	75	75\$		57□	904n						1.0n#	BC	A\$	PD100cØ	
10	LD162♦	15♦	25\$	3.6†	50m	25\$		K7*	904n					3.5n	500n#	BC	A\$	PD114Ø	
11	SG2010♦	15♦	75	10	75	75\$	2.0	57□	904n			9.0	75	3.5n	1.0n#	BC	A\$	PD100Ø	
12	SG2010A♦	15♦	75	10	75	75\$		57□	904n						1.0n#	BC	A\$	PD100cØ	
13	LD67♦	16♦	60\$	1.2†	50m	60\$	3.0	K7*	904n					3.5n	500n#	BC	A\$	PD114aØ	
14	LD68♦	16♦	75	1.2†	50m	75\$	3.0	K7*	904n					3.5n	500n#	BC	A\$	PD114aØ	
15	LA163♦	20♦	40\$	4.2†	50m	40\$		K7*	850n					3.5n	500n#	CE	B	PD114Ø	
16	SG2012♦	20♦	100	12	100	100\$	2.0	57□	904n			9.0	100	3.5n	1.0n#	BC	A\$	PD100aØ	
17	SG2012A♦	20♦	100	12	100	100\$		57□	904n						1.0n#	BC	A\$	PD100dØ	
18	C30002♦	25♦	25\$	60†	25\$	25\$	5.0	K6□	904n			30*		8.0n	BC	SS-1	A\$	PD102Ø	
19	MH-163♦	25	30	17†	30	30\$	3.0	K7*	900n			24	30	4.5n	1.0n#	STK	B	PD114Ø	
20	LD163♦	25♦	40\$	3.6†	50m	40\$		K7*	904n					3.5n	500p#	BC	A\$	PD114Ø	
21	SG3001♦	25♦	40	16†	40\$	40\$		K6□	904n			20		3.5n	500n#	BC	200n	A\$	PD100aØ
22	SSD9025♦	25♦	40	15	40	55\$	3.0	K7	904n			28			500p#	BC FO	B	PD114Ø	
23	LD164♦	30♦	75	2.4†	50m	75\$		K7*	904n					3.5n	500n#	BC	A\$	PD114Ø	
24	C30004♦	35♦	25\$	100†	25\$	25\$	5.0	K6□	904n			30*		8.0n	BC	SS-1	A\$	PD102Ø	
25	C30041	35♦	60			60\$		K7□	904n					8.0n	BC	200n	A\$	PD100aØ	
26	C30003♦	50♦	25\$	60†	25\$	25\$	5.0	K6□	904n			30*		8.0n	BC	SS-1	A\$	PD102Ø	
27	LD210♦	50♦	25\$	12†	50m	25\$		K7*	904n					3.5n	500p#	BC	A\$	PD115Ø	
28	MH-166♦	50♦	40	25†	40	40\$	3.0	K7*	900n			24	40	4.5n	1.0n#	STK	B	PD114Ø	
29	LD166♦	50♦	60\$	4.8†	50m	60\$		K7*	904n					3.5n	500n#	BC	A\$	PD115Ø	
30	DF-167♦	60♦		27†	75	75\$		K6*	904n			18		3.5n	1.0n#	STK	B	PD114Ø	
31	LD214♦	60♦	40\$	14†	50m	40\$		K7*	904n					3.5n	500p#	BC	A\$	PD115Ø	
32	LD214S♦	60♦	40\$	14†	50m	40\$		K7*	904n					3.5n	500p#	BC	A\$	PD115Ø	
33	C30038♦	60♦	75			75\$		K7□	904n						500p#	BC	200n	A\$	PD100aØ
34	LA167♦	60♦	75\$	7.0†	50m	75\$		K7*	850n					3.5n	500n#	CE	B	PD114Ø	
35	MH-167♦	70	50	32†	50	50\$	4.0	K7*	900n			24	50	4.5n	1.0n#	STK	A\$	PD102Ø	
36	C30005♦	75♦	25\$	100†	25\$	25\$	5.0	K6□	904n			30*		8.0n	BC	SS-1	A\$	PD102Ø	
37	C30006♦	75♦	25\$	200†	25\$	25\$	5.0	K6□	904n			30*		8.0n	BC	SS-2	A\$	PD102Ø	
38	LD211♦	75♦	25\$	18†	50m	25\$		K7*	904n					3.5n	500p#	BC	A\$	PD115Ø	
39	LA215♦	75♦	40\$	16†	50m	40\$		K7*	850n					3.5n	500n#	CE	A	PD115Ø	
40	LD167♦	75♦	75\$	6.0†	50m	75\$		K7*	904n					3.5n	500n#	BC	A\$	PD114Ø	
41	C30042	90♦	100			100\$		K7□	904n						500p#	BC	200n	A\$	PD100aØ
42	LD215♦	100♦	40\$	14†	50m	40\$		K7*	904n					3.5n	500p#	BC	A\$	PD115Ø	
43	LD215S♦	100♦	40\$	14†	50m	40\$		K7*	904n					3.5n	500p#	BC	A\$	PD115Ø	
44	LD168♦	100♦	100\$	7.2†	50m	100\$		K7*	904n					3.5n	500n#	BC	A\$	PD114Ø	
45	SSD2100♦	100♦	100	37	100	110	6.0	K7	904n			28			500p#	BC	FO	B	PD114Ø
46	C30007♦	150♦	25\$	200†	25\$	25\$	5.0	K6□	904n			30*		8.0n	BC	SS-2	A\$	PD102Ø	
47	C30008♦	150♦	25\$	400†	25\$	25\$	5.0	K6□	904n			30*		8.0n	BC	SS-4	A\$	PD102Ø	
48	LD212♦	150♦	25\$	36†	50m	25\$		K7*	904n					3.5n	500p#	BC	A\$	PD115Ø	
49	LA220♦	150♦	40\$	31†	50m	40\$		K7*	850n					3.5n	500n#	CE	A	PD115Ø	
50	LD224-8S♦	150♦	40\$	9.6†	50m	40\$		K7*	904n					3.5n	500p#	BC	A	PD115Ø	
51	LD220♦	200♦	40\$	29†	50m	40\$		K7*	904n					3.5n	500p#	BC	A	PD115Ø	
52	LA430♦	225♦	40\$	50†	50m	40\$		K7*	850n					3.5n	500n#	CE	A	PD115Ø	
53	LA235♦	275♦	40\$	60†	50m	40\$		K7*	850n					3.5n	500n#	CE	A	PD115Ø	
54	C30009♦	300♦	25\$	400†	25\$	25\$	5.0	K6□	904n			30*		8.0n	BC	SS-4	A\$	PD102Ø	
55	LD213♦	300♦	25\$	72†	50m	25\$		K7*	904n					3.5n	500p#	BC	A	PD115Ø	
56	LD330♦	300♦	40\$	44†	50m	40\$		K7*	904n					3.5n	500p#	BC	A	PD115Ø	
57	LD430♦	300♦	40\$	48†	50m	40\$		K7*	904n					3.5n	500p#	BC	A	PD115Ø	
58	LD235♦	350♦	40\$	58†	50m	40\$		K7*	904n					3.5n	500p#	BC	A	PD115Ø	
59	LD360♦	600♦	40\$	40†	50m	40\$		K7*	904n					3.5n	500p#	BC	A	PD115Ø	
60	LA410♦	800♦	40\$	31†	50m	40\$		K7*	850n					3.5n	500n#	CE	A	PD115Ø	
61	LD410♦	1.0k♦	40\$	28†	50m	40\$		K7*	904n					3.5n	500p#	BC	A	PD115Ø	



# 4. EMITTER ARRAY: LED & INFRARED EMITTING DIODE

IN ORDER OF: (1)NO. OF ELEMENTS (2) COLOR (3) PWR DISS-Pcase (4) IF & (5) TYPE No.

LINE No.	TYPE No.	No. OF ELEM	C O L O R	MAX FWD VOLTAGE		MAX. RATINGS @ 25°C	REV. VOLT VR	4 FWD CURR. IF (A)	TEMP. RNG. CODE	PEAK WAVE-LENGTH λp (nm)	LUMINOUS INTENSITY		MIN IR RADIAT PWR Po (W)	BEAM ANGLE θHI (°)	RESP TIME (S)	MATERIAL & FEATURES	DRAWING Ø-RND. ▽-RECT. △-STRIP *CHIP	
				V (V)	IF (A)						IF (A)	IF (A)						
1	TIL41	1	1	1.6	20m	2.0	40m	48	940n									
2	TIL261	1	2	2.0	20m	3.0	40m	48	650n	500u	20m	500u			600n#	BC	PA6Δ	
3	TIL281	1	3	3.5	25m	3.0	30m	48	590n	800u	25m				CA	MF .40 min	PA8Δ	
4	TIL271	1	5	3.5	25m	3.0	30m	48	565n	800u	25m				CA	MF .40 min	PA8Δ	
5	LD42	2	1	1.6	20m	2.0	40m	48	940n									
6	LEA502SN	2	1	1.5	50m	150m#	5.0	50m	07s	900n		500u			600n#	BC	PA6Δ	
7#	LD262	2	1	1.6	50m	170m#	4.0	50m	48s	950n	50m	700u			1.7u#	BC	PA27Δ	
8	TIL262	2	2	2.0	20m	3.0	40m	48	650n	500u	20m						PA8Δ	
9#	LD462	2	2	2.0	20m	85m	3.0	35m	48s	665n	1.0m†			90	5.0 #	CA	PA26aΔ	
10	TIL282	2	3	3.5	25m	3.0	30m	48	590n	800u	25m				CA	MF .40 Min	PA8Δ	
11#	LD482	2	4	3.0	20m	85m	3.0	25m	38s	575n	6.0m†			100	50n#	BD	PA26aΔ	
12	TIL272	2	5	3.5	25m	3.0	30m	48	565n	800u	25m						PA8Δ	
13#	LD472	2	5	3.0	20m	85m	3.0	25m	48s	560n	4.8m†						PA26aΔ	
14	TIL43	3	1	1.6	20m	2.0	40m	48	940n									
15	LEA503SN	3	1	1.5	50m	150m	5.0	50m	07s	900n		500u			50n#	BD	PA26aΔ	
16#	LD263	3	1	1.6	50m	255m#	4.0	50m	48s	950n	50m	700u			1.7u#	BC	PA27Δ	
17	TIL263	3	2	2.0	20m	3.0	40m	48	650n	500u	20m						PA8Δ	
18#	LD463	3	2	2.0	20m	85m	3.0	35m	48s	665n	1.0m†			90	5.0 #	CA	PA26aΔ	
19	HLMP-6203	3	2	2.0	10m	100m	3.0	50m	5A*	655n	500u			45	15n	CA	Matched	
20	TIL283	3	3	3.5	25m	3.0	30m	48	590n	800u	25m				CA	MF .40 Min	PA42b†	
21#	LD483	3	4	3.0	20m	85m	3.0	25m	38s	575n	6.0m†			100	50n#	BD	PA26aΔ	
22	TIL273	3	5	3.5	25m	3.0	30m	48	565n	800u	25m						PA8Δ	
23#	LD473	3	5	3.0	20m	85m	3.0	25m	48s	560n	4.8m†						PA26aΔ	
24	TIL44	4	1	1.6	20m	2.0	40m	48	940n								PA6Δ	
25	LEA504SN	4	1	1.5	50m	150m	5.0	50m	07s	900n		500u			50n#	BD	PA26aΔ	
26#	LD264	4	1	1.6	50m	340m#	4.0	50m	48s	950n	50m	700u			1.7u#	BC	PA27Δ	
27	TIL264	4	2	2.0	20m	3.0	40m	48	650n	500u	20m						PA8Δ	
28#	LD464	4	2	2.0	20m	85m	3.0	35m	48s	665n	1.0m†			90	5.0 #	CA	PA26aΔ	
29	HLMP-6204	4	2	2.0	10m	100m	3.0	50m	5A*	655n	500u			45	15n	CA	Matched	
30	TIL284	4	3	3.5	25m	3.0	30m	48	590n	800u	25m				CA	MF .40 Min	PA42b†	
31#	LD484	4	4	3.0	20m	85m	3.0	25m	38s	575n	6.0m†			100	50n#	BD	PA26aΔ	
32	TIL274	4	5	3.5	25m	3.0	30m	48	565n	800u	25m						PA8Δ	
33#	LD474	4	5	3.0	20m	85m	3.0	25m	48s	560n	4.8m†						PA26aΔ	
34▼	E2525♦	4	1	2.7	75 s				904n								16x16 Mil Spot	
35	TIL45	5	1	1.6	20m	2.0	40m	48	940n									
36	LEA505S	5	1	1.5	50m	150m	5.0	50m	07s	900n		500u			50n#	BD	PA6Δ	
37#	LD265	5	1	1.6	50m	425m#	4.0	50m	48s	950n	50m	700u			1.7u#	BC	PA27Δ	
38	TIL265	5	2	2.0	20m	3.0	40m	48	650n	500u	20m						PA8Δ	
39#	LD465	5	2	2.0	20m	85m	3.0	35m	48s	665n	1.0m†			90	5.0 #	CA	PA26aΔ	
40	HLMP-6205	5	2	2.0	10m	100m	3.0	50m	5A*	655n	500u			45	15n	CA	Matched	
41	TIL285	5	3	3.5	25m	3.0	30m	48	590n	800u	25m				CA	MF .40 Min	PA42b†	
42#	LD485	5	4	3.0	20m	85m	3.0	25m	38s	575n	6.0m†			100	50n#	BD	PA26aΔ	
43	TIL275	5	5	3.5	25m	3.0	30m	48	565n	800u	25m						PA8Δ	
44#	LD475	5	5	3.0	20m	85m	3.0	25m	48s	560n	4.8m†						PA26aΔ	
45	TIL46	6	1	1.6	20m	2.0	40m	48	940n								PA6Δ	
46	LEA506S	6	1	1.5	50m	150m	5.0	50m	07s	900n		500u			50n#	BD	PA26aΔ	
47#	LD266	6	1	1.6	50m	510m#	4.0	50m	48s	950n	50m	700u			1.7u#	BC	PA27Δ	
48	TIL266	6	2	2.0	20m	3.0	40m	48	650n	500u	20m						PA8Δ	
49#	LD466	6	2	2.0	20m	85m	3.0	35m	48s	665n	1.0m†			90	5.0 #	CA	PA26aΔ	
50	TIL286	6	3	3.5	25m	3.0	30m	48	590n	800u	25m				CA	MF .40 Min	PA8Δ	
51#	LD486	6	4	3.0	20m	85m	3.0	25m	38s	575n	6.0m†			100	50n#	BD	PA26aΔ	
52	TIL276	6	5	3.5	25m	3.0	30m	48	565n	800u	25m						PA8Δ	
53#	LD476	6	5	3.0	20m	85m	3.0	25m	48s	560n	4.8m†						PA26aΔ	
54	TIL47	7	1	1.6	20m	2.0	40m	48	940n								PA6Δ	
55	LEA507S	7	1	1.5	50m	150m	5.0	50m	07s	900n		500u			50n#	BD	PA26aΔ	
56#	LD267	7	1	1.6	50m	595m#	4.0	50m	48s	950n	50m	700u			1.7u#	BC	PA27Δ	
57	TIL267	7	2	2.0	20m	3.0	40m	48	650n	500u	20m						PA8Δ	
58#	LD467	7	2	2.0	20m	85m	3.0	35m	48s	665n	1.0m†			90	5.0 #	CA	PA26aΔ	
59	TIL287	7	3	3.5	25m	3.0	30m	48	590n	800u	25m				CA	MF .40 Min	PA8Δ	
60#	LD487	7	4	3.0	20m	85m	3.0	25m	38s	575n	6.0m†			100	50n#	BD	PA26aΔ	
61	TIL277	7	5	3.5	25m	3.0	30m	48	565n	800u	25m						PA8Δ	
62#	LD477	7	5	3.0	20m	85m	3.0	25m	48s	560n	4.8m†						PA26aΔ	
63	TIL48	8	1	1.6	20m	2.0	40m	48	940n								PA6Δ	
64	LEA508	8	1	1.5	50m	150m	5.0	50m	07s	900n		500u			50n#	BD	PA26aΔ	
65#	LD268	8	1	1.6	50m	680m#	4.0	50m	48s	950n	50m	700u			1.7u#	BC	PA27Δ	
66	TIL268	8	2	2.0	20m	3.0	40m	48	650n	500u	20m						PA8Δ	
67#	LD468	8	2	2.0	20m	85m	3.0	35m	48s	665n	1.0m†			90	5.0 #	CA	PA26aΔ	
68	TIL288	8	3	3.5	25m	3.0	30m	48	590n	800u	25m				CA	MF .40 Min	PA8Δ	
69#	LD488	8	4	3.0	20m	85m	3.0	25m	38s	575n	6.0m†			100	50n#	BD	PA26aΔ	
70	TIL278	8	5	3.5	25m	3.0	30m	48	565n	800u	25m						PA8Δ	
71#	LD478	8	5	3.0	20m	85m	3.0	25m	48s	560n	4.8m†						PA26aΔ	
72	OT3031A	9				450m		90m	900n								Light Bar	
73#	CQY63	9	1	1.3					930n								See CNY26	
74	TIL49	9	1	1.6	20m	2.0	40m	48	940n								PA20Δ	
75#	LEA13	9	1	1.5	50m	2.0	100m	6C	930n								PA6Δ	
76	TIL131	9	1	1.5	50m	2.0	100m	6C	930n								BC 9 TIL23	
77	LEA509	9	1	1.5	50m	5.0	50m	07s	900n								PA7†	
78#	CQY36/9	9	1	1.6	50m	650m	5.0	50m	2A%	925n		500u			50n#	BC	le 400uW/sr	
79#	CQY37/9	9	1	1.6	50m	650m	5.0	50m	2A%	925n		500u			50n#	BC	le 2.2mW/sr	
80#	LD269	9	1	1.6	50m	765m#	4.0	50m	48s	950n	50m	700u			1.7u#	BC	PA15†	
81	TIL269	9	2	2.0	20m	3.0	40m	48	650n	500u	20m						PA27Δ	
82#	LD469	9	2	2.0	20m	85m	3.0	35m	48s	665n	1.0m†			90	5.0 #	CA	PA26aΔ	
83	TIL289	9	3	3.5	25m	3.0	30m	48	590n	800u	25m				CA	MF .40 Min	PA8Δ	
84#	LD489	9	4	3.0	20m	85m	3.0	25m	38s	575n	6.0m†			100	50n#	BD	PA26aΔ	
85	TIL279	9	5	3.5	25m	3.0	30m	48	565n	800u	25m						PA8Δ	
86#	LD479	9	5	3.0	20m	85m	3.0	25m	48s	560n	4.8m†						PA26aΔ	
87	TIL50	10	1	1.6	20m	2.0	40m	48	940n								PA6Δ	
88	LEA510	10	1	1.5	50m	150m	5.0	50m	07s	900n		500u			50n#	BD	PA26aΔ	
89#	CQY39	10	1	1.6	50m	750m	3.0	50m	2A%	910n		200u			50	100n#	BC	PA2†
90#	V131P	10	1	1.6	50m	750m	3.0	50m	2A%	910n		200u			50	100n#	BC	PA2†
91#	LD260	10	1															



# 4. EMITTER ARRAY: LED & INFRARED EMITTING DIODE

IN ORDER OF: (1) NO. OF ELEMENTS (2) COLOR  
(3) PWR DISS-Pcase (4) IF & (5) TYPE No.

LINE No.	TYPE No.	No. OF ELEM	C O L O R	MAX FWD VOLTAGE		MAX. RATINGS @ 25°C			TEMP RNG. CODE	PEAK WAVE. LENGTH λp (m)	LUMINOUS INTENSITY		MIN IR RADIAT PWR Po (W)	BEAM ANGLE θHI (°)	RESP TIME (S)	MATERIAL & FEATURES	DRAWING Ø-RND. [ ]-RECT. [ ]-STRIP [ ]*-CHIP
				VF (V)	IF (A)	3 PWR. DISSIP. Pcase (W)	REV. VOLT VR (V)	4 FWD CURR. IF (A)			λp (m)	IF (A)					
1▼	DCC050GBCA	50	5	1.6 †	10m	3.2 *	15	20m	58%	660n	1.0k∅	10m			35n	CA Bar Graph	PA45a [ ]
2▼	DCC100IRCA	100	1	1.6 †	10m	3.2 *	15	20m	58%	660n	1.0k∅	10m			35n	CA Bar Graph	PA46 [ ]
3▼	DCC100IRCC	100	1	1.6 †	10m	3.2 *	15	20m	58%	660n	1.0k∅	10m			35n	CA Bar Graph	PA46b [ ]
4▼	DCC100IRH.E.CC	100	1	1.8 †	10m	3.2 *	15	20m	58%	63n	2.0m	10m		200n	CA Bar Graph	PA46b [ ]	
5▲	DCC100RCA	100	2	1.6 †	10m	3.2 *	15	20m	58%	660n	1.0k∅	10m			35n	CA	PA46 [ ]
6▲	DCC100RCC	100	2	1.6 †	10m	3.2 *	15	20m	58%	660n	1.0k∅	10m			35n	Bar Graph	PA46b [ ]
7▼	DCC100RH.E.CC	100	2	1.8 †	10m	3.2 *	15	20m	58%	63n	2.0m	10m		200n	CA Bar Graph	PA46b [ ]	
8	DCC10030	100	2	2.0	20m	3.8 *	3.0	20m	57*	660n	1.0k∅	20m			35n	CA	PA5
9▼	DCC100YCA	100	4	1.6 †	10m	3.2 *	15	20m	58%	660n	1.0k∅	10m			35n	CA Bar Graph	PA46 [ ]
10▼	DCC100YCC	100	4	1.6 †	10m	3.2 *	15	20m	58%	660n	1.0k∅	10m			35n	CA Bar Graph	PA46b [ ]
11▼	DCC100YH.E.CC	100	4	1.8 †	10m	3.2 *	15	20m	58%	63n	2.0m	10m		200n	CA Bar Graph	PA46b [ ]	
12▼	DCC100GCA	100	5	1.6 †	10m	3.2 *	15	20m	58%	660n	1.0k∅	10m			35n	CA Bar Graph	PA46 [ ]
13▼	DCC100GCC	100	5	1.6 †	10m	3.2 *	15	20m	58%	660n	1.0k∅	10m			35n	CA Bar Graph	PA46b [ ]
14▼	DCC100GH.E.CC	100	5	1.8 †	10m	3.2 *	15	20m	58%	63n	2.0m	10m		200n	CA Bar Graph	PA46b [ ]	

# 10. SENSOR: PHOTODIODE

IN ORDER OF: (1)TYPE PHOTODIODE (2) MAX. ID  
(3) VR & (4)TYPE No.

LINE No.	TYPE No.	TYP E	MAX DARK CURR @ 25°C		MAX RATINGS @ 25°C TEMP			MINIMUM RESPONSIVITY			ACTIVE AREA		RESP. TIME (S)	CAPAC C (F)	SPECTRAL RANGE		NOISE EQ.PWR Pn Watt/Hz <sup>1/2</sup>	M T L	LEAD CODE	DRAWING Ø-RND. Ø-RECT. Δ-STRIP *CHIP	
			ID (A)	VR (V)	PWR DISSIP Pcase (W)	REV. VOLT VR (V)	DC CURR. IF (A)	FWDRNG. CODE	Re (A/W)	SOUR -CE	λ (m)	VR (V)			Sq In	RESP. (S)					LOW λL (m)
1	PIN3DP	1				5.0	50	5C*	300m	850n	4.9m		300p				20p	AD	A	PD88Ø	
2	PIN5DP	1				5.0	50	5C*	300m	850n	7.9m		500p				50p	AD	A	PD8Ø	
3	PIN6DP	1				5.0	50	5C*	300m	850n	31m		1.8n			80p	AD	A	PD165Ø		
4	PIN10DP	1				5.0	50	07*	300m	850n	155m		2.4n			1.0p	AD	A	PD166Ø		
5#	AE960	1	50pt	5.0		60	60		500m	900n	1.5m	10n#	10p		350nt	1.1ut		AD	F	PD261	
6#	AE961	1	100p	5.0		60	60		500m	900n	3.9m	10n#	25p		350nt	1.1ut		AD	F	PD259	
7	PIN020A	1	150p	5.0		25	25		420m	800n	310u	5.0n	5.0p				6.0f#	AD	S	PD78Ø	
8	HP5082-4205	1	150p	10	100m	1.5m	60		1.5m	770n	77u	1.0n	700n					AD	J	PD5Ø	
9#	AE962	1	200pt	5.0		60	60		420m	900n	4.5m	15n#						AD	S	PD259	
10	PIN040A	1	400p	5.0		25	25		420m	800n	1.2m	5.0n	20p				100p#	AD	S	PD78Ø	
11#	AE963	1	500pt	5.0		60	60		500m	900n	32m	20n#						AD	S	PD260	
12	HP5082-4204	1	600p	10	100m	1.0m	20		1.0m	770n	310u	1.0n	2.0p				28f	AD	S	PD78Ø	
13	PIN020B	1	800p	5.0		25	25		420m	800n	310u	5.0n	5.0p				200p#	AD	S	PD78Ø	
14#	AE964	1	1.0n	5.0		60	60		500m	900n	99m	30n#						AD	S	PD260	
15	L4501	1	1.0n	6.0		6.0	6.0	10m	X8*	500m	850n	4.7u	6.0p	80p			100a#	AD		PD271Ø	
16	L4502	1	1.0n	6.0		6.0	6.0	10m	X8*	500m	850n	6.0	16u	10p	2.5p			AD		PD271Ø	
17#	CG5500A	1	1.0n	10	100m	100	100	10m	27	450m	850n	10	64u	1.0n	5.0p			AD		Ø	
18#	CG5600A	1	1.0n	10	100m	150	150	10m	27	300m	850n	10	64u	1.0n	2.0p			AD		Ø	
19#	MS502	1	1.0n	20	250m				5A*	3.2m	820n	10	240m	1.5n	2.6p			AD	F	PD24Ø	
20	SD2232	1	1.0n	100	200m	180			6C*	500m	875n	1.9m	4.1p		907n	1.1u		AD	A	PD348Ø	
21#	MS500	1	1.2n	10	250m				5A*	3.2m	820n	10	240m	1.5n	2.6p			AD	F	PD24Ø	
22#	MS501	1	1.2n	10	250m				5A*	3.2m	820n	10	240m	1.5n	2.6p			AD	F	PD24Ø	
23#	BP104	1	2.0n	10	150m*	20			48*	7.1m	820n	5.0	7.8m	1.25n	48p	840n	1.0u	42f	AD	Ø	
24	MRD500	1	2.0n	20	100m	100	Ø		6M*	1.8m	950n	20	5.7	1.0n	4.0p	800nt		AD	Ø	PD278	
25	MRD510	1	2.0n	20	100m	100	Ø		6M*	4.0m	770n	20	7.4	1.0n	4.0p	800nt		AD	Ø	PD7Ø	
26	HP5082-4203	1	2.0n	25	100m	50				1.0m	770n	20	310u	1.0n	1.5p		51f	AD	A	PD78Ø	
27	HP5082-4207	1	2.5n	10	100m	20				4.0m	770n	20	1.2m	1.0n	5.5p		57f	AD	S	PD78Ø	
28	SGD040A	1	3.0n	100	200m	600	†		6F*	500m	900n	1.2u	3.0n	2.0p		350n	1.1u	AD	D	PD22bØ	
29	SGD040B	1	3.0n	100	100m	600	†		6F*	500m	900n	1.2u	3.0n	2.0p		350n	1.1u	AD	D	PD22cØ	
30	SGD040L	1	3.0n	100	200m	600	†		6F*	500m	900n	1.2u	3.0n	2.0p		350n	1.1u	AD	D	PD22bØ	
31	PIN040B	1	4.0n	5.0		25				420m	800n	1.2m	5.0n	20p			900p#	AD	S	PD78Ø	
32#	BPW24	1	5.0n	20	180m	50			2A*	500m	900n	20	991u	3.0n	6.0p			AD	S	PD7Ø	
33	HP5082-4220	1	5.0n	25	100m	50				1.0m	770n	20	310u	1.0n	2.0p		80f	AD	A	PD8aØ	
34#	PD80P	1	1.0n	10	200m	50			3A*	180n	900n	5.0	6.8m	200n	40p	400n	1.1u	AD	A	PD7pØ	
35	SGD100A	1	1.0n	100	200m	600	†		6F*	500m	900n	7.9m	4.0n	4.0p		350n	1.1u	AD	D	PD22dØ	
36	SPX2478-001	1	2.0n	25	50	50	†		6C*	500m	907n	1.9m	10n	4.0p		907n		AD	A	PD348Ø	
37	SPX2478-002	1	2.0n	25	50	50	†		6C*	500m	907n	1.9m	10n	4.0p		907n		AD	A	PD96bØ	
38	SPX1777	1	2.0n	90	180	180	†		6C*	500m	907n	1.9m	1.5n	4.2p		907n		AD	A	PD351Ø	
39	SD5426	1	2.0n	100	200	200	†			500m	907n	1.9m	1.5n	2.7p		907n		AD	V	PD96aØ	
40#	OP905	1	3.0n	10	150m	33			48	490m	850n	38	7.5 *	200n	150p	300n	1.2u	40f	AD	Ø	PD366Ø
41#	OP915	1	3.0n	10	150m	33			48	600m	950n	38	7.5 *	50n	30p	300n	1.2u	70f	AD	Ø	PD366Ø
42	PINLSC5D	1	3.0n	10	200	200	†		5C	550m	920n	17m	600n#	110p		350n	1.1u	110f	AD	Ø	PD294Ø
43	C30839	1	3.0n	45	100	100		10m	48*	560m	900n	45	5.0 *	6.0n	5.5p	150n	1.1u	100f*	AD	E	PD363
44	DT25	1	3.0n	90	450	450				500m	900u	7.9m	5.0n#	7.0p				AD	D	PD22Ø	
45	C30812	1	3.0n	200	100m	225		10m	48*	600m	900n	200	7.7m	10n#	3.0p	400nt	1.1ut	150f	AD	E	PD109Ø
46	PIN3D	1	5.0n	10	50	50			5C*	300m	850n	10	4.9m	15n	10p		20p	AD	A	PD8Ø	
47#	PN303	1	5.0n	10	100m	30			29				50n	70p				AD	A	PD14Ø	
48	C30807	1	5.0n	45	10m	100		10m	48*	600m	900n	45	1.2m	3.0n#	2.5p	400nt	1.1ut	100f	AD	B	PD8Ø
49	C30831	1	5.0n	45	1.0m	100			48*	600m	900n	45	300u	3.0n#	2.0p	400nt	1.1ut	100f	AD	B	PD8Ø
50	SGD100	1	5.0n	100	350m	600	†		6F*	500m	900n	20m	7.0n	8.0p		350n	1.1u	AD	D	PD22eØ	
51	YAG100	1	7.5n	180	250	250				650m	900n	7.9m	8.0n	3.5p		350n	1.1u	AD	D	PD22Ø	
52	PINSC4D	1	100n	10	150	150	†		5C	550m	920n	10m	100n#	9.0p		350n	1.1u	10p	AD	A	PD296Ø
53#	PD50P	1	100n	30	100m	100			3A*	40n	900n	5.0	1.4m	80n	15p	400n	1.1u	AD	A	PD7nØ	
54	C30808	1	150n	45	100m	100		10m	48*	600m	900n	45	7.7m	5.0n#	6.0p	400nt	1.1ut	150f	AD	F	PD109Ø
55	C30900E	1	150n	90	200	200		10m	48*	600m	900n	90	7.7m	6.0n#	5.0p	400nt	1.1ut	500f	AD	G	PD109Ø
56	C30801	1	200nt	30	50m	100		10m	18*	600m	900n	30	7.7m	7.0n#	5.0p	400nt	1.1ut	400f	AD	E	PD109aØ
57	PIN5	1	250n	10	100	100			5C*	300m	850n	10	7.9m	15n	15p		50p	AD	A	PD8Ø	
58	C30822	1	250n	45	100m	100			48*	600m	900n	45	31m	7.0n#	17p	400nt	1.1ut	200f	AD	K	PD108Ø
59	C30809	1	350n	45	100m	100		10m	48*	600m	900n	45	7.7m	10n#	35p	400nt	1.1ut	200f	AD	K	PD108Ø
60	PIN9D	1	400n	10	50	50			5C*	300m	850n	10	31m	15n	60p		80p	AD	A	PD165Ø	
61	C30842	1	400n	45	100	100		10m	48*	570m	900n	45	100 *	16n	75p	150n	1.1u	400f*	AD	Ø	PD105
62	DT110	1	400n	90	450	450				500m	900u	154m	10n#	100p				AD	Ø	PD21Ø	
63	C30802	1	500nt	30	50m	100		10m	18*	600m	900n	30	31m	7.0n#	17p	400nt	1.1ut	600f	AD	E	PD109bØ
64	YAG444	1	600n	180	250	250				650m	900n	154m	8.0n	35p		350n	1.1u	AD	D	PD23Ø	
65	YAG444-4	1	600n	180	250	250				650m	900n	154m	8.0n	35p		350n	1.1u	AD	D	PD23Ø	
66	PINLSC30D	1	1.0u	5.0		5.0			5C	550m	920n	188m	200n#	9.3n		350n	1.1u	110f	AD	D	PD295Ø
67	PIN8LC	1	1.0u	10	50	50				250m	850n	17m	8.0n#	20p			60p#	AD	A	PD167Ø	
68	PIN10	1	1.0u	10	100	100				250m	850n	193m	10n#	400p			1.0p#	AD	A	PD166aØ	
69	PIN10AP	1	1.0u	10	2.0u	2.0u				100m	155m	155m	30n#	350p				AD	Si	PD166cØ	
70	PIN10DF	1	1.0u	10	100m	100m				100m	155m	155m	30n#	350p		450n	950n	AD	Si	PD166dØ	
71	PIN10RP	1	1.0u	10	2.0u	2.0u				100m	155m	155m	30n#	350p		580n	720n	AD	Si	PD166cØ	
72	PIN8LC	1	1.5u	10	50	50				250m	850n	155m	10n#	100p			1.0p#	AD	A	PD166aØ	
73	PIN10D	1	1.5u	10	100	100			07*	300m	850n	10	155m	25n	350p		1.0p	AD	A	PD166Ø	
74	PINSC10D	1	1.5u	10	150	150	†		5C	550m	920n	150m	200n#	60p		350n	1.1u				

# 10. SENSOR: PHOTODIODE

IN ORDER OF: (1) TYPE PHOTODIODE (2) MAX. ID (3) VR & (4) TYPE No.

LINE No.	TYPE No.	Y P E	MAX CURR @ 25°C (A)	MAX DARK VR (V)	MAX PWR DISSIP Pcase (W)	MAX RATINGS @ 25°C			TEMP RNG. CODE	MINIMUM RESPONSIVITY			ACTIVE AREA Sq In	RESP. TIME (S)	CAPAC C (F)	SPECTRAL RANGE		NOISE EQ.PWR Pn Watt/Hz <sup>1/2</sup>	M T L	LEAD CODE	DRAWING Ø-RND. Δ-RECT *-CHIP
						REV. VOLT VR (V)	DC FWD CURR. (A)	FWDRNG. (A/W)		Re	SOUR -CE	λ (m)				VR (V)	LOW λL (m)				
1	TIED69	2	700p	100m	185	185	6C	15	900n	2.7m	30p	700n	1.0u	AD	BØ	PD42Ø					
2	TIED89	2	700p	50m	185	6C	15	900n	2.8m	2.8m	30p	700n	1.0u	AD	AD	PD43Ø					
3#	CG512	2	2.0n	100m	100	07	200m	1.0n	480m	6.0p	600n	1.0m	1.0f	AD	AD	PDØ					
4#	BPW28	2	5.0n	100m	200	6C*	47*	65 †	47u	1.2p	450n	950n	AD	A	PD192Ø						
5	C30902E	2	30n	180	100m	250	5.0m	47*	1.6p	500p#	400n	1.0u	3.0f	AD	B	PD288Ø					
6	C30908E	2	30n	215	100m	225 †	5.0m	47*	77u	500p#	400n	1.0u	230f*	AD	X	PD286Ø					
7	C30817	2	50n†	300	100m	20	47*	75 †	900n	300	800u	2.0n#	2.0p	AD	J	PD109Ø					
8	C30884	2	100n†	300	100m	330	5.0m	47*	63 †	900n	300	774m	1.0n#	4.0p	AD	A	PD421Ø				
9	C30895	2	100n†	350	100m	425	5.0m	47*	75 †	900n	350	774m	2.0n#	2.0p	AD	AØ	PD421Ø				
10	C30904E	2	200n	350	100m	375 †	5.0m	47*	65	900n	310u	2.0n#	2.0p	AD	X	PD286Ø					
11	C30916E	2	200n	350	100m	390 †	5.0m	47*	43	900n	1.8 *	3.0n	3.0p	AD	Z	PD363a					
12	C30872	2	300n	335	100m	375 †	5.0m	47*	37 †	900n	1.1m	2.0n#	10p	AD	K\$	PD108Ø					
13	C30905E	2	400n	350	100m	390 †	5.0m	47*	43	900n	1.8m\$	3.0n#	3.5p	AD	X	PD286Ø					
14	1319	3				22			300k	J	376u	200u	1.0u	BH		PD183Ø					
15	1319BB	3				22			300k	J	376u	200u	1.0u	BH		PD183aØ					
16	1319M	3				22			300k	J	376u	200u	1.0u	BH		PD183bØ					
17	1319MF	3				22			300k	J	376u	200u	1.0u	BH		PD183cØ					
18	1620	3				7.5			4.0k	J	34m	500u	1.0u	BH		PD183Ø					
19	1620BB	3				7.5			4.0k	J	34m	500u	1.0u	BH		PD183aØ					
20	1620M	3				7.5			4.0k	J	34m	500u	1.0u	BH		PD183bØ					
21	1620MF	3				7.5			4.0k	J	34m	500u	1.0u	BH		PD183cØ					
22	8016	3				10			470m		900n	1.5m	30p	AD		PD169aØ					
23	8016-L	3				10			470m		900n	1.5m	30p	AD	A\$	PD169Ø					
24	8035	3				10			470m		900n	7.9m	150p	AD		PD169Ø					
25	8058	3				10			470m		900n	46m	800p	AD		PD165cØ					
26	8110	3				10			470m		900n	154m	2.6n	AD		PD165bØ					
27	8235	3				10			470m		900u	7.9m	150p	AD		PD169Ø					
28	8258	3				10			470m		900u	46m	800p	AD		PD162cØ					
29	L401	3						27	1.0u	1.5m	20p	2.0u	ED		PD318						
30#	P1-11	3						58*	500n	632n	1.5m	15p	1.0n	ED		PD344Ø					
31#	P1-11H	3			50m*			58*	130n	632n	1.5m	3.0p	1.0n	ED		PD344aØ					
32#	P1-12	3			50m*			58*	250n	632n	6.2m	24p	1.0n	ED		PD344Ø					
33#	P1-12H	3			1.0 *			58*	130n	632n	6.2m	12p	1.0n	ED		PD344aØ					
34#	P1-13	3			50m*			58*	250n	632n	14m	54p	1.0n	ED		PD344Ø					
35#	P1-13H	3			1.0 *			58*	130n	632n	14m	27p	1.0n	ED		PD344aØ					
36#	P1-15	3			50m*			58*	130n	632n	39m	75p	1.0n	ED		PD344Ø					
37#	P1-15H	3			1.0 *			58*	130n	632n	39m	75p	1.0n	ED		PD344aØ					
38#	RPY86	3				30		2A	640	10u	9.0 #	3.1m	6.5u	14u	1.3n	KK	PD377Ø				
39#	RPY87	3				30		2A	500	10u	9.0 #	3.1m	1.0u	15u	1.7n	KK	PD377Ø				
40#	RPY88	3				30		2A	320	10u	9.0 #	6.2m	6.5u	14u	2.0n	KK	PD377Ø				
41#	RPY89	3				30		2A	250	10u	9.0 #	6.2m	1.0u	15u	2.5n	KK	PD377Ø				
42	SD8734-1	3						EX				1.2m	40n#	5.0u\$	5.3u\$	BG	PD113Ø				
43	SD8735-1	3						EX				1.2m	40n#	5.0u\$	5.3u\$	BG	PD113Ø				
44	SD8736-1	3						EX				1.2m	40n#	5.0u\$	5.3u\$	BG	PD113Ø				
45	T301	3			1.0			1A	1.5u	1.5m	150n#	200p	300n	300u							
46	T302	3			1.0			1A	1.5u	1.5m	150n#	200p	300n	300u							
47#	BPY77	3	500p	10	500m*	100	40m	5M*	10u\$	F	900n	154u	500p	3.0p	400n	1.0u	AD	A	PD7cØ		
48	MFO100	3	2.0n	20	100m	200 †		5H\$	400m		900n	19m\$	1.0n	4.0p	520n	950n			PD7gØ		
49	TXED453C025	3	10n	25	100m	100 †		27	250m		790n	60n	2.0p	400n†	1.1u†		AD	GØ	PD374Ø		
50	TXED453C050	3	10n	25	100m	100 †		27	230m		790n	60n	2.0p	400n†	1.1u†		AD	GØ	PD374aØ		
51	TXED453C100	3	10n	25	100m	100 †		27	200m		790n	60n	2.0p	400n†	1.1u†		AD	GØ	PD374bØ		
52	7016	3	10n	100	200	200		470m	900n	100	1.5m	2.0n#	2.0p	350n	1.1u	370p	AD	GØ	PD161cØ		
53	7016-L	3	10n	100	200	200		470m	900n	100	1.5m	2.0n#	2.0p	350n	1.1u	37f	AD	GØ	PD161bØ		
54#	OSD1-3HSA	3	20n†	100	100	100		75 #	900n	100	1.5m	2.0n#	3.0p	900n	1.0u	70f	AD	VØ	PD27bØ		
55	MC32	3	40n	100	450m	100		450m	905n	50	6.9m	5.0n#	6.0p	890n	1.1u	200f	AD	VØ	PD352Ø		
56#	BPX69	3	50n	50	80m	100	6C*	450n\$	C	1.0u	50	2.3m	13u#	3.5p	500n	1.1u	AD		PD27bØ		
57#	OSD1-4HSA1	3	50n†	100	100	100		30 #	900n	100	1.5m	10n#	3.0p	900n	1.0u	70f	AD	VØ	PD27bØ		
58#	OSD1-4HSA2	3	50n†	180	180	180		45 #	900n	100	1.5m	15n#	2.5p	900n	1.0u	70f	AD	VØ	PD27bØ		
59	7225	3	60n	180	300	300		430m	900n	180	7.9m	8.0n#	3.0p	350n	1.1u	15p	AD		PD161bØ		
60	7025	3	75n	100	200	200		470m	900n	100	7.9m	4.0n#	4.0p	350n	1.1u	580p	AD		PD161bØ		
61	7258	3	100n	180	300	300		430m	900n	100	3.0m	8.0n#	12p	350n	1.1u	29p	AD		PD108bØ		
62	7058	3	250n	100	200	200		470m	900n	100	30m	7.0n#	12p	350n	1.1u	14p	AD		PD108bØ		
63#	OSD50-3	3	350n†	30	100	100		75 #	900n	100	50 *	10n#	630n	900n	570f	AD		PD199bØ			
64#	OSD50-4	3	350n†	30	180	180		60 #	900n	100	50 *	20n#	26p	900n	1.0u	570f	AD		PD199bØ		
65#	OSD100-3	3	800n†	30	100	100		75 #	900n	100	100 *	10n#	630n	900n	870f	AD		PD201bØ			
66#	OSD100-4	3	800n†	30	180	180		60 #	900n	100	100 *	20n#	50p	900n	1.0u	870f	AD		PD201bØ		
67	7110	3	1.0u	100	200	200		470m	900n	100	154m	20n#	70p	350n	1.1u	38p	AD		PD108aØ		
68#	OSD200-3	3	1.8u	30	100	100		75 #	900n	100	200 *	10n#	630n	900n	1.3p	AD		PD202aØ			
69#	OSD200-4	3	1.8u	30	180	180		60 #	900n	100	200 *	20n#	83p	900n	1.0u	1.3p	AD		PD202aØ		
70#	OSD300-2	3	3.0u	30	60	60		65 #	630n	300 *	300 *	10n#	630n	900n	1.7p	AD		PD202aØ			
71#	OSD300-3	3	3.0u	30	100	100		75 #	900n	300 *	300 *	10n#	630n	900n	1.7p	AD		PD202aØ			
72#	OSD300-4	3	3.0u	30	180	180		60 #	900n	300 *	300 *	20n#	133p	900n	1.0u	1.7p	AD		PD202aØ		
73	L4520	3	1.0u	6.0	6.0	10m	X8*	500m	1.5u	6.0	47u	100p\$	5.0p	1.0u	1.8u	100a#	AB		PD271aØ		
74	L4521	3	1.0u	10	20	10m	X8*	1.0 †	1.5u	10	1.2m	300p\$	40p	1.0u	1.8u		AB		PD274Ø		
75#	RPY77	3	15M*			25m	57*	3.5	6.0u	6.1m	100n	2.0u	7.0u	AD	BG			PD131Ø			
76#	RPY78	3	15M*			25m	57*	3.3	6.0u	6.1m	100n	2.0u	7.0u	BG				PD131Ø			
77#	RPY76A	3	100M*		20m	25*	200m	2.0u	1.5m	250u	1.5m	250u	1.5u	3.0u	10p	BH		PD42cØ			
78#	802CPY	3	120M*				1.0k				2.0u	25u	1.5n#					PD132Ø			
79#	ORP10	3	200M*				57*	400m	6.0u	4.6m	100n	1.1u	7.5u	860p		BG		PD121Ø			
80#	825CPY	3	600M*		9.0	14\$	200k		4.6m	4.6m	2.0u	25u	30n#					PD134Ø			
81	4003	3	1.0G*			26*	4.0k		1.5m	1.0u\$	1.0u	4.5u				BS		PD187Ø			
82	4005	3	1.0G*			26*	2.0k		6.2m	1.0u\$	1.0u	4.5u				BS		PD187Ø			
83	4006	3	1.0G*			26*	1.3k		13m	1.0u\$	1.0u	4.5u				BS		PD187Ø			
84	4007	3	1.0G*			26*	1.0k		24m	1.0u\$	1.0u	4.5u				BS		PD187Ø			
85	4080	3	1.0G*			X2*			6.2m	5.0											

# 10. SENSOR: PHOTODIODE

IN ORDER OF: (1)TYPE PHOTODIODE (2) MAX. ID  
(3) VR & (4)TYPE No.

LINE No.	TYPE No.	TYP E	MAX DARK CURR @ 25°C	MAX RATINGS @ 25°C			TEMP RING. CODE	MINIMUM RESPONSIVITY				ACTIVE AREA	RESP. TIME	CAPACITANCE	SPECTRAL RANGE		NOISE EQ. PWR	M T L	LEAD CODE	DRAWING Ø-RND. Δ-RECT Δ-STRIP *CHIP
				PWR DISSIP Pcase (W)	REV. VOLT (V)	DC FWD CURR. IF (A)		Re (A/W)	SOUR -CE	λ (m)	VR (V)				LOW λL (m)	HIGH λH (m)				
1	OE15-51	3	2.5G*				26*	4.0kΩ		3.7u		1.5m	1.0u		3.7u	4.0u		BS	PD161a	
2	OE15-52	3	2.5G*				26*	2.0kΩ		3.7u		6.2m	1.0u		3.7u	4.0u		BS	PD161a	
3	OE15-53	3	2.5G*				26*	1.3kΩ		3.7u		13m	1.0u		3.7u	4.0u		BS	PD161a	
4	OE15-181	3	2.5G*				26*	4.0kΩ		3.7u		1.5m	1.0u		3.7u	4.0u		BS	PD1610	
5	A200	3	2.6G*				KX	400m				1.5m	100ns		1.0u	9.0u	70p	AD	PD317	
6	GeAu-1.40A	3	3.0G*				KX	400m				1.5m	100ns		1.0u	10u		BJ	PD1470	
7	GeAu-1.60A	3	3.0G*				KX	400m				1.5m	100ns		1.0u	10u		BJ	PD1480	
8	GeAu-2.40A	3	3.0G*				KX	400m				3.0m	100ns		1.0u	10u		BJ	PD1470	
9	GeAu-2.60A	3	3.0G*				KX	400m				3.0m	100ns		1.0u	10u		BJ	PD1480	
10	GeAu-5.40A	3	3.0G*				KX	400m				774u	100ns		1.0u	10u		BJ	PD1470	
11	GeAu-5.60A	3	3.0G*				KX	400m				774u	100ns		1.0u	10u		BJ	PD1480	
12	SD5621	3	3.0G*				X2					1.2m		15n#	3.6u\$	3.8u\$		BF	PD950	
13#	F467	3	4.5G*				85*	1.6kΩ		500n		82u	200n		3.0u	6.0u		CG	PD137*	
14#	F471	3	4.5G*				85*	1.6kΩ		500n		82u	200n		3.0u	6.0u		CG	PD137a*	
15#	LGC600C	3	5.0G*				KX	5.0				387u	200n		800n	1.4u		CH	PD2490	
16	PbSeATO-1-10A	3	5.0G*				X2	1.0kΩ	K	2.4u		1.2m	5.0u\$		1.0u	4.5u		BS	PD1500	
17	PbSeATO-2-10A	3	5.0G*				X2	1.0kΩ	K	2.4u		4.8m	5.0u\$		1.0u	4.5u		BS	PD1500	
18	2-312	3	6.0G*				X6*	350m		5.0u	0.0	6.3m	10u\$		1.0u	5.5u		BG	PD3150	
19	5635	3	7.5G*		2.0	1.0	X6*	6.0kΩ				1.5m	10u\$		1.0u	5.0u		BS	PD162d	
20	5637	3	7.5G*		2.0	1.0	X6*	6.0kΩ				1.5m	10u\$		1.0u	5.0u		BS	PD184b	
21	5655	3	7.5G*		2.0	1.0	X6*	3.0kΩ				6.2m	10u\$		1.0u	5.0u		BS	PD162d	
22	5657	3	7.5G*		2.0	1.0	X6*	3.0kΩ				6.2m	10u\$		1.0u	5.0u		BS	PD184b	
23	5665	3	7.5G*		2.0	1.0	X6*	2.0kΩ				13m	10u\$		1.0u	5.0u		BS	PD162d	
24	5667	3	7.5G*		2.0	1.0	X6*	2.0kΩ				13m	10u\$		1.0u	5.0u		BS	PD184b	
25	OTC11-51	3	7.5G*		2.0	1.0	X6*	6.0kΩ				4.1u	10u		4.1u	4.5u†		BS	PD1620	
26	OTC11-51T	3	7.5G*		2.0	1.0	X6*	6.0kΩ				4.1u	10u		4.1u	4.5u†		BS	PD162a	
27	OTC11-51TC	3	7.5G*		2.0	1.0	X6*	6.0kΩ				4.1u	10u		4.1u	4.5u†		BS	PD162a	
28	OTC11-52	3	7.5G*		2.0	1.0	X6*	3.0kΩ				4.1u	10u		4.1u	4.5u†		BS	PD1620	
29	OTC11-52T	3	7.5G*		2.0	1.0	X6*	3.0kΩ				4.1u	10u		4.1u	4.5u†		BS	PD162a	
30	OTC11-52TC	3	7.5G*		2.0	1.0	X6*	3.0kΩ				4.1u	10u		4.1u	4.5u†		BS	PD162b	
31	OTC11-53	3	7.5G*		2.0	1.0	X6*	2.0kΩ				13m	10u		4.1u	4.5u†		BS	PD1620	
32	OTC11-53T	3	7.5G*		2.0	1.0	X6*	2.0kΩ				13m	10u		4.1u	4.5u†		BS	PD162b	
33	OTC11-53TC	3	7.5G*		2.0	1.0	X6*	2.0kΩ				13m	10u		4.1u	4.5u†		BS	PD162b	
34	SiAs-1.9145-1	3	9.0G*				TX					1.2m			1.0u	23u		BQ	PD1540	
35	SiAs-2.9145-1	3	9.0G*				TX					4.8m			1.0u	23u		BQ	PD1540	
36	SiAs-5.9145-1	3	9.0G*				TX					304u			1.0u	23u		BQ	PD1540	
37	SiGa-1.9145-1	3	9.0G*				SX					1.2m			1.0u	17u		BR	PD1540	
38	SiGa-2.9145-1	3	9.0G*				SX					4.8m			1.0u	17u		BR	PD1540	
39	SiGa-5.9145-1	3	9.0G*				SX					304u	100ns		2.0u	14u		BK	PD1540	
40	503	3	10G*				SX					1.2m	250n	12n	1.0u	17u		BR	PD1540	
41	GeHg-1.9145-1	3	10G*				KX					1.2m	100ns		6.5u	13u		CH	PD313	
42	GeHg-1.9145-2HS	3	10G*				SX					1.2m	1.0ns		2.0u	14u		BK	PD1540	
43	GeHg-2.9145-1	3	10G*				SX					4.8m	100ns		2.0u	14u		BK	PD1540	
44	GeHg-2.9145-2HS	3	10G*				SX					4.8m	1.0ns		2.0u	14u		BK	PD1540	
45	GeHg-5.9145-1	3	10G*				SX					4.8m	1.0ns		2.0u	14u		BK	PD1540	
46	GeHg-5.9145-2HS	3	10G*				SX					304u	100ns		2.0u	14u		BK	PD1540	
47	GeZn-1.9145-1	3	10G*				SX					304u	1.0ns		2.0u	14u		BK	PD1540	
48	GeZn-2.9145-1	3	10G*				UX					1.2m			2.0u	40u		BP	PD1540	
49	GeZn-5.9145-1	3	10G*				UX					4.8m			2.0u	40u		BP	PD1540	
50#	LGC600B	3	10G*				UX					304u			2.0u	40u		BP	PD1540	
51	OTC12-51	3	10G*				KX	5.0				387u			800n	1.4u		CH	PD2490	
52	OTC12-51T	3	13G*			125	26*	9.0kΩ		4.2u		1.5m	25u\$		4.2u	4.6u†		BS	PD162b	
53	OTC12-51TC	3	13G*			125	26*	9.0kΩ		4.2u		1.5m	25u\$		4.2u	4.6u†		BS	PD162c	
54	OTC12-52	3	13G*			200	26*	9.0kΩ		4.2u		1.5m	25u\$		4.2u	4.6u†		BS	PD162c	
55	OTC12-52T	3	13G*			200	26*	4.5kΩ		4.2u		6.2m	25u\$		4.2u	4.6u†		BS	PD162b	
56	OTC12-52TC	3	13G*			200	26*	4.5kΩ		4.2u		6.2m	25u\$		4.2u	4.6u†		BS	PD162c	
57	OTC12-53	3	13G*			250	26*	3.0kΩ		4.2u		13m	25u\$		4.2u	4.6u†		BS	PD162b	
58	OTC12-53T	3	13G*			250	26*	3.0kΩ		4.2u		13m	25u\$		4.2u	4.6u†		BS	PD162c	
59	OTC12-53TC	3	13G*			250	26*	3.0kΩ		4.2u		13m	25u\$		4.2u	4.6u†		BS	PD162c	
60	OTC12-84	3	13G*		2.0	1.0	26*	2.3kΩ		4.6u		24m	12u\$		1.0u	5.0u		BS	PD2140	
61	OTC12-84T	3	13G*		2.0	1.0	26*	2.3kΩ		4.6u		24m	12u\$		1.0u	5.0u		BS	PD2140	
62	OTC12-84TC	3	13G*		2.0	1.0	26*	2.3kΩ		4.6u		24m	12u\$		1.0u	5.0u		BS	PD2140	
63	OTC12-85	3	13G*		2.0	1.0	26*	1.8kΩ		4.6u		38m	12u\$		1.0u	5.0u		BS	PD2140	
64	OTC12-85T	3	13G*		2.0	1.0	26*	1.8kΩ		4.6u		38m	12u\$		1.0u	5.0u		BS	PD2140	
65	OTC12-85TC	3	13G*		2.0	1.0	26*	1.8kΩ		4.6u		38m	12u\$		1.0u	5.0u		BS	PD2140	
66#	F584	3	14G*				47*	18				8.7u	3.0u		2.5u	5.5u		CG	PD1360	
67#	F608	3	14G*				47*	38				8.1u	3.0u		2.5u	5.5u		CG	PD1360	
68	GeCu-1.9145-1	3	15G*				TX					1.2m	100ns		2.0u	30u		BM	PD1540	
69	GeCu-1.9145-2HS	3	15G*				TX					1.2m	1.0ns		2.0u	30u		BM	PD154a	
70	GeCu-2.9145-1	3	15G*				TX					4.8m	100ns		2.0u	30u		BM	PD1540	
71	GeCu-2.9145-2HS	3	15G*				TX					4.8m	1.0ns		2.0u	30u		BM	PD154a	
72	GeCu-5.9145-1	3	15G*				TX					4.8m	1.0ns		2.0u	30u		BM	PD154a	
73	GeCu-5.9145-2HS	3	15G*				TX					304u	100ns		2.0u	30u		BM	PD1540	
74	OTC12-81	3	15G*		3.0		TX					304u	1.0ns		2.0u	30u		BM	PD154a	
75	OTC12-81T	3	15G*		3.0		26*	9.0kΩ		4.6u		1.5m	12u\$		1.0u	5.0u		BS	PD2140	
76	OTC12-81TC	3	15G*		3.0		26*	9.0kΩ		4.6u		1.5m	12u\$		1.0u	5.0u		BS	PD2140	
77	OTC12-82	3	15G*		3.0		26*	9.0kΩ		4.6u		1.5m	12u\$		1.0u	5.0u		BS	PD2140	
78	OTC12-82T	3	15G*		3.0		26*	4.5kΩ		4.6u		6.2m	12u\$		1.0u	5.0u		BS	PD2140	
79	OTC12-82TC	3	15G*		3.0		26*	4.5kΩ		4.6u		6.2m	12u\$		1.0u	5.0u		BS	PD2140	
80	OTC12-83	3	15G*		3.0		26*	3.0kΩ		4.6u		13m\$	12u\$		1.0u	5.0u		BS	PD2140	
81	OTC12-83T	3	15G*		3.0		26*	3.0kΩ		4.6u		13m\$	12u\$		1.0u	5.0u		BS	PD2140	
82	OTC12-83TC	3	15G*		3.0		26*	3.0kΩ		4.6u		13m\$	12u\$		1.0u	5.0u		BS	PD2140	
83	OTC12S-81T	3	15G*		4.0		26*	12kΩ		4.6u		1.5m			1.0u	5.0u		BS	PD2140	
84	OTC12S-81TC	3	15G*		4.0		26*	12kΩ		4.6u		1.5m			1.0u	5.0				

# 10. SENSOR: PHOTODIODE

IN ORDER OF: (1) TYPE PHOTODIODE (2) MAX. ID  
(3) VR & (4) TYPE No.

LINE No.	TYPE No.	TYP E	MAX CURR @ 25°C (A)	DARK VR (V)	MAX PWR DISSIP (W)	RATINGS @ 25°C REV. VOLT VR (V)	DC CURR. IF (A)	TEMP. DRNG. CODE	MINIMUM RESPONSIVITY			ACTIVE AREA Sq In	RESP. TIME (S)	CAPAC C (F)	SPECTRAL RANGE		NOISE EQ. PWR Pn Watt/Hz <sup>1/2</sup>	M T L	LEAD CODE	DRAWING Ø-RND. Δ-RECT *-CHIP
									Re (A/W)	SOUR -CE λ (m)	VR (V)				LOW λL (m)	HIGH λH (m)				
1	OTC12S-83TC	3	15G*		4.0			26*	4.0k		4.6u	13m	15u		1.0u	5.0u		BS	♦	PD214Ø
2	OTC12S-84T	3	15G*		4.0			26*	3.0k		4.6u	24m	15u		1.0u	5.0u		BS	♦	PD214Ø
3	OTC12S-84TC	3	15G*		4.0			26*	3.0k		4.6u	24m	15u		1.0u	5.0u		BS	♦	PD214Ø
4	OTC12S-85T	3	15G*		4.0			26*	2.4k		4.6u	38m	15u		1.0u	5.0u		BS	♦	PD214Ø
5	OTC12S-85TC	3	15G*		4.0			26*	2.4k		4.6u	38m	15u		1.0u	5.0u		BS	♦	PD214Ø
6	PbSnTe-1-40742	3	15G*															CH		PD153Ø
7	PbSnTe-1-44782	3	15G*															CH		PD154Ø
8	PbSnTe-1-520A	3	15G*															CH		PD151Ø
9	PbSnTe-1-520AS	3	15G*															CH		PD151aØ
10	PbSnTe-5-40742	3	15G*															CH		PD153Ø
11	PbSnTe-5-44782	3	15G*															CH		PD154Ø
12	PbSnTe-5-520A	3	15G*															CH		PD151Ø
13	PbSnTe-5-520AS	3	15G*															CH		PD151aØ
14	5800	3	18G*															BS		PD185Ø
15	5840	3	18G*															BS		PD186Ø
16	502	3	20G*															CH		PD313
17	5802	3	20G*															BS		PD185Ø
18	5804	3	20G*															BS		PD185Ø
19	5805	3	20G*															BS		PD152Ø
20	5842	3	20G*															BS		PD186Ø
21	5844	3	20G*															BS		PD186Ø
22	5845	3	20G*															BS		PD153Ø
23	GeCd-1-9145-1	3	20G*															BN		PD154Ø
24	GeCd-2-9145-1	3	20G*															BN		PD154Ø
25	GeCd-5-9145-1	3	20G*															BN		PD154Ø
26	HgCdTe-1-40A	3	20G*															CG		PD147Ø
27	HgCdTe-1-40AS	3	20G*															CG		PD147aØ
28	HgCdTe-1-40742	3	20G*															CG		PD152Ø
29	HgCdTe-1-44782	3	20G*															CG		PD153Ø
30	HgCdTe-1-520AS	3	20G*															CG		PD151aØ
31	HgCdTe-1-60A	3	20G*															CG		PD148Ø
32	HgCdTe-1-60AS	3	20G*															CG		PD148aØ
33	HgCdTe-5-40A	3	20G*															CG		PD147Ø
34	HgCdTe-5-40AS	3	20G*															CG		PD147aØ
35	HgCdTe-5-40742	3	20G*															CG		PD152Ø
36	HgCdTe-5-44782	3	20G*															CG		PD153Ø
37	HgCdTe-5-520AS	3	20G*															CG		PD151aØ
38	HgCdTe-5-60A	3	20G*															CG		PD148Ø
39	HgCdTe-5-60AS	3	20G*															CG		PD148aØ
40#	LGC600A	3	20G*															CH		PD249Ø
41	501	3	30G*															CH		PD313
42	1101	3	30G*															BH		PD182Ø
43	1102	3	30G*															BH		PD182Ø
44	1103	3	30G*															BH		PD182Ø
45	1104	3	30G*															BH		PD182Ø
46	1105	3	30G*															BH		PD182Ø
47	1106	3	30G*															BH		PD182Ø
48	1107	3	30G*															BH		PD182Ø
49	1108	3	30G*															BH		PD182Ø
50	1109	3	30G*															BH		PD182Ø
51	1110	3	30G*															BH		PD182Ø
52	1111	3	30G*															BH		PD182Ø
53	1112	3	30G*															BH		PD182Ø
54	1113	3	30G*															BH		PD182Ø
55	1114	3	30G*															BH		PD182Ø
56	1115	3	30G*															BH		PD182Ø
57	1121	3	30G*															BH		PD182Ø
58	2101	3	30G*															BH		PD169aØ
59	2102	3	30G*															BH		PD169Ø
60	2103	3	30G*															BH		PD169Ø
61	2104	3	30G*															BH		PD169Ø
62	2105	3	30G*															BH		PD169Ø
63	2106	3	30G*															BH		PD169Ø
64	2107	3	30G*															BH		PD165aØ
65	2108	3	30G*															BH		PD165aØ
66	2109	3	30G*															BH		PD165aØ
67	2112	3	30G*															BH		PD165aØ
68	2113	3	30G*															BH		PD165aØ
69	2114	3	30G*															BH		PD165aØ
70	2115	3	30G*															BH		PD165aØ
71	2121	3	30G*															BH		PD165aØ
72	KP20-01	3	30G*															BH		PD160Ø
73	KP20-02	3	30G*															BH		PD160aØ
74	KP20-03	3	30G*															BH		PD160bØ
75	OE4M	3	30G*															CG		PD159Ø
76	PbSelTO-1-40A	3	30G*															BS		PD147Ø
77	PbSelTO-1-40AS	3	30G*															BS		PD147aØ
78	PbSelTO-1-520A	3	30G*															BS		PD151Ø
79	PbSelTO-1-520AS	3	30G*															BS		PD151aØ
80	PbSelTO-1-60A	3	30G*															BS		PD148Ø
81	PbSelTO-1-60AS	3	30G*															BS		PD148aØ



# 10. SENSOR: PHOTODIODE

IN ORDER OF: (1)TYPE PHOTODIODE (2) MAX. ID  
(3) VR & (4)TYPE No.

LINE No.	TYPE No.	T Y P E	MAX DARK CURR @ 25°C (A)	MAX RATINGS @ 25°C PWR DISSIP (W)	REV. VOLT (V)	DC FWD CURR. IF (A)	TEMP. RNG. CODE	MINIMUM RESPONSIVITY			ACTIVE AREA Sq In	RESP. TIME (S)	CAPAC C (F)	SPECTRAL RANGE		NOISE EQ. PWR Pn Watt/Hz <sup>1/2</sup>	M T L	LEAD CODE	DRAWING Ø-RND. Δ-RECT *-CHIP
								Re (A/W)	SOURCE λ (m)	VR (V)				LOW λL (m)	HIGH λH (m)				
1	PbSeITO-2-40A							8X♦	3.0k♦			4.8m	50u\$	1.0u	6.0u		BS	PD147Ø	
2	PbSeITO-2-40AS	3	30G*					8X♦	3.0k♦			4.8m	50u\$	1.0u	6.0u		BS	PD147aØ	
3	PbSeITO-2-520A	3	30G*					8X♦	3.0k♦			4.8m	50u\$	1.0u	6.0u		BS	PD151Ø	
4	PbSeITO-2-520AS	3	30G*					8X♦	3.0k♦			4.8m	50u\$	1.0u	6.0u		BS	PD151aØ	
5	PbSeITO-2-60A	3	30G*					8X♦	3.0k♦			4.8m	50u\$	1.0u	6.0u		BS	PD148Ø	
6	PbSeITO-2-60AS	3	30G*					8X♦	3.0k♦			4.8m	50u\$	1.0u	6.0u		BS	PD148aØ	
7	PbSeITO-5-40A	3	30G*					8X♦	3.0k♦			304u	50u\$	1.0u	6.0u		BS	PD147Ø	
8	PbSeITO-5-40AS	3	30G*					8X♦	3.0k♦			304u	50u\$	1.0u	6.0u		BS	PD147aØ	
9	PbSeITO-5-520A	3	30G*					8X♦	3.0k♦			304u	50u\$	1.0u	6.0u		BS	PD151Ø	
10	PbSeITO-5-520AS	3	30G*					8X♦	3.0k♦			304u	50u\$	1.0u	6.0u		BS	PD151aØ	
11	PbSeITO-5-60A	3	30G*					8X♦	3.0k♦			304u	50u\$	1.0u	6.0u		BS	PD148Ø	
12	PbSeITO-5-60AS	3	30G*					8X♦	3.0k♦			304u	50u\$	1.0u	6.0u		BS	PD148aØ	
13	ISC302A	3	33G*					KX♦	2.0 †		5.0u	1.9m	1.0u\$	1.1u	5.5u	1.3p#	BG	PD276Ø	
14	ISC363	3	33G*					KX♦	2.0 †		5.0u	6.1m	1.0u\$	1.1u	5.5u	2.0p#	BG	PD163Ø	
15	A100U	3	37G*					7X				2.8m		1.0u	3.5u		BF	PD316Ø	
16#	61SV	3	40G*					56*	80k♦			55m	100u	300n	3.5u	15p	BH	PD123Ø	
17#	RPY31	3	40G*					55%	3.8k♦			24m	5.0u\$	1.0u	5.6u	10p	BH	PD122aØ	
18#	RPY35	3	40G*					55%	3.8k♦			55m	5.0u\$	1.0u	5.6u	10p	BH	PD130Ø	
19	1201	3	45G*					X2*				96u	120u\$	1.0u	3.0u		BH	PD182Ø	
20	1202	3	45G*					X2*				387u	120u\$	1.0u	3.0u		BH	PD182Ø	
21	1203	3	45G*					X2*				1.5u	120u\$	1.0u	3.0u		BH	PD182Ø	
22	1204	3	45G*					X2*				3.4u	120u\$	1.0u	3.0u		BH	PD182Ø	
23	1205	3	45G*					X2*				6.2m	120u\$	1.0u	3.0u		BH	PD182Ø	
24	1206	3	45G*					X2*				13m	120u\$	1.0u	3.0u		BH	PD182Ø	
25	1207	3	45G*					X2*				24m	120u\$	1.0u	3.0u		BH	PD182Ø	
26	1208	3	45G*					X2*				38m	120u\$	1.0u	3.0u		BH	PD182Ø	
27	1209	3	45G*					X2*				55m	120u\$	1.0u	3.0u		BH	PD182Ø	
28	1210	3	45G*					X2*				99m	120u\$	1.0u	3.0u		BH	PD182Ø	
29	1211	3	45G*					X2*				155m	120u\$	1.0u	3.0u		BH	PD182Ø	
30	1212	3	45G*					X2*				387u	120u\$	1.0u	3.0u		BH	PD182Ø	
31	1213	3	45G*					X2*				3.1m	120u\$	1.0u	3.0u		BH	PD182Ø	
32	1214	3	45G*					X2*				4.6m	120u\$	1.0u	3.0u		BH	PD182Ø	
33	1215	3	45G*					X2*				6.2m	120u\$	1.0u	3.0u		BH	PD182Ø	
34	1221	3	45G*					X2*				968m	120u\$	1.0u	3.0u		BH	PD182Ø	
35	2201	3	45G*					X2*				96u	120u\$	1.0u	3.0u		BH	PD169Ø	
36	2202	3	45G*					X2*				387u	120u\$	1.0u	3.0u		BH	PD169Ø	
37	2203	3	45G*					X2*				1.5m	120u\$	1.0u	3.0u		BH	PD169Ø	
38	2204	3	45G*					X2*				3.4m	120u\$	1.0u	3.0u		BH	PD169Ø	
39	2205	3	45G*					X2*				6.2m	120u\$	1.0u	3.0u		BH	PD169Ø	
40	2206	3	45G*					X2*				13m	120u\$	1.0u	3.0u		BH	PD169Ø	
41	2207	3	45G*					X2*				24m	120u\$	1.0u	3.0u		BH	PD165Ø	
42	2208	3	45G*					X2*				38m	120u\$	1.0u	3.0u		BH	PD165Ø	
43	2209	3	45G*					X2*				55m	120u\$	1.0u	3.0u		BH	PD165Ø	
44	2212	3	45G*					X2*				387u	120u\$	1.0u	3.0u		BH	PD165Ø	
45	2213	3	45G*					X2*				3.1m	120u\$	1.0u	3.0u		BH	PD165Ø	
46	2214	3	45G*					X2*				4.6m	120u\$	1.0u	3.0u		BH	PD165Ø	
47	2215	3	45G*					X2*				6.2m	120u\$	1.0u	3.0u		BH	PD165Ø	
48	2221	3	45G*					X2*				96m	120u\$	1.0u	3.0u		BH	PD165Ø	
49	ISC302B	3	49G*					KX♦	2.0 †		5.0u	1.9m	1.0u\$	1.1u	5.5u	1.3p#	BG	PD276Ø	
50	ISC363A	3	49G*					KX♦	2.0 †		5.0u	6.1m	1.0u\$	1.1u	5.5u	2.0p#	BG	PD163Ø	
51	59-5035	3	50G*					26*	4.0k♦			1.5m	1.0u\$	1.0u	5.5u		BS	PD169Ø	
52	59-5055	3	50G*					26*	2.0k♦			6.2m	1.0u\$	1.0u	5.5u		BS	PD169Ø	
53	59-5635	3	50G*	2.0	1.0	2.0		X6*	6.0k♦			1.5m	1.0u\$	1.0u	5.5u		BS	PD162Ø	
54	59-5637	3	50G*	2.0	1.0	2.0		X6*	6.0k♦			1.5m	1.0u\$	1.0u	5.5u		BS	PD142Ø	
55	59-5655	3	50G*	2.0	1.0	2.0		X6*	3.0k♦			6.2m	1.0u\$	1.0u	5.5u		BS	PD162Ø	
56	59-5657	3	50G*	2.0	1.0	2.0		X6*	3.0k♦			6.2m	1.0u\$	1.0u	5.5u		BS	PD184Ø	
57	59-5735	3	50G*	2.0	1.1	2.0		X6*	9.0k♦			1.5m	25u\$	1.0u	5.5u		BS	PD162Ø	
58	59-5737	3	50G*	2.0	1.1	2.0		X6*	9.0k♦			1.5m	25u\$	1.0u	5.5u		BS	PD184Ø	
59	59-5755	3	50G*	2.0	1.1	2.0		X6*	4.5k♦			6.2m	25u\$	1.0u	5.5u		BS	PD162Ø	
60	59-5757	3	50G*	2.0	1.1	2.0		X6*	4.5k♦			6.2m	25u\$	1.0u	5.5u		BS	PD184Ø	
61	59-5800	3	50G*		Δ			X2*				80u\$	1.0u	5.5u		BS	PD185Ø		
62	59-5802	3	50G*		Δ			X2*				50u\$	1.0u	5.5u		BS	PD185Ø		
63	59-5804	3	50G*		Δ			X2*				50u\$	1.0u	5.5u		BS	PD185Ø		
64	59-5840	3	50G*		Δ			X2*				80u\$	1.0u	5.5u		BS	PD186Ø		
65	59-5842	3	50G*		Δ			X2*				80u\$	1.0u	5.5u		BS	PD186Ø		
66	59-5844	3	50G*		Δ			X2*				50u\$	1.0u	5.5u		BS	PD186Ø		
67	InSb-1-40A	3	50G*					KX♦	1.6 †		5.5u	1.2m	1.0u\$	2.0u	5.5u		BG	PD147Ø	
68	InSb-1-40AS	3	50G*					KX♦	1.6 †		5.5u	1.2m	1.0u\$	2.0u	5.5u		BG	PD147aØ	
69	InSb-1-60A	3	50G*					KX♦	1.6 †		5.5u	1.2m	1.0u\$	2.0u	5.5u		BG	PD148Ø	
70	InSb-1-60AS	3	50G*					KX♦	1.6 †		5.5u	1.2m	1.0u\$	2.0u	5.5u		BG	PD148aØ	
71	InSb-1-520A	3	50G*					KX♦	1.6 †		5.5u	1.2m	1.0u\$	2.0u	5.5u		BG	PD151Ø	
72	InSb-1-520AS	3	50G*					KX♦	1.6 †		5.5u	1.2m	1.0u\$	2.0u	5.5u		BG	PD151aØ	
73	InSb-1-40742	3	50G*					KX♦	1.6 †		5.5u	1.2m	1.0u\$	2.0u	5.5u		BG	PD152Ø	
74	InSb-1-44782	3	50G*					KX♦	1.6 †		5.5u	1.2m	1.0u\$	2.0u	5.5u		BG	PD153Ø	
75	InSb-2-40A	3	50G*					KX♦	1.6 †		5.5u	4.8m	1.0u\$	2.0u	5.5u		BG	PD147Ø	
76	InSb-2-40AS	3	50G*					KX♦	1.6 †		5.5u	4.8m	1.0u\$	2.0u	5.5u		BG	PD147aØ	
77	InSb-2-60A	3	50G*					KX♦	1.6 †		5.5u	4.8m	1.0u\$	2.0u	5.5u		BG	PD148Ø	
78	InSb-2-60AS	3	50G*					KX♦	1.6 †		5.5u	4.8m	1.0u\$	2.0u	5.5u		BG	PD148aØ	
79	InSb-2-520A	3	50G*					KX♦	1.6 †		5.5u	4.8m	1.0u\$	2.0u	5.5u		BG	PD151Ø	
80	InSb-2-520AS	3	50G*					KX♦	1.6 †		5.5u	4.8m	1.0u\$	2.0u	5.5u		BG	PD151aØ	
81	InSb-2-40742	3	50G*					KX♦	1.6 †		5.5u	4.8m	1.0u\$	2.0u	5.5u		BG	PD152Ø	
82	InSb-2-44782	3	50G*					KX♦	1.6 †		5.5u	4.8m	1.0u\$	2.0u	5.5u		BG	PD153Ø	
83#	RPY52	3	50G*					55%				4.8m	1.0u\$	2.0u	5.5u		BG	PD153Ø	
84	SD8721-1	3	50G*					KX♦	45k♦			4.6m	2.5u\$	1.5u	5.6u	3.3p	BH	PD130Ø	
85	SD8722-1	3	50G*					KX♦				1.2m		40n#	5.0u\$	5.3u\$	BG	PD110Ø	
86	SD8723-1	3	50G*					KX♦				300u		40n#	5.0u\$	5.3u\$	BG	PD110Ø	
87	SD8727-1	3	50G*					KX♦				100u		40n#	5.0u\$	5.3u\$	BG	PD110Ø	
88	SD8728-1	3	50G*					KX♦				1.2m		40n#	5.0u\$	5.3u\$	BG	PD111Ø	
89	SD8729-1	3	50G*					KX♦				300u		40n#	5.0u\$</				

# 10. SENSOR: PHOTODIODE

IN ORDER OF: (1)TYPE PHOTODIODE (2) MAX. ID  
(3) VR & (4)TYPE No.

LINE No.	TYPE No.	Y P E	MAX CURR @ 25°C (A)	DARK VR (V)	MAX PWR DISSIP (W)	MAX RATINGS @ 25°C			TEMP. RANGE	MINIMUM RESPONSIVITY				ACTIVE AREA	RESP. TIME (S)	CAPAC (F)	SPECTRAL RANGE		NOISE EQ. PWR Pn Watt/Hz <sup>1/2</sup>	M T L	LEAD CODE	DRAWING Ø-RND. Δ-RECT Δ-STRIP *-CHIP
						REV. VOLT (V)	DC CURR. IF (A)	FWD CURR. (A)		Re (A/W)	SOUR -CE (λ (m))	VR (V)	LOW λL (m)				HIGH λH (m)					
1#	ORP13	3	55G*										4.6m	5.0u		1.5u	5.6u	3.2p	BG		PD1220	
2#	62SV	3	60G*		20m				57*	35kΩ		5.3u	55m	175u		300n	3.5u		BH		PD1230	
3	SA-FP1.1PbS3	3	60G*							2.0kΩ			40m	50u\$		1.0u	3.4u		BH		PD342	
4	SA-FP2.2PbS3	3	60G*										80m	50u\$		1.0u	3.4u		BH		PD342	
5	SA-FP3.3PbS3	3	60G*										120m	50u\$		1.0u	3.4u		BH		PD342	
6	SA-FP4.4PbS3	3	60G*										160m	50u\$		1.0u	3.4u		BH		PD342	
7	SA-FP5.5PbS3	3	60G*										200m	50u\$		1.0u	3.4u		BH		PD342	
8	SA-FP6.6PbS3	3	60G*										240m	50u\$		1.0u	3.4u		BH		PD342	
9	SA-FP8.8PbS3	3	60G*										320m	50u\$		1.0u	3.4u		BH		PD342	
10	SA-FP10.10PbS3	3	60G*										400m	50u\$		1.0u	3.4u		BH		PD342	
11	ISC302C	3	66G*							KX#	2.0 ↑	5.0u	1.9m	1.0u\$		1.1u	5.5u	1.3p#	BG		PD2760	
12	ISC363B	3	66G*							KX#	2.0 ↑	5.0u	6.1m	1.0u\$		1.1u	5.5u	2.0p#	BG		PD1630	
13	KO20-01	3	75G*							26*	1.0MΩ↑	2.0u	300u\$	300u\$		2.0u	2.2u↑		BH		PD1600	
14	KO20-02	3	75G*							26*	1.0MΩ↑	2.0u	300u\$	300u\$		2.0u	2.2u↑		BH		PD1600	
15	KO20-03	3	75G*							26*	1.0MΩ↑	2.0u	300u\$	300u\$		2.0u	2.2u↑		BH		PD1600	
16	OTC11-81	3	75G*		2.0 ↑					26*	6.0kΩ	4.5u	1.5m	10u\$		1.0u	5.0u		BS	♦	PD2140	
17	OTC11-81T	3	75G*		2.0 ↑					26*	6.0kΩ	4.5u	1.5m	10u\$		1.0u	5.0u		BS	♦	PD2140	
18	OTC11-81TC	3	75G*		2.0 ↑					26*	6.0kΩ	4.5u	1.5m	10u\$		1.0u	5.0u		BS	♦	PD2140	
19	OTC11-82	3	75G*		2.0 ↑					26*	3.0kΩ	4.5u	6.2m	10u\$		1.0u	5.0u		BS	♦	PD2140	
20	OTC11-82T	3	75G*		2.0 ↑					26*	3.0kΩ	4.5u	6.2m	10u\$		1.0u	5.0u		BS	♦	PD2140	
21	OTC11-82TC	3	75G*		2.0 ↑					26*	3.0kΩ	4.5u	6.2m	10u\$		1.0u	5.0u		BS	♦	PD2140	
22	OTC11-83	3	75G*		2.0 ↑					26*	2.0kΩ	4.5u	13m	10u\$		1.0u	5.0u		BS	♦	PD2140	
23	OTC11-83T	3	75G*		2.0 ↑					26*	2.0kΩ	4.5u	13m	10u\$		1.0u	5.0u		BS	♦	PD2140	
24	OTC11-83TC	3	75G*		2.0 ↑					26*	2.0kΩ	4.5u	13m	10u\$		1.0u	5.0u		BS	♦	PD2140	
25	OTC11-84	3	75G*		2.0 ↑					26*	1.5kΩ	4.5u	24m	10u\$		1.0u	5.0u		BS	♦	PD2140	
26	OTC11-84T	3	75G*		2.0 ↑					26*	1.5kΩ	4.5u	24m	10u\$		1.0u	5.0u		BS	♦	PD2140	
27	OTC11-84TC	3	75G*		2.0 ↑					26*	1.5kΩ	4.5u	24m	10u\$		1.0u	5.0u		BS	♦	PD2140	
28	OTC11-85	3	75G*		2.0 ↑					26*	1.2kΩ	4.5u	38m	10u\$		1.0u	5.0u		BS	♦	PD2140	
29	OTC11-85T	3	75G*		2.0 ↑					26*	1.2kΩ	4.5u	38m	10u\$		1.0u	5.0u		BS	♦	PD2140	
30	OTC11-85TC	3	75G*		2.0 ↑					26*	1.2kΩ	4.5u	38m	10u\$		1.0u	5.0u		BS	♦	PD2140	
31	1301	3	80G*							X2*			96u	200u\$		1.0u	3.0u		BH		PD1820	
32	1302	3	80G*							X2*			387u	200u\$		1.0u	3.0u		BH		PD1820	
33	1303	3	80G*							X2*			1.5m	200u\$		1.0u	3.0u		BH		PD1820	
34	1304	3	80G*							X2*			3.4m	200u\$		1.0u	3.0u		BH		PD1820	
35	1305	3	80G*							X2*			6.2m	200u\$		1.0u	3.0u		BH		PD1820	
36	1306	3	80G*							X2*			13m	200u\$		1.0u	3.0u		BH		PD1820	
37	1307	3	80G*							X2*			24m	200u\$		1.0u	3.0u		BH		PD1820	
38	1308	3	80G*							X2*			38m	200u\$		1.0u	3.0u		BH		PD1820	
39	1309	3	80G*							X2*			55m	200u\$		1.0u	3.0u		BH		PD1820	
40	1310	3	80G*							X2*			99m	200u\$		1.0u	3.0u		BH		PD1820	
41	1311	3	80G*							X2*			155m	200u\$		1.0u	3.0u		BH		PD1820	
42	1312	3	80G*							X2*			387u	200u\$		1.0u	3.0u		BH		PD1820	
43	1313	3	80G*							X2*			3.1m	200u\$		1.0u	3.0u		BH		PD1820	
44	1314	3	80G*							X2*			4.6m	200u\$		1.0u	3.0u		BH		PD1820	
45	1315	3	80G*							X2*			6.2m	200u\$		1.0u	3.0u		BH		PD1820	
46	1321	3	80G*							X2*			968u	200u\$		1.0u	3.0u		BH		PD1820	
47	2301	3	80G*							X2*			96u	200u\$		1.0u	3.0u		BH		PD1690	
48	2302	3	80G*							X2*			387u	200u\$		1.0u	3.0u		BH		PD1690	
49	2303	3	80G*							X2*			1.5m	200u\$		1.0u	3.0u		BH		PD1690	
50	2304	3	80G*							X2*			3.4m	200u\$		1.0u	3.0u		BH		PD1690	
51	2305	3	80G*							X2*			6.2m	200u\$		1.0u	3.0u		BH		PD1690	
52	2306	3	80G*							X2*			13m	200u\$		1.0u	3.0u		BH		PD1690	
53	2307	3	80G*							X2*			24m	200u\$		1.0u	3.0u		BH		PD1650	
54	2308	3	80G*							X2*			38m	200u\$		1.0u	3.0u		BH		PD1650	
55	2309	3	80G*							X2*			55m	200u\$		1.0u	3.0u		BH		PD1650	
56	2312	3	80G*							X2*			387u	200u\$		1.0u	3.0u		BH		PD1650	
57	2313	3	80G*							X2*			3.1m	200u\$		1.0u	3.0u		BH		PD1650	
58	2314	3	80G*							X2*			4.6m	200u\$		1.0u	3.0u		BH		PD1650	
59	2315	3	80G*							X2*			6.2m	200u\$		1.0u	3.0u		BH		PD1650	
60	2321	3	80G*							X2*			96m	200u\$		1.0u	3.0u		BH		PD1690	
61	PbSATO-1-10A	3	80G*							X2#	K	2.4u	1.2m	500u\$		1.0u	3.5u		BH		PD1470	
62	PbSATO-2-10A	3	80G*							X2#	K	2.4u	4.8m	500u\$		1.0u	3.5u		BH		PD1470	
63	PbSATO-5-10A	3	80G*							X2#	K	2.4u	304u	500u\$		1.0u	3.5u		BH		PD1470	
64	SA-FP1.1PbS1A	3	80G*							X2#	K	2.4u	40m	400u\$		1.0u	3.4u		BH		PD342	
65	SA-FP1.1PbS1B	3	80G*							X2#	K	2.4u	40m	400u\$		1.0u	3.4u		BH		PD342	
66	SA-FP1.1PbS2	3	80G*							X2#	K	2.4u	40m	400u\$		1.0u	3.4u		BH		PD342	
67	SA-FP2.2PbS1A	3	80G*							X2#	K	2.4u	80m	400u\$		1.0u	3.4u		BH		PD342	
68	SA-FP2.2PbS2	3	80G*							X2#	K	2.4u	80m	400u\$		1.0u	3.4u		BH		PD342	
69	SA-FP3.3PbS1A	3	80G*							X2#	K	2.4u	120m	400u\$		1.0u	3.4u		BH		PD342	
70	SA-FP3.3PbS2	3	80G*							X2#	K	2.4u	120m	400u\$		1.0u	3.4u		BH		PD342	
71	SA-FP4.4PbS1A	3	80G*							X2#	K	2.4u	160m	400u\$		1.0u	3.4u		BH		PD342	
72	SA-FP4.4PbS2	3	80G*							X2#	K	2.4u	160m	400u\$		1.0u	3.4u		BH		PD342	
73	SA-FP5.5PbS1A	3	80G*							X2#	K	2.4u	200m	400u\$		1.0u	3.4u		BH		PD342	
74	SA-FP5.5PbS1B	3	80G*							X2#	K	2.4u	200m	400u\$		1.0u	3.4u		BH		PD342	
75	SA-FP5.5PbS2	3	80G*							X2#	K	2.4u	200m	400u\$		1.0u	3.4u		BH		PD342	
76	SA-FP6.6PbS1A	3	80G*							X2#	K	2.4u	240m	400u\$		1.0u	3.4u		BH		PD342	
77	SA-FP6.6PbS2	3	80G*							X2#	K	2.4u	240m	400u\$		1.0u	3.4u		BH		PD342	
78	SA-FP8.8PbS1A	3	80G*							X2#	K	2.4u	320m	400u\$		1.0u	3.4u		BH		PD342	
79	SA-FP8.8PbS2	3	80G*							X2#	K	2.4u	320m	400u\$		1.0u	3.4u		BH		PD342	
80	SA-FP10.10PbS1A	3	80G*							X2#	K	2.4u	400m	400u\$		1.0u	3.4u		BH		PD342	
81	SA-FP10.10PbS2	3	80G*							X2#	K	2.4u	400m	400u\$		1.0u	3.4u		BH		PD342	
8																						

# 10. SENSOR: PHOTODIODE

IN ORDER OF: (1) TYPE PHOTODIODE (2) MAX. ID  
(3) VR & (4) TYPE No.

LINE No.	TYPE No.	TYPE	MAX CURR ID (A)	DARK @ 25°C VR (V)	MAX RATINGS @ 25°C TEMP			MINIMUM RESPONSIVITY			ACTIVE AREA Sq In	RESP. TIME (S)	CAPAC C (F)	SPECTRAL RANGE		NOISE EQ.PWR Pn Watt/Hz <sup>1/2</sup>	M T L	LEAD CODE	DRAWING Ø-RND. Δ-RECT Δ-STRIP *-CHIP
					PWR DISSIP Pcase (W)	REV. VOLT VR (V)	DC FWRD CURR. IF (A)	Re (A/W)	λ (m)	VR (V)				LOW λL (m)	HIGH λH (m)				
1	KO25-181	3	90G*															PD181Ø	
2#	RPY51	3	90G*															PD130Ø	
3	ISC302E	3	99G*															PD278Ø	
4	ISC363D	3	99G*															PD163Ø	
5	ISC386A	3	99G*															PD277Ø	
6	603	3	100G*															PD314	
7	1416	3	100G*															PD182Ø	
8	1417	3	100G*															PD182Ø	
9	1517	3	100G*															PD182Ø	
10	1518	3	100G*															PD182Ø	
11	2416	3	100G*															PD165aØ	
12	2417	3	100G*															PD165aØ	
13	2517	3	100G*															PD165aØ	
14	2518	3	100G*															PD165aØ	
15	2635	3	100G*															PD162dØ	
16	2637	3	100G*															PD184Ø	
17	2655	3	100G*															PD162dØ	
18	2657	3	100G*															PD184Ø	
19	2665	3	100G*															PD162Ø	
20	2667	3	100G*															PD184bØ	
21	OE20-01	3	100G*															PD160Ø	
22	OE20-02	3	100G*															PD160aØ	
23	OE20-03	3	100G*															PD160bØ	
24	OE25-51	3	100G*															PD161aØ	
25	OE25-52	3	100G*															PD161aØ	
26	OE25-53	3	100G*															PD161aØ	
27	OE25-181	3	100G*															PD161Ø	
28	PbSLTO-1.40A	3	100G*															PD147Ø	
29	PbSLTO-1.40AS	3	100G*															PD147aØ	
30	PbSLTO-1.40742	3	100G*															PD152Ø	
31	PbSLTO-1.44782	3	100G*															PD153Ø	
32	PbSLTO-1.520A	3	100G*															PD151Ø	
33	PbSLTO-1.520AS	3	100G*															PD151aØ	
34	PbSLTO-1.60A	3	100G*															PD148Ø	
35	PbSLTO-1.60AS	3	100G*															PD148aØ	
36	PbSLTO-2.40A	3	100G*															PD147Ø	
37	PbSLTO-2.40AS	3	100G*															PD147aØ	
38	PbSLTO-2.40742	3	100G*															PD152Ø	
39	PbSLTO-2.44782	3	100G*															PD153Ø	
40	PbSLTO-2.520A	3	100G*															PD151Ø	
41	PbSLTO-2.520AS	3	100G*															PD151aØ	
42	PbSLTO-2.60A	3	100G*															PD148Ø	
43	PbSLTO-2.60AS	3	100G*															PD148aØ	
44	PbSLTO-5.40A	3	100G*															PD147Ø	
45	PbSLTO-5.40AS	3	100G*															PD147aØ	
46	PbSLTO-5.40742	3	100G*															PD152Ø	
47	PbSLTO-5.44782	3	100G*															PD153Ø	
48	PbSLTO-5.520A	3	100G*															PD151Ø	
49	PbSLTO-5.520AS	3	100G*															PD151aØ	
50	PbSLTO-5.60A	3	100G*															PD148Ø	
51	PbSLTO-5.60AS	3	100G*															PD148aØ	
52	SD8724-3	3	100G*															PD110Ø	
53	SD8725-3	3	100G*															PD110Ø	
54	SD8726-3	3	100G*															PD110Ø	
55	SD8731-3	3	100G*															PD112Ø	
56	SD8732-3	3	100G*															PD112Ø	
57	SD8733-3	3	100G*															PD112Ø	
58	ISC302F	3	111G															PD276Ø	
59	ISC363E	3	111G*															PD163Ø	
60	SD8720	3	120G*															PD162eØ	
61	5735	3	130G*															PD184aØ	
62	5737	3	130G*															PD162eØ	
63	5755	3	130G*															PD184aØ	
64	5757	3	130G*															PD184aØ	
65	5765	3	130G*															PD162eØ	
66	5767	3	130G*															PD184aØ	
67	602	3	150G*															PD314	
68	2735	3	150G*															PD162dØ	
69	2737	3	150G*															PD184Ø	
70	2755	3	150G*															PD162dØ	
71	2757	3	150G*															PD184Ø	
72	2765	3	150G*															PD162Ø	
73	2767	3	150G*															PD184bØ	
74	2800	3	150G*															PD185Ø	
75	2840	3	150G*															PD186Ø	
76	OTC21-51	3	150G*															PD162Ø	
77	OTC21-51T	3	150G*															PD162aØ	
78	OTC21-51TC	3	150G*															PD162aØ	
79	OTC21-52	3	150G*															PD162Ø	
80	OTC21-52T	3	150G*															PD162aØ	
81	OTC21-52TC	3	150G*															PD162aØ	
82	OTC21-53	3	150G*															PD162Ø	
83	OTC21-53T	3	150G*															PD162aØ	
84	OTC21-53TC	3	150G*															PD162aØ	
85	OTC21-81	3	150G*															PD214Ø	
86	OTC21-81T	3	150G*															PD214Ø	
87	OTC21-81TC	3	150G*															PD214Ø	
88	OTC21-82	3	150G*															PD214Ø	
89	OTC21-82T	3	150G*															PD214Ø	
90	OTC21-82TC	3	150G*															PD214Ø	

# 10. SENSOR: PHOTODIODE

IN ORDER OF: (1)TYPE PHOTODIODE (2) MAX. ID  
(3) VR & (4)TYPE No.

LINE No.	TYPE No.	TYPE	MAX CURR @ 25°C	DARK VR (V)	MAX RATINGS @ 25°C			TEMP RING. CODE	MINIMUM RESPONSIVITY				ACTIVE AREA Sq In	RESP. TIME (S)	CAPAC. C (F)	SPECTRAL RANGE		NOISE EQ. PWR Pn Watt/Hz <sup>1/2</sup>	M T L	LEAD CODE	DRAWING Ø-RND. Δ-STRIP *-CHIP
					PWR DISSIP Pcase (W)	REV. VOLT VR (V)	DC FWD CURR. IF (A)		Re (A/W)	SOUR -CE	λ (m)	VR (V)				LOW λL (m)	HIGH λH (m)				
1	OTC21-83	3	150G*		2.0 ↑			26*	150kΩ	2.5u			13m	1.0mS		1.0u	3.5u		BH	♦	PD2140
2	OTC21-83T	3	150G*		2.0 ↑			26*	150kΩ	2.5u			13m	1.0mS		1.0u	3.5u		BH	♦	PD2140
3	OTC21-83TC	3	150G*		2.0 ↑			26*	150kΩ	2.5u			13m	1.0mS		1.0u	3.5u		BH	♦	PD2140
4	OTC21-84	3	150G*		2.0 ↑			26*	100kΩ	2.5u			24m	1.0mS		1.0u	3.5u		BH	♦	PD2140
5	OTC21-84T	3	150G*		2.0 ↑			26*	100kΩ	2.5u			24m	1.0mS		1.0u	3.5u		BH	♦	PD2140
6	OTC21-84TC	3	150G*		2.0 ↑			26*	100kΩ	2.5u			24m	1.0mS		1.0u	3.5u		BH	♦	PD2140
7	OTC21-85	3	150G*		2.0 ↑			26*	80kΩ	2.5u			38m	1.0mS		1.0u	3.5u		BH	♦	PD2140
8	OTC21-85T	3	150G*		2.0 ↑			26*	80kΩ	2.5u			38m	1.0mS		1.0u	3.5u		BH	♦	PD2140
9	OTC21-85TC	3	150G*		2.0 ↑			26*	80kΩ	2.5u			38m	1.0mS		1.0u	3.5u		BH	♦	PD2140
10	601	3	200G*					X2*					1.2m		12n	6.5u	13u		CH		PD314
11	SD5622	3	200G*					X2*					1.2m		15n#	3.2u\$	3.4u\$		BF		PD950
12	SD8621	3	200G*					X2*					1.2m		15n#	3.2u\$	3.4u\$		BF		PD1100
13	OTC22-51	3	250G*			125		26*	600kΩ	2.4u			1.3m	1.0m		2.4u	2.6u†		BH		PD162b0
14	OTC22-51T	3	250G*			125		26*	600kΩ	2.4u			1.3m	1.0m		2.4u	2.6u†		BH		PD162c0
15	OTC22-51TC	3	250G*			125		26*	600kΩ	2.4u			1.3m	1.0m		2.4u	2.6u†		BH		PD162c0
16	OTC22-52	3	250G*			200		26*	300kΩ	2.4u			6.2m	1.0m		2.4u	2.6u†		BH		PD162b0
17	OTC22-52T	3	250G*			200		26*	300kΩ	2.4u			6.2m	1.0m		2.4u	2.6u†		BH		PD162c0
18	OTC22-52TC	3	250G*			200		26*	300kΩ	2.4u			6.2m	1.0m		2.4u	2.6u†		BH		PD162c0
19	OTC22-53	3	250G*			250		26*	200kΩ	2.4u			13m	1.0m		2.4u	2.6u†		BH		PD162b0
20	OTC22-53T	3	250G*			250		26*	200kΩ	2.4u			13m	1.0m		2.4u	2.6u†		BH		PD162c0
21	OTC22-53TC	3	250G*			250		26*	200kΩ	2.4u			13m	1.0m		2.4u	2.6u†		BH		PD162c0
22	OTC22-84	3	250G*		2.0 ↑			26*	150kΩ	2.6u			24m	1.0mS		1.0u	3.5u		BH	♦	PD2140
23	OTC22-84T	3	250G*		2.0 ↑			26*	150kΩ	2.6u			24m	1.0mS		1.0u	3.5u		BH	♦	PD2140
24	OTC22-84TC	3	250G*		2.0 ↑			26*	150kΩ	2.6u			24m	1.0mS		1.0u	3.5u		BH	♦	PD2140
25	OTC22-85	3	250G*		2.0 ↑			26*	120kΩ	2.6u			38m	1.0mS		1.0u	3.5u		BH	♦	PD2140
26	OTC22-85T	3	250G*		2.0 ↑			26*	120kΩ	2.6u			38m	1.0mS		1.0u	3.5u		BH	♦	PD2140
27	OTC22-85TC	3	250G*		2.0 ↑			26*	120kΩ	2.6u			38m	1.0mS		1.0u	3.5u		BH	♦	PD2140
28	2802	3	300G*					X2*						3.0mS		1.0u	4.5u		BH		PD1850
29	2804	3	300G*					X2*						3.0mS		1.0u	4.5u		BH		PD1850
30	2805	3	300G*					X2*					3.0mS			1.0u	4.5u		BH		PD1520
31	2842	3	300G*					X2*						3.0mS		1.0u	4.5u		BH		PD1860
32	2844	3	300G*					X2*						3.0mS		1.0u	4.5u		BH		PD1860
33	2845	3	300G*					X2*						3.0mS		1.0u	4.5u		BH		PD1530
34	OTC22-81	3	300G*		3.0			26*	600kΩ	2.6u			1.5m	1.0mS		1.0u	3.5u		BH	♦	PD2140
35	OTC22-81T	3	300G*		3.0			26*	600kΩ	2.6u			1.5m	1.0mS		1.0u	3.5u		BH	♦	PD2140
36	OTC22-81TC	3	300G*		3.0			26*	600kΩ	2.6u			1.5m	1.0mS		1.0u	3.5u		BH	♦	PD2140
37	OTC22-82	3	300G*		3.0			26*	300kΩ	2.6u			6.2m	1.0mS		1.0u	3.5u		BH	♦	PD2140
38	OTC22-82T	3	300G*		3.0			26*	300kΩ	2.6u			6.2m	1.0mS		1.0u	3.5u		BH	♦	PD2140
39	OTC22-82TC	3	300G*		3.0			26*	300kΩ	2.6u			6.2m	1.0mS		1.0u	3.5u		BH	♦	PD2140
40	OTC22-83	3	300G*		3.0			26*	200kΩ	2.6u			13m	1.0mS		1.0u	2.5u		BH	♦	PD2140
41	OTC22-83T	3	300G*		3.0			26*	200kΩ	2.6u			13m	1.0mS		1.0u	3.5u		BH	♦	PD2140
42	OTC22-83TC	3	300G*		3.0			26*	200kΩ	2.6u			13m	1.0mS		2.5u	3.5u		BH	♦	PD2140
43	OTC22S-81T	3	300G*		4.0			X6*	750kΩ	2.7u			1.5m			1.0u	3.5u		BH		PD2140
44	OTC22S-81TC	3	300G*		4.0			X6*	750kΩ	2.7u			1.5m			1.0u	3.5u		BH		PD2140
45	OTC22S-82T	3	300G*		4.0			X6*	370kΩ	2.7u			6.2m			1.0u	3.5u		BH		PD2140
46	OTC22S-82TC	3	300G*		4.0			X6*	370kΩ	2.7u			6.2m			1.0u	3.5u		BH		PD2140
47	OTC22S-83T	3	300G*		4.0			X6*	250kΩ	2.7u			13m			1.0u	3.5u		BH		PD2140
48	OTC22S-83TC	3	300G*		4.0			X6*	250kΩ	2.7u			13m			1.0u	3.5u		BH		PD2140
49	OTC22S-84T	3	300G*		4.0			X6*	190kΩ	2.7u			24m			1.0u	3.5u		BH		PD2140
50	OTC22S-84TC	3	300G*		4.0			X6*	190kΩ	2.7u			24m			1.0u	3.5u		BH		PD2140
51	OTC22S-85T	3	300G*		4.0			X6*	150kΩ	2.7u			38m			1.0u	3.5u		BH		PD2140
52	OTC22S-85TC	3	300G*		4.0			X6*	150kΩ	2.7u			38m			1.0u	3.5u		BH		PD2140
53	InAs-1-40742	3	400G*					KX*	1.0 ↑	3.0u			1.2m	1.0uS		1.0u	3.0u		BF		PD1520
54	InAs-1-44782	3	400G*					KX*	1.0 ↑	3.0u			1.2m	1.0uS		1.0u	3.0u		BF		PD1530
55	InAs-2-40742	3	400G*					KX*	1.0 ↑	3.0u			4.8m	1.0uS		1.0u	3.0u		BF		PD1520
56	InAs-2-44782	3	400G*					KX*	1.0 ↑	3.0u			4.8m	1.0uS		1.0u	3.0u		BF		PD1530
57	InAs-5-40742	3	400G*					KX*	1.0 ↑	3.0u			304u	1.0uS		1.0u	3.0u		BF		PD1520
58	InAs-5-44782	3	400G*					KX*	1.0 ↑	3.0u			304u	1.0uS		1.0u	3.0u		BF		PD1530
59	PbSITO-1-40A	3	400G*					8X*	5.0MΩ				1.2m	5.0mS		1.0u	4.0u		BH		PD1470
60	PbSITO-1-40AS	3	400G*					8X*	5.0MΩ				1.2m	5.0mS		1.0u	4.0u		BH		PD147a0
61	PbSITO-1-40742	3	400G*					8X*	5.0MΩ				1.2m	5.0mS		1.0u	4.0u		BH		PD1520
62	PbSITO-1-44782	3	400G*					8X*	5.0MΩ				1.2m	5.0mS		1.0u	4.0u		BH		PD1530
63	PbSITO-1-520A	3	400G*					8X*	5.0MΩ				1.2m	5.0mS		1.0u	4.0u		BH		PD1510
64	PbSITO-1-520AS	3	400G*					8X*	5.0MΩ				1.2m	5.0mS		1.0u	4.0u		BH		PD151a0
65	PbSITO-1-60A	3	400G*					8X*	5.0MΩ				1.2m	5.0mS		1.0u	4.0u		BH		PD1480
66	PbSITO-1-60AS	3	400G*					8X*	5.0MΩ				1.2m	5.0mS		1.0u	4.0u		BH		PD148a0
67	PbSITO-2-40A	3	400G*					8X*	5.0MΩ				4.8m	5.0mS		1.0u	4.0u		BH		PD1470
68	PbSITO-2-40AS	3	400G*					8X*	5.0MΩ				4.8m	5.0mS		1.0u	4.0u		BH		PD147a0
69	PbSITO-2-40742	3	400G*					8X*	5.0MΩ				4.8m	5.0mS		1.0u	4.0u		BH		PD1520
70	PbSITO-2-44782	3	400G*					8X*	5.0MΩ				4.8m	5.0mS		1.0u	4.0u		BH		PD1530
71	PbSITO-2-520A	3	400G*					8X*	5.0MΩ				4.8m	5.0mS		1.0u	4.0u		BH		PD1510
72	PbSITO-2-520AS	3	400G*					8X*	5.0MΩ				4.8m	5.0mS		1.0u	4.0u		BH		PD151a0
73	PbSITO-2-60A	3	400G*					8X*	5.0MΩ				4.8m	5.0mS		1.0u	4.0u		BH		PD1480
74	PbSITO-2-60AS	3	400G*					8X*	5.0MΩ				4.8m	5.0mS		1.0u	4.0u		BH		PD148a0
75	PbSITO-5-40A	3	400G*					8X*	5.0MΩ				304uS	5.0mS		1.0u	4.0u		BH		PD1470
76	PbSITO-5-40AS	3	400G*					8X*	5.0MΩ				304uS	5.0mS		1.0u	4.0u		BH		PD147a0
77	PbSITO-5-40742	3	400G*					8X*	5.0MΩ				304uS	5.0mS		1.0u	4.0u		BH</		

# 10. SENSOR: PHOTODIODE

IN ORDER OF: (1) TYPE PHOTODIODE (2) MAX. ID  
(3) VR & (4) TYPE No.

LINE No.	TYPE No.	TYPE	MAX DARK CURR @ 25°C		MAX RATINGS		REV. DC FWDRNG		MINIMUM RESPONSIVITY			AREA	RESP. TIME	CAPAC	SPECTRAL RANGE		NOISE EQ.PWR	M T L	LEAD CODE	DRAWING
			ID	VR	PWR DISSIP	REV. VOLT	CURR. IF	CODE	Re	SOUR	λ				VR	LOW				
			(A)	(V)	(W)	(V)	(A)	(A/W)	(m)	(V)	(m)	(S)	(F)	(m)	(nm)	(Watt/Hz <sup>1/2</sup> )				
1	9002		10T*	0.0				X2*	470m	900u	0.0	7.9m	150p	350n	1.1u	17f	AD		PD189Ø	
2	8045								500m	900n		15m	18u#	200n	1.1u	120f	AD		PD189Ø	
3	8245								70m	200n		15m	18u#	200n	1.1u	120f	AD		PD189Ø	
4	C30849								600m	900n		300u	1.0p	400nt	1.1u	35f	AD	Bs	PD8dØ	
5	C30850								600m	900n		1.2m	1.0p	400nt	1.1u	50f	AD	Bs	PD8dØ	
6	C30851								600m	900n		7.7m	1.0p#	80p	400nt	1.1u	80f	AD	FZ	PD109Ø
7	C30852								600m	900n		3.1m	1.0p#	250p	400nt	1.1u	130f	AD	Ks	PD108Ø
8	C30853								600m	900n		7.7m	1.0p#	500p	400nt	1.1u	170f	AD	Ks	PD108Ø
9	C30854								600m	900n		15.5m	1.0p#	1.0n	400nt	1.1u	250f	AD	Ks	PD105Ø
10	P151				75m	300		X7*	100m	330n			100p			20p	BB		PD253Ø	
11	PIN5D/UVF								190m	450n			500n			47p			PDØ	
12	PIN10DB/541								350m	850n			1.0u			10p			PDØ	
13	PIN125								650m	950n		1.2m	25p	200n	1.1u	30f	AD	A	PD169bØ	
14	UV040B								650m	950n		3.2m	600p	200n	1.1u	30f	AD	A	PD169hØ	
15	UV250B								470m	950n		7.9m	25n#	350n	1.1u	32f	AD	A	PD169Ø	
16	PV100A		15f						650m	950n	0.0	7.9m	25n#	150p	200n	1.1u	25f	AD	A	PD169
17	UV100B		15f	10n	250m	30			650m	950n	0.0	3.6m	30n#	700p	200n	1.1u	33f	AD	A	PD169a
18	UV215B		20f	10m	500m	30			470m	950n	0.0	3.6m	30n#	700p	350n	1.1u	43f	AD	A	PD169aØ
19	PV215		40f						470m	950n		15.5m	45n#	2.8n	350n	1.1u	90f	AD	A	PD169cØ
20	PV444A		40f						650m	950n	0.0	15.5m	40n#	2.8n	200n	1.1u	67f	AD	A	PD169c
21	UV444B		40f	10n	2.5	30			470m	950n		486m	75n#	9.0n	350n	1.1u	130f	AD	A	PD170
22	PV800A		60f						650m	950n	0.0	486m	75n#	9.0n	200n	1.1u	100f	AD	A	PD170
23	UV800B		2.0p	2.0n	3.0	10			125m	400n		2.0m	600p	300n	800n			AD		PD253Ø
24	VTB9416B		3.0p	2.0		5.0	1.0m	36	100ps	125m	B	400n	2.0m	150u#	440n	660n		CA	♦	PD265bØ
25#	PH201A		4.0p	2.0		10			125m	125m			600p	300n	800n			AD		PD265bØ
26	VTB9415B		1.0p	1.0		10			125m	125m			500p	500n	600n			AD	A	PD282Ø
27#	BS100C		10p	2.0		10		26*	125m	400n		2.0m	600p	300n	800n			AD		PD282Ø
28	VTB9414B		10p	2.0		10			125m	400n		2.0m	600p	300n	800n			AD		PD282Ø
29	PV040		15p	10m	150m	30			470m	950n	0.0	1.2m	25p	350n	1.1u	10f	AD	A	PD169b	
30	VTB1013		20p	2.0		10		2A*	125m	400n		2.0m	420p	300n	1.1u			AD		PD8kØ
31	VTB1113		20p	2.0		10		2A*	125m	400n		2.0m	420p	300n	1.1u			AD		PD7hØ
32	VTB9413		20p	2.0		10		2A*	125m	400n		2.0m	420p	300n	1.1u			AD		PD217Ø
33	VTB9413B		20p	2.0		10		2A*	125m	400n		2.0m	420p	300n	800n			AD		PD217Ø
34	VTB5041		50p	2.0		10			125m	400n		8.0m	1.6n	300n	1.1u			AD		PD8jØ
35	VTB5041B		50p	2.0		10			125m	400n		8.0m	1.6n	300n	800n			AD		PD8jØ
36	PV100		70p	10m	250m	30			450m	950n	0.0	7.9m	25n	150p	350n	1.1u	30f	AD	A	PD169
37#	BS100D		100p	1.0		10		16*	500m	780n		2.2m	500p	880n				AD	A	PD282aØ
38#	BFX94		200p	1.0	300m*	18		XF#	2.5	780n	0.0	2.2m	45p	780n				AD	F	PD42dØ
39#	BFX94A		200p	1.0	300m*	18		XF#	2.5	780n	0.0	2.2m	45p	780n				AD	F	PD27jØ
40	VTB5051		250p	2.0		10			125m	400n		2.3m	4.6n	300n	1.1u			AD		PD8jØ
41	VTB5051B		250p	2.0		10			125m	400n		2.3m	4.6n	300n	800n			AD		PD8jØ
42	PV444		350p	10m	2.5	30			450m	950n	0.0	15.5m	3.0n	350n	1.1u	90f	AD	A	PD169c	
43#	TFS701		500p	2.0	50m*	20		27*	2.0n	400n		2.0m	600p	300n	560n			AD	B	PD216Ø
44	VTB1012		500p	2.0		10		2A*	125m	400n		2.0m	420p	300n	1.1u			AD		PD8kØ
45	VTB1112		500p	2.0		10		2A*	125m	400n		2.0m	420p	300n	1.1u			AD		PD7hØ
46	VTB9412		500p	2.0		10		2A*	125m	400n		2.0m	420p	300n	1.1u			AD		PD217Ø
47	VTB9412B		500p	2.0		10		2A*	125m	400n		2.0m	420p	300n	800n			AD		PD217Ø
48	PV800		1.0n	10m	3.0	30			450m	950n	0.0	500m	75n	9.0n	350n	1.1u	130f	AD	A	PD170
49	VTP1013		1.5n	50		200			500m	925n		2.6m	6.0p	300n	1.1u			AD		TO18
50	VTP1113		1.5n	50		200			500m	925n		2.6m	6.0p	300n	1.1u			AD		TO18
51#	BS530F		2.0n	1.0		5.0		16*	70n	350n	B	125m	30u	325n	700n			AD	A	PD264bØ
52#	BS530G		2.0n	1.0		5.0		16*	350n	350n	B	125m	30u	275n	1.1u			AD	A	PD264aØ
53#	BS2030		2.0n	2.0				16*	20n	350n	B	7.5m		350n	1.1u			AD	A	PD265Ø
54#	BS2030A		2.0n	2.0				16*	30n	350n	B	7.5m		350n	1.1u			AD	A	PD265Ø
55	VTB5040		2.0n	2.0		10		2A*	125m	400n		8.0m	1.6n	300n	1.1u			AD		PD8jØ
56	VTB5040B		2.0n	2.0		10		2A*	125m	400n		8.0m	1.6n	300n	800n			AD		PD8jØ
57	VTB6061		2.0n	2.0		10			125m	400n		64m	13n	300n	1.1u			AD		PD165dØ
58	VTB6061B		2.0n	2.0		10			125m	400n		64m	13n	300n	800n			AD		PD165dØ
59	VTP5041		3.0n	50		200			500m	925n		8.0m	15p	300n	1.1u			AD		TO5
60	VTB5050B		3.5n	2.0		10			125m	400n		2.3m	4.6n	300n	1.1u			AD		PD8jØ
61	VTB5050B		3.5n	2.0		10			125m	400n		2.3m	4.6n	300n	800n			AD		PD8jØ
62	VTB5050UV		3.5n	2.0		5.0	Ø	6C*	100m	222n		2.3m	3.0n	200n	1.1u			AD	A	PD407
63	VTP5051		3.5n	50		200			500m	925n		10m	20p	300n	1.1u			AD		TO5
64	VTB6060B		5.0n	2.0		10			125m	400n		64m	13n	300n	1.1u			AD		PD165dØ
65	VTB6060B		5.0n	2.0		10			125m	400n		64m	13n	300n	800n			AD		PD165dØ
66	VTB6060UV		5.0n	2.0		5.0	Ø	6C*	100m	222n		60m	10u	8.0n	200n	1.1u		AD	A	PD408
67	SD1420-2		5.0n	20		50	Ø	6C*	550m	850n	A	5.0	50n#	590n	1.0u			AD	A	PD93a
68	SD2420-2		5.0n	20		50	Ø	6C*	550m	850n	A	5.0	50n#	590n	1.0u			AD	B	PD25aØ
69	SD3420-2		5.0n	20		50	Ø	6C*	550m	850n	A	5.0	50n#	590n	1.0u			AD	F	PD95Ø
70	SD5420-2		5.0n	20		50	Ø	6C*	550m	850n	A	5.0	50n#	590n	1.0u			AD	F	PD96Ø
71	STD1540-2		5.0n	20		50	Ø	6C	1.0m		E		50u#	370n	1.2u			AD	B	PD93Ø
72	STD1710-2		5.0n	20		50	Ø	6C	350u		E		50u#	370n	1.2u			AD	B	PD25aØ
73	STD1840-2		5.0n	20		50	Ø	6C	140u		E		50u#	370n	1.2u			AD	M	PD95Ø
74	STD2040-2		5.0n	20		50	Ø	6C	2.0m		E		50u#	370n	1.2u			AD	M	PD96Ø
75	VTP1012		7.0n	50		200			500m	925n		2.6m	6.0p	300n	1.1u			AD		TO18
76	VTP1112		7.0n	50		200			500m	925n		2.6m	6.0p	300n	1.1u			AD		TO18
77	VTP6061		7.0n	50		200			500m	925n		32m	60p	300n	1.1u			AD		TO8
78	OP900		8.0n	10	50m*	100	Ø	6C*	400u		E	50	100n#	400n	1.1u			AD	A	PD25gØ
79#	PD500U		10n	500m				17*	65n		B		16m	6.5u#	400n	1.1u		AD		



# 10. SENSOR: PHOTODIODE

IN ORDER OF: (1) TYPE PHOTODIODE (2) MAX. ID  
(3) VR & (4) TYPE No.

LINE No.	TYPE No.	TYPE	MAX CURR @ 25°C (A)	DARK VR (V)	MAX RATINGS @ 25°C			TEMP. CODE	MINIMUM RESPONSIVITY			ACTIVE AREA (S)	RESP. TIME (S)	CAPAC. C (F)	SPECTRAL RANGE		NOISE EQ. PWR Pn Watt/Hz <sup>1/2</sup>	M T L	LEAD CODE	DRAWING
					PWR DISSIP Pcase (W)	REV. VOLT (V)	DC CURR. (A)		Re (A/W)	SOUR. CE	λ (m)				VR (V)	LOW λL (m)				
1#	MD33	4	40n	100				660m	B	905n		6.9m	5.0n#	6.0p	360n	1.2u	200f	AD	A	PD3530
2#	BS530UV	4	50n	1.0				16* 350m	B			125m	30u		200n	1.1u		AD	A	PD2640
3#	BPX93	4	50n	10	75m	32	58%	500m	C	850n	10	1.5m	800n	120p	400n	1.1u		AD	A	PD1440
4#	30F2	4	50n	24	50m	40		2.4m										AD		PD1580
5#	31F2	4	50n	24	50m	40		12m										AD		PD1580
6#	32F2	4	50n	24	50m	40		26m										AD		PD1580
7#	33F2	4	50n	24	50m	40		48m										AD		PD1580
8#	34F2	4	50n	24	50m	40		96m										AD		PD1580
9#	35F2	4	50n	24	50m	30		192m										AD		PD1580
10#	BS112	4	100n	1.0				16* 55n	B			19m	20u		350n	1.1u		AD	A	PD2660
11#	BS142	4	100n	1.0				16* 180n	B			64m	27u		350n	1.1u		AD	A	PD2660
12#	BPX92	4	100n	10	50m	32	58%	500m	C	850n	10	1.5m	800n	90p	400n	1.1u		AD	A	PD1447
13#	FND100	4	100n	90				57 620m				7.9m	1.0n#	8.5p	300n	1.1u	290f	AD	A	PD22d0
14#	BPX90	4	200n	10	100m	32		48 500m	C	850n	10	7.0m	800n	500p	400	1.1u		AD	A	PD1440
15#	BPX60	4	300n	10	325m	32		4c 500m	C	850n	10	11m	1.0u	750p	400n	1.1u		AD	A	PD1430
16#	BPX91	4	300n	10	150m	32		48 500m	C	850n	10	11m	1.0u	750p	400n	1.1u		AD		PD144d
17#	BPX91B	4	300n	10	150m	32		48 470m	C	850n	10	11m	1.0u	750p	350n	1.1u		AD		PD144d
18#	OSD50-1	4	350n	30				55 #		630n		50 *	15n#	80p	430n	900n	570f	AD		PD199b
19#	L4412	4	50u	15				X8* 75u	H			5m	75n#		420n	1.1u		AD		PD2750
20#	H11	4	500n	50	50m	50		6C* 8.9										AD		PD1070
21#	H35	4	500n	50	50m	50		6C* 9.1										AD		PD1070
22#	H60	4	500n	50	50m	50		6C* 16										AD		PD1070
23#	H61	4	500n	50	50m	50		6C* 27										AD		PD1070
24#	H62	4	500n	50	50m	50		6C* 38										AD		PD1070
25#	TIED80	4	500n	100	100m	200		6C 400m				7.8m	15n#	4.5p	650n	1.0u		AD	G0	PD42a0
26#	OSD100-0	4	800n	30				55 #		630n		100 *	15n#	150p	430n	900n	870f	AD		PD201b0
27#	BPX98	4	1.0u	1.0				10m 6C%						800p	800n			AD	A	PD312a
28#	BPY13	4	1.0u	20	250m	50		250n		900n		18m	70n	15p	920n			AD		PD8e0
29#	OSD200-0	4	1.8u	30				55 #		630n		200 *	15n#	250p	430n	900n		AD		PD202a0
30#	OSD200E	4	1.8u	30	60m	30		07 60 #		900n		310m	15n#	250p	350n	1.1u	1.3p	AD		PD202a0
31#	OSD300-0	4	3.0u	30				55 #		630n		300 *	15n#	400p	430n	900n	1.7p	AD		PD202a0
32#	OSD300-1	4	3.0u	30				35 #		430n		300 *	20n#		250n	430n	1.7p	AD		PD202a0
33#	OSD300E	4	3.0u	30	60m	30		07 60 #		900n		465m	15n#	400p	350n	1.1u	1.7p	AD		PD202a0
34#	H38	4	1.0u	50	50m	50		6C* 16										AD		PD1070
35#	OAP12	4	15u	10	30m	30		26* 50n	G			1.5m			500n	2.1u		AB	B	PD107a0
36#	PHG2	4	30u	20	30m	30		20m										AB		PD1580
37#	PHG1	4	30u	30	30m	30		40m										AB		PD158a0
38#	BPX63	4	37T*	1.0	200m	7.0		59 470m	C	800n	1.0	1.5m	1.0u	120p	450n	1.1u	2.7f	AD	A	PD12p0
39#	BPW32	4	48T*	1.0	100m*	7.0		58 470m	C	800n	1.0	1.5m	1.0u	120p	450n	1.1u	5.3f	AD	A	PD144e0
40#	BPW33	4	52T*	1.0	150m*	7.0		48 470m	C	800n	1.0	11m	1.0u	750p	450n	1.1u		AD	A	PD144d0
41#	BPX48	5	200n	10	50m*	7.0		4C 550m	C	850n	10	2.9m	150n	40p	400n	1.1u		AD	M	PD1450
42#	E5100	1	100p			25		420m				2.0 *	5.0n				6.0f	AD		TO180
43#	E5102	1	1.0n			25		420m				.20 *	5.0n				200p	AD		TO180
44#	E5103	1	1.0n			50		420m				.30 *	15n				20p	AD		TO180
45#	OP905F	1	30n	10	150m	33		48 370m	E	850n	38	7.5 *	200n	150p	700n	1.2u	50f	AD		PD3660
46#	OP915F	1	30n	10	150m	33		48 580m	E	950n	38	7.5 *	50n	30p	700n	1.2u	70f	AD	A	PD3660
47#	TIL100	1	50n	10	150m	30		2A 40m		940n	10	8.8 *	100n#	50p	915n	975n		AD	A	PD4180
48#	NLS530	1	50n	45		100		4A 500m	C	900n	45	8.0 *	5.0n	2.5p	400n	1.1u	800f	AD	A	PD4050
49#	OSD1-5	3	200p	0.0		10		10m 27 150m		450n		1.0 *	1.0u	40p	450n	850n	60f	AD		PD3840
50#	OSD5-5	3	500p	0.0		10		10m 27 150m		450n		5.0 *	1.0u	150p	450n	850n	70f	AD		PD3850
51#	OSD50-5	3	1.0n	0.0		10		10m 27 150m		450n		5.0 *	1.0u	1.5n	450n	850n	200f	AD		PD199b0
52#	OSD100-5	3	2.0n	0.0		10		10m 27 150m		450n		100 *	1.0u	2.5n	450n	850n	200f	AD		PD201b0
53#	OSD1-3	3	5.0n	30		100		10m 27 75 #		900n		1.0 *	10n#		630n	900n	70f	AD		PD3840
54#	OSD1-3-R	3	5.0n	30		100		10m 27 75 #		900n		1.0 *	10n#		630n	900n	70f	AD		PD3860
55#	OSD1-3-R2	3	5.0n	30		100		10m 27 75 #		900n		1.0 *	10n#		630n	900n	70f	AD		PD3860
56#	OSD1-3-2	3	5.0n	30		100		10m 27 75 #		900n		1.0 *	10n#		630n	900n	70f	AD		PD3860
57#	OSD1-4	3	5.0n	30		180		10m 27 60 #		900n		1.0 *	20n#		900n	1.0u	70f	AD		PD3840
58#	OSD1-4-R	3	5.0n	30		180		10m 27 60 #		900n		1.0 *	20n#		900n	1.0u	70f	AD		PD3860
59#	OSD1-4-R2	3	5.0n	30		180		10m 27 60 #		900n		1.0 *	20n#		900n	1.0u	70f	AD		PD3860
60#	OSD1-4-2	3	5.0n	30		180		10m 27 60 #		900n		1.0 *	20n#		900n	1.0u	70f	AD		PD3860
61#	OSD1-4HSA-R	3	5.0n	80		80		10m 27 65 #		900n		1.0 *	10n#		630n	900n	70f	AD		PD3860
62#	OSD1-4HSA-R2	3	5.0n	80		80		10m 27 65 #		900n		1.0 *	10n#		630n	900n	70f	AD		PD3860
63#	OSD1-4HSA-2	3	5.0n	80		80		10m 27 65 #		900n		1.0 *	10n#		630n	900n	70f	AD		PD3860
64#	OSD1-4HSA1-R	3	10n	100		100		10m 27 15 #		1.0u		1.0 *	10n#		900n	1.0u	70f	AD		PD3860
65#	OSD1-4HSA1-R2	3	10n	100		100		10m 27 15 #		1.0u		1.0 *	10n#		900n	1.0u	70f	AD		PD3860
66#	OSD1-4HSA1-2	3	10n	100		100		10m 27 15 #		1.0u		1.0 *	10n#		900n	1.0u	70f	AD		PD3860
67#	OSD1-4HSA2-R	3	10n	180		180		10m 27 45 #		1.0u		1.0 *	15n#		900n	1.0u	70f	AD		PD3860
68#	OSD1-4HSA2-R2	3	10n	180		180		10m 27 45 #		1.0u		1.0 *	15n#		900n	1.0u	70f	AD		PD3860
69#	OSD1-4HSA2-2	3	10n	180		180		10m 27 45 #		1.0u		1.0 *	15n#		900n	1.0u	70f	AD		PD3860
70#	OSD5-3	3	30n	30		100		10m 27 75 #		900n		5.0 *	10n#	10p	630n	900n	170f	AD		PD109e0
71#	OSD5-3-R	3	30n	30		100		10m 27 75 #		900n		5.0 *	10n#		630n	900n	170f	AD		PD109e0
72#	OSD5-3-R2	3	30n	30		100		10m 27 75 #		900n		5.0 *	10n#		630n	900n	170f	AD		PD109e0
73#	OSD5-3-2	3	30n	30		100		10m 27 75 #		900n		5.0 *	10n#		630n	900n	170f	AD		PD109e0
74#	OSD5-4	3	30n	30		180		10m 27 60 #		900n		5.0 *	20n#	10p	900n	1.1u	170f	AD		PD109e0
75#	OSD5-4-R	3	30n	30		180		10m 27 60 #		900n		5.0 *	20n#		900n	1.0u	170f	AD		PD109e0
76#	OSD5-4-R2	3	30n	30		180		10m 27 60 #		900n		5.0 *	20n#		900n	1.0u	170f	AD		PD109e0
77#	OSD5-4-2	3	30n	30		180		10m 27 60 #		900n		5.0 *	20n#		900n	1.0u	170f	AD		PD109e0
78#	OSD200-5																			

# 10. SENSOR: PHOTODIODE

IN ORDER OF: (1) TYPE PHOTODIODE (2) MAX. ID  
(3) VR & (4) TYPE No.

LINE No.	TYPE No.	TYPE	MAX DARK CURR @ 25°C		MAX RATINGS @ 25°C			TEMP RNG. CODE	MINIMUM RESPONSIVITY			ACTIVE AREA	RESP. TIME (S)	CAPAC (F)	SPECTRAL RANGE		NOISE EQ. PWR Pn Watt/Hz <sup>1/2</sup>	M T L	LEAD CODE	DRAWING Ø-RND. Δ-RECT *-CHIP	
			1	2	PWR DISSIP Pcase (W)	REV. VOLT VR (V)	DC FWD CURR. (A)		Re (A/W)	SOUR -CE	λ (m)				VR (V)	LOW λL (m)					HIGH λH (m)
			3	VR (V)											Sq	In					
1▼	22BH18M	4	35n	10	100			500m	F	885n		2.6 *	60n#	40p#	300n	1.2u	100f	AD	PD410Ø		
2▼	22BH18P	4	35n	10	100			1.0	F	925n		2.6 *	60n#	40p#	300n	1.2u	100f	AD	PD411Ø		
3▼	22PH18M▼	4	35n	10	100			500m	F	925n		2.6 *	60n#	40p#	400n	1.2u	100f	AD	PD410Ø		
4▼	22PH18P▼	4	35n	10	100			1.0	F	925n		2.6 *	60n#	40p#	400n	1.2u	100f	AD	PD411Ø		
5▼	22PD18M	4	40n	10	50			500m	F	925n		2.6 *	60n#	260p#	400n	1.2u	80f	AD	PD410Ø		
6▼	22PD18P	4	40n	10	50			1.0	F	925n		2.6 *	60n#	260p#	400n	1.2u	80f	AD	PD410Ø		
7▼	33BH05M	4	50n	1.0	50			500m	F	885n		5.6 *	70n#	80p#	300n	1.2u	200f	AD	PD410aØ		
8▼	33BH05P	4	50n	1.0	50			1.0	F	925n		5.6 *	70n#	80p#	300n	1.2u	200f	AD	PF411aØ		
9▼	33PH05M▼	4	50n	1.0	50			500m	F	925n		5.6 *	70n#	80p#	400n	1.2u	200f	AD	PD410aØ		
10▼	33PH05P▼	4	50n	1.0	50			1.0	F	925n		5.6 *	70n#	80p#	400n	1.2u	200f	AD	PD411aØ		
11▼	33PD05M	4	55n	1.0	20			500m	F	925n		5.6 *	85n#	550p#	400n	1.2u	100f	AD	PD410aØ		
12▼	33PD05P	4	55n	1.0	20			1.0	F	925n		5.6 *	85n#	550p#	400n	1.2u	100f	AD	PD411aØ		
13▼	44PB05M	4	80n	1.0	10			500m	F	885n		18 *	250n#	1.9n#	300n	1.2u	300f	AD	PD410aØ		
14▼	44BH05M	4	200n	1.0	20			500m	F	885n		18 *	85n#	250p#	300n	1.2u	500f	AD	PD410aØ		
15▼	44BH05P	4	200n	1.0	20			1.0	F	925n		18 *	85n#	250p#	300n	1.2u	500f	AD	PD411aØ		
16▼	44PH05M▼	4	200n	1.0	20			500m	F	925n		18 *	85n#	250p#	400n	1.2u	500f	AD	PD410aØ		
17▼	44PH05P▼	4	200n	1.0	20			1.0	F	925n		18 *	85n#	250p#	400n	1.2u	500f	AD	PD411aØ		
18▼	68PB08M	4	200n	1.0	5.0			500m	F	885n		50 *	700n#	5.2n#	300n	1.2u	600f	AD	PD410bØ		
19▼	44PD05M	4	300n	1.0	10			500m	F	925n		18 *	250n#	1.9n#	400n	1.2u	300f	AD	PD410aØ		
20▼	44PD05P	4	300n	1.0	10			1.0	F	925n		18 *	250n#	1.9n#	400n	1.2u	300f	AD	PD411aØ		
21▼	OSD50-0-R	4	350nt	30	30	10m	27	55 #		630n		50 *	15n#	80p	430n	900n	570f	AD	PD199cØ		
22▼	OSD50-0-R2	4	350nt	30	30	10m	27	55 #		630n		50 *	15n#	80p	430n	900n	570f	AD	PD199cØ		
23▼	OSD50-0-2	4	350nt	30	30	10m	27	55 #		630n		50 *	15n#	80p	430n	900n	570f	AD	PD199cØ		
24▼	OSD50-2	4	350nt	30	60			65 #		630n		50 *	10n#		630n	900n	570f	AD	PD199bØ		
25▼	OSD50-2-R	4	350nt	30	60	10m	27	65 #		630n		50 *	10n#		630n	900n	570f	AD	PD199cØ		
26▼	OSD50-2-R2	4	350nt	30	60	10m	27	65 #		630n		50 *	10n#		630n	900n	570f	AD	PD199cØ		
27▼	OSD50-2-2	4	350nt	30	60	10m	27	65 #		630n		50 *	10n#		630n	900n	570f	AD	PD199cØ		
28▼	110PBM	4	360n	1.0	5.0			500m	F	885n		86 *	15u#	9.5n#	300n	1.2u	800f	AD	PD410cØ		
29▼	68PH08M	4	650n	1.0	10			500m	F	925n		50 *	150n#	800p#	400n	1.2u	700f	AD	PD410bØ		
30▼	68PD09M	4	800n	1.0	5.0			500m	F	925n		50 *	700n#	5.2n#	400n	1.2u	600f	AD	PD410bØ		
31▼	OSD100-2	4	800nt	30	60			65 #		630n		100 *	10n#		630n	900n	870f	AD	PD201bØ		
32▼	110PH9M▼	4	1.2u	10	5.0			500m	F	925n		86 *	250n#	1.5 #	400n	1.2u	900f	AD	PD410cØ		
33▼	110PD9M	4	1.5u	1.0	5.0			500m	F	925n		86 *	1.5u#	9.5n#	400n	1.2u	800f	AD	PD410cØ		
34▼	OSD200-2	4	1.8u	30	60			65 #		630n		200 *	10n#		630n	900n	1.3p	AD	PD202aØ		
35▼	45PQU5M	5	50n	10				450m		890n		6.7m#		30p	400n	1.2u	1.0p	AD	PD412aØ		
36▼	25PDU5M	5	100n	10				450m		890n		6.7m#		60p	400n	1.2u	1.0p	AD	PD412Ø		
37▼	420#	6						5C		250u		1.3k		6.2m#	1.0n#	15p	10n	1.0m	ED	TO5	
38▼	7461	6	16u%	10				55		200m		1.1u	10	800m#	50n#	28p	500n	1.9u	20p	AB	PD22g
39▼	7460	6	80u%	10				55		700m		1.1u	10	800m#	50n#	28p	500n	1.9u	20p	AB	PD22g
40▼	OSD1E	7E	5.0nt	30	60m	10	10m	07		180m		550n	30	1.0 *	1.0u	50p	460n	660n	40u#	AD	PD384Ø
41▼	OSD5E	7E	30nt	30	60m	10	10m	07		180m		550n	30	5.0 *	1.0u	200p	460n	660n	13u#	AD	PD385Ø
42▼	44PBF7C	7E	80n	1.0	10			250m	E	580n		18 *	250n#	1.9n#	440n	680n	300f	AD	PD413Ø		
43▼	68PBF9C	7E	200n	1.0	5.0			250m	E	580n		50 *	700n#	5.2n#	440n	680n	600f	AD	PD413aØ		
44▼	OSD50E	7E	350nt	30	60m	10	10m	07		900n		77m	15n#	80p	350n	1.1u	570f	AD	PD199aØ		
45▼	110PBF9	7E	360n	1.0	5.0			250m	E	580n		86 *	1.5u#	9.5n#	440n	680n	800f	AD	PD413aØ		
46▼	OSD100E	7E	800nt	30	60m	10	10m	07		60 #		900n		155m	15n#	150p	350n	1.1u	870f	AD	PD201aØ
47▼	OSD1-1	7U	5.0nt	30	10	10m	27	35 #		430n		1.0 *	20n#		250n	430n	70f	AD	PD384Ø		
48▼	OSD1-1-R	7U	5.0nt	30	10	10m	27	35 #		430n		1.0 *	20n#		250n	430n	70f	AD	PD386Ø		
49▼	OSD1-1-R2	7U	5.0nt	30	10	10m	27	35 #		430n		1.0 *	20n#		250n	430n	70f	AD	PD386Ø		
50▼	OSD1-1-2	7U	5.0nt	30	10	10m	27	35 #		430n		1.0 *	20n#		250n	430n	70f	AD	PD386Ø		
51▼	OSD5-1	7U	30nt	30	10	10m	27	35 #		430n		5.0 *	20n#		250n	430n	170f	AD	PD109eØ		
52▼	OSD5-1-R	7U	30nt	30	10	10m	27	35 #		430n		5.0 *	20n#		250n	430n	170f	AD	PD109eØ		
53▼	OSD5-1-R2	7U	30nt	30	10	10m	27	35 #		430n		5.0 *	20n#		250n	430n	170f	AD	PD109eØ		
54▼	OSD5-1-2	7U	30nt	30	10	10m	27	35 #		430n		5.0 *	20n#		250n	430n	170f	AD	PD109eØ		
55▼	OSD50-1	7U	350nt	30	10	10m	27	35 #		430n		50 *	20n#		250n	430n	570f	AD	PD199bØ		
56▼	OSD50-1-R	7U	350nt	30	10	10m	27	35 #		430n		50 *	20n#		250n	430n	570f	AD	PD199cØ		
57▼	OSD50-1-R2	7U	350nt	30	10	10m	27	35 #		430n		50 *	20n#		250n	430n	570f	AD	PD199cØ		
58▼	OSD50-1-2	7U	350nt	30	10	10m	27	35 #		430n		50 *	20n#		250n	430n	570f	AD	PD199cØ		
59▼	OSD100-1	7U	800nt	30	10	10m	27	35 #		430n		100 *	20n#		250n	430n	870f	AD	PD201bØ		
60▼	OSD200-1	7U	1.8u	30	10	10m	27	35 #		430n		200 *	20n#		250n	430n	1.3p	AD	PD202aØ		

# 11. SENSOR: PHOTOTRANSISTOR

IN ORDER OF: (1)PWR DISS-Pcase (2) MAX. VCEO  
(3) MAX. IC & (4) TYPE No.

LINE No.	TYPE No.	MAX. RATINGS @25°C			TEMP RING. CODE	MAX. DARK CURR.		MIN. LIGHT CURR. IL (A)	TEST CONDITIONS				RESP. TIME (S)	PEAK WAVE- LNTH. λp (m)	MAX. COLLECTOR SATURATION VOLT VCE(SAT)			P O L A R I T Y	FEAT URES	LEAD CODE	DRAWING Ø-RND. Z-RECT. Δ-STRIP *-CHIP
		1 PWR. DISS. Pcase (W)	2 C/E VOLT VCEO (V)	3 COL. CURR IC (A)		(A)	(V)		SR C	λ (m)	VCE (V)	W (E/cm <sup>2</sup> )			(V)	(A)	Ee W/cm <sup>2</sup>				
1	SD1440-1	10	10	0	6C*	1.0u	10	700u	5.0m	5.0	5.0	3.0u#	850n	300m	400u	NAD	AB	PT40a			
2	SD1441-1	10	10	0	6C*	1.0u	10	500u	2.0m	5.0	5.0	3.0u#	850n	300m	400u	NAD	AA	PT25			
3	SD2440-1	10	10	0	6C*	1.0u	10	500u	2.0m	5.0	5.0	3.0u#	850n	300m	400u	NAD	AB	PT6b			
4	SD2441-1	10	10	0	6C*	1.0u	10	1.0m	2.0m	5.0	5.0	3.0u#	850n	300m	400u	NAD	AD	PT41			
5	SD3440-1	10	10	0	6C*	1.0u	10	300u	2.0m	5.0	5.0	3.0u#	850n	300m	400u	NAD	AD	PT41			
6	SD3442-1	10	10	0	6C*	100n	5.0	500u	1.0m	5.0	5.0	40u#	850n	150m	400u	NAD	AD	PT41			
7	SD3442-2	10	10	0	6C*	100n	5.0	1.0m	1.0m	5.0	5.0	60u#	850n	150m	400u	NAD	AD	PT41			
8	SD3442-3	10	10	0	6C*	100n	5.0	2.0m	1.0m	5.0	5.0	80u#	850n	150m	400u	NAD	AD	PT41			
9	SD3443-1	10	10	0	6C*	1.0u	15	500u	5.0m	5.0	5.0	3.0u#	850n	200m	400u	5.0m	NAD	AH	PT39		
10	SD5440-1	10	10	0	6C*	1.0u	10	800u	5.0m	5.0	5.0	3.0u#	850n	300m	400u	NAD	AH	PT38			
11	SD5442-1	10	10	0	6C*	100n	5.0	2.0m	1.0m	5.0	5.0	40u#	850n	150m	400u	NAD	AH	PT38			
12	SD5442-2	10	10	0	6C*	100n	5.0	4.0m	1.0m	5.0	5.0	60u#	850n	150m	400u	NAD	AH	PT38			
13	SD5442-3	10	10	0	6C*	100n	5.0	8.0m	1.0m	5.0	5.0	80u#	850n	150m	400u	NAD	AH	PT38			
14	SD5443-1	10	10	0	6C*	1.0u	15	1.0m	5.0m	5.0	5.0	3.0u#	850n	200m	400u	5.0m	NAD	AB	PT40		
15	STPT1520-1	10	10	0	6C*	1.0u	10	700u	5.0m	5.0	5.0	3.0u#	850n	300m	400u	NAD	AJ	PT71			
16	STPT1530-1	10	10	0	6C*	1.0u	10	500u	2.0m	5.0	5.0	3.0u#	850n	300m	400u	NAD	AD	PT6e			
17	STPT1630-1	10	10	0	6C*	1.0u	10	1.0m	2.0m	5.0	5.0	3.0u#	850n	300m	400u	NAD	AD	PT41			
18	STPT1820-1	10	10	0	6C*	1.0u	10	300u	2.0m	5.0	5.0	3.0u#	850n	300m	200u	NAD	AD	PT41			
19	STPT1830-1	10	10	0	6C*	100n	5.0	500u	1.0m	5.0	5.0	40u#	850n	150m	400u	NAD	AD	PT41			
20	STPT1830-2	10	10	0	6C*	100n	5.0	1.0m	1.0m	5.0	5.0	60u#	850n	150m	400u	NAD	AD	PT41			
21	STPT1830-3	10	10	0	6C*	100n	5.0	2.0m	1.0m	5.0	5.0	80u#	850n	150m	400u	NAD	AD	PT41			
22	STPT2030-1	10	10	0	6C*	100n	5.0	2.0m	1.0m	5.0	5.0	40u#	850n	150m	400u	NAD	AD	PT38			
23	STPT2030-2	10	10	0	6C*	100n	5.0	4.0m	1.0m	5.0	5.0	60u#	850n	150m	400u	NAD	AD	PT38			
24	STPT2030-3	10	10	0	6C*	100n	5.0	8.0m	1.0m	5.0	5.0	80u#	850n	150m	400u	NAD	AD	PT38			
25	OP537	15	10	0	100n	10	10m	1.0m	2.0m	5.0	5.0	2.5n#	850n	400m	400u	1.0m	NAD	AB	PT90a		
26	OP640	25	20	0	100n	10	800u	2.0m	2.0m	5.0	5.0	5.0u#	850n	400m	400u	20m	NAD	AA	PT6b		
27	OP700	25	20	0	100n	10	800u	2.0m	2.0m	5.0	5.0	5.0u#	850n	400m	400u	20m	NAD	AA	PT27		
28	OP701	25	20	0	100n	10	1.5m	2.0m	2.0m	5.0	5.0	5.0u#	850n	400m	400u	20m	NAD	AA	PT27		
29	OP702	25	20	0	100n	10	3.0m	2.0m	2.0m	5.0	5.0	5.0u#	850n	400m	400u	20m	NAD	AA	PT27		
30	OP703	25	20	0	100n	10	6.0m	2.0m	2.0m	5.0	5.0	5.0u#	850n	400m	400u	20m	NAD	AA	PT27		
31	OP501	30	20	0	100n	15	1.0m	2.0m	2.0m	5.0	5.0						AB	PT88			
32	OP507	30	20	0	100n	15	500u	2.0m	2.0m	5.0	5.0						AB	PT90			
33	OP560	30	20	0	100n	10	500u	1.0m	1.0m	5.0	5.0						AA	PT89			
34	SD3443-2	30	20	0	6C*	100n	15	1.0m	5.0m	5.0	5.0	6.0u#	850n	200m	400u	5.0m	NAD	AH	PT39		
35	SD3443-3	30	20	0	6C*	100n	15	2.0m	5.0m	5.0	5.0	8.0u#	850n	200m	400u	5.0m	NAD	AH	PT39		
36	SD3443-4	30	20	0	6C*	100n	15	4.0m	5.0m	5.0	5.0	18u#	850n	200m	400u	5.0m	NAD	AH	PT39		
37	SD5443-2	30	20	0	6C*	100n	15	4.0m	5.0m	5.0	5.0	4.0u#	850n	200m	400u	5.0m	NAD	AH	PT38		
38	SD5443-3	30	20	0	6C*	100n	15	8.0m	5.0m	5.0	5.0	6.0u#	850n	200m	400u	5.0m	NAD	AH	PT38		
39	SD5443-4	30	20	0	6C*	100n	15	16m	5.0m	5.0	5.0	8.0u#	850n	200m	400u	5.0m	NAD	AH	PT38		
40	STPT40	30	20	0	6C*	25n	30	1.0m	9.0	5.0	5.0	2.5u#	850n	300m	400u		AD	PT23			
41	OPC60X	30	20	0	100u	100u	10	800u	5.0m	5.0	5.0						AD	PT63*			
42	OPC600L	45	20	0	100u	100u	10	800u	2.0m	5.0	5.0						AD	PT66*			
43	SD1440-2	50	20	0	6C*	25n	30	1.5m	5.0m	5.0	5.0	4.0u#	850n	300m	400u	NAD	AB	PT40a			
44	SD1440-3	50	20	0	6C*	25n	30	3.0m	5.0m	5.0	5.0	8.0u#	850n	300m	400u	NAD	AB	PT40a			
45	SD1440-4	50	20	0	6C*	25n	30	6.0m	5.0m	5.0	5.0	16u#	850n	300m	400u	NAD	AB	PT40a			
46	SD1441-2	50	20	0	6C*	100n	30	2.0m	2.0m	5.0	5.0	12u#	850n	300m	400u	NAD	AA	PT25			
47	SD1441-3	50	20	0	6C*	100n	30	4.0m	2.0m	5.0	5.0	20u#	850n	300m	400u	NAD	AA	PT25			
48	SD2440-2	50	20	0	6C*	25n	30	2.0m	2.0m	5.0	5.0	4.0u#	850n	300m	400u	NAD	AB	PT6b			
49	SD2440-3	50	20	0	6C*	25n	30	4.0m	2.0m	5.0	5.0	8.0u#	850n	300m	400u	NAD	AB	PT6b			
50	SD2440-4	50	20	0	6C*	25n	30	7.0m	2.0m	5.0	5.0	14u#	850n	300m	400u	NAD	AB	PT6a			
51	SD2441-2	50	20	0	6C*	100n	30	4.0m	2.0m	5.0	5.0	4.0u#	850n	300m	400u	NAD	AB	PT6a			
52	SD2441-3	50	20	0	6C*	100n	30	8.0m	2.0m	5.0	5.0	8.0u#	850n	300m	400u	NAD	AB	PT6a			
53	SD2441-4	50	20	0	6C*	100n	30	12m	2.0m	5.0	5.0	12u#	850n	300m	400u	NAD	AB	PT6a			
54	SD3440-2	50	20	0	6C*	25n	30	600u	2.0m	5.0	5.0	4.0u#	850n	300m	400u	NAD	AD	PT41			
55	SD3440-3	50	20	0	6C*	25n	30	1.2m	2.0m	5.0	5.0	8.0u#	850n	300m	400u	NAD	AD	PT41			
56	SD3440-4	50	20	0	6C*	25n	30	2.4m	2.0m	5.0	5.0	16u#	850n	300m	400u	NAD	AH	PT38			
57	SD5440-2	50	20	0	6C*	25n	30	2.0m	5.0m	5.0	5.0	1.5u#	850n	300m	400u	NAD	AH	PT38			
58	SD5440-3	50	20	0	6C*	25n	30	4.0m	5.0m	5.0	5.0	3.0u#	850n	300m	400u	NAD	AH	PT38			
59	SD5440-4	50	20	0	6C*	25n	30	8.0m	5.0m	5.0	5.0	6.0u#	850n	300m	400u	NAD	AH	PT38			
60	STPT60	50	20	0	6C*	25n	30	500u	2.0m	5.0	5.0	1.5u#	850n	300m	400u	20m	AD	AB	PT43a		
61	STPT61	50	20	0	6C*	25n	30	500u	2.0m	5.0	5.0	1.5u#	850n	150m	400u	20m	AD	AB	PT43a		
62	STPT62	50	20	0	6C*	25n	30	2.0m	2.0m	5.0	5.0	1.5u#	850n	150m	400u	20m	AD	AB	PT43a		
63	STPT63	50	20	0	6C*	25n	30	4.0m	2.0m	5.0	5.0	1.5u#	850n	150m	400u	20m	AD	AB	PT43a		
64	STPT64	50	20	0	6C*	25n	30	7.0m	2.0m	5.0	5.0	1.5u#	850n	150m	400u	20m	AD	AB	PT43a		
65	STPT260Q	50	20	0	4A*	25n	10	27m	5.0m	5.0	5.0	18u#	850n	300m	400u	20m	AD	AB	PT32b		
66	STPT1520-2	50	20	0	6C*	25n	30	1.5m	5.0m	5.0	5.0	4.0u#	850n	300m	400u	NAD	AD	PT40			
67	STPT1520-3	50	20	0	6C*	25n	30	3.0m	5.0m	5.0	5.0	8.0u#	850n	300m	400u	NAD	AD	PT40			
68	STPT1520-4	50	20	0	6C*	25n	30	6.0m	5.0m	5.0	5.0	16u#	850n	300m	400u	NAD	AD	PT40			
69	STPT1530-2	50	20	0	6C*	100n	30	2.0m	2.0m	5.0	5.0	12u#	850n	300m	400u	NAD	AJ	PT71			
70	STPT1530-3	50	20	0	6C*	100n	30	4.0m	2.0m	5.0	5.0	20u#	850n	300m	400u	NAD	AJ	PT71			
71	STPT1630-2	50	20	0	6C*	100n	30	4.0m	2.0m	5.0	5.0	4.0u#	850n	300m	400u	NAD	AB	PT6e			
72	STPT1630-3	50	20	0	6C*	100n	30	8.0m	2.0m	5.0	5.0	8.0u#	850n	300m	400u	NAD	AB	PT6e			
73	STPT1630-4	50	20	0	6C*	100n	30	12m	2.0m	5.0	5.0	12u#	850n	300m	400u	NAD	AB	PT6e			
74	STPT1820-2	50	20	0	6C*	25n	30	600u	2.0m	5.0	5.0	4.0u#	850n	300m	400u	NAD	AD	PT41			
75	STPT1820-3	50	20	0	6C*	25n	30	1.2m	2.0m	5.0	5.0	8.0u#	850n	300m	400u	NAD	AD	PT41</			





# 11. SENSOR: PHOTOTRANSISTOR

IN ORDER OF: (1)PWR DISS-Pcase (2) MAX. VCEO  
(3) MAX. IC & (4) TYPE No.

LINE No.	TYPE No.	MAX. RATINGS @25°C			TEMP. RING. CODE	MAX. DARK CURR. ID @25°C	MIN. LIGHT CURR. IL (A)	TEST CONDITIONS				RESP. TIME (S)	PEAK WAVELENGTH. λp (nm)	MAX. COLLECTOR SATURATION VOLT			P O L A	M T L	FEAT -URES	LEAD CODE	DRAWING Ø-RND. Δ-RECT. *-CHIP
		1 PWR. DISS. Pcase (W)	2 C/E VOLT VCEO (V)	3 COL CURR IC (A)				Ee (W/cm²)	S R C	λ (m)	VCE (V)			V (V)	IC (A)	Ee W/cm²					
1#	PN101	150m*	30	50m	3C	5.0n†	10					3.0u#	800n	200m†	1.0m	500m\$	NAD	NAD	AA	PT14a	
2#	PN101F	150m*	30	50m	28*	5.0n†	10	300u†	100 \$	C		3.0u#	800n†	200m†	100u	500m\$	NAD	NAD	AB	PD8d	
3#	PN102	150m*	30	50m	3C	5.0n†	10					3.0u#	800n	200m†	1.0m	500m\$	NAD	NAD	AD	PT2g	
4#	PN102F	150m*	30	50m	28	300n	10	300u†	100 \$	C		3.0u#	800n	200m†	100u	500 \$	NAD	NAD	AD	PT18n	
5#	TPS601	150m*	30	50m	3C*	500n	30	10m	10m			2.0u#	800n	500m	5.0m	10m	AD	AD	AA	PD7c	
6#	TPS604	150m*	30	50m	3C*	500n	30	10m	10m			2.0u#	800n	500m	5.0m	10m	NAD	NAD	AD	PT34d	
7#	2B50PB	150m*	30	100m	49#	100n	5.0	900u	1.0m			6.0u#	850n	300m	1.0m	1.0m	AD	AD	AJ	PT32f	
8#	2B50PC	150m*	30	100m	49#	100n	5.0	1.8m	1.0m			9.0u#	850n	300m	1.0m	1.0m	AD	AD	AJ	PT32f	
9#	PT550	150m*	35	100m	2C*	100n	10	20m†	100u	B		350u#	800n				NAD	NAD	AD	PT2u	
10#	PT550F	150m*	35	100m	2C*	1.0u	10	3.0m	1.0m	B		5.0	350u#	800n			NAD	NAD	AD	PT2v	
11#	BPX70	180m*	30	25m	4C#	100n	20	100u	4.7m	C		5.0	3.0u#	800n			NAD	NAD	AD	PT34a	
12#	BPX70C	180m*	30	25m	4C#	100n	20	100u	4.7m	C		5.0	3.0u#	800n			NAD	NAD	AD	PT34a	
13#	BPX70D	180m*	30	25m	4C#	100n	20	200u	4.7m	C		5.0	3.0u#	800n			NAD	NAD	AD	PT34a	
14#	BPX70E	180m*	30	25m	4C#	100n	20	300u	4.7m	C		5.0	3.0u#	800n			NAD	NAD	AD	PT34a	
15#	BPX72	180m*	30	25m	4C#	100n	20	500u	4.7m	C		5.0	6.0u#	800n			NAD	NAD	AD	PT34a	
16#	BPX72C	180m*	30	25m	4C#	100n	20	500u	4.7m	C		5.0	6.0u#	800n			NAD	NAD	AD	PT34a	
17#	BPX72D	180m*	30	25m	4C#	100n	20	850u	4.7m	C		5.0	6.0u#	800n			NAD	NAD	AD	PT34a	
18#	BPX72E	180m*	30	25m	4C#	100n	20	1.4m	4.7m	C		5.0	6.0u#	800n			NAD	NAD	AD	PT34a	
19	FPT132	200m	10	25m	58#	500n	5.0	200u*	1.0m	C		5.0	18u#	850n	700m	1.0m	20m	NAD	NAD	AD	PT37
20	FPT137	200m	10	25m	58#	500n	5.0	200u*	1.0m	C		5.0	18u#	850n	700m	1.0m	20m	NAD	NAD	AD	PT36
21	FPT120A	200m	15	25m	58#	100n	5.0	1.5m*	1.0m	C		5.0	18u#	850n	550m	1.0m	20m	NAD	NAD	AD	PT37
22	FPT120B	200m	15	25m	58#	100n	5.0	2.0m*	1.0m	C		5.0	18u#	850n	550m	1.0m	20m	NAD	NAD	AD	PT37
23	FPT120C	200m	15	25m	58*	100n	5.0	16m*	1.0m	C		5.0	18u#	850n	550m	1.0m	20m	NAD	NAD	AD	PT37
24	FPT130A	200m	15	25m	58#	100n	5.0	900u*	1.0m	C		5.0	18u#	850n	550m	1.0m	20m	NAD	NAD	AD	PT36
25	FPT130B	200m	15	25m	58#	100n	5.0	1.2m*	1.0m	C		5.0	18u#	850n	550m	1.0m	20m	NAD	NAD	AD	PT36
26	FPT131	200m	15	25m	58#	500n	5.0	100u*	5.0m	C		5.0	2.8u#	850n	700m	500u	20m	NAD	NAD	AD	PT37
27	FPT136	200m	15	25m	58#	500n	5.0	100u*	5.0m	C		5.0	2.8u#	850n	700m	500u	20m	NAD	NAD	AD	PT36
28	STPT120	200m	15	25m	58*	100n	5.0	400u	1.0m	C		5.0	18u#	800n	550m	1.0m	20m	AD	AD	AD	PT37c
29	STPT120A	200m	15	25m	58*	100n	5.0	1.5m	1.0m	C		5.0	18u#	800n	550m	1.0m	20m	AD	AD	AD	PT37c
30	STPT120B	200m	15	25m	58*	100n	5.0	2.0m	1.0m	C		5.0	18u#	800n	550m	1.0m	20m	AD	AD	AD	PT37c
31	STPT130	200m	15	25m	58*	100n	5.0	400u	1.0m	C		5.0	20u#	800n	550m	1.0m	20m	AD	AD	AD	PT36b
32	STPT130A	200m	15	25m	58*	100n	5.0	900u	1.0m	C		5.0	20u#	800n	550m	1.0m	20m	AD	AD	AD	PT36b
33	STPT130B	200m	15	25m	58*	100n	5.0	1.2m	1.0m	C		5.0	20u#	800n	550m	1.0m	20m	AD	AD	AD	PT36b
34	FPT120	200m	20	25m	58#	100n	5.0	400u*	1.0m	C		5.0	18u#	850n	550m	1.0m	20m	NAD	NAD	AD	PT37a
35	FPT130	200m	20	25m	58#	100n	5.0	400u*	1.0m	C		5.0	18u#	850n	550m	1.0m	20m	NAD	NAD	AD	PT36a
36	FPT220	200m	20	25m	58#	100n	5.0	1.0m*	1.0m	C		5.0	18u#	850n	550m	1.0m	20m	NAD	NAD	AD	PT37a
37	FPT230	200m	20	25m	58#	100n	5.0	600u*	1.0m	C		5.0	18u#	850n	550m	1.0m	20m	NAD	NAD	AD	PT36a
38	FPT320	200m	20	25m	58#	100n	5.0	750u*	1.0m	C		5.0	18u#	850n	550m	1.0m	20m	NAD	NAD	AD	PT37a
39	FPT330	200m	20	25m	58#	100n	5.0	450u*	1.0m	C		5.0	18u#	850n	550m	1.0m	20m	NAD	NAD	AD	PT36a
40#	OPT500	200m	30		XD*	25n	30	200u	20m	E		5.0	10u	700n	400m		20m	NAD	NAD	AJ	PT32m
41	VT19013	200m	30			100n	5.0	5.0m	5.0m	C		5.0	10u	850n	150m†	1.0m	5.0m	NAD	NAD	AD	PT36
42	VT19113	200m	30			100n	5.0	12m	5.0m	C		5.0	10u	850n	150m†	1.0m	5.0m	NAD	NAD	AD	PT37
43	FPT100	200m	30	25m	58#	100n	5.0	200u	5.0m	C		5.0	2.8u#	800n	300m	500u	20m	NAD	NAD	AD	PT37
44	FPT100A	200m	30	25m	58#	100n	5.0	1.0m	5.0m	C		5.0	2.8u#	800n	300m	500u	20m	NAD	NAD	AD	PT37
45	FPT100B	200m	30	25m	58#	100n	5.0	1.3m	5.0m	C		5.0	2.8u#	800n	300m	500u	20m	NAD	NAD	AD	PT37
46	FPT110	200m	30	25m	58#	100n	5.0	200u*	5.0m	C		5.0	2.8u#	800n	330m	500u	20m	NAD	NAD	AD	PT36
47	FPT110A	200m	30	25m	58#	100n	5.0	600u*	5.0m	C		5.0	2.8u#	800n	330m	500u	20m	NAD	NAD	AD	PT36
48	FPT110B	200m	30	25m	58#	100n	5.0	800u*	5.0m	C		5.0	2.8u#	800n	330m	500u	20m	NAD	NAD	AD	PT36
49	LPT100	200m	30	25m	58	100n	5.0	200u	50m	C		5.0	2.8u	800n	300m	500u	20m	NBC	NBC	AD	PT37
50	LPT100A	200m	30	25m	58	100n	5.0	1.0m	50m	C		5.0	2.8u	800n	300m	500u	20m	NBC	NBC	AD	PT37
51	LPT100B	200m	30	25m	58	100n	5.0	1.3m	50m	C		5.0	2.8u	800n	300m	500u	20m	NBC	NBC	AD	PT37
52	LPT110	200m	30	25m	58	100n	5.0	200u	50m	C		5.0	2.8u	800n	330m	500u	20m	NBC	NBC	AD	PT36
53	LPT110A	200m	30	25m	58	100n	5.0	600u	50m	C		5.0	2.8u	800n	330m	500u	20m	NBC	NBC	AD	PT36
54	LPT110B	200m	30	25m	58	100n	5.0	800u	50m	C		5.0	2.8u	800n	330m	500u	20m	NBC	NBC	AD	PT36
55#	MFPT100	200m	30	25m	58#	100n	5.0	200u	5.0m	C		5.0	2.8u#	800n	300m	500u	20m	NAD	NAD	AH	PT56b
56#	MFPT100A	200m	30	25m	58#	100n	5.0	1.0m		C		5.0	2.8u#	800n	300m	500u	20m	NAD	NAD	AH	PT56b
57#	MFPT100B	200m	30	25m	58#	100n	5.0	1.3m		C		5.0	2.8u#	800n	300m	500u	20m	NAD	NAD	AH	PT56b
58	STPT100	200m	30	25m	58*	100n	5.0	200u	5.0m	C		5.0	2.8u#	800n	300m	500u	20m	AD	AD	AD	PT37b
59	STPT100A	200m	30	25m	58*	100n	5.0	1.0m	5.0m	C		5.0	2.8u#	800n	300m	500u	20m	AD	AD	AD	PT37b
60	STPT100B	200m	30	25m	58*	100n	5.0	1.3m	5.0m	C		5.0	2.8u#	800n	300m	500u	20m	AD	AD	AD	PT37b
61	STPT110	200m	30	25m	58*	100n	5.0	200u	5.0m	C		5.0	2.8u#	800n	330m	500u	20m	AD	AD	AD	PT36
62	STPT110A	200m	30	25m	58*	100n	5.0	600u	5.0m	C		5.0	2.8u#	800n	330m	500u	20m	AD	AD	AD	PT36
63	STPT110B	200m	30	25m	58*	100n	5.0	800u	5.0m	C		5.0	2.8u#	800n	330m	500u	20m	AD	AD	AD	PT36
64	MT1	200m*	30	40m	5C*	20n	5.0	6.0m*	10m	E	900n	5.0	2.0u#	850n	500m	2.0m	10m	NAD	NAD	AD	PT18a
65	MT2	200m*	30	40m	5C*	20n	5.0	12m*	10m	E	900n	5.0	2.0u#	850n	500m	2.0m	10m	NAD	NAD	AD	PT18a
66	MT8020	200m*	30	40m	5A	50n	10	7.5m†	10m	A	900n	30	2.5u#	800n	400m	1.6m	10m	NAD	NAD	AB	PD89g
67	NSL610-1	200m*	30	50m	XC*	50n	15	200u	10m	C		5.0	3.0u#	825n	500m	500u	20m	NAD	NAD	AD	PT32g
68	NSL610-3	200m*	30	50m	XC*	50n	15	1.0m	10m	C		5.0	3.0u#	825n	500m	500u	20m	NAD	NAD	AD	PT32g
69	NSL610-6	200m*	30	50m	XC*	50n	15	4.0m	10m	C		5.0	4.0u#	825n	500m	500u	20m	NAD	NAD	AD	PT32g



# 11. SENSOR: PHOTOTRISTOR

IN ORDER OF: (1)PWR DISS-Pcase (2) MAX. VCEO  
(3) MAX. IC & (4) TYPE No.

LINE No.	TYPE No.	MAX. RATINGS @25°C			TEMP RING. CODE	MAX. DARK CURR. ID @25°C	MIN. LIGHT CURR. IL (A)	TEST CONDITIONS			RESP. TIME (S)	PEAK WAVE. LNGTH. λp (m)	MAX. COLLECTOR SATURATION VOLT VCE(SAT)			P O L A R I Z A T I O N	M T L	FEAT URES	LEAD CODE	DRAWING Ø-RND. Δ-STRIP *-CHIP
		1 PWR. DISS. Pcase (W)	2 VCEO (V)	3 COL. CURR. IC (A)				Ee (W/cm2)	S R C	λ (m)			VCE (V)	IC (A)	Ee W/cm2					
1	CLT2020	250m	30	200ms	6F5	25n	10	400u	5.0	3.0u	300m	10m	0	NAD			AD	PT18		
2	CLT2030	250m	30	200ms	6F5	25n	10	1.0m	5.0	3.0u	300m	10m	0	NAD			AD	PT18		
3	CLT2160	250m	30	200ms	6F5	25n	10	4.0m	5.0	3.0u	300m	10m	0	NAD			AD	PT20		
4	VTT1010	250m*	30	200m	6M	500pt	20	1.0m	5.0	5.0u#	775n	100mt	1.0m	20m	N		AD	PT12a		
5	VTT1023	250m*	30	200m	6M	500pt	20	600u	5.0	3.0u#	775n	150mt	1.0m	20m	N		AD	PT12a		
6	VTT1112	250m*	30	200m	6M	500pt	20	4.0m	5.0	5.0u#	775n	100mt	1.0m	20m	N		AD	PT12		
7	VTT1123	250m*	30	200m	6M	500pt	20	3.0m	5.0	3.0u#	775n	150mt	1.0m	20m	N		AD	PT12		
8	CLCT5320	250m*	35	100u	5F5	40n	10	400u	5.0	5.0u#	500m	500m					AD	PT67a*		
9	CLCT5511	250m*	35	100u	5F5	40n	10	200u	5.0	5.0u#	500m	500m					AD	PT67*		
10	CLR2049	250m	40	100m	5C5	100n	10	200u	200u	5.0	940n	5.0	5.0u#	850n	300m	1.0m	1.0m	AD	PT2e	
11#	2B95B	250m	40	100m	5C5	100n	5.0	6.0m	100u	5.0	940n	5.0	9.0u#	850n	300m	1.0m	1.0m	AD	PT2e	
12#	2B95C	250m	40	100m	5C5	100n	5.0	12m	100u	5.0	940n	5.0	9.0u#	850n	300m	1.0m	1.0m	AD	PT2e	
13	CLT2140	250m	40	200ms	6F5	25n	10	1.2m	5.0	3.0u	300m	10m	0	NAD			AD	PT20		
14	CLT2150	250m	40	200ms	6F5	25n	10	2.4m	5.0	3.0u	300m	10m	0	NAD			AD	PT20		
15	VTT1011	250m*	40	200m	6M	500pt	20	400u	5.0	5.0u#	775n	100mt	1.0m	20m	N		AD	PT12a		
16	VTT1022	250m*	40	200m	6M	500pt	20	300u	5.0	2.0u#	775n	150mt	1.0m	20m	N		AD	PT12a		
17	VTT1111	250m*	40	200m	6M	500pt	20	2.0m	5.0	5.0u#	775n	100mt	1.0m	20m	N		AD	PT12		
18	VTT1122	250m*	40	200m	6M	500pt	20	1.2m	5.0	2.0u#	775n	150mt	1.0m	20m	N		AD	PT12		
19	MFOD200	250m*	40	250m	5H5	25n	20	3.0m	1.0m	4.0u*	900n	20*	4.0u*	810n				NAD	PT20	
20	MRD300	250m	50	6M5	25n	20*	4.0m	5.0m	5.0	2.5u#								NAD	PT2a	
21	MRD310	250m	50	6M5	25n	20*	1.0m	5.0m	5.0	2.5u#								NAD	PT2a	
22	STPT300	250m*	50	6M*	25n	20*	1.0m	200u	5.0	1.0u	800n	20*	1.0u	800n				NAD	PT2m	
23	STPT310	250m*	50	6M*	25n	20*	4.0m	800u	5.0	1.0u	800n	20*	1.0u	800n				NAD	PT2m	
24	VTT1020	250m*	50	50m	6M	500pt	20	75u	5.0	1.0u#	775n	150mt	1.0m	20m	N		AD	PT12a		
25	VTT1021	250m*	50	50m	6M	500pt	20	150u	5.0	2.0u#	775n	150mt	1.0m	20m	N		AD	PT12a		
26	CLT2010	250m	50	200ms	6F5	25n	10	200u	5.0	3.0u	300m	10m	0	NAD			AD	PT18		
27	CLT2130	250m	50	200ms	6F5	25n	10	600u	5.0	3.0u	350m	10m	0	NAD			AD	PT20		
28	VTT1012	250m*	50	200m	6M	500pt	20	200u	5.0	3.0u#	775n	100mt	1.0m	20m	N		AD	PT12		
29	VTT1110	250m*	50	200m	6M	500pt	20	1.0m	5.0	3.0u#	775n	100mt	1.0m	20m	N		AD	PT12		
30	VTT1120	250m*	50	200m	6M	500pt	20	250u	5.0	1.0u#	775n	150mt	1.0m	20m	N		AD	PT12		
31	VTT1121	250m*	50	200m	6M	500pt	20	650u	5.0	2.0u#	775n	150mt	1.0m	20m	N		AD	PT12		
32	FF600	300m	15	15	6M5	8.0m	10	800u	1.0*	10	30n							NAD	JFET	
33	FF617	300m	15	15	6M5	8.0m	10	800u	1.0*	10	30n							NAD	JFET	
34#	PH241N	300m	25	15	6F%	3.0m	15	40u	1.0*	15	30n							GG	PT20	
35#	PH242N	300m	25	15	6F%	6.0m	15	50u	1.0*	15	30n							GG	PT20	
36#	PH243N	300m	25	15	6F%	15m	15	75u	1.0*	15	30n							GG	PT20	
37	FF409	300m	30	15	6M5	5.0m	15	144u	1.0*	15	25n							NAD	JFET	
38	FF411	300m	30	15	6M5	5.0m	15	144u	1.0*	15	25n							NAD	JFET	
39	FF412	300m	30	15	6M5	5.0m	15	144u	1.0*	15	25n#							NAD	JFET	
40	FF413	300m	30	15	6M5	5.0m	15	144u	1.0*	15	25n#							NAD	JFET	
41#	MEL31	300m	30	50m	585	50n	5.0	10u	2.0m	5.0	4.0u#	800n	350m	500u	2.0m	NAD		AD	PT56b	
42#	BPX25	300m	32	50m	5C*	1.0u	24	2.5m	1.0k\$	5.0	1.8u#	800n						NAD	PT20	
43#	BPX29	300m	32	50m	5C*	1.0u	24	250u	1.0k\$	5.0	2.4u#	800n						NAD	PT18	
44#	BPY62I	300m	32	100m	5C5	100n	25	5.0	20m	5.0	10u	800n	300m	1.0m	5.0m	NAD		AD	PT2p	
45#	BPY62II	300m	32	100m	5C5	100n	25	9.0	20m	5.0	10u	800n	300m	1.0m	5.0m	NAD		AD	PT2p	
46#	BPY62III	300m	32	100m	5C5	100n	25	14	20m	5.0	10u	800n	300m	1.0m	5.0m	NAD		AD	PT2p	
47#	MEL32	300m	40	50m	585	50n	5.0	30u	2.0m	5.0	4.0u#	800n	350m	500u	2.0m	NAD		AD	PT56b	
48#	BP103I	300m	100	100m	5C5	100n	30	700u	20m	5.0	10u	850n	190m	2.5m	5.0m	NAD		AD	PT34b	
49#	BP103II	300m	100	100m	5C5	100n	30	1.1m	20m	5.0	10u	850n	160m	2.5m	5.0m	NAD		AD	PT34b	
50#	BP103III	300m	100	100m	5C5	100n	30	1.8m	20m	5.0	10u	850n	150m	2.5m	5.0m	NAD		AD	PT34b	
51#	BP103IV	300m	100	100m	5C5	100n	30	2.8m	20m	5.0	10u	850n	150m	2.5m	5.0m	NAD		AD	PT34b	
52#	BPX38I	330m	50	50m	5H5	200n	25	1.6m	20m	5.0	5.0u	870n	175m	2.0m	5.0m	NAD		AD	PT18f	
53#	BPX38II	330m	50	50m	5H5	200n	25	2.5m	20m	5.0	6.0u	870n	175m	2.0m	5.0m	NAD		AD	PT18f	
54#	BPX38III	330m	50	50m	5H5	500n	25	4.5m	20m	5.0	8.0u	870n	160m	2.0m	5.0m	NAD		AD	PT18f	
55#	BPX38IV	330m	50	50m	5H5	500n	25	7.0m	20m	5.0	12u	870n	140m	2.0m	5.0m	NAD		AD	PT18f	
56#	BPX43I	330m	50	100m	5H5	200n	25	9.0m	20m	5.0	5.0u	870n	175m	2.0m	5.0m	NAD		AD	PT2p	
57#	BPX43II	330m	50	100m	5H5	200n	25	14m	20m	5.0	6.0u	870n	175m	2.0m	5.0m	NAD		AD	PT2p	
58#	BPX43III	330m	50	100m	5H5	500n	25	22m	20m	5.0	8.0u	870n	160m	2.0m	5.0m	NAD		AD	PT2p	
59#	BPX43IV	330m	50	100m	5H5	500n	25	35m	20m	5.0	12u	870n	140m	2.0m	5.0m	NAD		AD	PT2p	
60#	MAL100	360m	30	50m	5F%	100n	5.0	200u	2.0m	5.0	5.0u*	800n						NAD	PT34	
61#	MEL100	360m	30	50m	5F%	100n	5.0	200u	2.0m	5.0	5.0u*	800n						NAD	PT56b	
62#	BPW13A	375m	32	50m	5H%	100n	20	200u	1.0k\$	735n	32	1.6u#	780n	300m	100u	1.0k\$	NAD		AD	PT18
63#	BPW13B	375m	32	50m	5H%	100n	20	300u	1.0k\$	735n	32	1.6u#	780n	300m	100u	1.0k\$	NAD		AD	PT18
64#	BPW13C	375m	32	50m	5H%	100n	20	500u	1.0k\$	735n	32	1.6u#	780n	300m	1.0m	1.0k\$	NAD		AD	PT18
65#	BPW14A	375m	32	50m	5H%	100n	20	2.0m	1.0k\$	735n	32	1.6u#	780n	300m	100u	1.0k\$	NAD		AD	PT20
66#	BPW14B	375m	32	50m	5H%	100n	20	3.0m	1.0k\$	735n	32	1.6u#	780n	300m	1.0m	1.0k\$	NAD		AD	PT20
67#	BPW14C	375m	32	50m	5H%	100n	20	5.0m	1.0k\$	735n	32	1.6u#	780n	300m	1.0m	1.0k\$	NAD		AD	PT20
68	FF102	400m	15	15	6M5	5.0m	10	15u	1.0*	10	30n#							NAD	JFET	
69	FF108	400m	15	15	6M5	5.0m	10	15u	1.0*	10	30n#							NAD	JFET	
70	FF626	400m	15	15	6M5	8.0m	10	800u	1.0*	10	30n#							NAD	JFET	
71	FF627	400m	15	15	6M5	8.0m	10	800u	1.0*	10	30n#							NAD	JFET	
72	HEPP0001-RT	400m*	30	6M5	100n	20*	400u	1.0m	5.0	2.0u#	800n							NAD	PT20	
73	MRD3050	400m	30	6M5	100n	20*	100u	5.0m	5.0	2.0u#	800n							NAD	PT20	
74	MRD3051	400m	30	6M5	100n	20*	200u	5.0m	5.0	2.0u#	800n							NAD	PT20	
75	MRD3054	400m	30	6M5	100n	20*	500u	5.0m	5.0	2.0u#	800n							NAD	PT20	
76	MRD3055	400m	30	6M5	100n	20*	1.5m	5.0m	5.0	2.0u#	800n							NAD	PT20	
77	MRD3056	400m	30	6M5	100n	20*	2.0m	5.0m	5.0	2										

# 12. SENSOR: PHOTODARLINGTON

IN ORDER OF: (1)PWR DISS-Pcase (2) MAX. VCEO  
(3) MAX. IC & (4) TYPE No.

LINE No.	TYPE No.	MAX. RATINGS @ 25°C			TEMP RING. CODE	MAX. DARK CURR. @ 25°C		MIN. LIGHT CURR. (A)	TEST CONDITIONS			RESP. TIME (S)	PEAK WAVELENGTH. λp (m)	MINIMUM DC CURRENT GAIN			P O L L FEAT URES	LEAD CODE	DRAWING Δ-RND. RECT Δ-STRIP *-CHIP
		1 PWR. DISS. Pcase (W)	2 C/E VCEO (V)	3 COL CURR IC (A)		ID (A)	VCE (V)		Ee (W/cm2)	S R C λ (m)	VCE (V)			hFE	VCE (V)	IC (A)			
1	SD1410-1		10	∅	67*	1.0u	10	600u	200u	E	5.0	15u#	850n			AD	DB	PT40a	
2	SD2410-1		10	∅	67*	1.0u	10	1.0m	1.0m	E	5.0	15u#	850n			AD	DB	PT6b	
3	SD3410-1		10	∅	67*	1.0u	10	600u	2.0m	E	5.0	15u#	850n			AD	ES	PT39a	
4	SD3410-1B		10	∅	67*	1.0u	10	600u	2.0m	E	5.0	15u#	850n			AD	DE	PT39	
5	SD5410-1		10	∅	67*	1.0u	10	2.0m	200u	E	5.0	15u#	850n			AD	ES	PT38a	
6	SD5410-1B		10	∅	67*	1.0u	10	2.0m	200u	E	5.0	15u#	850n			AD	DE	PT38	
7	STPD1510-1		10	∅	67*	1.0u	10	600u	200u	E	5.0	15u#	820n			AD	AB	PT40	
8	STPD1610-1		10	∅	67*	1.0u	10	1.0m	1.0m	E	5.0	15u#	820n			AD	AB	PT6d	
9	STPD1810-1		10	∅	67*	1.0u	10	600u	1.0m	E	5.0	15u#	820n			AD	AD	PT41	
10	STPD2010-1		10	∅	67*	1.0u	10	2.0m	200u	E	5.0	15u#	820n			AD	AD	PT38	
11	OP301		15			250n	10	800u	1.0m	E	5.0	20u#				AD	AB	PT6b	
12	OP302		15			250n	10	1.8m	1.0m	E	5.0	20u#				AD	AB	PT6b	
13	OP303		15			1.0u	10	3.6m	1.0m	E	5.0	20u#				AD	AB	PT6b	
14	OP304		15			1.0u	10	7.0m	1.0m	E	5.0	20u#				AD	AB	PT6b	
15	OP305		15			1.0u	10	1.4m	1.0m	E	5.0	20u#				AD	AB	PT6b	
16	SD1410-2		15	∅	67*	250n	10	2.0m	200u	E	5.0	25u#	850n			AD	DB	PT40a	
17	SD1410-3		15	∅	67*	250n	10	4.0m	200u	E	5.0	75u#	850n			AD	DB	PT40a	
18	SD1410-4		15	∅	67*	250n	10	8.0m	200u	E	5.0	125u#	850n			AD	DB	PT40a	
19	SD2410-2		15	∅	67*	250n	10	3.0m	1.0m	E	5.0	75u#	850n			AD	DB	PT6b	
20	SD2410-3		15	∅	67*	250n	10	6.0m	1.0m	E	5.0	75u#	850n			AD	DB	PT6b	
21	SD3410-2		15	∅	67*	250n	10	2.0m	2.0m	E	5.0	25u#	850n			AD	ES	PT39a	
22	SD3410-2B		15	∅	67*	250n	10	2.0m	2.0m	E	5.0	25u#	850n			AD	DE	PT39	
23	SD3410-3		15	∅	67*	250n	10	4.0m	2.0m	E	5.0	75u#	850n			AD	ES	PT39a	
24	SD3410-3B		15	∅	67*	250n	10	4.0m	2.0m	E	5.0	75u#	850n			AD	DE	PT39	
25	SD3410-4		15	∅	67*	250n	10	8.0m	2.0m	E	5.0	125u#	850n			AD	ES	PT39a	
26	SD3410-4B		15	∅	67*	250n	10	8.0m	2.0m	E	5.0	125u#	850n			AD	DE	PT39	
27	SD5410-2		15	∅	67*	250n	10	4.0m	200u	E	5.0	25u#	850n			AD	ES	PT38a	
28	SD5410-2B		15	∅	67*	250n	10	4.0m	200u	E	5.0	25u#	850n			AD	DE	PT38	
29	SD5410-3		15	∅	67*	250n	10	8.0m	200u	E	5.0	75u#	850n			AD	ES	PT38a	
30	SD5410-3B		15	∅	67*	250n	10	8.0m	200u	E	5.0	75u#	850n			AD	DE	PT38	
31	STPD1510-2		15	∅	67*	250n	10	2.0m	200u	E	5.0	25u#	820n			AD	AB	PT40	
32	STPD1510-3		15	∅	67*	250n	10	4.0m	200u	E	5.0	75u#	820n			AD	AB	PT40	
33	STPD1510-4		15	∅	67*	250n	10	8.0m	200u	E	5.0	125u#	820n			AD	AB	PT40	
34	STPD1610-2		15	∅	67*	250n	10	3.0m	1.0m	E	5.0	25u#	820n			AD	AB	PT6d	
35	STPD1610-3		15	∅	67*	250n	10	6.0m	1.0m	E	5.0	75u#	820n			AD	AB	PT6d	
36	STPD1810-2		15	∅	67*	250n	10	2.0m	2.0m	E	5.0	25u#	820n			AD	AD	PT41	
37	STPD1810-3		15	∅	67*	250n	10	4.0m	2.0m	E	5.0	75u#	820n			AD	AD	PT41	
38	STPD1810-4		15	∅	67*	250n	10	8.0m	2.0m	E	5.0	125u#	820n			AD	AD	PT38	
39	STPD2010-2		15	∅	67*	250n	10	4.0m	200u	E	5.0	25u#	820n			AD	AD	PT38	
40	STPD2010-3		15	∅	67*	250n	10	8.0m	200u	E	5.0	75u#	820n			AD	AD	PT38	
41	OPC300		30	∅		250n	10	800u	1.0m	E	5.0	20u#	850n			NAD	EQ	PT65*	
42	OPC300L		30	∅		100u	10	1.0m	1.0m	E	5.0	20u#	850n			NAD	EQ	PT65*	
43	OP300		15	∅	67*	250n	10	800u	1.0m	E	5.0	20u#	850n			NAD	AB	PT6b	
44	OP530		50m*			100n	10	500u	500u	E	5.0	20u#	850n			NAD	AB	PT31	
45	VTA3122		50m*		47 *	6M	3.0n†	4.0m	200u	C	5.0	100u#	775n			N	DB	PT11	
46	CLR3180		50m*		6F‡	100n	10	2.0m	200u	C	5.0	100u#				N	DB	PT11	
47	VTA3121		50m*		6M	3.0n†	10	1.0m	200u	C	5.0	100u#	775n			N		PT68	
48	CLR5101		50m*		200m	6F‡	100n	10	2.0m	200u	C	5.0	150u#			N		PT68	
49	CLR5101-2		50m*		200m	6F‡	100n	10	2.0m	200u	C	5.0	150u#			N		PT68	
50	107-2		100m*		30m	07*	10u	5.0	2.0m	2.0m	E	5.0	100u#			N	ES	PT69	
51#	PN202		100m*		30m	28	500n	10	400u	C	10	100u	800n			NAD	AB	PT74	
52#	PN202S		100m*		30m	28	500n	10	200u	C	10	150u	800n			NAD	AB	PT47	
53#	PH101		100m*		50m	X8‡	500n	15	40u	C	2.0	20u#	850n			NAD	EA	PT60a	
54	107-3		100m*		100m	07*	10u	5.0	1.0m	2.0m	E	5.0	20u#			N	AR	PT69	
55	VTA9313		100m*		50m	5A	30n†	20	8.0m	200u	C	5.0	300u#	775n			N	DA	PT13
56	VTA9323		100m*		50m	5A	30n†	20	2.0m	200u	C	5.0	100u#	775n			N	DA	PT13
57#	ZMX150		100m		35	1.0u						400u			AD	N	PT35		
58#	ZMX132		100m		35	250m‡	8*	1.0u	5.0	200u	10 *	400u#	850n			N	DG	PT33	
59#	ZMX133		100m		35	250m‡	8*	1.0u	5.0	200u	10 *	400u#	850n			N	DG	PT33	
60	VTA9312		100m*		40	50m	5A	30n†	20	3.0m	200u	300u#	775n			N	DA	PT13	
61	VTA9322		100m*		40	50m	5A	30n†	20	750u	200u	300u#	775n			N	DA	PT13	
62	VTA9311		100m*		50	50m	5A	30n†	20	1.0m	200u	300u#	775n			N	DA	PT13	
63	VTA9321		100m*		50	50m	5A	30n†	20	250u	200u	100u#	775n			N	DA	PT13	
64#	6B82		100m		60	50m	5C‡	10n†	5.0	5.0m	100u	500	850n			NAD	EP	PT34c	
65	HEPP1001-RT		200m*		12	6A‡	100n	12	500u	2.0m	E	5.0	250n	800n			NAD	AC	PT8
66	MRD11		200m		12	6A‡	100n	12	500u	2.0m	E	5.0	250u#	1.0u			NAD	DH	PT1
67	2N5777		200m*		25	250m	6A‡	100n	12	500u	2.0m	5.0	250u#	850n			NAD	AC	PT1
68	2N5779		200m*		25	250m	6A‡	100n	12	2.0m	2.0m	5.0	250u#	850n			NAD	AC	PT1
69	FPT400		200m		30	50m	58*	100n	5.0	3.0m	1.0m	5.0	100u	900n			NAD	AD	PT37
70	FPT410		200m		30	50m	58*	100n	5.0	2.0m	1.0m	5.0	100u	900n			NAD	AD	PT36
71#	MEL11		200m*		30	150m	5A%	100n	5.0	500u	2.0m	5.0	100u	900n			AD	AD	PT21
72#	ZMX140		200m		35	5C*	25n	5.0	500u	10 *	10	250u#	850n			NAD	DG	PT34	
73#	ZM100		200m		35	250m‡	8*	1.0u	24	800u	2.0 *	400u#	850n			AD	AD	PT9a	
74#	MEL12		200m*		40	150m	5A%	100n	5.0	1.0m	2.0m	5.0	100u#	900n			AD	AD	PT21
75	2N5778		200m*		40	250m	6A‡	100n	12	500u	2.0m	5.0	250u#	850n			NAD	AC	PT1
76	2N5780		200m*		40	250m	6A‡	100n	12	2.0m	2.0m	5.0	250u#	850n			NAD	AC	PT1
77	OP830		250m		15	1.0u	10	15m	500u	E	5.0	20u#	850n			NAD	AD	PT32e	
78	OP830W		250m		15	1.0u	10	4.0m	500u	E	5.0	20u#	850n			NAD	AD	PT18	
79	VTA1023		250m*		30	50m	6M	10n†	20	2.0m	200u	100u#	775n			N	DG	PT12a	
80	VTA1122		250m*		30	50m	6M	3.0n†	20	3.0m	200u	100u#	775n			N	DG	PT12	
81	VTA1013		250m*		30	200m	6M	10n†	20	8.0m	200u	300u#	775n			N	DG	PT12a	
82	VTA1112		250m*		30	200m	6M	3.0n†	20	15m	200u	300u#	775n			N	DG	PT12	
83	CLCR5590		250m*		35	100u	5F‡	100n	10	10m	5.0m	5.0	100u#				DG	PT66*	
84	CLT2164		250m*		40			100n	10	7.0m	5.0m	5.0						PT	
85	CLT2165																		

# 13. SENSOR: PHOTOTHRISTOR

IN ORDER OF: (1) MAX. IT(RMS) (2) TEMP-T.  
(3) MAX. VDRM & (4) TYPE No.

LINE No.	TYPE No.	MAXIMUM RATINGS @ 25°C				TEMP RING. CODE	MIN. IRRADIANCE TO TRIGGER				MAX IDR @ VDRM @ MAX T	MAX. TURN OFF TIME tq	MAX. IGT @ 25°C	MAX. VGT @ 25°C	MAX. IH @ 25°C	MATER. & FEAT MAT	LEAD CODE	DRAWING Ø-RND. Δ-RECT. Δ-STRIP *-CHIP	
		1 IT(RMS)		3 VDRM Δ-VRRM (V)	ITSM (A)		Ee W/cm2	SOUR CE	λ (m)										VAK (V)
		(A)	2 @ T (°C)						CE	λ									
1	PF30	150m	50A	30	5.0	6C*	10 *	E		10	500n\$						PT18mØ		
2	PF30A	150m	50A	30	5.0	6C*	20 *	E		10	500n\$						PT18mØ		
3	PF60	150m	50A	60	5.0	6C*	10 *	E		10	500n\$						PT18mØ		
4	PF60A	150m	50A	60	5.0	6C*	20 *	E		10	500n\$						PT18mØ		
5	PF100	150m	50A	100	5.0	6C*	10 *	E		10	500n\$						PT18mØ		
6	PF100A	150m	50A	100	5.0	6C*	20 *	E		10	500n\$						PT18mØ		
7	PF200	150m	50A	200	5.0	6C*	10 *	E		10	500n\$						PT18mØ		
8	PF200A	150m	50A	200	5.0	6C*	20 *	E		10	500n\$						PT18mØ		
9	PF300	150m	50A	300	5.0	6C*	75 *	E		10	500n\$						PT18mØ		
10	PF300A	150m	50A	300	5.0	6C*	150 *	E		10	500n\$						PT18mØ		
11	PF400	150m	50A	400	5.0	6C*	75 *	E		10	500n\$						PT18mØ		
12	PF400A	150m	50A	400	5.0	6C*	150 *	E		10	500n\$						PT18mØ		
13#	PT701	200m	25A	400	2.0	2A	45m	B		6.0	1.0m						PT18bØ		
14	L8U	1.6	25C	25	15	6A*	680u			6.0	100m	600n	1.0	220u	800m	560u	AD	KG	PT18bØ
15	L9U	1.6	25C	25	15	6A*	680u			6.0	100m	600n	1.0	220u	800m	560u	AD	KG	PT18bØ
16	L8F	1.6	25C	50	15	6A*	680u			6.0	100m	600n	1.0	220u	800m	560u	AD	KG	PT18bØ
17	L9F	1.6	25C	50	15	6A*	680u			6.0	100m	600n	1.0	220u	800m	560u	AD	KG	PT18bØ
18	L8A	1.6	25C	100	15	6A*	680u			6.0	100m	600n	1.0	220u	800m	560u	AD	KG	PT18bØ
19	L9A	1.6	25C	100	15	6A*	680u			6.0	100m	600n	1.0	220u	800m	560u	AD	KG	PT18bØ
20	L8G	1.6	25C	150	15	6A*	680u			6.0	100m	600n	1.0	220u	800m	560u	AD	KG	PT18bØ
21	L9G	1.6	25C	150	15	6A*	680u			6.0	100m	600n	1.0	220u	800m	560u	AD	KG	PT18bØ
22	L8B	1.6	25C	200	15	6A*	680u			6.0	100m	600n	1.0	220u	800m	560u	AD	KG	PT18bØ
23	L9B	1.6	25C	200	15	6A*	680u			6.0	100m	600n	1.0	220u	800m	560u	AD	KG	PT18bØ
24	L811U	1.6	75C	25	15	6A*	680u			6.0	100m	600n	1.0	220u	800m	560u	AD	KG	PT18cØ
25	L911U	1.6	75C	25	15	6A*	680u			6.0	100m	600n	1.0	220u	800m	560u	AD	KG	PT18cØ
26	L811F	1.6	75C	50	15	6A*	680u			6.0	100m	600n	1.0	220u	800m	560u	AD	KG	PT18cØ
27	L911F	1.6	75C	50	15	6A*	680u			6.0	100m	600n	1.0	220u	800m	560u	AD	KG	PT18cØ
28	L811A	1.6	75C	100	15	6A*	680u			6.0	100m	600n	1.0	220u	800m	560u	AD	KG	PT18cØ
29	L911A	1.6	75C	100	15	6A*	680u			6.0	100m	600n	1.0	220u	800m	560u	AD	KG	PT18cØ
30	L811G	1.6	75C	150	15	6A*	680u			6.0	100m	600n	1.0	220u	800m	560u	AD	KG	PT18cØ
31	L911G	1.6	75C	150	15	6A*	680u			6.0	100m	600n	1.0	220u	800m	560u	AD	KG	PT18cØ
32	L811B	1.6	75C	200	15	6A*	680u			6.0	100m	600n	1.0	220u	800m	560u	AD	KG	PT18cØ
33	L911B	1.6	75C	200	15	6A*	680u			6.0	100m	600n	1.0	220u	800m	560u	AD	KG	PT18cØ

# 14. SENSOR: PHOTOCIRCUIT (IC)

IN ORDER OF: (1) CKT. FUNCTION CODE  
(2) I/P VOLT-Vo (3) I/P IMPED-Zo (4) I/P TYPE No.

LINE No.	4	TYPE No.	CIRCUIT			OUTPUT			TEMP RNG. CODE	RATED SUP. VOLT ΔVs (V)	CURR. ΔIs Pk-Pk (A)	DESCRIPTION	SCHEMATIC	DRAWING Ø-RND. Δ-RECT. Δ-STRIP *-CHIP
			1 FUN CT CODE	2 SENS ELEM CODE	3 VOLT Vo @25°C (V)	4 IMPED. Zo (Ω)	5 25°C f (Hz)							
1		539-01-1	30-10						07*	30	3.0m	Optical Det;Diode Re 30mV/uW;Diode Area 0.8mm sq	BE2	PH2
2		539-01-5	30-10						07*	30	3.0m	Optical Det;Diode Re 30mV/uW;Diode Area 5.0mm sq	BE2	PH2a
3		539-003-1	30-10						07*	30	3.0m	Optical Det;Diode Re 30mV/uW;Diode Area 0.8mm sq	BE2	PH2
4		539-003-5	30-10						07*	30	3.0m	Optical Det;Diode Re 30mV/uW;Diode Area 5.0mm sq	BE2	PH2a
5		539-005-1	30-10						07*	30	3.0m	Optical Det;Diode Re 30mV/uW;Diode Area 0.8mm sq	BE2	PH2
6		539-005-5	30-10						07*	30	3.0m	Optical Det;Diode Re 30mV/uW;Diode Area 5.0mm sq	BE2	PH2a
7#		CS-401	30-10						25*	4.5		Optical Det;Sen 350uA/mW/cm sq;Active Area 1.0mm sq	BE32	PH139
8#		CS-450	30-10						4.5		20m	Optical Det;SW,Sensitivity 80fc-ms at 10.5fc	BE33	PH139
9#		LDH2J	30-10									2-Elem Hyb;250nm NEP 40pW/Hz 1/2;Sens 3mV/uW/sq cm	♦	PH143
10#		LDH2K	30-10									2-Elem Hyb;900nm NEP 2pW/Hz 1/2;Sens 50mV/uW/sq cm	♦	PH143
11#		LDH2L	30-10									2-Elem Hyb;1064nm NEP 4pW/Hz 1/2;Sens 26mV/uW/sq cm	♦	PH143
12		MDA7705	30-10								30	Responsivity 12mV/uW at 905nm;BW11MHz;tr30ns	BE37	PH118a
13		MDA7705SMA	30-10								45	905nm pk typ;FO;Re12kV/W;BW 11MHz;NEP 2.0pW/Hz 1/2	BE37	PH118c
14		MDA7708	30-10								30	Responsivity 4.0mV/uW at 905nm;BW40MHz;tr9ns	BE37	PH118a
15		MDA7708SMA	30-10								45	905nm pk typ;FO;Re4.0kV/W;BW 40MHz;NEP 3.0pW/Hz 1/2	BE37	PH118c
16		MDA7709SMA	30-10								45	F.O.;TIA;905nm pk;Re1.0kV/W;BW 100MHz;NEP 4pW/Hz1/2	BE37	PH118c
17		MDA7710	30-10								30	Responsivity 1.0mV/uW at 905nm;BW100MHz;tr4ns	BE37	PH118a
18#		OSI5JHGA	30-10						27	30	1.2m	Hyb Recvr;Min Responsivity 550mV/uW/Sq cm at 430nm	PH17	PH17
19#		OSI5KHGA	30-10						27	30	1.2m	Hyb Recvr;Min Responsivity 300mV/uW/Sq cm at 430nm	PH17	PH17
20#		OSI5LHGA	30-10						27	30	1.2m	Hyb Recvr;Min Responsivity 2.3V/uW/Sq cm at 900nm	PH17	PH17
21#		OSI5E	30-10			5.0			07	40	1.3m	Responsivity 20mV/lux Typ;BW 3.0kHz min	PH17	PH17
22		DDK528P	30-10			20	40M		12	12	5.0m	Photo Det;Responsivity 75mV/uW;Rise Time 15ns	BE22	PH76
23		MDA431SMA	30-10			50	0.0	0.0	27	15	8.0m	905nm pk typ;FO;Re5.2kV/W;BW 1.0MHz;NEP3.0pW/Hz 1/2	BE37a	PH118b
24		MDA435BNC	30-10			50	0.0	0.0	27	15	8.0m	905nm pk typ;FO;Re10.5kV/W;BW 5.0MHz;NEP5.0pW/Hz1/2	BE37a	PH118b
25		MDA435SMA	30-10			50	0.0	0.0	27	15	8.0m	905nm pk typ;FO;Re10.5kV/W;BW 5.0MHz;NEP5.0pW/Hz1/2	BE37a	PH118b
26		MDA438SMA	30-10			50	0.0	0.0	27	15	8.0m	905nm pk typ;FO;Re3.5kV/W;BW 15MHz;NEP 7.0pW/Hz 1/2	BE37a	PH118b
27		R7500	30-10			50			40	15	15m	Receiver;Responsivity 10mV/uW at 905nm;tr60ns	BE39	
28		R7550	30-10			50			45	15	15m	Receiver;Responsivity 160mV/uW at 905nm;tr60ns	BE38	
29		R7800	30-10			50			40	15	15m	Receiver;Responsivity 3.0mV/uW at 905nm;tr20ns	BE39	
30		UDT600	30-10			50			2A*	30	5.0m	Responsivity (850n) 55 max A/W	BE16a	PH70
31		HAV4000	30-10			80			07*	30	2.2m	WL350-1150nm;NEP(900,20,1)93fW/Hz1/2	BE18	PH72
32		UDT450	30-10			100			2A*	30	3.0m	Responsivity (850n) 55 max A/W	BE16	PH70
33		UDT500	30-10			100			78*	30	3.0m	Responsivity (850n) 3 typ A/W	BE16	PH71
34		HAV1000	30-10			500			07*	30	3.4m	WL350-1150nm;NEP(900,20,1)111fW/Hz1/2;PV100	BE17	PH12a
35		HAV4000A	30-10			500			07*	30	2.2m	WL350-1150nm;NEP(900,20,1)93fW/Hz 1/2;PV444	BE18	PH72
36		HUV1000B	30-10			500			07*	30	3.4m	WL200-1150nm;NEP(900,20,1)187fW/Hz1/2;UV100	BE17	PH12a
37		HUV2000B	30-10			500			07*	30	2.2m	WL200-1150nm;NEP(900,20,1)75fW/Hz 1/2	BE18	PH72
38		HUV4000B	30-10			500			07*	30	2.2m	WL200-1150nm;NEP(900,20,1)72fW/Hz1/2;UV444	BE18	PH72
39		MDA431	30-10			500	0.0	0.0	27	15	8.0m	Responsivity 52mV/uW at 905nm;BW1.0MHz;Range 75dB	BE37a	PH118
40		MDA435	30-10			500	0.0	0.0	27	15	8.0m	Responsivity 10.5mV/uW at 905nm;BW5.0MHz;Range 75dB	BE37a	PH118
41		MDA438	30-10			500	0.0	0.0	27	15	8.0m	Responsivity 3.5mV/uW at 905nm;BW15MHz;Range 75dB	BE37a	PH118
42		R7880	30-10			500	0.0	0.0	45	15	15m	Receiver;Responsivity 40mV/uW at 905nm;tr18ns	BE38	
43		R7900	30-10			500	0.0	0.0	40	15	15m	Receiver;Responsivity 2.0mV/uW at 905nm;tr6.0ns	BE39	
44		DDV325	30-10			1.5m			16	12	12m	360-1150nm;Re 160mV/uW min;NEP(905nm)5.0pW/Hz 1/2	BE22	PH76
45		R1001	30-10			2.0	10M		14	14	35m	Dig Rcvr;Resp(905nm);72mV/uW;Rate 1.0Mb/s max	BE28	PH110
46		R1001SMA	30-10			2.0			14	14	35m	FO Dig Rcvr;Resp(905nm);72mV/uW;Rate 1.0Mb/s max	BE28	PH110a
47		R1101	30-10			2.0			14	14	35m	Dig Rcvr;Resp(905nm);36mV/uW;Rate 2.0Mb/s max	BE28	PH110
48		R1101SMA	30-10			2.0			14	14	35m	FO Dig Rcvr;Resp(905nm);36mV/uW;Rate 2.0Mb/s max	BE28	PH110a
49		R1201	30-10			2.0			14	14	35m	Dig Rcvr;Resp(905nm);18mV/uW;Rate 4.0Mb/s max	BE28	PH110
50		R1201SMA	30-10			2.0			14	14	35m	FO Dig Rcvr;Resp(905nm);18mV/uW;Rate 4.0Mb/s max	BE28	PH110a
51		C30818E	30-10			2.0	50		47*	12	6.0m	400nm-1100nm;50Mz BW Rec;Avalanche Detector	BE57	PH47
52		C30847E	30-10			2.0	50		47*	12	6.0m	400nm-1100nm;50Mz BW Rec;p-n Detector	BE57a	PH47
53		MHZ016	30-10			2.0	50		07*	15	20m	Pk WL 950nm;35MHz BW;Resp 30kV/W;SGD160	BE19	PH73a
54		MHZ018	30-10			2.0	50		07*	15	20m	Pk WL 950nm;35MHz BW;Resp 30kV/W;SGD100A	BE19	PH73
55		MHZ018Y	30-10			2.0	50		07*	15	20m	Pk WL 1.06um;40MHz BW;Resp 40kV/W;YAG100A	BE19	PH73
56		C30815	30-10			3.0	50		47*	24		600nm-1.2um;P-N Photodetector;hybrid Preamp	BE7	PH48
57		C30816	30-10			3.0	50		47*	24		600nm-1.2um;P-N Photodetector;hybrid Preamp	BE7	PH48
58#		OSI1JHSA	30-10			4.0	20		07	12	24m	UV Region;BW5.0MHz min;tr50ns max	BE40	PH85
59#		OSI1KHSA	30-10			4.0	20		07	6.0	24m	Visible Region;Responsivity 5.0mV/uW/Sq cm;tr50ns	BE40	PH85
60#		OSI1LHSA	30-10			4.0	20		07	16	24m	IR Region;BW5.0MHz min;tr50ns max	BE40	PH85
61		IPL18A	30-10			7.3	800		28*	27	300u	520-930nm;Respons 220mV/uW/cm sq;Freq 4.0kHz	BE11	PH57
62		IPL18B	30-10			7.3	800		28*	-27	300u	520-930nm;Respons 2.2mV/uW-1cm sq;Freq 40kHz	BE11	PH57
63		IPL18C	30-10			7.3	800		28*	-27	300u	520-930nm;Respons 2.2mV/uW-1cm sq;Freq 400kHz	BE11	PH57
64#		IS006	30-10			10			28*	10		40-1.2um For Switch;Meter Relay;Intensity 120fct	♦	PH34
65#		IS007	30-10			10			27*	10		40-1.1um For Camera;l128uA;at 10fct;lD5.0pAat1.0V	BE30	PH35
66#		509-01	30-10			10	100m	100	07*	20	4.0m	35-1.12um;A Resp 40kV/W	BE1	PH2
67		509-1	30-10			10	100m	100	07*	20	800u	35-1.12um;A Resp 400V/W	BE1	PH2
68		509-10	30-10			10	100m	100	07*	20	800u	35-1.12um;A Resp 4.0mV/W	BE1	PH2
69		509-50	30-10			10	100m	100	07*	20	800u	35-1.12um;A Resp 20mV/W	BE1	PH2
70#		OSI5J	30-10			12	75	5.0k	07	30	1.3m	Hyb Recvr;Max Resp UV;tr30us;Re 30mV/uW at 253nm	PH17	PH17
71#		OSI5K	30-10			12	75	5.0k	07	30	1.3m	Hyb Recvr;Max Resp Vis;tr30us;Re 60mV/uW at 425nm	PH17	PH17
72#		OSI5KHSB	30-10			12	75	5.0k	07	30	1.3m	Hyb Recvr;Max Resp Vis;tr100ns;Re 2.2mV at 900nm	PH137	PH137
73#		OSI5L	30-10			12	75	5.0k	07	30	1.3m	Hyb Recvr;Max Resp IR;tr30us;Re 150mV/uW at 1.0um	PH17	PH17
74#		OSI5LHSB	30-10			12	75	5.0k	07	30	1.3m	Hyb Recvr;Max Resp IR;tr100ns;Re 2.5mV at 900nm	PH137	PH137
75		HAD1000A	30-10			13	80		07*	30	4.2m	35-1.15um;Dual FET Op Amp;Slew Rate 6V/us;2mHz G/B	BE5	PH12
76#		IS106	30-10			15			28*	22		Light Switch;xp 750nm;P 170mw	PH115	PH115
77#		IS206	30-10			15			28*	20		Light Switch;xp 750nm;P 170mw;ton 9.0us	BE34	PH115
78		529-01-1	30-10			20					30	Optical Det;Diode Re 600mA/W;Diode Area 0.8mm sq	BE2	PH2
79		529-01-5	30-10			20					2.0m	Optical Det;Diode Re 600mA/W;Diode Area 5.0mm sq	BE2	PH2a
80		529-2-1	30-10			20					30	Optical Det;Diode Re 600mA/W;Diode Area 0.8mm sq	BE2	PH2
81		529-2-5	30-10			20					30	Optical Det;Diode Re 600mA/W;Diode Area 5.0mm sq	BE2	PH2a
82		C30818	30-14			10			47*	12		400n-1.1um;Photodetector;Preamp	♦	PH47
83		C30819	30-14			10			47*	12		400n-1.1um;Photodetector;Preamp	♦	PH49
84		404	30-15			75			5C	30	7.0m	200nm-20um;Respons 11kV/W;Pin 500mW	BE42	
85		404CM	30-15			75			5C	30	7.0m	200nm-20um;Respons 100kV/W;Diam 2.0mm	BE43	
86#		406	30-15			75			5C	15	100m	2.0um-15um;Response 425V/W;Diam 2.0mm	BE59	TO5
87#		408	30-15			75			5C	15	2.0m	2.0um-15um;Response 60kV/W;Diam 2.0mm	BE60	TO5
88#		P1-31	30-15			100			07	30	4.0m	Overall Response 50V/Wmin at 632nm;Area 0.8mm sq	BE47	PH123
89#		P1-32	30-15			100			07	30	4.0m	Overall Response 25V/Wmin at 632nm;Area 3.1mm sq	BE47	PH123
90#		P1-33	30-15			100			07	30	4.0m	Overall Response 25V/Wmin at 632nm;Area 7.1mm sq	BE47	PH123
91#		P1-35	30-15			100			07	30	4.0m	Overall Response 13V/Wmin at 632nm;Area 2.0mm sq	BE47	PH123
92		P1-41	30-15			100			07	30	6.0m	FET;BW3.0MHz;Re 10kV/W at 632nm;Act Dia 1mm	BE47	PH123
93		P1-42	30-15			100			07	30	6.0m	FET		

# 14. SENSOR: PHOTOCIRCUIT (IC)

IN ORDER OF: (1) CKT. FUNCTION CODE  
(2)I/P VOLT-Vo (3)O/P IMPED-Zo & (4)TYPE No.

LINE No.	TYPE No.	CIRCUIT FUN CT ELEM CODE	OUTPUT			TEMP. RATED SUP.			DESCRIPTION	SCHEMATIC	DRAWING Ø-RND. Δ-RECT. Δ-STRIP *-CHIP
			1 VOLT Vo @ 25°C (V)	3 IMPED. Zo (Ω)	IMPED. f (Hz)	RNG. CODE	VOLT ΔVs (V)	CURR. ΔIs Pk-Pk (A)			
1	OT100	31-12	4.0			07*	5.0	6.0m	Si PV Detector w/Hybrid AMP/Digitizer	BE15	PH67Ø
2	OT102	31-12	4.0			07*	5.0	6.0m	Si PV Detector w/Hybrid AMP/Digitizer	BE15	PH67Ø
3	OT104	31-12	4.0			07*	5.0	6.0m	Si PV Detector w/Hybrid AMP/Digitizer	BE15	PH67Ø
4	OT106A	31-12	4.0			07*	5.0	6.0m	Si PV Detector w/Hybrid AMP/Digitizer	BE15	PH67Ø
5	OT108	31-12	4.0			07*	5.0	6.0m	Si PV Detector w/Hybrid AMP/Digitizer	BE15	PH67Ø
6	OT900	31-12	4.0			07*	5.0	6.0m	9 Elem;Si PV Detector w/Hybrid AMP/Digitizer	BE15	PH68Ø
7	OT906	31-12	4.0			07*	5.0	6.0m	9 Elem;Si PV Detector w/Hybrid AMP/Digitizer	BE15	PH68Ø
8	OT1200	31-12	4.0			07*	5.0	6.0m	12 Elem;Si PV Detector w/Hybrid AMP/Digitizer	BE15	PH69Ø
9#	IS005	32-10	10			27*	10		Log Diode Vf 380mV at 10nA If,N Mos FET Output	BE35	PH35aØ
10#	IS008	32-10	10			27*	10		Log Diode Vf 380mV at 10nA If,N Mos FET Output	BE36	PH35aØ
11	CA3062	32-11				5C	7.5	5.5m	Photo Detector and Power Amp;Pk WL 725nm;tr 125us	BE25	PH83Ø
12#	OM805	32-11	10			5C%	10	5.0m	Optically Controlled Relaxation Osc/Time Delay Ckt	BE20	PH17e
13	H11F3	32-11	15	470	0.0	5A	60	200m\$	Bilateral Analog FET;isol 700Vrms;Pd 450mW	BE58	PH114bØ
14	H11F1	32-11	30	200	0.0	5A	60	200m\$	Bilateral Analog FET;isol 1060Vrms;Pd 450mW	BE58	PH114bØ
15	H11F2	32-11	30	330	0.0	5A	60	200m\$	Bilateral Analog FET;isol 1060Vrms;Pd 450mW	BE58	PH114bØ
16#	P1-51	32-15		5.0k		07	24		FET;BW 10MHz;Re 100v/W at 632nm;Act Dia 1mm	BE48	PH123
17#	P1-52	32-15		5.0k		07	24		FET;BW 10MHz;Re 50v/W at 632nm;Act Dia 2mm	BE48	PH123
18#	P1-53	32-15		5.0k		07	24		FET;BW 10MHz;Re 50v/W at 632nm;Act Dia 3mm	BE48	PH123
19#	P1-55	32-15		5.0k		07	24		FET;BW 10MHz;Re 25v/W at 632nm;Act Dia 5mm	BE48	PH123
20#	P1-61	32-15		5.0k		07	24		FET;BW 70MHz;Re 100v/W at 632nm;Act Dia 1mm	BE48	PH123
21#	P1-62	32-15		5.0k		07	24		FET;BW 70MHz;Re 50v/W at 632nm;Act Dia 2mm	BE48	PH123
22#	P1-63	32-15		5.0k		07	24		FET;BW 70MHz;Re 50v/W at 632nm;Act Dia 3mm	BE48	PH123
23#	P1-65	32-15		5.0k		07	24		FET;BW 70MHz;Re 25v/W at 632nm;Act Dia 5mm	BE48	PH123
24#	P1-71	32-15		5.0k		07	24		FET;BW 100kHz;Re 900v/W at 632nm;Act Dia 1mm	BE48	PH123
25#	P1-72	32-15		5.0k		07	24		FET;BW 100kHz;Re 200v/W at 632nm;Act Dia 2mm	BE48	PH123
26#	P1-73	32-15		5.0k		07	24		FET;BW 100kHz;Re 90v/W at 632nm;Act Dia 3mm	BE48	PH123
27#	P1-75	32-15		5.0k		07	24		FET;BW 100kHz;Re 25v/W at 632nm;Act Dia 5mm	BE48	PH123
28	TIED92	33-14	100m	2.0	20k	46	15	20m	700nm Pk;Re 300uV/nW;MOD BW 50MHz	BE6	PH62Ø
29	TIED93	33-14	100m	2.0	20k	46	15	20m	700nm Pk;Re 150uV/nW;MOD BW 50MHz	BE6	PH62Ø
30	TIED96	33-14	100m	2.0	20k	46	15	20m	800nm Pk;Re 230uV/nW;MOD BW 50MHz	BE6	PH62Ø
31	TIED97	33-14	100m	2.0	20k	46	15	20m	800nm Pk;Re 110uV/nW;MOD BW 50MHz	BE6	PH62Ø
32	TIED90	33-14	100m	4.0	20k	46	15	20m	700nm Pk;Re 610uV/nW;MOD BW 20MHz	BE6	PH62Ø
33	TIED91	33-14	100m	4.0	20k	46	15	20m	700nm Pk;Re 300uV/nW;MOD BW 20MHz	BE6	PH62Ø
34	TIED94	33-14	100m	4.0	20k	46	15	20m	800nm Pk;Re 470uV/nW;MOD BW 20MHz	BE6	PH62Ø
35	TIED95	33-14	100m	4.0	20k	46	15	20m	800nm Pk;Re 240uV/nW;MOD BW 20MHz	BE6	PH62Ø
36	IPL13	35-10	20			58*	27	1.0m	.50-1.0um Freq 100kpps max;Dark Outp 10pps.	BE8	PH17bØ
37	CS-132	37.*	300m			15*	4.5		Shutter Control;Battery Check;Low Light Indicator	BE54	PH131Ø
38	CS-131	37.*	1.5			15*	4.5		Shutter Control;Battery Check;Low Light Indicator	BE54	PH131Ø
39	CS-129	37.*	5.0			15*	5.0	8.0m	Shutter Control;Battery Check;Low Light Indicator	BE53a	PH131Ø
40	CS-130	37.*	5.0			15*	5.0	8.0m	Shutter Control;Battery Check;Low Light Indicator	BE53	PH131Ø
41▼	CS-180	37.*	5.0			27	2.2	2.5m	Aperture Control;Photo Resistor;Window Comparator	BE53	PH138Ø
42#	CS-127	37.*	11 Ø			27*	4.5	25m	Shutter Control;Battery Check;Low Light Indicator	BE52	PH141Ø
43▼	CS-480	37-10	5.0			26	4.8	14m	Aperture/Shutter Contr;Lo Lt Ind;Batt Test	BE61	PH139Ø
44▼	CS-481	37-10	5.0			26	4.8	14m	Aperture/Shutter Contr;Lo Lt Ind;Batt Test	BE61	PH139Ø
45▼	CS-482	37-10	5.0			26	4.8	14m	Aperture/Shutter Contr;Lo Lt Ind;Batt Test	BE61	PH139Ø
46▼	CS-483	37-10	5.0			26	4.8	14m	Aperture/Shutter Contr;Lo Lt Ind;Batt Test	BE61	PH139Ø
47▼	CS-484	37-10	5.0			26	4.8	14m	Aperture/Shutter Contr;Lo Lt Ind	BE61	PH139Ø
48▼	CS-486	37-10	5.0			26	4.8	14m	Aperture/Shutter Contr;Lo Lt Ind;Batt Test	BE61a	PH140Ø
49▼	CS-487	37-10	5.0			26	4.8	14m	Aperture/Shutter Contr;Lo Lt Ind;Batt Test	BE61a	PH140Ø
50▼	CS-488	37-10	5.0			26	4.8	14m	Aperture/Shutter Contr;Lo Lt Ind;Batt Test	BE61a	PH140Ø
51▼	CS-489	37-10	5.0			26	4.8	14m	Aperture/Shutter Contr;Lo Lt Ind	BE61a	PH140Ø
52	CS-460	37-10	12			25	4.5		Exposure Cont IC;Shutter Spd 1ms to 1Sec	BE50	PH130Ø
53	CS-461	37-10	12			25	4.5		Exposure Cont IC;Shutter Spd 1ms to 66ms	BE50a	PH130Ø
54	CS-462	37-10	12			25	4.5		Exposure Cont IC;Shutter Spd 1ms to 1Sec	BE50b	PH130Ø
55	CS-463	37-10	12			25	4.5		Exposure Cont IC;Shutter Spd 1ms to 66ms	BE50c	PH130Ø
56	CS-464	37-10	12			25	4.5		Exposure Cont IC;Shutter Spd 1ms to 66ms	BE50d	PH130Ø
57#	CS-402	38-10*	4.5			25	4.5		Photocurrent Proc;Linear/Threshold	BE51	PH139Ø



# 15. SENSOR ARRAY: PHOTODIODE,PHOTOTRANSISTOR

IN ORDER OF: (1)TYPE SENSING ELEMENT  
(2)No. ELEM.(3)TOT. PWR.DISS.&(4)TYPE No.

LINE No.	TYPE No.	SENS-ING ELEM-ENT	NO. OF ELEM-ENTS	TOT. PWR. DISS. @ 25°C (W)	TEMP. RNG. CODE	MAX. VOLT #VR ΔVCEO (V)	MAX. DARK CURRENT ID (A)	#VR ΔVCE (V)	MINIMUM LIGHT CURRENT			CENTER SPACING (in)	RESP. TIME (S)	MATCH FACT -OR MIN/MAX	MATERIAL & FEATURES	SCHEM-ATIC	DRAWING Ø-RND. □-RECT. Δ-STRIP *CHIP	
									#-RESP (A)	Ee (W/cm2)	S R C							
1#	LD2-0	DI	2			30 #	5.0nT	30 #				1.0m	15n#	AD		PA35Ø		
2#	LD2-1	DI	2				5.0nT	30 #				1.9m		AD		PA35Ø		
3#	LD2-2	DI	2				5.0nT	30 #				1.9m		AD		PA35Ø		
4#	LD2-3	DI	2				5.0nT	30 #				1.9m		AD		PA35Ø		
5#	LD2-4	DI	2				5.0nT	30 #				1.9m		AD		PA35Ø		
6	NSL701-4A	DI	4			6F*	5.0 #	10u	1.5	300u	25m		8.0u	AD		PA44Δ		
7	NSL701-5A	DI	5			6F*	5.0 #	10u	1.5	300u	25m		8.0u	AD		PA44Δ		
8	NSL701-6A	DI	6			6F*	5.0 #	10u	1.5	300u	25m		8.0u	AD		PA44Δ		
9	NSL701-7A	DI	7			6F*	5.0 #	10u	1.5	300u	25m		8.0u	AD		PA44Δ		
10	NSL701-8A	DI	8			6F*	5.0 #	10u	1.5	300u	25m		8.0u	AD		PA44Δ		
11#	PD0291	DI	9			37*	6.0 #	100n	1.0 #	43n*		B	100m	AD	BF4	PA39Z		
12#	PD0292	DI	9			37*	6.0 #	100n	1.0 #	43n*		B	100m	AD	BF4	PA40Z		
13	NSL701-9	DI	9	500m		6F*	5.0 #	1.0u	1.0	300u	25m	E	100m	AD		PA44eΔ		
14	NSL701-9A	DI	9	500m		6F*	5.0 #	1.0u	1.5	300u	25m	E	100m	AD		PA41Z		
15#	PD0391N	DI	18			37*	6.0 #	100n	1.0 #	48n*		B	100m	AD	BF5	PA41Z		
16#	PD0392N	DI	18			37*	6.0 #	100n	1.0 #	48n*		B	100m	AD	BF5	PA41Z		
17#	LD20-0	DI	20				20nT	30 #				1.0m	15n#	AD		PA36Ø		
18#	LD20-1	DI	20				20nT	30 #				1.9m		AD		PA36Ø		
19#	LD20-2	DI	20				20nT	30 #				1.9m		AD		PA36Ø		
20#	LD20-3	DI	20				20nT	30 #				1.9m		AD		PA36Ø		
21#	LD20-4	DI	20				20nT	30 #				1.9m		AD		PA36Ø		
22#	MD25-0	DI	25		27		70nT	30 #				3.9m	15n#	AD	5x5 Matrix	PA37		
23#	MD25-1	DI	25		27		70nT	30 #				3.9m		AD	5x5 Matrix	PA37Z		
24#	MD25-2	DI	25		27		70nT	30 #				3.9m		AD	5x5 Matrix	PA37Z		
25#	MD25-3	DI	25		27		70nT	30 #				3.9m		AD	5x5 Matrix	PA37Z		
26#	MD25-4	DI	25		27		70nT	30 #				3.9m		AD	5x5 Matrix	PA37Z		
27#	MD100-0	DI	100		27		20nT	30 #				3.9m	15n#	AD	10x10 Matrix	PA38Z		
28#	MD100-1	DI	100		27		20nT	30 #				3.9m		AD	10x10 Matrix	PA38Z		
29#	MD100-2	DI	100		27		20nT	30 #				3.9m		AD	10x10 Matrix	PA38Z		
30#	MD100-3	DI	100		27		20nT	30 #				3.9m		AD	10x10 Matrix	PA38Z		
31#	MD100-4	DI	100		27		20nT	30 #				3.9m		AD	10x10 Matrix	PA38		
32	TIL621	TR	1	50m#48		50 Δ	1.0uT	30 Δ	800u	5.0m	E	5.0 Δ	100m	8.0u#	.50	AD	PA6Δ	
33	TIL622	TR	2	50m#48		50 Δ	1.0uT	30 Δ	800u	5.0m	E	5.0 Δ	100m	8.0u#	.50	AD	PA6Δ	
34	LA202SN	TR	2	100m 07s		30 Δ	200n	5.0 Δ	800u	2.0m	E	5.0 Δ	.100	20u#	.500	AD;Paper Tape Rdr	BF3	PA18Δ
35	LA602SN	TR	2	100m 07s		30 Δ	200n	10 Δ	750u	10m	E	10 Δ	.100	3.0u#	.500	AD;PAPER TAPE RDR	BF3	PA18Δ
36	LA702SN	TR	2	100m 07s		25 Δ	20nT	10 Δ	20uT	2.0m	E	10 Δ	.100	3.0u	.333	AD;Paper Tape Rdr	BF3	PA18Δ
37	LA802SN	TR	2	100m 07s		25 Δ	20nT	10 Δ	2.0mT	2.0m	E	10 Δ	.100	150u#	.500	AD;Paper Tape Rdr	BF3	PA18Δ
38#	BPX82	TR	2	200m#49s		32 Δ	200n	25 Δ	2.5m	20m	C	5.0 Δ	100m	8.0u#	.50	AD	PA26Δ	
39	TIL623	TR	3	50m#48		50 Δ	1.0uT	30 Δ	800u	5.0m	E	5.0 Δ	100m	8.0u#	.50	AD	PA6Δ	
40	LA203SN	TR	3	100m 07s		30 Δ	200n	5.0 Δ	800u	2.0m	E	5.0 Δ	.100	20u#	.500	AD;Paper Tape Rdr	BF3	PA18aΔ
41	LA603SN	TR	3	100m 07s		30 Δ	200n	10 Δ	750u	10m	E	10 Δ	.100	3.0u#	.500	AD;Paper Tape Rdr	BF3	PA18aΔ
42	LA703SN	TR	3	100m 07s		25 Δ	20nT	10 Δ	20uT	2.0m	E	10 Δ	.100	3.0u	.333	AD;Paper Tape Rdr	BF3	PA18aΔ
43	LA803SN	TR	3	100m 07s		25 Δ	20nT	10 Δ	2.0mT	2.0m	E	10 Δ	.100	150u#	.500	AD;Paper Tape Rdr	BF3	PA18aΔ
44#	BPX83	TR	3	300m#49s		32 Δ	200n	25 Δ	2.5m	20m	C	5.0 Δ	100m	8.0u#	.50	AD	PA26Δ	
45	TIL624	TR	4	50m#48		50 Δ	1.0uT	30 Δ	800u	5.0m	E	5.0 Δ	100m	8.0u#	.50	AD	PA6Δ	
46	LA204SN	TR	4	100m 07s		30 Δ	200n	5.0 Δ	800u	2.0m	E	5.0 Δ	.100	20u#	.500	AD;Paper Tape Rdr	BF3	PA18bΔ
47	LA604SN	TR	4	100m 07s		30 Δ	200n	10 Δ	750u	10m	E	10 Δ	.100	3.0u#	.500	AD;Paper Tape Rdr	BF3	PA18bΔ
48	LA704SN	TR	4	100m 07s		25 Δ	20nT	10 Δ	20uT	2.0m	E	10 Δ	.100	3.0u	.333	AD;Paper Tape Rdr	BF3	PA18bΔ
49	LA804SN	TR	4	100m 07s		25 Δ	20nT	10 Δ	2.0mT	2.0m	E	10 Δ	.100	150u#	.500	AD;Paper Tape Rdr	BF3	PA18bΔ
50#	BPX84	TR	4	400m#49s		32 Δ	200n	25 Δ	2.5m	20m	C	5.0 Δ	100m	8.0u#	.50	AD	PA26Δ	
51	TIL625	TR	5	50m#48		50 Δ	1.0uT	30 Δ	800u	5.0m	E	5.0 Δ	100m	8.0u#	.50	AD	PA6Δ	
52	LA205S	TR	5	100m 07s		30 Δ	200n	5.0 Δ	800u	2.0m	E	5.0 Δ	.100	20u#	.500	AD;Paper Tape Rdr	BF3	PA18cΔ
53	LA605S	TR	5	100m 07s		30 Δ	200n	10 Δ	750u	10m	E	10 Δ	.100	3.0u#	.500	AD;Paper Tape Rdr	BF3	PA18cΔ
54	LA705S	TR	5	100m 07s		25 Δ	20nT	10 Δ	20uT	2.0m	E	10 Δ	.100	3.0u	.333	AD;Paper Tape Rdr	BF3	PA18cΔ
55	LA805S	TR	5	100m 07s		25 Δ	20nT	10 Δ	2.0mT	2.0m	E	10 Δ	.100	150u#	.500	AD;Paper Tape Rdr	BF3	PA18cΔ
56#	BPX85	TR	5	500m#49s		32 Δ	200n	25 Δ	2.5m	20m	C	5.0 Δ	100m	8.0u#	.50	AD	PA26Δ	
57	TIL626	TR	6	50m#48		50 Δ	1.0uT	30 Δ	800u	5.0m	E	5.0 Δ	100m	8.0u#	.50	AD	PA6Δ	
58	LA206S	TR	6	100m 07s		30 Δ	200n	5.0 Δ	800u	2.0m	E	5.0 Δ	.100	20u#	.500	AD;Paper Tape Rdr	BF3	PA18dΔ
59	LA606S	TR	6	100m 07s		30 Δ	200n	10 Δ	750u	10m	E	10 Δ	.100	3.0u#	.500	AD;Paper Tape Rdr	BF3	PA18dΔ
60	LA706S	TR	6	100m 07s		25 Δ	20nT	10 Δ	20uT	2.0m	E	10 Δ	.100	3.0u	.333	AD;Paper Tape Rdr	BF3	PA18dΔ
61	LA806S	TR	6	100m 07s		25 Δ	20nT	10 Δ	2.0mT	2.0m	E	10 Δ	.100	150u#	.500	AD;Paper Tape Rdr	BF3	PA18dΔ
62#	BPX86	TR	6	600m#49s		32 Δ	200n	25 Δ	2.5m	20m	C	5.0 Δ	100m	8.0u#	.50	AD	PA26Δ	
63	TIL627	TR	7	50m#48		50 Δ	1.0uT	30 Δ	800u	5.0m	E	5.0 Δ	100m	8.0u#	.50	AD	PA6Δ	
64	LA207S	TR	7	100m 07s		30 Δ	200n	5.0 Δ	800u	2.0m	E	5.0 Δ	.100	20u#	.500	AD;Paper Tape Rdr	BF3	PA18eΔ
65	LA607S	TR	7	100m 07s		30 Δ	200n	10 Δ	750u	10m	E	10 Δ	.100	3.0u#	.500	AD;Paper Tape Rdr	BF3	PA18eΔ
66	LA707S	TR	7	100m 07s		25 Δ	20nT	10 Δ	20uT	2.0m	E	10 Δ	.100	3.0u	.333	AD;Paper Tape Rdr	BF3	PA18eΔ
67	LA807S	TR	7	100m 07s		25 Δ	20nT	10 Δ	2.0mT	2.0m	E	10 Δ	.100	150u#	.500	AD;Paper Tape Rdr	BF3	PA18eΔ
68#	BPX87	TR	7	700m#49s		32 Δ	200n	25 Δ	2.5m	20m	C	5.0 Δ	100m	8.0u#	.50	AD	PA26Δ	
69	TIL628	TR	8	50m#48		50 Δ	1.0uT	30 Δ	800u	5.0m	E	5.0 Δ	100m	8.0u#	.50	AD	PA6Δ	
70	LA208	TR	8	100m 07s		30 Δ	200n	5.0 Δ	800u	2.0m	E	5.0 Δ	.100	20u#	.500	AD;Paper Tape Rdr	BF3	PA18fΔ
71	LA608	TR	8	100m 07s		30 Δ	200n	10 Δ	750u	10m	E	10 Δ	.100	3.0u#	.500	AD;Paper Tape Rdr	BF3	PA18fΔ
72	LA708	TR	8	100m 07s		25 Δ	20nT	10 Δ	20uT	2.0m	E	10 Δ	.100	3.0u	.333	AD;Paper Tape Rdr	BF3	PA18fΔ
73	LA808	TR	8	100m 07s		25 Δ	20nT	10 Δ	2.0mT	2.0m	E	10 Δ	.100	150u#	.500	AD;Paper Tape Rdr	BF3	PA18fΔ
74#	BPX88	TR	8	800m#49s		32 Δ	200n	25 Δ	2.5m	20m	C	5.0 Δ	100m	8.0u#	.50	AD	PA26Δ	
75#	BPW26	TR	9			25 Δ	100n	5.0 Δ	2.0m	20m	C	5.0 Δ	.0787	500		See CNY26	PA20Δ	
76	OPA508	TR	9			25 Δ	100n	5.0 Δ	80u	2.0m	E	5.0 Δ	100m	40u	.650	BC	PA23Δ	
77	SA609	TR	9	1.19m	47s	25 Δ	100n	5.0 Δ	80u	2.0m	E	5.0 Δ	.100	40u	.850	AD Tape Reader	PA12Z	
78	SA609A	TR	9	1.19m	47s	25 Δ	100n	5.0 Δ	80u	2.0m	E	5.0 Δ	.100	40u	.850	AD Tape Reader	PA12Z	
79#	LSA13	TR	9	50m 6C		50 Δ	100n	30 Δ	2.0m	20m	E	5.0 Δ	100m	.50		AD 9 LS600	PA28aZ	
80	TIL132	TR	9	50m 6C		50 Δ	100n	30 Δ	2.0m	20m	E	5.0 Δ	100m	.50		AD 9 LS600	PA7aZ	
81	TIL629	TR	9	50m#48		50 Δ	1.0uT	30 Δ	800u	5.0m	E	5.0 Δ	100m	8.0u#	.50	AD	PA6Δ	
82	LA209	TR	9	100m 07s		30 Δ	200n	5.0 Δ	800u	2.0m	E	5.0 Δ	.100	20u#	.500	AD;Paper Tape Rdr	BF3	PA18gΔ
83	LA609	TR	9	100m 07s		30 Δ	200n	10 Δ	750u	10m	E	10 Δ	.100	3.0u#	.500	AD;Paper Tape Rdr	BF3	PA18gΔ
84	LA709	TR	9	100m 07s		25 Δ	20nT	10 Δ	20uT	2.0m	E	10 Δ	.100	3.0u	.333	AD;Paper Tape Rdr	BF3	PA18gΔ
85	LA809	TR	9															

# 15. SENSOR ARRAY: PHOTODIODE,PHOTOTRANSISTOR

IN ORDER OF: (1)TYPE SENSING ELEMENT  
(2)No. ELEM.(3)TOT. PWR.DISS.&(4)TYPE No.

LINE No.	TYPE No.	SENS-ING ELEM ENT	2 NO. OF ELEM-ENTS	3 TOT. PWR. DISS. @ 25°C (W)	TEMP RNG. CODE	MAX. VOLT # -VR Δ-VCEO (V)	MAX. DARK CURRENT ID (A)	# -VR Δ-VCE (V)	MINIMUM LIGHT CURRENT			CENTER SPACING (in)	RESP. TIME (S)	MATCH FACT -OR MIN/MAX	MATERIAL & FEATURES	SCHEM -ATIC	DRAWING Ø-RND. ▣-RECT. Δ-STRIP *-CHIP
									IL # -RESP (A)	Ee (W/cm <sup>2</sup> )	S # -VR Δ-VCE (V)						
1	CR712C	TR	12	100m#48s	25	20nΔ	10 Δ	20u	2.0m	E	10 Δ	.100	3.0u		AD Card Reader		PA19▣
2	CR812C	TR	12	100m#48s	25	20nΔ	10 Δ	2.0u	2.0m	E	10 Δ	.100	150u		AD Card Reader		PA19▣
3	LA212	TR	12	100m 07s	30 Δ	200n	5.0 Δ	800u	2.0m	E	5.0 Δ	.100	20u#	.500	AD;Paper Tape Rdr	BF3	PA18kΔ
4	LA612	TR	12	100m 07s	30 Δ	200n	10 Δ	750u	10m	E	10 Δ	.100	3.0u#	.500	AD;Paper Tape Rdr	BF3	PA18kΔ
5	LA712	TR	12	100m 07s	25 Δ	20nΔ	10 Δ	20u	2.0m	E	10 Δ	.100	3.0u	.333	AD;Paper Tape Rdr	BF3	PA18kΔ
6	LA812	TR	12	100m 07s	25 Δ	20nΔ	10 Δ	2.0m	2.0m	E	10 Δ	.100	150u#	.500	AD;Paper Tape Rdr	BF3	PA18kΔ
7	STA73	TR	12	200m#48*	30 Δ	100n	5.0 Δ	800u	20m	E	5.0 Δ	.250m	3.0u#	.850	AD		PA13Δ
8	OPA518	TR	18	25 Δ	100n	10 Δ	800u	20m	E	5.0 Δ	.100m			.50	BC		PA25Δ
9	CR218C	TR	18	100m#28s	30 Δ	200n	5.0 Δ	800u	2.0m	E	5.0 Δ	.100	20u		AD Card Reader		PA19a▣
10	CR618C	TR	18	100m#28s	30 Δ	200n	5.0 Δ	150u	2.0m	E	10 Δ	.100	3.0u		AD Card Reader		PA19a▣
11	CR718C	TR	18	100m#48s	25	20nΔ	10 Δ	20u	2.0m	E	10 Δ	.100	3.0u		AD Card Reader		PA19a▣
12	CR818C	TR	18	100m#48s	25	20nΔ	10 Δ	2.0u	2.0m	E	10 Δ	.100	150u		AD Card Reader		PA19a▣
13	CR224C	TR	24	100m#28s	30 Δ	200n	5.0 Δ	800u	2.0m	E	5.0 Δ	.100	20u		AD Card Reader		PA19b▣
14	CR624C	TR	24	100m#28s	30 Δ	200n	5.0 Δ	150u	2.0m	E	10 Δ	.100	3.0u		AD Card Reader		PA19b▣
15	CR724C	TR	24	100m#48s	25	20nΔ	10 Δ	20u	2.0m	E	10 Δ	.100	3.0u		AD Card Reader		PA19b▣
16	CR824C	TR	24	100m#48s	25	20nΔ	10 Δ	2.0u	2.0m	E	10 Δ	.100	150u		AD Card Reader		PA19b▣

# 16. SENSOR: PHOTOCONDUCTIVE CELL (LDR)

IN ORDER OF: (1)PWR. DISS. Pcase (2)PK WAVELENGTH (3)MAX. VOLT & (4)TYPE No.

LINE No.	4	TYPE No.	1 MAX. PWR @ 25°C Pcase (W)	2 PEAK WAVE-LENGTH λp (m)	3 MAX. VOLT (V)	TEMP RING. CODE	LIGHT RESISTANCE				DARK RESISTANCE				S O U R C E	MATERIAL & FEATURES	LEAD CODE	DRAWING NO. □-RECT. △-STRIP * CHIP	
							Ron (Ω)	Ev		Ee (W/cm2)	Roff (Ω)	SECS. AFTER (S)	Ev						Ee (W/cm2)
								(f)	(lx)				(f)	(lx)					
1#		1114E1	30m	730n	60	17*	40k	2.0				1.0M	5.0					PC8a	
2#		434TS1	40m	580n	800	17*	100k					2.0M	5.0					PC50	
3		MKB1-7H26P	40m	700n	150	26	2.0k					1.5M	10					PC14	
4		MKY1-5C38E	45m	550n	150		7.5k	1.0				300k	10	40				PC14	
5#		MKY1-5C38E%	45m*	620n	150	37	7.5k					300k	10		10			PC32	
6#		RPY71	50m	50n	50	47*	6.0k					600k	20		10			PC21a	
7#		RPY64	50m	500n	100	47*	3.5k					100M	60					PC24	
8		CL902L	50m*	515n	100 Δ	57*	67k	2.0				4.5M	5.0	2.0				PC10	
9		VT222	50m*	515n	100	16	10k	2.0				1.0M	5.0	2.0				PC10	
10		VT222H	50m	515n	100	16	20k	2.0				1.0M	5.0	2.0				PC10	
11		CL902	50m*	515n	250 Δ	57*	1.0M	2.0				66M	5.0	2.0				PC10	
12		VT223	50m	515n	300	16	40k	2.0				5.0M	5.0	2.0				PC10	
13		VT223H	50m	515n	300	16	65k	2.0				5.0M	5.0	2.0				PC10	
14		VT224	50m	515n	300	16	500k	2.0				5.0M	5.0	2.0				PC10	
15		VT224L	50m	515n	300	16	80k	2.0				10M	5.0	2.0				PC10	
16		VT225	50m	515n	300	16	1.0M	2.0				200M	5.0	2.0				PC10	
17#		RPY63	50m	550n	50	47*	800			1.0k		1.0M	60					PC24	
18		CL905HLL	50m	550n	60		11k	2.0										PC13	
19		CL9P9LL	50m*	550n	70	27*	15k	2.0				10M	5.0	2.0				PC55a	
20		NSL412	50m	550n	80	67	75k	1.0	10			10M	15	50	500			PC39a	
21		NSL413	50m	550n	80	67	30k	1.0	10			2.0M	15	50	500			PC39a	
22		NSL414	50m	550n	80	67	14k	1.0	10			200k	15	50	500			PC39a	
23#		NSL4122	50m	550n	80		75k	1.0	10			1.0M	15	50	500			PC41	
24#		NSL4132	50m	550n	80		30k	1.0	10			200k	15	50	500			PC41	
25#		NSL4142	50m	550n	80		14k	1.0	10			100k	15	50	500			PC41	
26		CL9P5HL	50m*	550n	100	27*	100k	2.0				67M	5.0	2.0				PC55a	
27		CL9P5L	50m*	550n	100	27*	10k	2.0				670k	5.0	2.0				PC55a	
28		CL9P9L	50m*	550n	100	27*	100k	2.0				67M	5.0	2.0				PC55a	
29		CL905HL	50m*	550n	100 Δ	57*	100k	2.0				67M	5.0	2.0				PC10	
30		CL905HN	50m*	550n	100 Δ	57*	700k	2.0				467M	5.0	2.0				PC10	
31		CL905L	50m*	550n	100 Δ	57*	10k	2.0				670k	5.0	2.0				PC10	
32		CL905N	50m*	550n	100 Δ	57*	83k	2.0				5.5M	5.0	2.0				PC10	
33		CL909L	50m*	550n	100 Δ	57*	100k	2.0				67M	5.0	2.0				PC10	
34		MKY1-5H26	50m	550n	100		2.0k	1.0		1.0k		200k	10	40				PC14	
35#		RPY62	50m	550n	100	47*	3.5k					100M	60					PC24	
36		VT23L	50m	550n	100	16	11k	2.0				1.0M	5.0	2.0				PC10	
37		VT231	50m	550n	100	16	22k	2.0				1.0M	5.0	2.0				PC10	
38		VT232	50m	550n	100	16	100k	2.0				50M	5.0	2.0				PC10	
39		VT233	50m	550n	100	16	350k	2.0				100M	5.0	2.0				PC10	
40		VT233L	50m	550n	100	16	150k	2.0				50M	5.0	2.0				PC10	
41		VT234	50m	550n	100	16	700k	2.0				200M	5.0	2.0				PC10	
42		MKY1-4H37	50m	550n	150		5.0k	1.0				500k	10	40				PC14	
43		MKY1-4H48	50m	550n	150		10k	1.0				1.0M	10	40				PC14	
44		MKY1-5H37	50m	550n	150		5.0k	1.0				400k	10	40				PC14	
45		MKY1-5H38	50m	550n	150		5.0k	1.0				500k	10	40				PC14	
46		MKY1-5H48	50m	550n	150		10k	1.0				1.0M	10	40				PC14	
47		MKY1-5H49	50m	550n	150		10k	1.0				1.0M	10	40				PC14	
48		NSL418	50m	550n	160	67	50k	1.0	10			5.0M	15	50	500			PC39a	
49#		NSL4182	50m*	550n	160		50k	1.0	10			1.0M	15	50	500			PC41	
50		CL9P5	50m*	550n	250	27*	166k	2.0				1.1M	5.0	2.0				PC55a	
51		CL905	50m*	550n	250 Δ	57*	166k	2.0				1.1M	5.0	2.0				PC10	
52		VT235	50m	550n	300	16	1.4M	2.0				200M	5.0	2.0				PC10	
53		NSL415	50m	550n	320	67	550k	1.0	10			100M	15	50	500			PC39a	
54		NSL416	50m	550n	320	67	260k	1.0	10			100M	15	50	500			PC39a	
55		NSL417	50m	550n	320	67	110k	1.0	10			50M	15	50	500			PC39a	
56#		NSL4152	50m	550n	320		550k	1.0	10			10M	15	50	500			PC41	
57#		NSL4162	50m	550n	320		260k	1.0	10			10M	15	50	500			PC41	
58#		NSL4172	50m	550n	320		110k	1.0	10			5.0M	15	50	500			PC41	
59		VT201	50m	565n	100	16	4.3k	2.0				500k	5.0	2.0				PC10	
60		VT202	50m	565n	100	16	8.0k	2.0				750k	5.0	2.0				PC10	
61		VT202H	50m	565n	100	16	15k	2.0				1.0M	5.0	2.0				PC10	
62		VT203	50m	565n	300	16	22k	2.0				5.0M	5.0	2.0				PC10	
63		VT203H	50m	565n	300	16	44k	2.0				5.0M	5.0	2.0				PC10	
64		VT204	50m	565n	300	16	110k	2.0				2.0M	5.0	2.0				PC10	
65		VT204L	50m	565n	300	16	88k	2.0				10M	5.0	2.0				PC10	
66		VT205	50m	565n	300	16	1.0M	2.0				200M	5.0	2.0				PC10	
67		VT271	50m	615n	50	16	4.0k	2.0				2.5M	5.0	2.0				PC10	
68		VT272	50m	615n	50	16	6.0k	2.0				5.0M	5.0	2.0				PC10	
69		CL907L	50m*	615n	100 Δ	57*	6.0k	2.0				1.2M	5.0	2.0				PC10	
70		CL907N	50m*	615n	100 Δ	57*	66k	2.0				13M	5.0	2.0				PC10	
71		CL907	50m*	615n	250 Δ	57*	133k	2.0				17M	5.0	2.0				PC55a	
72		CL9P7HLL	50m*	620n	70	27*	4.5k	2.0				3.0M	5.0	2.0				PC10	
73		CL9P7HL	50m*	620n	100	27*	24k	2.0				16M	5.0	2.0				PC55a	
74		CL907HL	50m*	620n	100 Δ	57*	24k	2.0				16M	5.0	2.0				PC10	
75		CL907HN	50m*	620n	100 Δ	57*	300k	2.0				200M	5.0	2.0				PC10	
76#		MKY1-4H37%	50m*	620n	150	37	5.0k	1.0	10			500k	10	10				PC25	
77#		MKY1-4H48%	50m*	620n	150	37	10k	1.0	10			1.0M	10	10				PC25	
78#		MKY1-5H26%	50m*	620n	150	37	2.0k	1.0	10			200k	10	10				PC26	
79#		MKY1-5H37%	50m*	620n	150	37	5.0k	1.0	10			400k	10	10				PC26	
80#		MKY1-5H38%	50m*	620n	150	37	5.0k	1.0	10			500k	10	10				PC26	
81#		MKY1-5H48%	50m*	620n	150	37	10k	1.0	10			1.0M	10	10				PC26	
82#		MKY1-5H49%	50m*	620n	150	37	10k	1.0	10			1.0M	10	10				PC26	
83#		RPY61	50m	650n	50	47*	800			1.0k		1.0M	60					PC24	
84		VT241	50m	675n	100	16	2.0k	2.0				500k	5.0	2.0				PC10	
85		VT241H	50m	675n	100	16	4.0k	2.0				1.0M	5.0	2.0				PC10	
86		VT242	50m	675n	100	16	15k	2.0				10M	5.0	2.0				PC10	
87		VT242L	50m	675n	100	16	8.0k	2.0				1.0M	5.0	2.0				PC10	
88		VT242H	50m	675n	300	16	30k	2.0				10M	5.0	2.0				PC10	
89		CL9P4L	50m*	690n	100	27*	2.0k	2.0				520k	5.0	2.0				PC55a	
90		CL904L	50m*	690n	100 Δ	57*	2.0k	2.0				520k	5.0	2.0				PC10	
91		CL904N	50m*	690n	100 Δ	57*													

# 16. SENSOR: PHOTOCONDUCTIVE CELL (LDR)

IN ORDER OF: (1)PWR. DISS-Peace  
(2)PK WAVELENGTH (3)MAX. VOLT & (4)TYPE No.

LINE No.	TYPE No.	1 MAX. PWR @ 25°C Pease (W)	2 PEAK WAVELENGTH λp (m)	3 MAX. VOLT V	TEMP RING CODE	LIGHT RESISTANCE				DARK RESISTANCE				S O U R C E	MATERIAL & FEATURES	LEAD DRWG CODE	Ø-RND. Δ-RECT. * CHIP	
						Ron (Ω)	Ev		Ee (W/cm <sup>2</sup> )	Roff (Ω)	SECS. AFTER (S)	Ev						Ee (W/cm <sup>2</sup> )
							(fc)	(lx)				(fc)	(lx)					
1	CL903L	50m*	735n	100 Δ	57*	6.0k	2.0			40M	5.0	2.0		C	BB	PC100		
2	CL903N	50m*	735n	100 Δ	57*	66k	2.0			440M	5.0	2.0		C	BB	PC100		
3	VT211	50m	735n	100	16	2.3k	2.0			500k	5.0	2.0		C	BB	PC100		
4	VT211H	50m	735n	100	16	3.5k	2.0			1.0M	5.0	2.0		C	BB	PC100		
5	VT212	50m	735n	100	16	7.8k	2.0			5.0M	5.0	2.0		C	BB	PC100		
6	VT212L	50m	735n	100	16	6.0k	2.0			5.0M	5.0	2.0		C	BB	PC100		
7	VT213L	50m	735n	100	16	16k	2.0			10M	5.0	2.0		C	BB	PC100		
8	VT221	50m	735n	100	16	6.8k	2.0			750k	5.0	2.0		C	BA	PC100		
9	CL903	50m*	735n	250 Δ	57*	133k	2.0			880M	5.0	2.0		C	BB	PC100		
10	CL903A	50m*	735n	250 Δ	57*	67k	2.0			450M	5.0	2.0		C	BB	PC100		
11	VT213	50m	735n	300	16	22k	2.0			50M	5.0	2.0		C	BB	PC100		
12	VT213H	50m	735n	300	16	32k	2.0			50M	5.0	2.0		C	BB	PC100		
13	VT214	50m	735n	300	16	140k	2.0			200M	5.0	2.0		C	BB	PC100		
14	VT214L	50m	735n	300	16	64k	2.0			100M	5.0	2.0		C	BB	PC100		
15	VT21K	50m	740n	70		4.0k				50M				C	BB			
16	VT21M	50m	740n	250		60k				500M				C	BB			
17	MPY4H69	60m	520n	200		50k	1.0			10M	10	40		C	BA	PC140		
18#	MPY4H69%	60m*	520n	200	38	50k				10M	10	40		C	BA	PC250		
19	MPY4H79	60m	520n	200		100k	1.0			20M	10	40		C	BA	PC140		
20#	MPY4H79%	60m*	520n	200	38	100k				20M	10	40		C	BA	PC250		
21	MPB2-4H48	60m	590n	200		10k	1.0			5.0M	10	40		C	BA	PC140		
22#	MPB2-4H48%	60m*	590n	200	38	10k				5.0M	10	40		C	BA	PC250		
23	MPB2-4H59	60m	590n	200		20k	1.0			10M	10	40		C	BA	PC140		
24#	MPB2-4H59%	60m*	590n	200	38	20k				10M	10	40		C	BA	PC250		
25#	RPX10	60m	630n	350	37*	80k	2.0			10M	5.0	2.0		C	BA	PC520		
26	MKB1-7H28P	60m	690n	150		2.0k	1.0			1.5M	10	40		C	BB	PC140		
27#	MKB1-7H28P%	60m*	700n	150	37	2.0k				1.5M	10	40		C	BB	PC290		
28#	ORP60	70m*		350	47*	60k				200M	20			G	BA	PC170		
29#	ORP61	70m*		350	47*	60k				200M	20			G	BA	PC170		
30#	ORP66	70m*		350	47*	55k				200M	20			G	BA	PC170		
31	MKY1-7C38E	70m	550n	150		7.5k	1.0			300k	10	40		C	BA	PC140		
32#	MKY1-7C38E%	70m*	620n	150	37	7.5k				300k	10	40		C	BA	PC330		
33#	RPY33	75m	515n	75	46*	1.6k				100k	20	25		K	CF	PC200		
34	CK1214	75m	510n	75	47	7.0k	2.0			500k	10	2.0		C	CF	PC520		
35	CK1221	75m	515n	75		7.0k	2.0			500k	5.0	2.0		C	BA	PC450		
36	CK1222	75m	515n	75		12k	2.0			1.0M	5.0	2.0		C	BA	PC450		
37	CK1261	75m	515n	75		6.0k	2.0			500k	5.0	2.0		C	BA	PC460		
38	CK1262	75m	515n	75		12k	2.0			1.0M	5.0	2.0		C	BA	PC460		
39	CK1223	75m	515n	100		20k	2.0			1.0M	5.0	2.0		C	BA	PC450		
40	CL602	75m*	515n	300 Δ	57*	1.0M	2.0			66M	5.0	2.0		C	BA	PC80		
41	CK1209	75m	550n	75	37	6.0k	2.0			1.0M	5.0	2.0		C	CF	PC450		
42	CK1213	75m	550n	75	47	9.0k	2.0			500k	10	2.0		C	CF	PC520		
43	CL605L	75m*	550n	170 Δ	57*	7.5k	2.0			500k	5.0	2.0		C	BA	PC80		
44	CL605	75m*	550n	300 Δ	57*	166k	2.0			11M	5.0	2.0		C	BA	PC80		
45	CK1212	75m	610n	75	47	1.5k	2.0			500k	10	2.0		C	CF	PC520		
46	CK1208	75m	615n	75	36	3.0k	2.0			1.0M	5.0	2.0		C	CF	PC450		
47	CK1266	75m	615n	75		3.0k	2.0			1.0M	5.0	2.0		C	CF	PC460		
48	CL607L	75m*	615n	170 Δ	57*	3.5k	2.0			700k	5.0	2.0		C	BA	PC80		
49	CL607	75m*	615n	300 Δ	57*	133k	2.0			27m	5.0	2.0		C	BA	PC80		
50	CK1211	75m	655n	75	47	6.0k	2.0			1.0M	10	2.0		C	CF	PC520		
51	CK1224	75m	655n	75		1.0k	2.0			1.0M	5.0	2.0		C	CF	PC450		
52	CL604L	75m*	690n	170 Δ	57*	1.5k	2.0			400k	5.0	2.0		C	BB	PC80		
53	CL604M	75m*	690n	250 Δ	57*	7.5k	2.0			2.0M	5.0	2.0		C	BB	PC80		
54	CL604	75m*	690n	300 Δ	57*	30k	2.0			8.0M	5.0	2.0		C	BB	PC80		
55	MKB5H38	75m	700n	150		5.0k	1.0			100M	10	40		C	BB	PC140		
56#	MKB5H38%	75m*	700n	150	37	5.0k				100M	5.0	40		C	BB	PC260		
57	MKB5H69	75m	700n	300		50k	1.0			400M	10	40		C	BB	PC140		
58#	MKB5H69%	75m*	700n	300	37	50k				400M	5.0	40		C	BB	PC260		
59	CK1201	75m	715n	75		600	2.0			10M	5.0	2.0		C	BB	PC450		
60	CK1210	75m	715n	75	46	8.5k	2.0			10M	5.0	2.0		C	BB	PC520		
61	CK1241	75m	715n	75		800	2.0			10M	5.0	2.0		C	BB	PC460		
62	CL603AL	75m*	735n	170 Δ	57*	3.5k	2.0			23M	5.0	2.0		C	BB	PC80		
63	CL603	75m*	735n	300 Δ	57*	133k	2.0			880M	5.0	2.0		C	BB	PC80		
64	CL603A	75m*	735n	300 Δ	57*	75k	2.0			500M	5.0	2.0		C	BB	PC80		
65	VT93L	80m	550n	100	16	11k	2.0			1.0M	5.0	2.0		C	BA	PC30		
66	VT931	80m	550n	100	16	22k	2.0			1.0M	5.0	2.0		C	BA	PC30		
67	VT932	80m	550n	100	16	100k	2.0			50M	5.0	2.0		C	BA	PC30		
68	MKY1-7H26	80m	550n	150		2.0	1.0			100k	10	40		C	BA	PC140		
69	MKY1-7H37	80m	550n	150		5.0	1.0			400k	10	40		C	BA	PC140		
70	MKY1-7H38	80m	550n	150		5.0	1.0			500k	10	40		C	BA	PC140		
71	MKY1-7H39	80m	550n	150		5.0	1.0			1.0M	10	40		C	BA	PC140		
72	MKY1-7H48	80m	550n	150		10	1.0			2.0M	10	40		C	BA	PC140		
73	MKY1-7H49	80m	550n	150		10	1.0			2.0M	10	40		C	BA	PC140		
74	VT901	80m	565n	100	16	43k	2.0			500k	5.0	2.0		C	BA	PC140		
75	VT902	80m	565n	100	16	8.0k	2.0			750k	5.0	2.0		C	BA	PC30		
76	VT903H	80m	565n	300	16	44k	2.0			5.0M	5.0	2.0		C	BA	PC30		
77	VT904	80m	565n	300	16	110k	2.0			20M	5.0	2.0		C	BA	PC30		
78	VT904L	80m	565n	300	16	88k	2.0			10M	5.0	2.0		C	BA	PC30		
79#	424SPFS1	80m	600n	200	37*	2.0k	2.0			100k	5.0	2.0		C	BA	PC490		
80#	MKY1-7H26%	80m*	620n	150	37	2.0k				100k	10	10		C	BA	PC280		
81#	MKY1-7H38%	80m*	620n	150	37	5.0k				500k	10	10		C	BA	PC280		
82#	MKY1-7H39%	80m*	620n	150	37	5.0k				1.0M	10	10		C	BA	PC280		
83#	MKY1-7H49%	80m*	620n	150	37	10k				2.0M	10	10		C	BA	PC280		
84	VT941	80m	675n	100	16	2.0k	2.0			500k	5.0	2.0		C	BB	PC30		
85	VT912	80m	735n	100	16	15k	2.0			20M	5.0	2.0		C	BB	PC30		
86	VT912L	80m	735n	100	16	6.0k	2.0			5.0M	5.0	2.0		C	BB	PC30		
87	VT913H	80m	735n	100	16	32k	2.0			50M	5.0	2.0		C	BB	PC30		
88	VT914L	80m	735n	100	16	64k	2.0			100M	5.0	2.0		C	BB	PC30		
89	VT914	80m	735n	250	16	140k	2.0			200M	5.0	2.0		C	BB	PC30		
90#	ORP62	100m*		350	47*	45k				150M	20			G	BA	PC170		
91#	ORP68	100m*		350	47*	64k				150M	20			G	BA	PC170		
92#	ORP69	100m*		350	47*	30k				100M	20			G	BA	PC170		
93	EM1507	100m	514n	200	59	2.5k	100			1.0M				G	BA	PC480		
94	CK1263	100m	515n	100		20k	2.0			1.0M	5.0	2.0		C	BA	PC460		
95	CK1264	100m	515n	100		10k	2.0			10M	5.0	2.0		C	BA	PC460		
96	MPY5C69	100m	520n	200		50k	1.0			30M	10	40						

# 16. SENSOR: PHOTOCONDUCTIVE CELL (LDR)

IN ORDER OF: (1)PWR. DISS. Pcase  
(2)PK WAVELENGTH (3)MAX. VOLT & (4)TYPE No.

LINE No.	TYPE No.	1. MAX. PWR @ 25°C Pcase (W)	2. PEAK WAVELENGTH (m)	3. MAX. VOLT (V)	TEMP. RING. CODE	LIGHT RESISTANCE				S O U R C E	DARK RESISTANCE				MATERIAL & FEATURES	LEAD CODE	DRAWING Q-RND. Δ-RECT. * CHIP	
						R <sub>on</sub> (Ω)	E <sub>v</sub>		E <sub>e</sub> (W/cm <sup>2</sup> )		R <sub>off</sub> (Ω)	SECS. AFTER (S)	E <sub>v</sub>					E <sub>e</sub> (W/cm <sup>2</sup> )
							(fc)	(lx)					(fc)	(lx)				
1	RPS5PF	100m	600n	400	47	400			1.0M	5.0	100			C	CF	PC62a		
2	CK1218	100m	610n	150	36	3.5k	2.0		1.0m	10	2.0			C	CF	PC52a		
3	CK1249	100m	615n	100	47	4.0k	2.0		1.0M	5.0	2.0			C	CF	PC46		
4	CK1217	100m	655n	100	47	1.5k	2.0		1.0M	10	2.0			C	CF	PC52a		
5	CK1245	100m	655n	100		1.5k	2.0		1.0M	5.0	2.0			C	CF	PC46		
6	CK1265	100m	655n	100		3.0k	2.0		1.0M	5.0	2.0			C	CF	PC46		
7	RPY58A	100m*	675n	50	47*	600		50	200k	20				C	BA	PC21		
8	EM1502	100m	695n	200	57	1.2k			30M					C	BB	PC46		
9	EM1508	100m	695n	200	57	1.2k			30M					C	BB	PC46a		
10	NSL361	100m	700n	70	66	65k	1.0		200M	15	500	500		C	BB	PC39b		
11	NSL362	100m	700n	70	66	28k	1.0		200M	15	500	500		C	BB	PC39b		
12	NSL363	100m	700n	70	66	12k	1.0		100M	15	500	500		C	BB	PC39b		
13	NSL364	100m	700n	70	66	5.2k	1.0		100M	15	500	500		C	BB	PC39b		
14	NSL365	100m	700n	250	66	550k	1.0		1.0G	15	500	500		C	BB	PC39b		
15	NSL366	100m	700n	250	66	230k	1.0		1.0G	15	500	500		C	BB	PC39b		
16	NSL367	100m	700n	250	66	100k	1.0		1.0G	15	500	500		C	BB	PC39b		
17	CK1202	100m	715n	100		300	2.0		100M	5.0	2.0			C	BB	PC45		
18	CK1216	100m	715n	100	46	1.0k	2.0		10m	5.0	2.0			C	BB	PC52a		
19	CK1242	100m	715n	100		1.2k	2.0		10M	5.0	2.0			C	BB	PC46		
20	CK1243	100m	715n	100		3.5k	2.0		10M	5.0	2.0			C	BB	PC46		
21	CK1244	100m	715n	100		7.0k	2.0		100M	5.0	2.0			C	BB	PC46		
22	CK1203	100m	715n	150		500	2.0		100M	5.0	2.0			C	BB	PC45		
23	MPY5H69	120m	520n	200	38	50k	1.0		30M	10	40			C	BA	PC14		
24	MPY5H69%	120m*	520n	200	38	50k	1.0		30M	10	40			C	BA	PC26		
25	MPY5H79	120m	520n	200	38	100k	1.0		50M	10	40	10		C	BA	PC14		
26	MPY5H79%	120m*	520n	200	38	100k	1.0		50M	10	40	10		C	BA	PC26		
27	MPY5H89	120m	520n	200		200k	1.0		60M	10	40			C	BA	PC14		
28	VT334/21	120m	550n	300	57	75k	2.0		10M	5.0				C	BA	PC2a		
29	VT334/21A	120m	550n	300	57	75k	2.0		10M	5.0				C	BA	PC2a		
30	VT334/21B	120m	550n	300	57	75k	2.0		10M	5.0				C	BA	PC2a		
31	MPB2-5H49	120m	590n	200	38	10k	1.0		5.0M	10	40	10		C	BA	PC14		
32	MPB2-5H49%	120m*	590n	200	38	10k	1.0		5.0M	10	40	10		C	BA	PC26		
33	MPB2-5H59	120m	590n	200	38	20k	1.0		10M	10	40			C	BA	PC14		
34	MPB2-5H59%	120m*	590n	200	38	20k	1.0		10M	10	40	10		C	BA	PC26		
35	CL704/2	125m	510n	300	47	7.0k	2.0		6.8M	5.0	2.0			C	BA	PC52a		
36	CK1220	125m	510n	100	47	7.0k	2.0		1.0M	5.0	2.0			C	BA	PC9		
37	CL702L2	125m*	515n	100	57*	46k	2.0		3.0M	5.0	2.0			C	BA	PC9		
38	CL702L	125m*	515n	100	57*	20k	2.0		1.3M	5.0	2.0			C	BA	PC46		
39	CK1268	125m	515n	200	37	80k	2.0		10M	10	2.0			C	BA	PC2		
40	VT32L	125m	515n	200	16	1.9k	2.0		100k	5.0	2.0			C	BA	PC2		
41	VT32I	125m	515n	200	16	3.9k	2.0		200k	5.0	2.0			C	BA	PC2		
42	VT32IH	125m	515n	200	16	7.8k	2.0		1.0M	5.0	2.0			C	BA	PC2		
43	CL702	125m*	515n	300	57*	1.0M	2.0		68M	5.0	2.0			C	BA	PC9		
44	VT322	125m	515n	300	16	31k	2.0		10M	5.0	2.0			C	BA	PC2		
45	VT322L	125m	515n	300	16	15k	2.0		5.0M	5.0	2.0			C	BA	PC2		
46	VT325	125m	515n	300	16	1.0M	2.0		200M	5.0	2.0			C	BA	PC2		
47	CL7P5H-ID	125m*	550n	100	27*	24k	2.0		14M	5.0	2.0			C	BA	PC57		
48	CL705HL2	125m*	550n	100	57*	67k	2.0		45M	5.0	2.0			C	BA	PC9		
49	CL705HL	125m*	550n	100	57*	28k	2.0		18M	5.0	2.0			C	BA	PC9		
50	CL705L2	125m*	550n	100	57*	7.5k	2.0		500k	5.0	2.0			C	BA	PC9		
51	CL705L	125m*	550n	100	57*	3.3k	2.0		220k	5.0	2.0			C	BA	PC9		
52	CL709L	125m*	550n	100	57*	28k	2.0		18M	5.0	2.0			C	BA	PC9		
53	CL7P5HL	125m*	550n	170	27*	28k	2.0		14M	5.0	2.0			C	BA	PC56a		
54	CL7P5L	125m*	550n	170	27*	3.3k	2.0		165k	5.0	2.0			C	BA	PC56a		
55	CL7P9L	125m*	550n	170	27*	28k	2.0		18M	5.0	2.0			C	BA	PC56a		
56	VT333	125m	550n	200	16	28k	2.0		10M	5.0	2.0			C	BA	PC2		
57	VT333/2	125m	550n	200	16	60k	2.0		25M	5.0	2.0			C	BA	PC2		
58	VT333L	125m	550n	200	16	14k	2.0		5.0M	5.0	2.0			C	BA	PC2		
59	CL705	125m*	550n	300	57*	166k	2.0		11M	5.0	2.0			C	BA	PC9		
60	CL705/2	125m*	550n	300	57*	166k	2.0		11M	5.0	2.0			C	BA	PC9		
61	VT30L	125m	565n	200	16	1.8k	2.0		100k	5.0	2.0			C	BA	PC2		
62	VT30I	125m	565n	200	16	3.0k	2.0		200k	5.0	2.0			C	BA	PC2		
63	VT30I/2	125m	565n	200	16	7.5k	2.0		1.0M	5.0	2.0			C	BA	PC2		
64	VT30IH	125m	565n	200	16	6.0k	2.0		1.0M	5.0	2.0			C	BA	PC2		
65	VT302/2	125m	565n	200	16	16k	2.0		5.0M	5.0	2.0			C	BA	PC2		
66	VT303L2	125m	565n	200	16	32k	2.0		5.0M	5.0	2.0			C	BA	PC2		
67	VT302	125m	565n	300	16	16k	2.0		5.0M	5.0	2.0			C	BA	PC2		
68	VT302L	125m	565n	300	16	10k	2.0		1.0M	5.0	2.0			C	BA	PC2		
69	VT303	125m	565n	300	16	70k	2.0		10M	5.0	2.0			C	BA	PC2		
70	VT303L	125m	565n	300	16	32k	2.0		10M	5.0	2.0			C	BA	PC2		
71	VT304	125m	565n	300	16	144k	2.0		50M	5.0	2.0			C	BA	PC2		
72	VT305	125m	565n	300	16	1.0M	2.0		200M	5.0	2.0			C	BA	PC2		
73	CK1248	125m	615n	100	36	7.0k	2.0		10M	5.0	2.0			C	CF	PC46		
74	CL3P7L	125m*	615n	100	27*	1.2k	2.0		80k	5.0	2.0			C	BA	PC55		
75	CL707L	125m*	615n	100	57*	2.7k	2.0		540k	5.0	2.0			C	BA	PC9		
76	CK1225	125m	615n	125		10k	2.0		10M	5.0	2.0			C	CF	PC45		
77	CK1267	125m	615n	200	36	15k	2.0		10M	5.0	2.0			C	CF	PC46		
78	CL707	125m*	615n	300	57*	133k	2.0		27M	5.0	2.0			C	BA	PC9		
79	CL707HL	125m*	620n	100	57*	10k	2.0		67M	5.0	2.0			C	BA	PC9		
80	CL7P7HL	125m*	620n	170	27*	10k	2.0		6.7M	5.0	2.0			C	BA	PC56a		
81	CL707HM	125m*	620n	250	57*	100k	2.0		67M	5.0	2.0			C	BA	PC9		
82	CL707H	125m*	620n	300	57*	600k	2.0		335M	5.0	2.0			C	BA	PC9		
83	CL7P7HM	125m*	620n	400	27*	30k	2.0		20M	5.0	2.0			C	BA	PC56a		
84	CK1205	125m	655n	150		1.0k	2.0		100M	5.0	2.0			C	CF	PC45		
85	VT34L2	125m	675n	200	16	1.5k	2.0		100k	5.0	2.0			C	BB	PC2		
86	VT34L	125m	675n	200	16	600	2.0		100k	5.0	2.0			C	BB	PC2		
87	VT34I	125m	675n	200	16	1.2k	2.0		500k	5.0	2.0			C	BB	PC2		
88	VT34I/2	125m	675n	200	16	3.0k	2.0		100k	5.0	2.0			C	BB	PC2		
89	VT34IH	125m	675n	300	16	2.4k	2.0		1.0M	5.0	2.0			C	BB	PC2		
90	VT342	125m	675n	300	16	7.0k	2.0		5.0M	5.0	2.0			C	BB	PC2		
91	VT342L	125m	675n	300	16	4.8k	2.0		1.0M	5.0	2.0			C	BB	PC2		
92	VT343	125m	675n	300	16	28k	2.0		10M	5.0	2.0			C	BB	PC2		
93	VT343L	125m	675n	300	16	14k	2.0		10M	5.0	2.0			C	BB	PC2		
94	CL704L2	125m*	690n	100	57*	1.5k	2.0		400k	5.0	2.0			C				



# 16. SENSOR: PHOTOCONDUCTIVE CELL (LDR)

IN ORDER OF: (1)PWR. DISS. Pcase (2)PK WAVELENGTH (3)MAX. VOLT & (4)TYPE No.

LINE No.	TYPE No.	1 MAX. PWR @ 25°C Pcase (W)	2 PEAK WAVE-LENGTH λp (m)	3 MAX. VOLT (V)	TEMP RNG. CODE	LIGHT RESISTANCE				DARK RESISTANCE				S O U R C E	MATERIAL & FEATURES	LEAD CODE	DRAWING	
						Ron (Ω)	Ev		Ee (W/cm2)	Roff (Ω)	SECS. AFTER (S)	Ev						Ee (W/cm2)
							(fc)	(lx)				(fc)	(lx)					
1	VT312	125m	735n	300	16	22k	2.0				50M∅	5.0	2.0	C	BB		PC2∅	
2	VT312H	125m	735n	300	16	30k	2.0				50M∅	5.0	2.0	C	BB		PC2∅	
3	VT312L	125m	735n	300	16	8.4k	2.0				5.0M∅	5.0	2.0	C	BB		PC2∅	
4	VT313L	125m	735n	300	16	60k	2.0				100M∅	5.0	2.0	C	BB		PC2∅	
5	VT314	125m	735n	300	16	140k	2.0				200M∅	5.0	2.0	C	BB		PC2∅	
6	VT31K	125m	740n	70		1.9k					50M			C	BB		PC2∅	
7	VT31M	125m	740n	250		50k					50M			C	BB		PC2∅	
8	CL7P5	125m*	550m	300 Δ	27*	166k	2.0				8.3M	5.0	2.0	C	BA		PC56a∅	
9	CK1283	150m	515n	125	07	15k	2.0				1.0M	5.0	2.0	C	BA	Dual	PC48a∅	
10	CK1228	150m	515n	200	37	130k	2.0				50M	10	2.0	C	BA		PC45∅	
11	CK1257	150m	515n	200	37	10k	2.0				1.0M	5.0	2.0	C	BA		PC11∅	
12	MPY7C59	150m	520n	150		20k∅	1.0				20M	10	40	C	BA		PC14∅	
13#	MPY7C59%	150m*	520n	150	27	20k∅	1.0	10			20M∅	10	40	C	BA		PC33∅	
14	MPY7C59E	150m	520n	150		50k∅	1.0				5.0M	10	40	C	BA		PC14∅	
15	MPY7C69	150m	520n	150		50k∅	1.0				30M	10	40	C	BA		PC14∅	
16#	MPY7C69%	150m*	520n	150	27	50k∅	1.0	10			30M∅	10	40	C	BA		PC33∅	
17	MPY7C79	150m	520n	150		100k∅	1.0				50M	10	40	C	BA		PC14∅	
18	MPB2-7C39	150m	590n	150		5.0k∅	1.0				3.0M	10	40	C	BB		PC14∅	
19#	MPB2-7C39%	150m*	590n	150	27	5.0k∅	1.0	10			3.0M∅	10	40	C	BB		PC33∅	
20	MPB2-7C49	150m	590n	150		10k∅	1.0				5.0M	10	40	C	BB		PC14∅	
21#	MPB2-7C49%	150m*	590n	150	27	10k∅	1.0	10			5.0M∅	10	40	C	BB		PC33∅	
22#	1384S1	150m	600n	200	37*	400 ∅	2.0				100k	5.0	2.0	C	CF		PC51∅	
23	CK1255	150m	610n	200	37	3.0k	2.0				1.0M	5.0	2.0	C	CF		PC11∅	
24	CK1282	150m	615n	125	07	9.0k	2.0				1.0M	5.0	2.0	C	CF		PC48a∅	
25	CK1227	150m	615n	200		100k	2.0				50M	5.0	2.0	C	CF		PC45∅	
26#	MPY7C59E%	150m*	620n	150	37	50k∅	1.0	10			5.0M	10	40	C	BA		PC33∅	
27	CK1281	150m	655n	125	06	4.5k	2.0				10M	5.0	2.0	C	BA	Dual	PC48a∅	
28	CK1253	150m	655n	200	37	8.0k	2.0				10M	5.0	2.0	C	CF		PC11∅	
29	MKB7H38	150m	700n	150		5.0k∅	1.0				100M	10	40	C	BA		PC14∅	
30#	MKB7H38%	150m*	700n	150	37	5.0k∅	1.0	10			100M	5.0	40	C	BB		PC28∅	
31	MKB7H69	150m	700n	300		50k∅	1.0				400M	10	40	C	BA		PC14∅	
32#	MKB7H69%	150m*	700n	300	37	50k∅	1.0	10			400M	5.0	40	C	BB		PC28∅	
33	CK1280	150m	715n	125	06	1.5k	2.0				10M	5.0	2.0	C	CF	Dual	PC48a∅	
34	CK1284	150m	715n	125		25k	2.0				100M	5.0	2.0	C	BB		PC48a∅	
35	CK1206	150m	715n	200		20k	2.0				100M∅	5.0	2.0	C	BB		PC45∅	
36	CK1207	150m	715n	200		100k	2.0				1.0G∅	5.0	2.0	C	BB		PC45∅	
37	CK1246	150m	715n	200		10k	2.0				100M	5.0	2.0	C	BB		PC46∅	
38	CK1247	150m	715n	200		30k	2.0				100M	5.0	2.0	C	BB		PC46∅	
39	VT82L	175m	515n	100	16	1.9k	2.0				100k∅	5.0	2.0	C	BA		PC3a∅	
40	VT833/2	175m	550n	200	16	52k	2.0				10M∅	5.0	2.0	C	BA	Dual	PC4∅	
41	VT833	175m	550n	300	16	33k	2.0				15M∅	5.0	2.0	C	BA		PC3a∅	
42	VT835	175m	550n	300	16	330k	2.0				100M∅	5.0	2.0	C	BA		PC3a∅	
43	VT801	175m	565n	200	16	3.0k	2.0				250k∅	5.0	2.0	C	BA		PC3a∅	
44	VT804	175m	565n	300	16	140k	2.0				50M∅	5.0	2.0	C	BA		PC3a∅	
45	VT871	175m	615n	100	16	3.0k	2.0				10M∅	5.0	2.0	C	BA		PC3a∅	
46	VT871/2	175m	615n	100	16	8.8k	2.0				1.0M∅	5.0	2.0	C	BA	Dual	PC4∅	
47	VT841/2	175m	675n	75	16	2.4k	2.0				550k∅	5.0	2.0	C	BB	Dual	PC4∅	
48	VT841L	175m	675n	100	16	900	2.0				500k∅	5.0	2.0	C	BB		PC3a∅	
49	VT811	175m	735n	70		4.0k	2.0				10M∅	5.0	2.0	C	BB		PC3a∅	
50	VT811/2	175m	735n	100	16	2.4k	2.0				1.0M∅	5.0	2.0	C	BB	Dual	PC4∅	
51	VT811H	175m	735n	100		8.0k	2.0				10M∅	5.0	2.0	C	BB		PC3a∅	
52#	ORP12	200m*		110	16*	300 ∅	2.0	1.0k			10M			C	BA		PC52b∅	
53	CK1234	200m	510n	200	47	14k	2.0				1.0M	10	2.0	C	BA		PC11∅	
54	CK1258	200m	515n	200	37	12k	2.0				100M	5.0	2.0	C	BA		PC11∅	
55	VT14L	200m*	515n	200		600m	2.0				100k∅	5.0	2.0	C	BB		PC6∅	
56	VT132	200m*	515n	200		10	2.0				5.0M∅	5.0	2.0	C	BA		PC6∅	
57	VT133	200m*	515n	200		28	2.0				10M∅	5.0	2.0	C	BA		PC6∅	
58	VT133L	200m*	515n	200		14	2.0				5.0M∅	5.0	2.0	C	BA		PC6∅	
59	VT141	200m*	515n	200		1.2	2.0				500k∅	5.0	2.0	C	BB		PC6∅	
60	VT141H	200m*	515n	200		2.4	2.0				1.0M∅	5.0	2.0	C	BB		PC6∅	
61	VT124	200m*	515n	300		136	2.0				50M∅	5.0	2.0	C	BA		PC6∅	
62	VT142	200m*	515n	300		7.0	2.0				5.0M∅	5.0	2.0	C	BB		PC6∅	
63	VT142L	200m*	515n	300		4.8	2.0				1.0M∅	5.0	2.0	C	BB		PC6∅	
64	VT143	200m*	515n	300		28	2.0				10M∅	5.0	2.0	C	BB		PC6∅	
65	VT143L	200m*	515n	300		14	2.0				10M∅	5.0	2.0	C	BB		PC6∅	
66	MPY7H59	200m	520n	150		20k∅	1.0				20M	10	40	C	BB		PC14∅	
67#	MPY7H59%	200m*	520n	150	38	20k∅	1.0	10			20M∅	10	40	C	BA		PC27∅	
68	MPY7H69	200m	520n	150		50k∅	1.0				30M	10	40	C	BA		PC14∅	
69#	MPY7H69%	200m*	520n	150	38	50k∅	1.0	10			30M∅	10	40	C	BA		PC27∅	
70	MPY7H79	200m	520n	150		100k∅	1.0				50M	10	40	C	BA		PC14∅	
71	MPY12C28	200m	520n	200		2.0k∅	1.0				1.0M	10	40	C	BA		PC14∅	
72#	MPY12C28%	200m*	520n	200	27	2.0k∅	1.0	10			1.0M∅	10	40	C	BA		PC34∅	
73∇	NSL4921	200m	550n	80		4.0k	1.0	10			1.0M	15	50	500	BA		PC∅	
74∇	NSL4922	200m	550n	80		4.0k	1.0	10			1.0M	15	50	500	BA		PC40∅	
75∇	NSL4931	200m	550n	80		1.7k	1.0	10			200k	15	50	500	BA		PC∅	
76∇	NSL4932	200m	550n	80		1.7k	1.0	10			200k	15	50	500	BA		PC40∅	
77∇	NSL4941	200m	550n	80		750	1.0	10			40k	15	50	500	BA		PC40∅	
78∇	NSL4942	200m	550n	80		750	1.0	10			40k	15	50	500	BA		PC40∅	
79	NSL481	200m	550n	120	67	43k	1.0	10			65M	15	50	500	BA		PC42∅	
80	NSL482	200m	550n	120	67	18k	1.0	10			15M	15	50	500	BA		PC42∅	
81	NSL483	200m	550n	120	67	8.0k	1.0	10			1.8M	15	50	500	BA		PC42∅	
82	NSL484	200m	550n	120	67	3.5k	1.0	10			250k	15	50	500	BA		PC42∅	
83∇	NSL4812	200m	550n	120		43k	1.0	10			5.0M	15	50	500	BA		PC58∅	
84∇	NSL4822	200m	550n	120		18k	1.0	10			1.5M	15	50	500	BA		PC58∅	
85∇	NSL4832	200m	550n	120		8.0k	1.0	10			500k	15	50	500	BA		PC58∅	
86∇	NSL4842	200m	550n	120		3.5k	1.0	10			100k	15	50	500	BA		PC58∅	
87	CK1233	200m	550n	175	47	7.5k	2.0				1.0M	10	2.0	C	CF		PC52b∅	
88	NSL485	200m	550n	250	67	330k	1.0	10			200M	15	50	500	BA		PC42∅	
89	NSL486	200m	550n	250	67	155k	1.0	10			130M	15	50	500	BA		PC42∅	
90	NSL																	

# 16. SENSOR: PHOTOCONDUCTIVE CELL (LDR)

IN ORDER OF: (1)PWR. DISS. Pcase  
(2)PK WAVELENGTH (3)MAX. VOLT & (4)TYPE No.

LINE No.	TYPE No.	1 MAX. PWR @ 25°C Pcase (W)	2 PEAK WAVELENGTH λp (m)	3 MAX. VOLT (V)	TEMP. RING. CODE	LIGHT RESISTANCE				DARK RESISTANCE				S O U R C E	MATERIAL & FEATURES	LEAD CODE	DRAWING & RND. Δ-RECT. * CHIP	
						R <sub>on</sub> (Ω)	E <sub>v</sub>		E <sub>e</sub> (W/cm <sup>2</sup> )	R <sub>off</sub> (Ω)	SECS. AFTER (S)	E <sub>v</sub>						E <sub>e</sub> (W/cm <sup>2</sup> )
							(fc)	(lx)				(fc)	(lx)					
1#	MPB2-7H49%	200m*	590n	150	38	10k∅	10			5.0M∅	10			C	BA		PC27∅	
2	MKB2-12H49	200m	610n	150	26	10k∅	10			10M	10			C	BA		PC14∅	
3	CK1232	200m	610n	175	47	4.0k	2.0			1.0M	10	2.0		C	CF		PC52b∅	
4	CK1231	200m	655n	175	47	10k	2.0			10M	10	2.0		C	CF		PC52b∅	
5	NSL293-2	200m	690n	70	67	45	100			10M	15	50	500	C	CF		PC40∅	
6	NSL294-2	200m	690n	70	67	750	1.0	10		10M	15	50	500	C	CF		PC40∅	
7▼	NSL2941	200m	690n	70		750	1.0	10		2.0M	15	50	500				PC∅	
8▼	NSL2942	200m	690n	70		750	1.0	10		2.0M	15	50	500				PC∅	
9	NSL297-2	200m	690n	250	67	7.5k	1.0	10		100M	15	50	500	E	CF		PC40∅	
10▼	NSL2971	200m	690n	250		7.5k	1.0	10		10M	15	50	500				PC∅	
11▼	NSL2972	200m	690n	250		7.5k	1.0	10		10M	15	50	500				PC∅	
12▼	NSL3921	200m	700n	70		4.0k	1.0	10		2.0M	15	50	500		BB		PC39c∅	
13	NSL3922	200m	700n	70		4.0k	1.0	10		2.0M	15	50	500		BB		PC40∅	
14	NSL3931	200m	700n	70		1.7k	1.0	10		2.0M	15	50	500		BB		PC39c∅	
15	NSL3932	200m	700n	70		1.7k	1.0	10		2.0M	15	50	500		BB		PC40∅	
16	NSL3941	200m	700n	70		750k	1.0	10		2.0M	15	50	500		BB		PC39c∅	
17	NSL3942	200m	700n	70		750	1.0	10		2.0M	15	50	500		BB		PC40∅	
18	NSL381	200m	700n	80	66	43k	1.0	10		100M	15	50	500	E	BB		PC42∅	
19	NSL382	200m	700n	80	66	18k	1.0	10		100M	15	50	500	E	BB		PC42∅	
20	NSL383	200m	700n	80	66	8.0k	1.0	10		100M	15	50	500	E	BB		PC42∅	
21	NSL384	200m	700n	80	66	3.5k	1.0	10		100M	15	50	500	E	BB		PC42∅	
22	NSL3812	200m	700n	80		43k	1.0	10		10M	15	50	500		BB		PC58∅	
23	NSL3822	200m	700n	80		18k	1.0	10		10M	15	50	500		BB		PC58∅	
24	NSL3832	200m	700n	80		8.0k	1.0	10		10M	15	50	500		BB		PC58∅	
25	NSL3842	200m	700n	80		3.5k	1.0	10		10M	15	50	500		BB		PC58∅	
26	NSL385	200m	700n	250	66	330k	1.0	10		1.0G	15	50	500	E	BB		PC42∅	
27	NSL386	200m	700n	250	66	155k	1.0	10		1.0G	15	50	500	E	BB		PC42∅	
28	NSL387	200m	700n	250	66	66k	1.0	10		1.0G	15	50	500	E	BB		PC42∅	
29	NSL3852	200m	700n	250		330k	1.0	10		100M	15	50	500		BB		PC58∅	
30	NSL3862	200m	700n	250		155k	1.0	10		100M	15	50	500		BB		PC58∅	
31	NSL3872	200m	700n	250		66k	1.0	10		100M	15	50	500		BB		PC58∅	
32	NSL3951	200m	700n	250		40k	1.0	10		5.0M	15	50	500		BB		PC39c∅	
33	NSL3952	200m	700n	250		40k	1.0	10		5.0M	15	50	500		BB		PC40∅	
34	NSL3961	200m	700n	250		17k	1.0	10		5.0M	15	50	500		BB		PC39c∅	
35	NSL3962	200m	700n	250		17k	1.1	10		5.0M	15	50	500		BB		PC40∅	
36	NSL3971	200m	700n	250		7.5k	1.0	10		5.0M	15	50	500		BB		PC39c∅	
37	NSL3972	200m	700n	250		7.5k	1.0	10		5.0M	15	50	500		BB		PC40∅	
38	CK1285	200m	715n	150	06	120k	2.0			100M	5.0	100		E	Dual		PC48∅	
39	CK1230	200m	715n	175	46	12k	2.0			10M	5.0	2.0		C	BB		PC52b∅	
40	VT111	200m*	735n	200		2.3k	2.0			500k∅	5.0	2.0		C	BB		PC6∅	
41	VT111H	200m*	735n	200		4.6k	2.0			1.0M∅	5.0	2.0		C	BB		PC6∅	
42	VT121	200m*	735n	200		3.0k	2.0			300k∅	5.0	2.0		C	BA		PC6∅	
43	VT121H	200m*	735n	200		6.0k	2.0			1.0M∅	5.0	2.0		C	BA		PC6∅	
44	VT112	200m*	735n	300		22k	2.0			50M∅	5.0	2.0		C	BB		PC6∅	
45	VT112L	200m*	735n	300		9.2k	2.0			5.0M∅	5.0	2.0		C	BB		PC6∅	
46	VT113	200m*	735n	300		60k	2.0			100M∅	5.0	2.0		C	BB		PC6∅	
47	VT113L	200m*	735n	300		44k	2.0			100M∅	5.0	2.0		C	BB		PC6∅	
48	VT122	200m*	735n	300		16k	2.0			5.0M∅	5.0	2.0		C	BA		PC6∅	
49	VT122L	200m*	735n	300		9.0k	2.0			5.0M∅	5.0	2.0		C	BA		PC6∅	
50	VT123	200m*	735n	300		66k	2.0			20M∅	5.0	2.0		C	BA		PC6∅	
51	VT123L	200m*	735n	300		32k	2.0			10M∅	5.0	2.0		C	BA		PC6∅	
52	NSL41385	250m	500n	150	67	18k	1.0			6.0M∅	15	50		E	BA		PC54∅	
53	CK1275	250m	515n	125		6.0k	2.0			1.0M	5.0	2.0		C	Dual		PC47∅	
54	CK1278	250m	515n	125	36	12k	2.0			1.0M	5.0	2.0		E	Dual		PC47a∅	
55	CK1279	250m	515n	125	36	1.2k	100			1.0M∅	5.0	100		E	Dual		PC47a∅	
56	VT721	250m	515n	300	16	2.6k	2.0			1.0M∅	5.0	2.0		C	BA		PC3b∅	
57	VT721H	250m	515n	300	16	4.8k	2.0			2.0M∅	5.0	2.0		C	BA		PC3b∅	
58	VT721HE	250m	515n	300	16	5.5k	2.0			2.0M∅	5.0	2.0		C	BA		PC5∅	
59	VT74L	250m	550n	100	16	450	2.0			500k∅	5.0	2.0		C	BB		PC3b∅	
60	NSL41386	250m	550n	150	67	8.0k	1.0	10		6.0M∅	15	50	500	E	BA		PC54∅	
61	NSL41387	250m	550n	150	67	3.5k	1.0	10		1.0M∅	15	50	500	E	BA		PC54∅	
62	NSL41388	250m	550n	150	67	1.6k	1.0	10		540k∅	15	50	500	E	BA		PC54∅	
63	CL5P5L	250m*	550n	170	27*	1.5k	2.0			75k	5.0	2.0		C	BA		PC56∅	
64	CL5P5	250m*	550n	250	27*	9.0k	2.0			450k	5.0	2.0		C	BA		PC56∅	
65	CL5P5M	250m*	550n	250	27*	6.0k	2.0			400k	5.0	2.0		C	BA		PC56∅	
66	CL5P9M	250m*	550n	250	27*	9.0k	2.0			6.0M	5.0	2.0		C	BA		PC56∅	
67	VT732	250m	550n	300	16	10k	2.0			10M∅	5.0	2.0		C	BA		PC3b∅	
68	VT732E	250m	550n	300	16	11k	2.0			10M∅	5.0	2.0		C	BA		PC5∅	
69	NORP11	250m	550n	320	67	20k	1.0	10		2.5M	15	50	500	E	BA		PC61∅	
70	NORP12	250m	550n	320	67	9.0k	1.0	10		1.0M	15	50	500	E	BA		PC61∅	
71	NORP13	250m	550n	320	67	4.0k	1.0	10		500k	15	50	500	E	BA		PC61∅	
72	VT701E	250m	565n	100	16	3.3k	2.0			300k∅	5.0	2.0		C	BA		PC5∅	
73	VT70L	250m	565n	200	16	1.6k	2.0			1.0M∅	5.0	2.0		C	BA		PC3b∅	
74	VT701	250m	565n	200	16	3.0k	2.0			5.0M∅	5.0	2.0		C	BA		PC3b∅	
75	VT702E	250m	565n	300	16	17k	2.0			1.0M∅	5.0	2.0		C	BA		PC5∅	
76	CK1256	250m	610n	250	37	4.0k	2.0			10M	5.0	2.0		C	CF		PC11∅	
77	VT771	250m	615n	150	16	2.0k	2.0			2.0M∅	5.0	2.0		C	BA		PC3b∅	
78	CK1274	250m	655n	125	36	6.5k	2.0			10M	5.0	2.0		E	Dual		PC47∅	
79	CK1277	250m	655n	125	36	7.5k	2.0			10M	5.0	2.0		E	Dual		PC47a∅	
80	CK1254	250m	655n	300	37	10k	2.0			10M	5.0	2.0		C	CF		PC11∅	
81	VT741	250m	675n	100	16	900	2.0			500k∅	5.0	2.0		C	BB		PC3b∅	
82	VT741E	250m	675n	100	16	1.3k	2.0			500k∅	5.0	2.0		C	BB		PC5∅	
83	CL5P4L	250m*	690n	170	27*	450	2.0			120k	5.0	2.0		C	BB		PC56∅	
84	CL5P4	250m*	690n	250	27*	2.7k	2.0			720k	5.0	2.0		C	BB		PC56∅	
85	CK1273	250m	715n	125	36	1.5k	2.0			10M	5.0	2.0		E	Dual		PC47∅	
86	CK1276	250m	715n	125	37	1.8k	2.0			10M	5.0	2.0		E	Dual		PC47∅	
87	CK1252	250m	715n	300	36	12k	2.0			100M	5.0	2.0		C	BB		PC11∅	
88	VT712E	250m	735n	300	16	24k	2.0			20M∅	5.0	2.0		C	BB		PC5∅	
89	VT773</																	

# 16. SENSOR: PHOTOCONDUCTIVE CELL (LDR)

IN ORDER OF: (1)PWR. DISS. Pcase (2)PK WAVELENGTH (3)MAX. VOLT & (4)TYPE No.

LINE No.	TYPE No.	1. MAX. PWR @ 25°C Pcase (W)	2. PEAK WAVELENGTH λp (m)	3. MAX. VOLT (V)	TEMP. RNG. CODE	LIGHT RESISTANCE				DARK RESISTANCE				S O U R C E	MATERIAL & FEATURES	LEAD CODE	DRAWING NO. RECT. Δ-STRIP * CHIP	
						Ron (Ω)	Ev (fc)		Ee (W/cm2)	Roff (Ω)	SECS. AFTER (S)	Ev (fc)						Ee (W/cm2)
							(lx)	(lx)				(fc)	(lx)					
1	VT521	500m	515n	200	16	2.6k	2.0				100k∅	5.0	2.0		C	BA	PC1a∅	
2	CL5M2	500m*	515n	250 Δ	57*	55k	2.0				3.6M	5.0	2.0		C	BA	PC11∅	
3	VT521H	500m	515n	300	16	5.0k	2.0				500k∅	5.0	2.0		C	BA	PC1a∅	
4	VT522	500m	515n	300	16	18k	2.0				5.0M∅	5.0	2.0		C	BA	PC1a∅	
5	VT522L	500m	515n	300	16	9.0k	2.0				1.0M∅	5.0	2.0		C	BA	PC1a∅	
6	VT523L	500m	515n	300	16	36k	2.0				10M∅	5.0	2.0		C	BA	PC1a∅	
7	MPY12H39	500m	520n	200	38	5.0k∅	1.0				2.0M∅	10	40		C	BA	PC14∅	
8#	MPY12H39%	500m*	520n	200	38	5.0k∅	1.0	10			2.0M∅	10	40	10	C	BA	PC30∅	
9	MPY12H46	500m	520n	300	38	10k∅	1.0				600k∅	10	40		C	BA	PC14∅	
10#	MPY12H46%	500m*	520n	300	38	10k∅	1.0	10			600k∅	10	40	10	C	BA	PC30∅	
11	MPY12H49	500m	520n	300	38	10k∅	1.0				5.0M∅	10	40		C	BA	PC14∅	
12#	MPY12H49%	500m*	520n	300	38	10k∅	1.0	10			5.0M∅	10	40	10	C	BA	PC30∅	
13	MPY12H59	500m	520n	300	37	2.0k∅	1.0				10M∅	10	40		C	BA	PC14∅	
14#	MPY20C39E	500m*	520n	500	67	9.3k	1.0				500k∅	10	40	100	C	BA	PC35∅	
15	NSL491	500m	550n	80	67	4.0k	1.0				14M	15	50	500	C	BA	PC39∅	
16	NSL492	500m	550n	80	67	1.7k	1.0	10			3.2M	15	50	500	C	BA	PC39∅	
17	NSL493	500m	550n	80	67	1.7k	1.0	10			400k	15	50	500	C	BA	PC39∅	
18	NSL494	500m	550n	80	67	7.5k	1.0	10			50k	15	50	500	C	BA	PC39∅	
19	CL5M5L	500m*	550n	170 Δ	57*	1.5k	2.0				100k	5.0	2.0		C	BA	PC11∅	
20	CL5M9M	500m*	550n	170 Δ	57*	1.1k	2.0				3.7M	5.0	2.0		C	BA	PC11∅	
21	VT54L	500m	550n	200	16	250	2.0				100k∅	5.0	2.0		C	BB	PC1a∅	
22	VT533	500m	550n	200	16	25k	2.0				10M∅	5.0	2.0		C	BA	PC1a∅	
23	VT533L	500m	550n	200	16	12k	2.0				5.0M∅	5.0	2.0		C	BA	PC1a∅	
24	VT541	500m	550n	200	16	500	2.0				500k∅	5.0	2.0		C	BB	PC1a∅	
25	VT541H	500m	550n	200	16	1.0k	2.0				1.0M∅	5.0	2.0		C	BB	PC1a∅	
26	CL5M5	500m*	550n	250 Δ	57*	9.0k	2.0				600k	5.0	2.0		C	BA	PC11∅	
27	VT542	500m	550n	300	16	2.0k	2.0				1.0M∅	5.0	2.0		C	BB	PC1a∅	
28	VT542L	500m	550n	300	16	1.5k	2.0				1.0M∅	5.0	2.0		C	BB	PC1a∅	
29	NSL495	500m	550n	320	67	4.0k	1.0	10			32M	15	50	500	C	BA	PC39∅	
30	NSL496	500m	550n	320	67	1.7k	1.0	10			4.0M	15	50	500	C	BA	PC39∅	
31	NSL497	500m	550n	320	67	7.5k	1.0	10			540k	15	50	500	C	BA	PC39∅	
32	NSL445-2	500m	550n	420	67	2.6k	1.0	10			15M	15	50	500	C	BA	PC44∅	
33	NSL446-2	500m	550n	420	67	1.1k	1.0	10			5.0M	15	50	500	C	BA	PC44∅	
34	NSL447-2	500m	550n	420	67	5.5k	1.0	10			1.0M	15	50	500	C	BA	PC44∅	
35	NSL4432	500m	550n	1.0k		200k	1.0	10			30M	15	50	500	C	BB	PC∅	
36	NSL4442	500m	550n	1.0k		120k	1.0	10			10M	15	50	500	C	BB	PC∅	
37	NSL4452	500m	550n	1.0k		2.6k	1.0	10			1.5M	15	50	500	C	BB	PC∅	
38	NSL4462	500m	550n	1.0k		1.1k	1.0	10			500k	15	50	500	C	BB	PC∅	
39	NSL4472	500m	550n	1.0k		5.5k	1.0	10			200k	15	50	500	C	BB	PC∅	
40	NSL443-2	500m	550n	2.0k	67	1.0k	35				300M	15	50	500	C	BA	PC44∅	
41	NSL444-2	500m	550n	2.0k	67	5.5k	35				100M	15	50	500	C	BA	PC44∅	
42	VT50L	500m	565n	200	16	1.3k	2.0				100k∅	5.0	2.0		C	BA	PC1a∅	
43	VT501	500m	565n	200	16	2.6k	2.0				200k∅	5.0	2.0		C	BA	PC1a∅	
44	VT501H	500m	565n	300	16	4.0k	2.0				500k∅	5.0	2.0		C	BA	PC1a∅	
45	VT502	500m	565n	300	16	1.6k	2.0				50M∅	5.0	2.0		C	BA	PC1a∅	
46	VT502L	500m	565n	300	16	8.0k	2.0				1.0M∅	5.0	2.0		C	BA	PC1a∅	
47	VT503	500m	565n	300	16	6.6k	2.0				50M∅	5.0	2.0		C	BA	PC1a∅	
48	VT503L	500m	565n	300	16	3.2k	2.0				10M∅	5.0	2.0		C	BA	PC1a∅	
49	CL5M7	500m*	615n	250 Δ	57*	7.2k	2.0				1.4M	5.0	2.0		C	BA	PC11∅	
50	NSL293	500m	690n	70	67	4.5	100				10M	15	50	500	C	CF	PC39∅	
51	NSL294	500m	690n	70	67	7.5k	1.0	10			10M	15	50	500	C	CF	PC39∅	
52	CL5M4L	500m*	690n	170 Δ	57*	2.5k	2.0				67k	5.0	2.0		C	BB	PC11∅	
53	CL5M4	500m*	690n	250 Δ	57*	1.5k	2.0				400k	5.0	2.0		C	BB	PC11∅	
54	NSL297	500m	690n	250	67	7.5k	1.0	10			100M	15	50	500	C	CF	PC39∅	
55	NSL392	500m	700n	70	66	4.0k	1.0	10			10M	15	50	500	C	BB	PC39∅	
56	NSL393	500m	700n	70	66	1.7k	1.0	10			10M	15	50	500	C	BB	PC39∅	
57	NSL394	500m	700n	70	66	7.5k	1.0	10			10M	15	50	500	C	BB	PC39∅	
58	NSL395	500m	700n	250	66	4.0k	1.0	10			20M	15	50	500	C	BB	PC39∅	
59	NSL396	500m	700n	250	66	1.7k	1.0	10			20M	15	50	500	C	BB	PC39∅	
60	NSL397	500m	700n	250	66	7.5k	1.0	10			20M	15	50	500	C	BB	PC39∅	
61	CK1271	500m	710n	200	57	7.5	100				10M∅				E	BB	PC15∅	
62	VT51L	500m	735n	200	16	700	2.0				100k∅	5.0	2.0		C	BB	PC1a∅	
63	VT511	500m	735n	200	16	2.3k	2.0				500k∅	5.0	2.0		C	BB	PC1a∅	
64	VT511L	500m	735n	200	16	1.4k	2.0				200k∅	5.0	2.0		C	BB	PC1a∅	
65	CL5M3	500m*	735n	250 Δ	57*	7.2k	2.0				48M	5.0	2.0		C	BB	PC11∅	
66	VT511H	500m	735n	300	16	4.6k	2.0				1.0M∅	5.0	2.0		C	BB	PC1a∅	
67	VT512L	500m	735n	300	16	9.2k	2.0				20M∅	5.0	2.0		C	BB	PC1a∅	
68	CK1289	600m	515n	300	47	12k	2.0				10M	10	2.0		C	CF	PC53∅	
69	VT431	600m	550n	350		6.0k	2.0				1.0M	5.0			C	BA		
70	VT432	600m	550n	350		1.0k	2.0				1.0M	5.0			C	BA		
71	VT433	600m	550n	350		1.8k	2.0				10M	5.0			C	BA		
72	VT434	600m	550n	350		3.2k	2.0				10M	5.0			C	BA		
73	VT435	600m	550n	350		6.0k	2.0				10M	5.0			C	BA		
74	VT436	600m	550n	350		11.0k	2.0				10M	5.0			C	BA		
75	CK1288	600m	555n	300	47	9.0k	2.0				100M	10	2.0		C	CF	PC53∅	
76	VT471	600m	615n	150		900	2.0				300k	5.0			C	BS		
77	CK1287	600m	655n	300	47	6.5k	2.0				100M	10	2.0		C	CF	PC53∅	
78	VT401	600m	665n	100		1.0k	2.0				250k	5.0			C	BA		
79	VT402	600m	665n	300		9.0k	2.0				1.0M	5.0			C	BA		
80	CK1286	600m	715n	300	47	12k	2.0				100M	10	2.0		C	BB	PC53∅	
81#	RPY84	750m*	400	47*	1.1k			50			9.0M	20			G	BA	PC22aΔ	
82	MPY25C38	750m	520n	500	37	5.0k∅	1.0				5.0M	10	40		C	BA	PC14∅	
83#	MPY25C38%	750m*	520n	500	37	5.0k∅	1.0	10			2.0M∅	10	40	10	C	BA	PC36∅	
84	MPY25C49	750m	520n	500		10k∅	1.0				5.0M	10	40		C	BA	PC14∅	
85#	MPY25C49%	750m*	520n	500	37	10k∅	1.0	10			5.0M∅	10	40	10	C	BA	PC36∅	
86	MPY25R38	750m	520n	500		5.0k∅	1.0				5.0M	10	40		C	BA	PC14∅	
87#	MPY25R38%	750m*	520n	500	37	5.0k∅	1.0	10			2.0M∅	10	40	10	C	BA	PC37∅	
88	MPY25R49	750m	520n	500		10k∅	1.0				5.0M	10	40		C	BA	PC14∅	
89#	MPY25R49%	750m*	520n	500	37	10k∅												

# 17. SENSOR: PHOTOVOLTAIC CELL

IN ORDER OF: (1) CELL USE (2) MIN. OUTPUT CURR.

(3) MIN. OUTPUT VOLT. & (4) TYPE No.

LINE No.	TYPE No	ACTIVE SURFACE	CELL USE	1 MIN. OUTPUT CURR. Δ-Isc (A)	3 MIN. OUTPUT VOLT-Vo Δ-Voc (V)	MIN. OUTPUT PWR. Po (W)	TEST CONDITIONS			S O U R C E	PEAK WAVE LENGTH λp (m)	MAX. REV. VOLT VR (V)	TEMP. RING. CODE	POL. ARI. TY	MATERIAL & FEATURES	LEAD CODE	DRAWING ∅-RND. Δ-STRIP *-CHIP
							FT.C (fc)	LUX (lx)	Ee (W/cm2)								
1#	MS15	.500x.500 in	ID		28mΔ		500m			E	900n			AD	A	PV43Z	
2#	BPX40	.0032 in sq	ID	10uΔ	330mΔ					G	800n	18	6F*	AD	A	PV37bΔ	
3#	BPX41	.0097 in sq	ID	30uΔ	330mΔ					G	800n	18	6C*	AD	A	PV37cΔ	
4#	NSL8932	24 sq mm	ID	100uΔ	300mΔ		50			G	940n	12	26	AD	A	PV147Z	
5#	BPX42	.0392 in sq	ID	110uΔ	330mΔ					G	800n		6C*	AD	A	PV63Δ	
6#	MP55	.035 in sq	ID	700mΔ	350mΔ					C	700n		6C*	AD	A	PV112Z	
7#	MM53	.023 in sq	ID	900mΔ	340mΔ					C	700n			AD	A	PV113Z	
8	ZR10EB	1.310 in dia	LD		320mΔ		10k			C	575n	6.0	57	AC		PV16Z	
9	ZR10MB	1.310 in dia	LD		320mΔ		10k			C	575n	6.0	57	AC		PV15Z	
10	ZR75EB	1.500 in dia	LD		320mΔ		10k			C	575n	6.0	57	AC		PV16aZ	
11	ZR100GB	1.750 in dia	LD		320mΔ		10k			C	575n	6.0	57	AC		PV19Z	
12	ZR100KB	1.750 in dia	LD		320mΔ		10k			C	575n	6.0	57	AC		PV18Z	
13	ZR100MB	1.750 in dia	LD		320mΔ		10k			C	575n	6.0	57	AC		PV17Z	
14	ZRX80EB	.810 in dia	LD		320mΔ		10k			C	575n	6.0	57	AC		PV13Z	
15	ZRX80HB	.810 in dia	LD		320mΔ		10k			C	575n	6.0	57	AC		PV13Z	
16	ZRX80TB	.810 in dia	LD		320mΔ		10k			C	575n	6.0	57	AC		PV14Z	
17	ZS14LB	2.200 sq in	LD		320mΔ		10k			C	575n	6.0	57	AC		PV11mZ	
18	ZS17LB	.140 sq in	LD		320mΔ		10k			C	575n	6.0	57	AC		PV11nZ	
19	ZS50LB	.720 sq in	LD		320mΔ		10k			C	575n	6.0	57	AC		PV11pZ	
20	ZS55LB	2.280 sq in	LD		320mΔ		10k			C	575n	6.0	57	AC		PV11qZ	
21	ZS56LB	1.770 sq in	LD		320mΔ		10k			C	575n	6.0	57	AC		PV11rZ	
22	ZS100EB	1.50x.700 in	LD		320mΔ		10k			C	575n	6.0	57	AC		PV12Z	
23	ZS100LB	1.050 sq in	LD		320mΔ		10k			C	575n	6.0	57	AC		PV11sZ	
24	ZS150LB	.950 sq in	LD		320mΔ		10k			C	575n	6.0	57	AC		PV11tZ	
25#	MS611	.351x.393 in	LD		330mΔ			100	100u	C	620n			AD		PV38cZ	
26#	MS612	.401x.401 in	LD		330mΔ					C	620n			AD		PV44Z	
27	R10EB	1.310 in dia	LD		500mΔ		10k			C	575n	6.0	57	AC		PV16Z	
28	R10MB	1.310 in dia	LD		500mΔ		10k			C	575n	6.0	57	AC		PV15Z	
29	R75EB	1.500 in dia	LD		500mΔ		10k			C	575n	6.0	57	AC		PV16aZ	
30	R100GB	1.750 in dia	LD		500mΔ		10k			C	575n	6.0	57	AC		PV19Z	
31	R100KB	1.750 in dia	LD		500mΔ		10k			C	575n	6.0	57	AC		PV18Z	
32	R100MB	1.750 in dia	LD		500mΔ		10k			C	575n	6.0	57	AC		PV17Z	
33	RX80EB	.810 in dia	LD		500mΔ		10k			C	575n	6.0	57	AC		PV13Z	
34	RX80HB	.810 in dia	LD		500mΔ		10k			C	575n	6.0	57	AC		PV13Z	
35	RX80TB	.810 in dia	LD		500mΔ		10k			C	575n	6.0	57	AC		PV14Z	
36	S14LB	2.200 sq in	LD		500mΔ		10k			C	575n	6.0	57	AC		PV11mZ	
37	S17LB	.140 sq in	LD		500mΔ		10k			C	575n	6.0	57	AC		PV11nZ	
38	S50LB	.720 sq in	LD		500mΔ		10k			C	575n	6.0	57	AC		PV11pZ	
39	S55LB	2.280 sq in	LD		500mΔ		10k			C	575n	6.0	57	AC		PV11qZ	
40	S56LB	1.770 sq in	LD		500mΔ		10k			C	575n	6.0	57	AC		PV11rZ	
41	S100EB	1.50x.700 in	LD		500mΔ		10k			C	575n	6.0	57	AC		PV12Z	
42	S100LB	1.050 sq in	LD		500mΔ		10k			C	575n	6.0	57	AC		PV11sZ	
43	S150LB	.950 sq in	LD		500mΔ		10k			C	575n	6.0	57	AC		PV11tZ	
44	VR10EB	1.310 in dia	LD		500mΔ		10k			C	560n	6.0	57	AC		PV16Z	
45	VR10MB	1.310 in dia	LD		500mΔ		10k			C	560n	6.0	57	AC		PV15Z	
46	VR75EB	1.500 in dia	LD		500mΔ		10k			C	560n	6.0	57	AC		PV16aZ	
47	VR100GB	1.750 in dia	LD		500mΔ		10k			C	560n	6.0	57	AC		PV19Z	
48	VR100KB	1.750 in dia	LD		500mΔ		10k			C	560n	6.0	57	AC		PV18Z	
49	VR100MB	1.750 in dia	LD		500mΔ		10k			C	560n	6.0	57	AC		PV17Z	
50	VRX80EB	.810 in dia	LD		500mΔ		10k			C	560n	6.0	57	AC		PV13Z	
51	VRX80HB	.810 in dia	LD		500mΔ		10k			C	560n	6.0	57	AC		PV13Z	
52	VRX80TB	.810 in dia	LD		500mΔ		10k			C	560n	6.0	57	AC		PV14Z	
53	VS14LB	2.200 sq in	LD		500mΔ		10k			C	560n	6.0	57	AC		PV11mZ	
54	VS17LB	.140 sq in	LD		500mΔ		10k			C	560n	6.0	57	AC		PV11nZ	
55	VS50LB	.720 sq in	LD		500mΔ		10k			C	560n	6.0	57	AC		PV11pZ	
56	VS55LB	2.280 sq in	LD		500mΔ		10k			C	560n	6.0	57	AC		PV11qZ	
57	VS56LB	1.770 sq in	LD		500mΔ		10k			C	560n	6.0	57	AC		PV11rZ	
58	VS100EB	1.50x.700 in	LD		500mΔ		10k			C	560n	6.0	57	AC		PV12Z	
59	VS100LB	1.050 sq in	LD		500mΔ		10k			C	560n	6.0	57	AC		PV11sZ	
60	VS150LB	.950 sq in	LD		500mΔ		10k			C	560n	6.0	57	AC		PV11tZ	
61#	MS601	.133x.133 in	LD	1.0uΔ	320mΔ			100	100u	C	560n			AD	A	PV29cZ	
62#	MS600	.133x.133 in	LD	1.0uΔ	330mΔ					C	620n			AD	A	PV29bZ	
63#	SPD541	.310 sq in	LD	1.17uΔ	350mΔ					C	850n		16*	AD	A	PV75Z	
64#	BP100	.10m	LD	1.9u	160m		9.2	100	600u	C	850n	1.0	5A*	AD	A	PV94Z	
65#	SPD111	.486 sq in	LD	1.96uΔ	350mΔ		100			C	850n		16*	AD	A	PV13aZ	
66#	SPD110	.486 sq in	LD	2.04uΔ	350mΔ		100			C	850n		28*	AD	A	PV71Z	
67#	58B	.014 Sq in*	LD	2.5uΔ	220mΔ			100	100u	F	900n	1.0	6C*	AD;BLUE	B	PV11bZ	
68#	58BL	.014 Sq in*	LD	2.5uΔ	220mΔ			100	100u	F	900n	1.0	6C*	AD;BLUE	B	PV13Z	
69#	BPY11P	.011 sq in	LD	2.8uΔ	180mΔ			100		C	850n	1.0	5A*	AD	A	PV13Z	
70#	BPY11P/I	.011 sq in	LD	2.8uΔ	180mΔ		9.2	100	600u	C	850n	1.0	5A*	AD	B	PV94Z	
71#	BPY11	.10m	LD	2.8u	280m		9.2	100	600u	C	850n	1.0	5A*	AD	A	PV94Z	
72#	BPY11I	.10m	LD	2.8u	280m		9.2	100	600u	C	850n	1.0	5A*	AD	B	PV13Z	
73#	BPY11P/II	.011 sq in	LD	3.2uΔ	180mΔ		9.2	100	600u	C	850n	1.0	5A*	AD	A	PV94Z	
74#	BPY11II	.10m	LD	3.3u	280m		9.2	100	600u	C	850n	1.0	5A*	AD	B	PV13Z	
75#	BPY11P/III	.011 sq in	LD	4.0uΔ	180mΔ		9.2	100	600u	C	850n	1.0	5A*	AD	A	PV94Z	
76#	BPY11III	.10m	LD	4.0u	280m		9.2	100	600u	C	850n	1.0	28*	AD	B	PV79Z	
77#	SBC255	.019 sq in	LD	4.4uΔ	180mΔ		10			C	560n		2A*	AD	A	PV29Z	
78#	BPW21	.0116 Sq In	LD	4.5uΔ	280m			100		C	565n	1.0	5A*	AD	B	PV13Z	
79#	BPY11P/IV	.011 sq in	LD	4.7uΔ	180mΔ					C	850n	1.0	5A*	AD	B	PV29Z	
80#	BPW21M	.0116 Sq In	LD	5.0uΔ	280m		10			C	565n	1.0	5A*	AD	A	PV11Z	
81	VTS2077	.013 sq in	LD	5.0uΔ	300mΔ		10			C	900n		5C	AD	BES	PV1Z	
82	VTS3077	.013 sq in	LD	5.0uΔ	300mΔ		10			C	900n		5C	AD	BES	PV38bZ	
83#	MS610	.199x.240 in	LD	5.0uΔ	330mΔ		100		100u	F	900n	1.0	6C*	AD;BLUE	G	PV11bZ	
84#	55B	.03 Sq in*	LD	5.4uΔ	220mΔ				100u	F	9						

# 17. SENSOR: PHOTOVOLTAIC CELL

IN ORDER OF: (1) CELL USE (2) MIN. OUTPUT CURR. (3) MIN. OUTPUT VOLT. & (4) TYPE No.

LINE No.	TYPE No	ACTIVE SURFACE	CELL USE	2 MIN. OUTPUT CURR-Io	3 MIN. OUTPUT VOLT-Vo	MIN. OUTPUT PWR. Po (W)	TEST CONDITIONS			S O U R C E	PEAK WAVE LENGTH λp (m)	MAX. REV. VOLT VR (V)	TEMP. RING. CODE	POL. ARI. TY	MATERIAL & FEATURES MAT	LEAD CODE	DRAWING Ø-RND. Δ-RECT. Δ-STRIP *CHIP
							Ev		Ee (W/cm2)								
							F.T.C (fc)	LUX (lx)									
1	VB100-2	.016 sq in	LD	15uΔ	180mΔ	10	10		1.0m	400n		5A*		AD		PV4v	
2	VB100-5	.016 sq in	LD	15uΔ	180mΔ	10	10		1.0m	400n		5A*		AD		T05	
3	GB100-2	.016 sq in	LD	16uΔ	100mΔ	10	10		1.0m	555n		5A*		AD		PV4v	
4	GB100-5	.016 sq in	LD	16uΔ	100mΔ	10	10		1.0m	555n		5A*		AD		T05	
5#	BPY64	.049 sq in	LD	16u	300m	9.2	100		600u	850n	1.0	5A*		AD		PV94d	
6#	BPY64P	.049 sq in	LD	18u	150m	9.2	100			850n	1.0	5A*		AD		PV94d	
7	A3Δ	.060 sq in	LD	20u		100				600n		28		AC		PV5a	
8	SS400-3	.130x.050 in	LD	20u	250m	1.2k						6H		AC		PV55	
9	SS400-4	.130x.050 in	LD	20u	250m	1.2k						6H		AC		PV55	
10	ZRX10LB	.050 sq in	LD	20u	320mΔ	100				575n	6.0	57		AC		PV20a	
11#	BPW20	.0116 Sq In	LD	20uΔ	330m					700n	10	2A*		AD		PV29	
12	RX10LB	.050 sq in	LD	20u	500mΔ	100				575n	6.0	57		AC		PV20a	
13	VRX10LB	.050 sq in	LD	20u	500mΔ	100				560ns	6.0	57		AC		PV20a	
14#	PD5151	.0069sq in	LD	22uΔ	300mΔ		1.0k			850n		17*		AD		PV133	
15#	52B	.12 Sq in*	LD	23uΔ	220mΔ			100u		900n	1.0	6C*		AD:BLUE		PV1bm	
16#	52BL	.12 Sq in*	LD	23uΔ	220mΔ			100u		900n	1.0	6C*		AD:BLUE		PV1bm	
17#	CSC11	.137 sq in	LD*	25u	280m			200u		900n		6C*		AD:BLUE		PV90a	
18#	CSC12	.137 sq in	LD*	25u	280m			200u		900n		6C*		AD:BLUE		PV90	
19	VTS2074	.065 sq in	LD	26uΔ	300mΔ	10				900n		5C		AD BES		PV1u	
20	VTS3074	.065 sq in	LD	26uΔ	300mΔ	10				900n		5C		AD BES		PV1u	
21#	110B	.14 Sq in*	LD	27uΔ	220mΔ	10				900n	1.0	6C*		AD:BLUE		PV1bk	
22#	110BL	.14 Sq in*	LD	27uΔ	220mΔ	10			100u	900n	1.0	6C*		AD:BLUE		PV1bk	
23	ZSX10LB	.070 sq in	LD	28u	320mΔ	100				900n	1.0	6C*		AD:BLUE		PV1bk	
24	NSL781	.014 sq in	LD	28uΔ	350mΔ	500				575n	6.0	57		AC		PV11	
25	SX10LB	.070 sq in	LD	28u	500mΔ	100			25m	850n	5.0	6C*		AD		PV110	
26	VSX10LB	.070 sq in	LD	28u	500mΔ	100				575n	6.0	57		AC		PV11	
27#	B4%	543ms	LD	30u	100m	100				560ns	6.0	07		AC		PV11	
28	ST410-2	.030 sq in	LD	30uΔ	180mΔ	3.0mt	150			565n		54		AC		PV51a	
29	ST555-3	.100 cm sq	LD	30uΔ	180mΔ	10			5.0m	850n		5A		AD		PV1ab	
30	VB100-1	.031 sq in	LD	30uΔ	180mΔ	10			1.0m	555n		5A*		AD		AD.09x.2Pkg	
31#	BPY48	103m	LD	30u	300m	9.2	100			400n		5A*		AD		PV4u	
32#	SPD551	.007 sq in	LD	30uΔ	350mΔ	100				850n	1.0	5A*		AD		PV94b	
33	VTS6079	.080 sq in	LD	32uΔ	300mΔ	10				850n		16*		AD		PV77	
34#	BPY48P	.103 sq in	LD	35u	150m	9.2	100			750n	1.0	5A*		AD BES		PV28	
35	VB100-18	.008 sq in	LD	35uΔ	180mΔ	10				850n	1.0	5A		AD		PV94b	
36	CLD42	.002 sq in	LD	35uΔ	300mΔ	10			1.0m	400n		5A*		AD		T018	
37#	SC100	.070x.062 in	LD	35uΔ	400mΔ				5.0m	950n		5C		AD		PV143	
38	GB100-1	.031 sq in	LD	39uΔ	100mΔ	10				555n	5.0	5A*		AD		PV118	
39	ZRX15LB	.110 sq in	LD	44u	320mΔ	100			1.0m	575n	6.0	57		AC		PV40	
40	RX15LB	.110 sq in	LD	44u	500mΔ	100				575n	6.0	57		AC		PV20b	
41	VRX15LB	.110 sq in	LD	44u	500mΔ	100				560ns	6.0	57		AC		PV20b	
42	GB100-8	.031 sq in	LD	46uΔ	100mΔ	10			1.0m	555n		5A*		AD		PV20b	
43#	SPD331	.014sq in	LD	48uΔ	350mΔ		1.0k			825n		17*		AD		T08	
44#	A3%	1.181 dia	LD	50u	100m	5.0mt	150			565n		04		AC		PV124	
45#	BPY63P	.14 sq in	LD	50uΔ	280mΔ	10	1.0k			850n	1.0	5A*		AD		PV5h	
46	VTS2073	.130 sq in	LD	52uΔ	300mΔ	10				900n		5C		AD		PV138	
47	VTS3073	.130 sq in	LD	52uΔ	300mΔ	10				900n		5C		AD		PV1v	
48#	B2%	1.080	LD	55u	150m	8.0mt	150			565n		04		AD		PV1ad	
49	VTS2072	.140 sq in	LD	55uΔ	300mΔ	10				900n		5C		AD		PV51	
50	VTS3072	.140 sq in	LD	55uΔ	300mΔ	10				900n		5C		AD		PV1ae	
51	VTS2087	.013 sq in	LD	55uΔ	350mΔ	100				900n		5C		AD		PV1a	
52	VTS3087	.013 sq in	LD	55uΔ	350mΔ	100				900n		5C		AD		PV1z	
53	ST555-2	.200 cm sq	LD	60uΔ	180mΔ	100				900n		5A*		AD		2x.2Pkg	
54	VTS1086	.016 sq in	LD	65uΔ	325mΔ	100				900n		5A		AD		PV21	
55	VTS5086	.016 sq in	LD	65uΔ	325mΔ	100				900n		5A		AD		PV22	
56	VTS2086	.016 sq in	LD	65uΔ	350mΔ	100				900n		5C		AD		PV1s	
57	VTS3086	.016 sq in	LD	65uΔ	350mΔ	100				900n		5C		AD		PV1aa	
58#	MS59B	.003 sq in	LD	65uΔ	360mΔ	1.0k						58*		AD		B	
59#	MS59BE	.003 sq in	LD	65uΔ	360mΔ	1.0k						58*		AD		B	
60#	MS59PCD	.003 sq in	LD	65uΔ	360mΔ	1.0k						58*		AD		B	
61#	MS59PCDE	.003 sq in	LD	65uΔ	360mΔ	1.0k						58*		AD		B	
62#	SPD550	.016 sq in	LD	68uΔ	350mΔ	100				850n		28*		AD		PV34a	
63#	SBC541	.310 sq in	LD	70uΔ	180mΔ	10				560n		16*		AD		B	
64#	B5%	1.662	LD	70u	200m	14mt	150			560n		04		AD		B	
65#	TP60	232m	LD	70u	300m	9.2	100			585n	1.0	27*		AD		A	
66#	TP61	232m	LD	70u	300m	9.2	100			850n	1.0	5A*		AD		A	
67	ZS1LB	.230 sq in	LD	88u	320mΔ	100				850n	1.0	57		AC		PV98	
68#	SPD500	.021 sq in	LD	88uΔ	350mΔ	100				575n	6.0	57		AC		PV11a	
69	S1LB	.230 sq in	LD	88u	500mΔ	100				850n		28*		AD		B	
70	VS1LB	.230 sq in	LD	88u	500mΔ	100				575n	6.0	57		AC		PV72	
71#	A1%	1.771 dia	LD	90u	150m	13mt	100			560ns	6.0	57		AC		PV11a	
72#	BPY47P	.279 sq in	LD	90u	150m	9.2	150			565n	1.0	04		AD		PV5g	
73#	BPY47	.279m	LD	90u	300m	9.2	100			850n	1.0	5A*		AD		A	
74	CLD56	.027 sq in	LD	100uΔ	300m				5.0m	950n		5C		AD		A	
75#	SBC111	.486 sq in	LD	110uΔ	180mΔ	10				560n		16*		AD		B	
76	VTS2071	.290 sq in	LD	115uΔ	300mΔ	10				900n		5C		AD		A	
77	VTS3071	.290 sq in	LD	115uΔ	300mΔ	10				900n		5C		AD		B	
78	B4Δ	.390 sq in	LD	120u	120u	100				600n		28		AC		PV1x	
79	ST410-4	.139 sq in	LD	120uΔ	180mΔ	10			5.0m	850n		5A		AD		AD BES	
80	VB100-3	.140 sq in	LD	120uΔ	180mΔ	10			1.0m	400n		5A*		AD		PV1bb	
81	ZS2LB	.360 sq in	LD	120u	320mΔ	100				575n	6.0	57		AC		PV4w	
82	VTS5088	.028 sq in	LD	120uΔ	325mΔ	100				900n		5A		AD		PV11b	
83	S2LB	.360 sq in	LD	120u	500mΔ	100				575n	6.0	57		AC		PV22	
84	VS2LB	.360 sq in	LD	120u	500mΔ	100				560ns	6.0	57		AC		PV11b	
85	NSL720	.0072 sq in	LD	125uΔ	350mΔ	500				850n	5.0	6C*		AD		PV11b	
86	NSL710	.005 sq in	LD	125uΔ	400mΔ	500				850n	5.0	6C*		AD		PV110	
87#	SFH100	.032 sq in	LD	130u	150m	9.2	100			850n	1.0	47\$		AD		PV102a	
88	NSL820	.0072 sq in	LD	130uΔ	275mΔ	500				850n	1.0	47\$		AD		PV145	
89	ZS5LB	.350 sq in	LD	130u	320mΔ	100				850n	10	6C*		AD		PV110	
90#	58PBH	.077 sq cm	LD	130uΔ	350mΔ	100				575n	6.0	57		AD		PV11e	
91#	58P1	.012 sq in*	LD	130uΔ	400m			10m		935n	20			AD:PLANAR		PV148	
92#	58P2	.012 sq in*	LD	130uΔ	400m			20m		900n	1.0	6C*		AD:PLANAR		PV1ba	
93#	58P11	.012 sq in*	LD	130uΔ	400m			20m		900n	6.0	6C*		AD:PLANAR		PV1ba	
94#	58P12	.012 sq in*	LD	130uΔ	400m			20m		900n	1.0	6C*		AD:PLANAR		PV1ba	
95	S5LB	.350 sq in	LD	130u	500mΔ	100				900n	6.0	6C*		AD:PLANAR		PV1ba	
96	VS5LB	.350 sq in	LD	130u	500mΔ	100				575n	6.0	57		AC		PV11e	
97#	SPD511T	.031 sq in	LD	132uΔ	350mΔ	100				560ns	6.0	57		AC		PV11e	
98	CLD31	.034 sq in	LD	140uΔ	300mΔ	100				850n		16*		AD		B	
99	VTS40																



# 17. SENSOR: PHOTOVOLTAIC CELL

IN ORDER OF: (1) CELL USE (2) MIN. OUTPUT CURR. (3) MIN. OUTPUT VOLT. & (4) TYPE No.

LINE No.	4 TYPE No	ACTIVE SURFACE	1 CELL USE	2 MIN. OUTPUT CURR-Io Δ-Isc (A)	3 MIN. OUTPUT VOLT-Vo Δ-Voc (V)	MIN. OUTPUT PWR. Po (W)	TEST CONDITIONS			S O U R C E	PEAK WAVE LENGTH λp (m)	MAX. REV. VOLT VR (V)	TEMP. RING CODE	POL ARITY	MATERIAL & FEATURES	LEAD CODE	DRAWING Ø-RND. Δ-RECT. Δ-STRIP *-CHIP
							E <sub>v</sub>		E <sub>e</sub> (W/cm <sup>2</sup> )								
							FT.C (fc)	LUX (lx)									
1	ZS3LB	.530 sq in	LD	180u	320mΔ	100	100			C	575n	6.0	57		AC	PV11c	
2	S3LB	.530 sq in	LD	180u	500mΔ	100	100			C	575n	6.0	57		AC	PV11c	
3	VS3LB	.530 sq in	LD	180u	500mΔ	100	100			C	560n	6.0	57		AC	PV11c	
4#	SPD520	.055sq in	LD	199uΔ	350mΔ			1.0k		B	825n		17*			PV128	
5#	EA7E5	.13x.05 in	LD	200u	200m			1.2k		F	850n		6F*	AD	AD	PV55	
6	SS400-6	.130x.050 in	LD	200u	200m			1.2k		F	850n		6H	AD	AD	PV55	
7	SS400-7	.130x.050 in	LD	200u	200m			1.2k		F	800n		6H	AD	AD	PV55	
8	ZS7LB	.640 sq in	LD	205u	320mΔ	100	100			C	575n	6.0	57		AC	PV11f	
9	S7LB	.640 sq in	LD	205u	500mΔ	100	100			C	575n	6.0	57		AC	PV11f	
10	VS7LB	.640 sq in	LD	205u	500mΔ	100	100			C	560n	6.0	57		AC	PV11f	
11	ZS4LB	.660 sq in	LD	220u	320mΔ	100	100			C	575n	6.0	57		AC	PV11d	
12	ZS8LB	.670 sq in	LD	220u	320mΔ	100	100			C	575n	6.0	57		AC	PV11d	
13	S4LB	.660 sq in	LD	220u	500mΔ	100	100			C	575n	6.0	57		AC	PV11d	
14	S8LB	.670 sq in	LD	220u	500mΔ	100	100			C	575n	6.0	57		AC	PV11d	
15	VS4LB	.660 sq in	LD	220u	500mΔ	100	100			C	560n	6.0	57		AC	PV11d	
16	VS8LB	.670 sq in	LD	220u	500mΔ	100	100			C	560n	6.0	57		AC	PV11d	
17	ZS10LB	.700 sq in	LD	225u	320mΔ	100	100			C	575n	6.0	57		AC	PV11h	
18	S10LB	.700 sq in	LD	225u	500mΔ	100	100			C	575n	6.0	57		AC	PV11h	
19	VS10LB	.700 sq in	LD	225u	500mΔ	100	100			C	560n	6.0	57		AC	PV11h	
20	ZR1LB	.610 sq in	LD	230u	320mΔ	100	100			C	575n	6.0	57		AC	PV20d	
21	R1LB	.610 sq in	LD	230u	500mΔ	100	100			C	575n	6.0	57		AC	PV20d	
22	VR1LB	.610 sq in	LD	230u	500mΔ	100	100			C	560n	6.0	57		AC	PV20d	
23	ZS11LB	.740 sq in	LD	235u	320mΔ	100	100			C	575n	6.0	57		AC	PV11j	
24	S11LB	.740 sq in	LD	235u	500mΔ	100	100			C	575n	6.0	57		AC	PV11j	
25	VS11LB	.740 sq in	LD	235u	500mΔ	100	100			C	560n	6.0	57		AC	PV11j	
26	ST410-5	.279 sq in	LD	240uΔ	180mΔ				5.0m	C	850n		5A	AD	AD	PV1ba	
27	VB100-4	.280 sq in	LD	240uΔ	180mΔ			10	1.0m	C	400n		5A*	AD	AD	PV4x	
28	VTS2070	.610 sq in	LD	240uΔ	300mΔ	100	100			C	900n	5.0	6C*	P	AD BES	PV1y	
29	VTS3070	.610 sq in	LD	240uΔ	300mΔ	100	100			C	900n	5.0	6C*	P	AD BES	PV1ag	
30	A5	.780 sq in	LD	250u		100	100			C	600n	28	28	AC	AD	PV5b	
31	B5Δ	.780 sq in	LD	250u		100	100			C	600n	28	28	AC	AD	PV1m	
32	ST555-4	.900 cm sq	LD	250uΔ	180mΔ	10	10			C	555n		5A*	AD	AD.39x.39Pg	PV55	
33#	EA7E3	.13x.05 in	LD	250u	250m			1.2k		F	850n		6F*	AD	AD	PV55	
34	SS400-5	.130x.050 in	LD	250u	250m			1.2k		F	850n		6H	AD	AD	PV55	
35#	SPD570	.062 sq in	LD	260uΔ	350mΔ	100	100			C	850n		28*	P	AD	PV73c	
36	VTS2084	.065 sq in	LD	270uΔ	350mΔ	100	100			C	900n		5C	P	AD	PV1u	
37	VTS3084	.065 sq in	LD	270uΔ	350mΔ	100	100			C	900n		5C	P	AD	PV1ac	
38	VTS6089	.080 sq in	LD	280uΔ	325mΔ	100	100			C	900n		5A	P	AD	PV23	
39#	SPD102	.078 sq in	LD	280uΔ	350mΔ	100	100			C	850n		28*	P	AD	PV70	
40	NSL881	.014 sq in	LD	300uΔ	275mΔ	500	500		25m	E	850n	10	6C*	N	AD	PV110	
41#	EA7E1	.13x.05 in	LD	300u	300m	1.2k	1.2k			F	850n		6F*	AD	AD	PV55	
42#	EA7E2	.13x.05 in	LD	300u	300m	1.2k	1.2k			F	850n		6F*	AD	AD	PV55	
43	SS400-1	.130x.050 in	LD	300u	300m	1.2k	1.2k			F	850n		6H	AD	AD	PV55	
44	SS400-2	.130x.050 in	LD	300u	300m	1.2k	1.2k			F	850n		6H	AD	AD	PV55	
45	NSL701	.014 sq in	LD	300uΔ	350mΔ	500	500		25m	E	950n	5.0	6C*	N	AD	PV105	
46	NSL701-1	.005 sq in	LD	300uΔ	350mΔ	500	500		25m	E	850n	5.0	6C*	N	AD	PV105	
47	55PBH	.18 sq cm	LD	310uΔ	350mΔ			10m		F	935n	12	12	AD	AD PLANAR	PV148a	
48#	55P1	.028 Sq in*	LD	310uΔ	400m			20m		F	900n	1.0	6C*	P	AD	PV1bp	
49#	55P2	.028 Sq in*	LD	310uΔ	400m			20m		F	900n	6.0	6C*	P	AD	PV1bp	
50#	55PL1	.028 Sq in*	LD	310uΔ	400m			20m		F	900n	1.0	6C*	P	AD	PV1bp	
51#	55PL2	.028 Sq in*	LD	310uΔ	400m			20m		F	900n	6.0	6C*	P	AD	PV1bp	
52	GB100-4	.280 sq in	LD	320uΔ	100mΔ	10	10		1.0m	E	555n		5A*	AD	AD	PV4x	
53	NSL801	.0147 sq in	LD	325uΔ	275mΔ	500	500		25m	E	950n	10	6C*	N	AD	PV105	
54	B10	.126 sq in	LD	380u		100	100			C	600n		28	AD	AD	PV1n	
55	ZR5LB	1.100 sq in	LD	390u	320mΔ	100	100			C	575n	6.0	57		AC	PV20e	
56	R5LB	1.100 sq in	LD	390u	500mΔ	100	100			C	575n	6.0	57		AC	PV20e	
57	VR5LB	1.100 sq in	LD	390u	500mΔ	100	100			C	560n	6.0	57		AC	PV20e	
58	SS500	.215 in <sup>2</sup>	LD	400u	350m	1.0k	1.0k			F	800n		6H	AD	AD NorP	PV62	
59	NSL782	.023 sq in	LD	420uΔ	350mΔ	500	500		25m	E	850n	5.0	6C*	N	AD	PV111	
60	ZR10LB	1.350 sq in	LD	430u	320mΔ	100	100			C	575n	6.0	57		AC	PV20f	
61	R10LB	1.350 sq in	LD	430u	500mΔ	100	100			C	575n	6.0	57		AC	PV20f	
62	VR10LB	1.350 sq in	LD	430u	500mΔ	100	100			C	560n	6.0	57		AC	PV20f	
63	NSL882	.023 sq in	LD	440uΔ	275mΔ	500	500		25m	E	850n	10	6C*	N	AD	PV111	
64	ST555-5	1.80 cm sq	LD	500uΔ	180mΔ	10	10			C	555n		5A*	AD	AD.39x.785	PV20g	
65	ZR75LB	1.750 sq in	LD	500u	320mΔ	100	100			C	575n	6.0	57		AC	PV11k	
66	ZS13LB	1.820 sq in	LD	500u	320mΔ	100	100			C	575n	6.0	57		AC	PV11k	
67	R75LB	1.750 sq in	LD	500u	500mΔ	100	100			C	575n	6.0	57		AC	PV20g	
68	S13LB	1.820 sq in	LD	500u	500mΔ	100	100			C	575n	6.0	57		AC	PV11k	
69	VR75LB	1.750 sq in	LD	500u	500mΔ	100	100			C	560n	6.0	57		AC	PV20g	
70	VS13LB	1.820 sq in	LD	500u	500mΔ	100	100			C	560n	6.0	57		AC	PV11k	
71	VTS2083	.130 sq in	LD	550uΔ	350mΔ	100	100			C	900n		5C	P	AD	PV1v	
72	VTS3083	.130 sq in	LD	550uΔ	350mΔ	100	100			C	900n		5C	P	AD	PV1ad	
73	NSL702	.028 sq in	LD	600uΔ	350mΔ	500	500		25m	E	950n	5.0	6C*	N	AD	PV106	
74	NSL791	.028 sq in	LD	600uΔ	350mΔ	500	500		25m	E	850n	5.0	6C*	N	AD	PV111a	
75	VTS2082	.140 sq in	LD	600uΔ	350mΔ	100	100			C	900n		5C	P	AD	PV1w	
76	VTS3082	.140 sq in	LD	600uΔ	350mΔ	100	100			C	900n		5C	P	AD	PV1ae	
77	NSL802	.028 sq in	LD	650uΔ	275mΔ	500	500		25m	E	950n	10	6C*	N	AD	PV106	
78	NSL891	.029 sq in	LD	650uΔ	275mΔ	500	500		25m	E	850n	10	6C*	N	AD	PV111a	
79	51PBH	.38 sq cm	LD	650uΔ	350mΔ			10m		F	935n	8.0	28*	P	AD PLANAR	PV148b	
80#	SPD530	.155 sq in	LD	650uΔ	350mΔ	100	100			C	850n		6C*	P	AD	PV73a	
81#	51P1	.059 Sq in*	LD	650uΔ	400m			20m		F	900n	1.0	6C*	P	AD	PV1bn	
82#	51P2	.059 Sq in*	LD	650uΔ	400m			20m		F	900n	6.0	6C*	P	AD	PV1bn	
83#	51PL1	.059 Sq in*	LD	650uΔ	400m			20m		F	900n	1.0	6C*	P	AD	PV1bn	
84#	51PL2	.059 Sq in*	LD	650uΔ	400m			20m		F	900n	6.0	6C*	P	AD	PV1bn	
85	B17	2.60 sq in	LD	710u		100	100			C	600n		28	AC	AD	PV1p	
86	ZR100LB	2.400 sq in	LD	850u	320mΔ	100	100			C	575n	6.0	57		AC	PV20h	
87	R100LB	2.400 sq in	LD	850u	500mΔ	100	100			C	575n	6.0	57		AC	PV20h	
88	VR100LB	2.400 sq in	LD	850u	500mΔ	100	100			C	560n	6.0	57		AC	PV20h	
89	B20	3.30 sq in	LD	900u		100	100			C	600n		28	AC	AD	PV1q	
90	NSL792	.054 sq in	LD	1.1mΔ	350mΔ	500	500		25m	E	850n	5.0	6C*	N	AD	PV111b	
91	NSL892	.054 sq in	LD	1.2mΔ	275mΔ	500	500		25m	E	850n	10	6C*	N	AD	PV111b	
92	52PBH	.77 sq cm	LD	1.2mΔ	350mΔ			10m		F	935n	5.0	10	AD	AD PLANAR	PV148c	
93	VTS2081	.290 sq in	LD	1.2mΔ	350mΔ	100	100			C	900n</						

# 17. SENSOR: PHOTOVOLTAIC CELL

IN ORDER OF: (1) CELL USE (2) MIN. OUTPUT CURR. (3) MIN. OUTPUT VOLT. & (4) TYPE No.

LINE No.	TYPE No	ACTIVE SURFACE	CELL USE	2 MIN. OUTPUT CURR-Io (A)	3 MIN. OUTPUT VOLT-Vo (V)	MIN. OUTPUT PWR. Po (W)	TEST CONDITIONS			S O U R C E	PEAK WAVE LENGTH λp (m)	MAX. REV. VOLT VR (V)	TEMP RING CODE	POL ARITY	MATERIAL & FEATURES	LEAD CODE	DRAWING Ø-RND. Δ-STRIP *CHIP
							E v		Ee (W/cm <sup>2</sup> )								
							FT.C (fc)	LUX (lx)									
1	NSL851	.068 sq in	LD	1.5mΔ	275mΔ											PV109	
2	VTS7080A	.370 sq in	LD	1.5mΔ	325mΔ											PV24	
3	MSR1	.180x.080 in	LD	1.6mΔ	400mΔ											PV47	
4	MSR1E	.180x.080 in	LD	1.6mΔ	400mΔ											PV46	
5	SC1	.150x.08 in	LD	1.6mΔ	450mΔ	400u			100m	900n		5A*				PV114*	
6	SC4	.393x.354 in	LD	1.6mΔ	450mΔ	400u			100m	900n		5A*				PV114a*	
7	SC5	.834x.120 in	LD	1.6mΔ	450mΔ	400u			100m	900n		5A*				PV114b*	
8	SC7	.150x.027 in	LD	1.6mΔ	450mΔ	400u			100m	900n		5A*				PV114d*	
9	SC11	.150x.042 in	LD	1.6mΔ	450mΔ	400u			100m	900n		5A*				PV114e*	
10	SC13	.257x.217 in	LD	1.6mΔ	450mΔ	400u			100m	900n		5A*				PV114h*	
11	SC17	.085x.048 in	LD	1.6mΔ	450mΔ	400u			100m	900n		5A*				PV114f*	
12	SC18	.157x.087 in	LD	1.6mΔ	450mΔ	400u			100m	900n		5A*				PV114g*	
13	SC30	.120x.107 in	LD	1.6mΔ	450mΔ	400u			100m	900n		5A*				PV114c*	
14	58C	.014 sq in	LD	1.8m	510mΔ	720u	3.0k		200m	900n		6C*	P			PV1bq	
15	58CL	.014 Sq in*	LD	1.8m	510mΔ	720u	3.0k		200m	900n		6C*	P			PV1bq	
16	MS10A	.196x.181 in	LD	2.2mΔ	500mΔ		3.0k			850n		5C*					
17	VTS2080	.610 sq in	LD	2.5mΔ	350mΔ		100			900n		5C*	P			PV1y	
18	VTS3080	.610 sq in	LD	2.5mΔ	350mΔ		100			900n		5C*	P			PV1ag	
19	MS3A	.064x.403 in	LD	2.6mΔ	500mΔ		3.0k			850n		5C*			A	PV37	
20	MS3B	.064x.403 in	LD	2.6mΔ	500mΔ		3.0k			850n		5C*			A	PV37	
21	NSL706	.138 sq in	LD	2.9mΔ	350mΔ		500		25m	950n	5.0	6C*	N			PV107	
22	NSL806	.138 sq in	LD	3.0mΔ	275mΔ		500		25m	950n	10	6C*	N			PV107	
23	NSL707	.161 sq in	LD	3.3mΔ	350mΔ		500		25m	950n	5.0	6C*	N			PV105a	
24	NSL807	.161 sq in	LD	3.5mΔ	275mΔ		500		25m	950n	10	6C*	N			PV105a	
25	55C	.030 sq in	LD	3.8m	530mΔ	1.5m	3.0k		200m	900n		6C*	P			PV1bp	
26	55CL	.03 Sq in*	LD	3.8m	530mΔ	1.5m	3.0k		200m	900n		6C*	P			PV1bp	
27	NSL705	.246 sq in	LD	4.5mΔ	350mΔ		500		25m	950n	5.0	6C*	N			PV108	
28	NSL805	.246 sq in	LD	4.7mΔ	275mΔ		500		25m	950n	10	6C*	N			PV108	
29	MS4A	.207x.242 in	LD	5.0mΔ	500mΔ		3.0k			850n		5C*	NonP		A	PV38	
30	MS4B	.207x.242 in	LD	5.0mΔ	500mΔ		3.0k			850n		5C*	NonP		A	PV38	
31	OSD5-5PV	.0077 Sq in	LD	7.0m					1.0		10u					PD109	
32	51C	.060 sq in	LD	7.8m	550mΔ	3.1m	3.0k		200m	900n		6C*	P			PV1bn	
33	51CL	.06 Sq in*	LD	7.8m	550mΔ	3.1m	3.0k		200m	900n		6C*	P			PV1bn	
34	MS5A	.207x.492 in	LD	10mΔ	500mΔ		3.0k			850n		5C*	NonP		A	PV38a	
35	MS5B	.207x.492 in	LD	10mΔ	500mΔ		3.0k			850n		5C*	NonP		A	PV38a	
36	MS6A	.75x.205 in	LD	15mΔ	500mΔ		3.0k			850n		5C*			B	PV33a	
37	MS6B	.75x.205 in	LD	15mΔ	500mΔ		3.0k			850n		5C*			B	PV33a	
38	52C	.120 sq in	LD	16m	550mΔ	6.4m	3.0k		200m	900n		6C*	P			PV1bm	
39	52CL	.12 Sq in*	LD	16m	550mΔ	6.4m	3.0k		200m	900n		6C*	P			PV1bk	
40	110C	.140 sq in	LD	17.8m	550mΔ	7.1m	3.0k		200m	900n		6C*	P			PV1bk	
41	110CL	.14 Sq in*	LD	17.8m	550mΔ	7.1m	3.0k		200m	900n		6C*	P			PV1bk	
42	MS7A	1x.205 in	LD	20mΔ	500mΔ		3.0k			850n		5C*			B	PV33b	
43	MS7B	1x.205 in	LD	20mΔ	500mΔ		3.0k			850n		5C*			B	PV33b	
44	S0505A6	.200x.200 ins	LD	25mΔ	560mΔ				100m	800n		28	N	AD:Eff 6%		PV4j	
45	S0505A6PL	.200x.200 ins	LD	25mΔ	560mΔ				100m	800n		28	N	AD:Eff 6%		PV4j	
46	S0505A7	.200x.200 ins	LD	25mΔ	560mΔ				100m	800n		28	N	AD:Eff 7%		PV4j	
47	S0505A7PL	.200x.200 ins	LD	25mΔ	560mΔ				100m	800n		28	N	AD:Eff 7%		PV4j	
48	S0505A8	.200x.200 ins	LD	25mΔ	560mΔ				100m	800n		28	N	AD:Eff 8%		PV4j	
49	S0505A8PL	.200x.200 ins	LD	25mΔ	560mΔ				100m	800n		28	N	AD:Eff 8%		PV4j	
50	S0505A9	.200x.200 ins	LD	25mΔ	560mΔ				100m	800n		28	N	AD:Eff 9%		PV4j	
51	S0505A9PL	.200x.200 ins	LD	25mΔ	560mΔ				100m	800n		28	N	AD:Eff 9%		PV4j	
52	S0505A10	.200x.200 ins	LD	25mΔ	560mΔ				100m	800n		28	N	AD:Eff 10%		PV4j	
53	S0505A10PL	.200x.200 ins	LD	25mΔ	560mΔ				100m	800n		28	N	AD:Eff 10%		PV4j	
54	S0505A11	.200x.200 ins	LD	25mΔ	560mΔ				100m	800n		28	N	AD:Eff 11%		PV4j	
55	S0505A11PL	.200x.200 ins	LD	25mΔ	560mΔ				100m	800n		28	N	AD:Eff 11%		PV4j	
56	S0505A12	.200x.200 ins	LD	25mΔ	560mΔ				100m	800n		28	N	AD:Eff 12%		PV4j	
57	S0505A12PL	.200x.200 ins	LD	25mΔ	560mΔ				100m	800n		28	N	AD:Eff 12%		PV4j	
58	S0505E6	.200x.200 ins	LD	25mΔ	560mΔ				100m	800n		28	P	AD:Eff 6%		PV4j	
59	S0505E6PL	.200x.200 ins	LD	25mΔ	560mΔ				100m	800n		28	P	AD:Eff 6%		PV4j	
60	S0505E7	.200x.200 ins	LD	25mΔ	560mΔ				100m	800n		28	P	AD:Eff 7%		PV4j	
61	S0505E7PL	.200x.200 ins	LD	25mΔ	560mΔ				100m	800n		28	P	AD:Eff 7%		PV4j	
62	S0505E8	.200x.200 ins	LD	25mΔ	560mΔ				100m	800n		28	P	AD:Eff 8%		PV4j	
63	S0505E8PL	.200x.200 ins	LD	25mΔ	560mΔ				100m	800n		28	P	AD:Eff 8%		PV4j	
64	S0505E9	.200x.200 ins	LD	25mΔ	560mΔ				100m	800n		28	P	AD:Eff 9%		PV4j	
65	S0505E9PL	.200x.200 ins	LD	25mΔ	560mΔ				100m	800n		28	P	AD:Eff 9%		PV4j	
66	S0505E10	.200x.200 ins	LD	25mΔ	560mΔ				100m	800n		28	P	AD:Eff 10%		PV4j	
67	S0505E10PL	.200x.200 ins	LD	25mΔ	560mΔ				100m	800n		28	P	AD:Eff 10%		PV4j	
68	S0505E11	.200x.200 ins	LD	25mΔ	560mΔ				100m	800n		28	P	AD:Eff 11%		PV4j	
69	S0505E11PL	.200x.200 ins	LD	25mΔ	560mΔ				100m	800n		28	P	AD:Eff 11%		PV4j	
70	S0505E12	.200x.200 ins	LD	25mΔ	560mΔ				100m	800n		28	P	AD:Eff 12%		PV4j	
71	S0505E12PL	.200x.200 ins	LD	25mΔ	560mΔ				100m	800n		28	P	AD:Eff 12%		PV4j	
72	S0510A6	.200x.400 ins	LD	25mΔ	560mΔ				100m	800n		28	N	AD:Eff 6%		PV4g	
73	S0510A6PL	.200x.400 ins	LD	25mΔ	560mΔ				100m	800n		28	N	AD:Eff 6%		PV4g	
74	S0510A7	.200x.400 ins	LD	25mΔ	560mΔ				100m	800n		28	N	AD:Eff 7%		PV4g	
75	S0510A7PL	.200x.400 ins	LD	25mΔ	560mΔ				100m	800n		28	N	AD:Eff 7%		PV4g	
76	S0510A8	.200x.400 ins	LD	25mΔ	560mΔ				100m	800n		28	N	AD:Eff 8%		PV4g	
77	S0510A8PL	.200x.400 ins	LD	25mΔ	560mΔ				100m	800n		28	N	AD:Eff 8%		PV4g	
78	S0510A9	.200x.400 ins	LD	25mΔ	560mΔ				100m	800n		28	N	AD:Eff 9%		PV4g	
79	S0510A9PL	.200x.400 ins	LD	25mΔ	560mΔ				100m	800n		28	N	AD:Eff 9%		PV4g	
80	S0510A10	.200x.400 ins	LD	25mΔ	560mΔ				100m	800n		28	N	AD:Eff 10%		PV4g	
81	S0510A10PL	.200x.400 ins	LD	25mΔ	560mΔ				100m	800n		28	N	AD:Eff 10%		PV4g	
82	S0510A11	.200x.400 ins	LD	25mΔ	560mΔ				100m	800n		28	N	AD:Eff 11%		PV4g	
83	S0510A11PL	.200x.400 ins	LD	25mΔ	560mΔ				100m	800n		28	N	AD:Eff 11%		PV4g	
84	S0510A12	.200x.400 ins	LD	25mΔ	560mΔ				100m	800n		28	N	AD:Eff 12%		PV4g	
85	S0510A12PL	.200x.400 ins	LD	25mΔ	560mΔ				100m	800n		28	N	AD:Eff 12%		PV4g	
86	S0510E6	.200x.400 ins	LD	25mΔ	560mΔ				100m	800n		28	P	AD:Eff 6%		PV4g	
87	S0510E6PL	.200x.400 ins	LD	25mΔ	560mΔ				100m	800n		28	P	AD:Eff 6%		PV4g	
88	S0510E7	.200x.400 ins	LD	25mΔ	560mΔ				100m	800n		28	P	AD:Eff 7%		PV4g	
89	S0510E7PL	.200x.400 ins	LD	25mΔ	560mΔ				100m	800n		28	P	AD:Eff 7%		PV4g	
90	S0510E8	.200x.400 ins	LD	25mΔ	560mΔ				100m	800n		28	P	AD:Eff 8%		PV4g	
91	S0510E8PL	.200x.400 ins	LD	25mΔ	560mΔ				100m	800n		28	P	AD:Eff 8%		PV4g	
92	S0510E9	.200x.400 ins	LD	25mΔ	560mΔ				100m	800n		28	P	AD:Eff 9%		PV4g	
93	S0510E9PL	.200x.400 ins	LD	25mΔ	560mΔ				100m	800n		28	P	AD:Eff 9%		PV4g	
94	S0510E10																

# 17. SENSOR: PHOTOVOLTAIC CELL

IN ORDER OF: (1) CELL USE (2) MIN. OUTPUT CURR. (3) MIN. OUTPUT VOLT. & (4) TYPE No.

LINE No.	TYPE No	ACTIVE SURFACE	CELL USE	MIN. OUTPUT CURR. I <sub>o</sub> Δ-I <sub>sc</sub> (A)	MIN. OUTPUT VOLT. V <sub>o</sub> Δ-V <sub>oc</sub> (V)	MIN. OUTPUT PWR. P <sub>o</sub> (W)	TEST CONDITIONS			S O U R C E	PEAK WAVE LENGTH λ <sub>p</sub> (m)	MAX. REV. VOLT V <sub>R</sub> (V)	TEMP. RNG. CODE	POL. ARI. TY	MATERIAL & FEATURES	LEAD CODE	DRAWING Ø-RND. Δ-RECT. Δ-STRIP *-CHIP
							E <sub>v</sub>		E <sub>e</sub> (W/cm <sup>2</sup> )								
							FT.C (fc)	LUX (lx)									
1	S0520A11PL	200x.800 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	N	N	AD:Eff 11% <sup>0</sup>	PV4m <sup>2</sup>		
2	S0520A12	200x.800 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	N	N	AD:Eff 12% <sup>0</sup>	PV4b <sup>2</sup>		
3	S0520A12PL	200x.800 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	N	N	AD:Eff 12% <sup>0</sup>	PV4m <sup>2</sup>		
4	S0520E6	200x.800 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	P	P	AD:Eff 6% <sup>0</sup>	PV4b <sup>2</sup>		
5	S0520E6PL	200x.800 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	P	P	AD:Eff 6% <sup>0</sup>	PV4m <sup>2</sup>		
6	S0520E7	200x.800 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	P	P	AD:Eff 7% <sup>0</sup>	PV4b <sup>2</sup>		
7	S0520E7PL	200x.800 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	P	P	AD:Eff 7% <sup>0</sup>	PV4m <sup>2</sup>		
8	S0520E8	200x.800 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	P	P	AD:Eff 8% <sup>0</sup>	PV4b <sup>2</sup>		
9	S0520E8PL	200x.800 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	P	P	AD:Eff 8% <sup>0</sup>	PV4m <sup>2</sup>		
10	S0520E9	200x.800 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	P	P	AD:Eff 9% <sup>0</sup>	PV4b <sup>2</sup>		
11	S0520E9PL	200x.800 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	P	P	AD:Eff 9% <sup>0</sup>	PV4m <sup>2</sup>		
12	S0520E10	200x.800 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	P	P	AD:Eff 10% <sup>0</sup>	PV4b <sup>2</sup>		
13	S0520E10PL	200x.800 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	P	P	AD:Eff 10% <sup>0</sup>	PV4m <sup>2</sup>		
14	S0520E11	200x.800 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	P	P	AD:Eff 11% <sup>0</sup>	PV4b <sup>2</sup>		
15	S0520E11PL	200x.800 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	P	P	AD:Eff 11% <sup>0</sup>	PV4m <sup>2</sup>		
16	S0520E12	200x.800 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	P	P	AD:Eff 12% <sup>0</sup>	PV4b <sup>2</sup>		
17	S0520E12PL	200x.800 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	P	P	AD:Eff 12% <sup>0</sup>	PV4m <sup>2</sup>		
18	S0520GA6	200x.800 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	N	N	AD:Eff 6% <sup>0</sup>	PV4b <sup>2</sup>		
19	S0520GA6PL	200x.800 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	N	N	AD:Eff 6% <sup>0</sup>	PV4m <sup>2</sup>		
20	S0520GA7	200x.800 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	N	N	AD:Eff 7% <sup>0</sup>	PV4b <sup>2</sup>		
21	S0520GA7PL	200x.800 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	N	N	AD:Eff 7% <sup>0</sup>	PV4m <sup>2</sup>		
22	S0520GA8	200x.800 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	N	N	AD:Eff 8% <sup>0</sup>	PV4b <sup>2</sup>		
23	S0520GA8PL	200x.800 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	N	N	AD:Eff 8% <sup>0</sup>	PV4m <sup>2</sup>		
24	S0520GA9	200x.800 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	N	N	AD:Eff 9% <sup>0</sup>	PV4b <sup>2</sup>		
25	S0520GA9PL	200x.800 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	N	N	AD:Eff 9% <sup>0</sup>	PV4m <sup>2</sup>		
26	S0520GA10	200x.800 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	N	N	AD:Eff 10% <sup>0</sup>	PV4b <sup>2</sup>		
27	S0520GA10PL	200x.800 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	N	N	AD:Eff 10% <sup>0</sup>	PV4m <sup>2</sup>		
28	S0520GA11	200x.800 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	N	N	AD:Eff 11% <sup>0</sup>	PV4b <sup>2</sup>		
29	S0520GA11PL	200x.800 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	N	N	AD:Eff 11% <sup>0</sup>	PV4m <sup>2</sup>		
30	S0520GA12	200x.800 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	N	N	AD:Eff 12% <sup>0</sup>	PV4b <sup>2</sup>		
31	S0520GA12PL	200x.800 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	N	N	AD:Eff 12% <sup>0</sup>	PV4m <sup>2</sup>		
32	S0520GE6	200x.800 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	P	P	AD:Eff 6% <sup>0</sup>	PV4b <sup>2</sup>		
33	S0520GE6PL	200x.800 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	P	P	AD:Eff 6% <sup>0</sup>	PV4m <sup>2</sup>		
34	S0520GE7	200x.800 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	P	P	AD:Eff 7% <sup>0</sup>	PV4b <sup>2</sup>		
35	S0520GE7PL	200x.800 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	P	P	AD:Eff 7% <sup>0</sup>	PV4m <sup>2</sup>		
36	S0520GE8	200x.800 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	P	P	AD:Eff 8% <sup>0</sup>	PV4b <sup>2</sup>		
37	S0520GE8PL	200x.800 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	P	P	AD:Eff 8% <sup>0</sup>	PV4m <sup>2</sup>		
38	S0520GE9	200x.800 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	P	P	AD:Eff 9% <sup>0</sup>	PV4b <sup>2</sup>		
39	S0520GE9PL	200x.800 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	P	P	AD:Eff 9% <sup>0</sup>	PV4m <sup>2</sup>		
40	S0520GE10	200x.800 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	P	P	AD:Eff 10% <sup>0</sup>	PV4b <sup>2</sup>		
41	S0520GE10PL	200x.800 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	P	P	AD:Eff 10% <sup>0</sup>	PV4m <sup>2</sup>		
42	S0520GE11	200x.800 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	P	P	AD:Eff 11% <sup>0</sup>	PV4b <sup>2</sup>		
43	S0520GE11PL	200x.800 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	P	P	AD:Eff 11% <sup>0</sup>	PV4m <sup>2</sup>		
44	S0520GE12	200x.800 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	P	P	AD:Eff 12% <sup>0</sup>	PV4b <sup>2</sup>		
45	S0520GE12PL	200x.800 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	P	P	AD:Eff 12% <sup>0</sup>	PV4m <sup>2</sup>		
46	S1005A6	400x.200 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	N	N	AD:Eff 6% <sup>0</sup>	PV4c <sup>2</sup>		
47	S1005A6PL	400x.200 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	N	N	AD:Eff 6% <sup>0</sup>	PV4m <sup>2</sup>		
48	S1005A7	400x.200 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	N	N	AD:Eff 7% <sup>0</sup>	PV4c <sup>2</sup>		
49	S1005A7PL	400x.200 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	N	N	AD:Eff 7% <sup>0</sup>	PV4m <sup>2</sup>		
50	S1005A8	400x.200 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	N	N	AD:Eff 8% <sup>0</sup>	PV4c <sup>2</sup>		
51	S1005A8PL	400x.200 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	N	N	AD:Eff 8% <sup>0</sup>	PV4m <sup>2</sup>		
52	S1005A9	400x.200 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	N	N	AD:Eff 9% <sup>0</sup>	PV4c <sup>2</sup>		
53	S1005A9PL	400x.200 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	N	N	AD:Eff 9% <sup>0</sup>	PV4m <sup>2</sup>		
54	S1005A10	400x.200 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	N	N	AD:Eff 10% <sup>0</sup>	PV4c <sup>2</sup>		
55	S1005A10PL	400x.200 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	N	N	AD:Eff 10% <sup>0</sup>	PV4m <sup>2</sup>		
56	S1005A11	400x.200 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	N	N	AD:Eff 11% <sup>0</sup>	PV4c <sup>2</sup>		
57	S1005A11PL	400x.200 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	N	N	AD:Eff 11% <sup>0</sup>	PV4m <sup>2</sup>		
58	S1005A12	400x.200 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	N	N	AD:Eff 12% <sup>0</sup>	PV4c <sup>2</sup>		
59	S1005A12PL	400x.200 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	N	N	AD:Eff 12% <sup>0</sup>	PV4m <sup>2</sup>		
60	S1005E6	400x.200 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	P	P	AD:Eff 6% <sup>0</sup>	PV4c <sup>2</sup>		
61	S1005E6PL	400x.200 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	P	P	AD:Eff 6% <sup>0</sup>	PV4m <sup>2</sup>		
62	S1005E7	400x.200 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	P	P	AD:Eff 7% <sup>0</sup>	PV4c <sup>2</sup>		
63	S1005E7PL	400x.200 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	P	P	AD:Eff 7% <sup>0</sup>	PV4m <sup>2</sup>		
64	S1005E8	400x.200 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	P	P	AD:Eff 8% <sup>0</sup>	PV4c <sup>2</sup>		
65	S1005E8PL	400x.200 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	P	P	AD:Eff 8% <sup>0</sup>	PV4m <sup>2</sup>		
66	S1005E9	400x.200 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m	100m	800n	100m	800n	28	P	P	AD:Eff 9% <sup>0</sup>	PV4c <sup>2</sup>		
67	S1005E9PL	400x.200 in <sup>2</sup>	LD	25m <sup>+</sup> Δ	560m <sup>+</sup> Δ	100m											

# 17. SENSOR: PHOTOVOLTAIC CELL

IN ORDER OF: (1) CELL USE (2) MIN. OUTPUT CURR. (3) MIN. OUTPUT VOLT. & (4) TYPE No.

LINE No.	TYPE No	ACTIVE SURFACE	CELL USE	MIN. OUTPUT CURR. I <sub>sc</sub> (A)	MIN. OUTPUT VOLT. V <sub>oc</sub> (V)	MIN. OUTPUT PWR. P <sub>o</sub> (W)	TEST CONDITIONS			S O U R C E	PEAK WAVE LENGTH λ <sub>p</sub> (m)	MAX. REV. VOLT VR (V)	TEMP. RING. CODE	POL. ARI TY	MATERIAL & FEATURES	LEAD CODE	DRAWING Ø-RND. Δ-RECT. *-CHIP
							E <sub>v</sub>		E <sub>e</sub> (W/cm <sup>2</sup> )								
							FT.C (fc)	LUX (lx)									
1	S1010GA10PL	400x.400 ins	LD	25mA	560mV				100m	800n	28	N	N	AD:Eff 10%		PV4p	
2	S1010GA11	400x.400 ins	LD	25mA	560mV				100m	800n	28	N	N	AD:Eff 11%		PV4d	
3	S1010GA11PL	400x.400 ins	LD	25mA	560mV				100m	800n	28	N	N	AD:Eff 11%		PV4p	
4	S1010GA12	400x.400 ins	LD	25mA	560mV				100m	800n	28	N	N	AD:Eff 12%		PV4d	
5	S1010GA12PL	400x.400 ins	LD	25mA	560mV				100m	800n	28	N	N	AD:Eff 12%		PV4p	
6	S1010GE6	400x.400 ins	LD	25mA	560mV				100m	800n	28	P	P	AD:Eff 6%		PV4d	
7	S1010GE6PL	400x.400 ins	LD	25mA	560mV				100m	800n	28	P	P	AD:Eff 6%		PV4p	
8	S1010GE7	400x.400 ins	LD	25mA	560mV				100m	800n	28	P	P	AD:Eff 7%		PV4d	
9	S1010GE7PL	400x.400 ins	LD	25mA	560mV				100m	800n	28	P	P	AD:Eff 7%		PV4p	
10	S1010GE8	400x.400 ins	LD	25mA	560mV				100m	800n	28	P	P	AD:Eff 8%		PV4d	
11	S1010GE8PL	400x.400 ins	LD	25mA	560mV				100m	800n	28	P	P	AD:Eff 8%		PV4p	
12	S1010GE9	400x.400 ins	LD	25mA	560mV				100m	800n	28	P	P	AD:Eff 9%		PV4d	
13	S1010GE9PL	400x.400 ins	LD	25mA	560mV				100m	800n	28	P	P	AD:Eff 9%		PV4p	
14	S1010GE10	400x.400 ins	LD	25mA	560mV				100m	800n	28	P	P	AD:Eff 10%		PV4d	
15	S1010GE10PL	400x.400 ins	LD	25mA	560mV				100m	800n	28	P	P	AD:Eff 10%		PV4p	
16	S1010GE11	400x.400 ins	LD	25mA	560mV				100m	800n	28	P	P	AD:Eff 11%		PV4d	
17	S1010GE11PL	400x.400 ins	LD	25mA	560mV				100m	800n	28	P	P	AD:Eff 11%		PV4p	
18	S1010GE12	400x.400 ins	LD	25mA	560mV				100m	800n	28	P	P	AD:Eff 12%		PV4d	
19	S1010GE12PL	400x.400 ins	LD	25mA	560mV				100m	800n	28	P	P	AD:Eff 12%		PV4p	
20	S1020A6	400x.800 ins	LD	25mA	560mV				100m	800n	28	N	N	AD:Eff 6%		PV4e	
21	S1020A6PL	400x.800 ins	LD	25mA	560mV				100m	800n	28	N	N	AD:Eff 6%		PV4p	
22	S1020A7	400x.800 ins	LD	25mA	560mV				100m	800n	28	N	N	AD:Eff 7%		PV4e	
23	S1020A7PL	400x.800 ins	LD	25mA	560mV				100m	800n	28	N	N	AD:Eff 7%		PV4p	
24	S1020A8	400x.800 ins	LD	25mA	560mV				100m	800n	28	N	N	AD:Eff 8%		PV4e	
25	S1020A8PL	400x.800 ins	LD	25mA	560mV				100m	800n	28	N	N	AD:Eff 8%		PV4p	
26	S1020A9	400x.800 ins	LD	25mA	560mV				100m	800n	28	N	N	AD:Eff 9%		PV4e	
27	S1020A9PL	400x.800 ins	LD	25mA	560mV				100m	800n	28	N	N	AD:Eff 9%		PV4p	
28	S1020A10	400x.800 ins	LD	25mA	560mV				100m	800n	28	N	N	AD:Eff 10%		PV4e	
29	S1020A10PL	400x.800 ins	LD	25mA	560mV				100m	800n	28	N	N	AD:Eff 10%		PV4p	
30	S1020A11	400x.800 ins	LD	25mA	560mV				100m	800n	28	N	N	AD:Eff 11%		PV4e	
31	S1020A11PL	400x.800 ins	LD	25mA	560mV				100m	800n	28	N	N	AD:Eff 11%		PV4p	
32	S1020A12	400x.800 ins	LD	25mA	560mV				100m	800n	28	N	N	AD:Eff 12%		PV4e	
33	S1020A12PL	400x.800 ins	LD	25mA	560mV				100m	800n	28	N	N	AD:Eff 12%		PV4p	
34	S1020E6	400x.800 ins	LD	25mA	560mV				100m	800n	28	P	P	AD:Eff 6%		PV4e	
35	S1020E6PL	400x.800 ins	LD	25mA	560mV				100m	800n	28	P	P	AD:Eff 6%		PV4p	
36	S1020E7	400x.800 ins	LD	25mA	560mV				100m	800n	28	P	P	AD:Eff 7%		PV4e	
37	S1020E7PL	400x.800 ins	LD	25mA	560mV				100m	800n	28	P	P	AD:Eff 7%		PV4p	
38	S1020E8	400x.800 ins	LD	25mA	560mV				100m	800n	28	P	P	AD:Eff 8%		PV4e	
39	S1020E8PL	400x.800 ins	LD	25mA	560mV				100m	800n	28	P	P	AD:Eff 8%		PV4p	
40	S1020E9	400x.800 ins	LD	25mA	560mV				100m	800n	28	P	P	AD:Eff 9%		PV4e	
41	S1020E9PL	400x.800 ins	LD	25mA	560mV				100m	800n	28	P	P	AD:Eff 9%		PV4p	
42	S1020E10	400x.800 ins	LD	25mA	560mV				100m	800n	28	P	P	AD:Eff 10%		PV4e	
43	S1020E10PL	400x.800 ins	LD	25mA	560mV				100m	800n	28	P	P	AD:Eff 10%		PV4p	
44	S1020E11	400x.800 ins	LD	25mA	560mV				100m	800n	28	P	P	AD:Eff 11%		PV4e	
45	S1020E11PL	400x.800 ins	LD	25mA	560mV				100m	800n	28	P	P	AD:Eff 11%		PV4p	
46	S1020E12	400x.800 ins	LD	25mA	560mV				100m	800n	28	P	P	AD:Eff 12%		PV4e	
47	S1020E12PL	400x.800 ins	LD	25mA	560mV				100m	800n	28	P	P	AD:Eff 12%		PV4p	
48	S1020GA6	400x.800 ins	LD	25mA	560mV				100m	800n	28	N	N	AD:Eff 6%		PV4e	
49	S1020GA6PL	400x.800 ins	LD	25mA	560mV				100m	800n	28	N	N	AD:Eff 6%		PV4p	
50	S1020GA7	400x.800 ins	LD	25mA	560mV				100m	800n	28	N	N	AD:Eff 7%		PV4e	
51	S1020GA7PL	400x.800 ins	LD	25mA	560mV				100m	800n	28	N	N	AD:Eff 7%		PV4p	
52	S1020GA8	400x.800 ins	LD	25mA	560mV				100m	800n	28	N	N	AD:Eff 8%		PV4e	
53	S1020GA8PL	400x.800 ins	LD	25mA	560mV				100m	800n	28	N	N	AD:Eff 8%		PV4p	
54	S1020GA9	400x.800 ins	LD	25mA	560mV				100m	800n	28	N	N	AD:Eff 9%		PV4e	
55	S1020GA9PL	400x.800 ins	LD	25mA	560mV				100m	800n	28	N	N	AD:Eff 9%		PV4p	
56	S1020GA10	400x.800 ins	LD	25mA	560mV				100m	800n	28	N	N	AD:Eff 10%		PV4e	
57	S1020GA10PL	400x.800 ins	LD	25mA	560mV				100m	800n	28	N	N	AD:Eff 10%		PV4p	
58	S1020GA11	400x.800 ins	LD	25mA	560mV				100m	800n	28	N	N	AD:Eff 11%		PV4e	
59	S1020GA11PL	400x.800 ins	LD	25mA	560mV				100m	800n	28	N	N	AD:Eff 11%		PV4p	
60	S1020GA12	400x.800 ins	LD	25mA	560mV				100m	800n	28	N	N	AD:Eff 12%		PV4e	
61	S1020GA12PL	400x.800 ins	LD	25mA	560mV				100m	800n	28	N	N	AD:Eff 12%		PV4p	
62	S1020GE6	400x.800 ins	LD	25mA	560mV				100m	800n	28	P	P	AD:Eff 6%		PV4e	
63	S1020GE6PL	400x.800 ins	LD	25mA	560mV				100m	800n	28	P	P	AD:Eff 6%		PV4p	
64	S1020GE7	400x.800 ins	LD	25mA	560mV				100m	800n	28	P	P	AD:Eff 7%		PV4e	
65	S1020GE7PL	400x.800 ins	LD	25mA	560mV				100m	800n	28	P	P	AD:Eff 7%		PV4p	
66	S1020GE8	400x.800 ins	LD	25mA	560mV				100m	800n	28	P	P	AD:Eff 8%		PV4e	
67	S1020GE8PL	400x.800 ins	LD	25mA	560mV				100m	800n	28	P	P	AD:Eff 8%		PV4p	
68	S1020GE9	400x.800 ins	LD	25mA	560mV				100m	800n	28	P	P	AD:Eff 9%		PV4e	
69	S1020GE9PL	400x.800 ins	LD	25mA	560mV				100m	800n	28	P	P	AD:Eff 9%		PV4p	
70	S1020GE10	400x.800 ins	LD	25mA	560mV				100m	800n	28	P	P	AD:Eff 10%		PV4e	
71	S1020GE10PL	400x.800 ins	LD	25mA	560mV				100m	800n	28	P	P	AD:Eff 10%		PV4p	
72	S1020GE11	400x.800 ins	LD	25mA	560mV				100m	800n	28	P	P	AD:Eff 11%		PV4e	
73	S1020GE11PL	400x.800 ins	LD	25mA	560mV				100m	800n	28	P	P	AD:Eff 11%		PV4p	
74	S1020GE12	400x.800 ins	LD	25mA	560mV				100m	800n	28	P	P	AD:Eff 12%		PV4e	
75	S1020GE12PL	400x.800 ins	LD	25mA	560mV				100m	800n	28	P	P	AD:Eff 12%		PV4p	
76	S2005A6	800x.200 ins	LD	25mA	560mV				100m	800n	28	N	N	AD:Eff 6%		PV4r	
77	S2005A6PL	800x.200 ins	LD	25mA	560mV				100m	800n	28	N	N	AD:Eff 6%		PV4p	
78	S2005A7	800x.200 ins	LD	25mA	560mV				100m	800n	28	N	N	AD:Eff 7%		PV4r	
79	S2005A7PL	800x.200 ins	LD	25mA	560mV				100m	800n	28	N	N	AD:Eff 7%		PV4p	
80	S2005A8	800x.200 ins	LD	25mA	560mV				100m	800n	28	N	N	AD:Eff 8%		PV4r	
81	S2005A8PL	800x.200 ins	LD	25mA	560mV				100m	800n	28	N	N	AD:Eff 8%		PV4p	
82	S2005A9	800x.200 ins	LD	25mA	560mV				100m	800n	28	N	N	AD:Eff 9%		PV4r	
83	S2005A9PL	800x.200 ins	LD	25mA	560mV				100m	800n	28	N	N	AD:Eff 9%		PV4p	
84	S2005A10	800x.200 ins	LD	25mA	560mV				100m	800n	28	N	N	AD:Eff 10%		PV4r	
85	S2005A10PL	800x.200 ins	LD	25mA	560mV				100m	800n	28	N	N	AD:Eff 10%		PV4p	
86	S2005A11	800x.200 ins	LD	25mA	560mV				100m	800n	28	N	N	AD:Eff 11%		PV4r	
87	S2005A11PL	800x.200 ins	LD	25mA	560mV				100m	800n	28	N	N	AD:Eff 11%		PV4p	
88	S2005A12	800x.200 ins	LD	25mA	560mV				100m	800n	28	N	N	AD:Eff 12%		PV4r	
89	S2005A12PL	800x.200 ins	LD	25mA	560mV				100m	800n	28	N	N	AD:Eff 12%		PV4p	
90	S2005E6	800x.200 ins	LD	25mA	560mV				100m	800n	28	P	P	AD:Eff 6%		PV4r	
91	S2005E6PL	8															



# 17. SENSOR: PHOTOVOLTAIC CELL

IN ORDER OF: (1) CELL USE (2) MIN. OUTPUT CURR. (3) MIN. OUTPUT VOLT. & (4) TYPE No.

LINE No.	TYPE No	ACTIVE SURFACE	CELL USE	MIN. OUTPUT CURR-lo Δ-Isc (A)	MIN. OUTPUT VOLT-Vo Δ-Voc (V)	MIN. OUTPUT PWR. Po (W)	TEST CONDITIONS			S O U R C E	PEAK WAVE LENGTH λp (m)	MAX. REV. VOLT VR (V)	TEMP. RING. CODE	POL ARITY	MATERIAL & FEATURES MAT	LEAD CODE	DRAWING Ø-RND. ▽-RECT. △-STRIP *CHIP
							Ev		Ee (W/cm <sup>2</sup> )								
							FT.C (fc)	LUX (lx)									
1	S2005GA9PL	800x200 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	N	AD:Eff 9%	28	N	AD:Eff 9%	PV4h	PV4h	
2	S2005GA10	800x200 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	N	AD:Eff 10%	28	N	AD:Eff 10%	PV4h	PV4h	
3	S2005GA10PL	800x200 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	N	AD:Eff 10%	28	N	AD:Eff 10%	PV4h	PV4h	
4	S2005GA11	800x200 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	N	AD:Eff 11%	28	N	AD:Eff 11%	PV4h	PV4h	
5	S2005GA11PL	800x200 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	N	AD:Eff 11%	28	N	AD:Eff 11%	PV4h	PV4h	
6	S2005GA12	800x200 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	N	AD:Eff 12%	28	N	AD:Eff 12%	PV4h	PV4h	
7	S2005GA12PL	800x200 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	N	AD:Eff 12%	28	N	AD:Eff 12%	PV4h	PV4h	
8	S2005GE6	800x200 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	P	AD:Eff 6%	28	P	AD:Eff 6%	PV4h	PV4h	
9	S2005GE6PL	800x200 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	P	AD:Eff 6%	28	P	AD:Eff 6%	PV4h	PV4h	
10	S2005GE7	800x200 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	P	AD:Eff 7%	28	P	AD:Eff 7%	PV4h	PV4h	
11	S2005GE7PL	800x200 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	P	AD:Eff 7%	28	P	AD:Eff 7%	PV4h	PV4h	
12	S2005GE8	800x200 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	P	AD:Eff 8%	28	P	AD:Eff 8%	PV4h	PV4h	
13	S2005GE8PL	800x200 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	P	AD:Eff 8%	28	P	AD:Eff 8%	PV4h	PV4h	
14	S2005GE9	800x200 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	P	AD:Eff 9%	28	P	AD:Eff 9%	PV4h	PV4h	
15	S2005GE9PL	800x200 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	P	AD:Eff 9%	28	P	AD:Eff 9%	PV4h	PV4h	
16	S2005GE10	800x200 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	P	AD:Eff 10%	28	P	AD:Eff 10%	PV4h	PV4h	
17	S2005GE10PL	800x200 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	P	AD:Eff 10%	28	P	AD:Eff 10%	PV4h	PV4h	
18	S2005GE11	800x200 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	P	AD:Eff 11%	28	P	AD:Eff 11%	PV4h	PV4h	
19	S2005GE11PL	800x200 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	P	AD:Eff 11%	28	P	AD:Eff 11%	PV4h	PV4h	
20	S2005GE12	800x200 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	P	AD:Eff 12%	28	P	AD:Eff 12%	PV4h	PV4h	
21	S2005GE12PL	800x200 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	P	AD:Eff 12%	28	P	AD:Eff 12%	PV4h	PV4h	
22	S2010A6	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	N	AD:Eff 6%	28	N	AD:Eff 6%	PV4g	PV4g	
23	S2010A6PL	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	N	AD:Eff 6%	28	N	AD:Eff 6%	PV4g	PV4g	
24	S2010A7	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	N	AD:Eff 7%	28	N	AD:Eff 7%	PV4g	PV4g	
25	S2010A7PL	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	N	AD:Eff 7%	28	N	AD:Eff 7%	PV4g	PV4g	
26	S2010A8	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	N	AD:Eff 8%	28	N	AD:Eff 8%	PV4g	PV4g	
27	S2010A8PL	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	N	AD:Eff 8%	28	N	AD:Eff 8%	PV4g	PV4g	
28	S2010A9	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	N	AD:Eff 9%	28	N	AD:Eff 9%	PV4g	PV4g	
29	S2010A9PL	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	N	AD:Eff 9%	28	N	AD:Eff 9%	PV4g	PV4g	
30	S2010A10	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	N	AD:Eff 10%	28	N	AD:Eff 10%	PV4g	PV4g	
31	S2010A10PL	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	N	AD:Eff 10%	28	N	AD:Eff 10%	PV4g	PV4g	
32	S2010A11	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	N	AD:Eff 11%	28	N	AD:Eff 11%	PV4g	PV4g	
33	S2010A11PL	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	N	AD:Eff 11%	28	N	AD:Eff 11%	PV4g	PV4g	
34	S2010A12	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	N	AD:Eff 12%	28	N	AD:Eff 12%	PV4g	PV4g	
35	S2010A12PL	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	N	AD:Eff 12%	28	N	AD:Eff 12%	PV4g	PV4g	
36	S2010E6	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	P	AD:Eff 6%	28	P	AD:Eff 6%	PV4g	PV4g	
37	S2010E6PL	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	P	AD:Eff 6%	28	P	AD:Eff 6%	PV4g	PV4g	
38	S2010E7	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	P	AD:Eff 7%	28	P	AD:Eff 7%	PV4g	PV4g	
39	S2010E7PL	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	P	AD:Eff 7%	28	P	AD:Eff 7%	PV4g	PV4g	
40	S2010E8	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	P	AD:Eff 8%	28	P	AD:Eff 8%	PV4g	PV4g	
41	S2010E8PL	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	P	AD:Eff 8%	28	P	AD:Eff 8%	PV4g	PV4g	
42	S2010E9	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	P	AD:Eff 9%	28	P	AD:Eff 9%	PV4g	PV4g	
43	S2010E9PL	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	P	AD:Eff 9%	28	P	AD:Eff 9%	PV4g	PV4g	
44	S2010E10	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	P	AD:Eff 10%	28	P	AD:Eff 10%	PV4g	PV4g	
45	S2010E10PL	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	P	AD:Eff 10%	28	P	AD:Eff 10%	PV4g	PV4g	
46	S2010E11	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	P	AD:Eff 11%	28	P	AD:Eff 11%	PV4g	PV4g	
47	S2010E11PL	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	P	AD:Eff 11%	28	P	AD:Eff 11%	PV4g	PV4g	
48	S2010E12	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	P	AD:Eff 12%	28	P	AD:Eff 12%	PV4g	PV4g	
49	S2010E12PL	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	P	AD:Eff 12%	28	P	AD:Eff 12%	PV4g	PV4g	
50	S2010GA6	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	N	AD:Eff 6%	28	N	AD:Eff 6%	PV4s	PV4s	
51	S2010GA6PL	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	N	AD:Eff 6%	28	N	AD:Eff 6%	PV4s	PV4s	
52	S2010GA7	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	N	AD:Eff 7%	28	N	AD:Eff 7%	PV4s	PV4s	
53	S2010GA7PL	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	N	AD:Eff 7%	28	N	AD:Eff 7%	PV4s	PV4s	
54	S2010GA8	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	N	AD:Eff 8%	28	N	AD:Eff 8%	PV4s	PV4s	
55	S2010GA8PL	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	N	AD:Eff 8%	28	N	AD:Eff 8%	PV4s	PV4s	
56	S2010GA9	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	N	AD:Eff 9%	28	N	AD:Eff 9%	PV4s	PV4s	
57	S2010GA9PL	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	N	AD:Eff 9%	28	N	AD:Eff 9%	PV4s	PV4s	
58	S2010GA10	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	N	AD:Eff 10%	28	N	AD:Eff 10%	PV4s	PV4s	
59	S2010GA10PL	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	N	AD:Eff 10%	28	N	AD:Eff 10%	PV4s	PV4s	
60	S2010GA11	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	N	AD:Eff 11%	28	N	AD:Eff 11%	PV4s	PV4s	
61	S2010GA11PL	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	N	AD:Eff 11%	28	N	AD:Eff 11%	PV4s	PV4s	
62	S2010GA12	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	N	AD:Eff 12%	28	N	AD:Eff 12%	PV4s	PV4s	
63	S2010GA12PL	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	N	AD:Eff 12%	28	N	AD:Eff 12%	PV4s	PV4s	
64	S2010GE6	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	P	AD:Eff 6%	28	P	AD:Eff 6%	PV4h	PV4h	
65	S2010GE6PL	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	P	AD:Eff 6%	28	P	AD:Eff 6%	PV4h	PV4h	
66	S2010GE7	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	P	AD:Eff 7%	28	P	AD:Eff 7%	PV4h	PV4h	
67	S2010GE7PL	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	P	AD:Eff 7%	28	P	AD:Eff 7%	PV4h	PV4h	
68	S2010GE8	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	P	AD:Eff 8%	28	P	AD:Eff 8%	PV4h	PV4h	
69	S2010GE8PL	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	P	AD:Eff 8%	28	P	AD:Eff 8%	PV4h	PV4h	
70	S2010GE9	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	P	AD:Eff 9%	28	P	AD:Eff 9%	PV4h	PV4h	
71	S2010GE9PL	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	P	AD:Eff 9%	28	P	AD:Eff 9%	PV4h	PV4h	
72	S2010GE10	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	P	AD:Eff 10%	28	P	AD:Eff 10%	PV4h	PV4h	
73	S2010GE10PL	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	P	AD:Eff 10%	28	P	AD:Eff 10%	PV4h	PV4h	
74	S2010GE11	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	P	AD:Eff 11%	28	P	AD:Eff 11%	PV4h	PV4h	
75	S2010GE11PL	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	P	AD:Eff 11%	28	P	AD:Eff 11%	PV4h	PV4h	
76	S2010GE12	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	P	AD:Eff 12%	28	P	AD:Eff 12%	PV4h	PV4h	
77	S2010GE12PL	800x400 in <sup>s</sup>	LD	25mA	560mV	100m	100m	800n	28	P	AD:Eff 12%	28	P	AD:Eff 12%	PV4h	PV4h	
78	S2020A6	800x800 in <sup>s</sup>	LD	25mA	56												



# 17. SENSOR: PHOTOVOLTAIC CELL

IN ORDER OF: (1) CELL USE (2) MIN. OUTPUT CURR. (3) MIN. OUTPUT VOLT. & (4) TYPE No.

LINE No.	TYPE No	ACTIVE SURFACE	CELL USE	MIN. OUTPUT CURR-Io Δ-Isc	MIN. OUTPUT VOLT-Vo Δ-Voc	MIN. PWR. Po (W)	TEST CONDITIONS			S O U R C E	PEAK WAVE LENGTH λp (m)	MAX. REV. VOLT VR (V)	TEMP. RING. CODE	POL. AR. TY	MATERIAL & FEATURES	LEAD CODE	DRAWING Ø-RECT. Δ-STRIP *-CHIP
							Ev		Ee (W/cm2)								
							FT.C (fc)	LUX (lx)									
1	S2020GA8PL	800x.800 in <sup>s</sup>	LD	25m $\Delta$	560m $\Delta$				100m	800n		28	N	AD:Eff 8%		PV4t $\square$	
2	S2020GA9	800x.800 in <sup>s</sup>	LD	25m $\Delta$	560m $\Delta$				100m	800n		28	N	AD:Eff 9%		PV4t $\square$	
3	S2020GA9PL	800x.800 in <sup>s</sup>	LD	25m $\Delta$	560m $\Delta$				100m	800n		28	N	AD:Eff 9%		PV4t $\square$	
4	S2020GA10	800x.800 in <sup>s</sup>	LD	25m $\Delta$	560m $\Delta$				100m	800n		28	N	AD:Eff 10%		PV4t $\square$	
5	S2020GA10PL	800x.800 in <sup>s</sup>	LD	25m $\Delta$	560m $\Delta$				100m	800n		28	N	AD:Eff 10%		PV4t $\square$	
6	S2020GA11	800x.800 in <sup>s</sup>	LD	25m $\Delta$	560m $\Delta$				100m	800n		28	N	AD:Eff 11%		PV4t $\square$	
7	S2020GA11PL	800x.800 in <sup>s</sup>	LD	25m $\Delta$	560m $\Delta$				100m	800n		28	N	AD:Eff 11%		PV4t $\square$	
8	S2020GA12	800x.800 in <sup>s</sup>	LD	25m $\Delta$	560m $\Delta$				100m	800n		28	N	AD:Eff 12%		PV4t $\square$	
9	S2020GA12PL	800x.800 in <sup>s</sup>	LD	25m $\Delta$	560m $\Delta$				100m	800n		28	N	AD:Eff 12%		PV4t $\square$	
10	S2020GE6	800x.800 in <sup>s</sup>	LD	25m $\Delta$	560m $\Delta$				100m	800n		28	P	AD:Eff 6%		PV4t $\square$	
11	S2020GE6PL	800x.800 in <sup>s</sup>	LD	25m $\Delta$	560m $\Delta$				100m	800n		28	P	AD:Eff 6%		PV4t $\square$	
12	S2020GE7	800x.800 in <sup>s</sup>	LD	25m $\Delta$	560m $\Delta$				100m	800n		28	P	AD:Eff 7%		PV4t $\square$	
13	S2020GE7PL	800x.800 in <sup>s</sup>	LD	25m $\Delta$	560m $\Delta$				100m	800n		28	P	AD:Eff 7%		PV4t $\square$	
14	S2020GE8	800x.800 in <sup>s</sup>	LD	25m $\Delta$	560m $\Delta$				100m	800n		28	P	AD:Eff 8%		PV4t $\square$	
15	S2020GE8PL	800x.800 in <sup>s</sup>	LD	25m $\Delta$	560m $\Delta$				100m	800n		28	P	AD:Eff 8%		PV4t $\square$	
16	S2020GE9	800x.800 in <sup>s</sup>	LD	25m $\Delta$	560m $\Delta$				100m	800n		28	P	AD:Eff 9%		PV4t $\square$	
17	S2020GE9PL	800x.800 in <sup>s</sup>	LD	25m $\Delta$	560m $\Delta$				100m	800n		28	P	AD:Eff 9%		PV4t $\square$	
18	S2020GE10	800x.800 in <sup>s</sup>	LD	25m $\Delta$	560m $\Delta$				100m	800n		28	P	AD:Eff 10%		PV4t $\square$	
19	S2020GE10PL	800x.800 in <sup>s</sup>	LD	25m $\Delta$	560m $\Delta$				100m	800n		28	P	AD:Eff 10%		PV4t $\square$	
20	S2020GE11	800x.800 in <sup>s</sup>	LD	25m $\Delta$	560m $\Delta$				100m	800n		28	P	AD:Eff 11%		PV4t $\square$	
21	S2020GE11PL	800x.800 in <sup>s</sup>	LD	25m $\Delta$	560m $\Delta$				100m	800n		28	P	AD:Eff 11%		PV4t $\square$	
22	S2020GE12	800x.800 in <sup>s</sup>	LD	25m $\Delta$	560m $\Delta$				100m	800n		28	P	AD:Eff 12%		PV4t $\square$	
23	S2020GE12PL	800x.800 in <sup>s</sup>	LD	25m $\Delta$	560m $\Delta$				100m	800n		28	P	AD:Eff 12%		PV4t $\square$	
24#	MS2A	75x.455 in	LD	27m $\Delta$	500m $\Delta$				850n			5C*		AD		PV35 $\square$	
25#	MS2AE	75x.455 in	LD	31m $\Delta$	500m $\Delta$			3.0k	850n			5C*		AD	B	PV36 $\square$	
26#	MS2B	75x.455 in	LD	31m $\Delta$	500m $\Delta$			3.0k	850n			5C*		AD		PV35 $\square$	
27#	MS2BE	75x.455 in	LD	34m $\Delta$	550m $\Delta$			3.0k	850n			5C*		AD		PV36 $\square$	
28#	OSD50-5PV	077 Sq In	LD	70m					1.0					AD		PD199a $\phi$	
29#	2A	790 Sq in*	LD	95m	550m $\Delta$	38m	3.0k		200m		10u	6C*	P	AD		PV5e $\phi$	
30#	2AL	790 Sq in*	LD	95m	550m $\Delta$	38m	3.0k		200m		10u	6C*	P	AD		PV5f $\phi$	
31#	OSD100-5PV	155 Sq In	LD	140m					1.0					AD		PD201a $\phi$	
32#	BPY11P/V	0.11 sq in	LD	5.69 $\Delta$	180m $\Delta$			100						AD	B	PV137 $\square$	
33	DP2	0.88 sq in	LD	24 $\uparrow$	220m $\uparrow$			100						AD		PV8 $\square$	
34	DP3	2.10 sq in	LD	66 $\uparrow$	260m $\uparrow$			100						AD		PV7 $\square$	
35	A5M	1.10 in Dia	LD	220 $\uparrow$	300m $\uparrow$			100						AD		PV3a $\phi$	
36	B10M	1.60x.700 in	LD	320 $\uparrow$	300m $\uparrow$			100						AD		PV2a $\square$	
37	A10M	1.70 in Dia	LD	550 $\uparrow$	300m $\uparrow$			100						AD		PV3b $\phi$	
38	A15M	1.90 in Dia	LD	700 $\uparrow$	310m $\uparrow$			100						AD		PV6 $\phi$	
39	A15	2.58 sq in	LD	770 $\uparrow$				100						AD		PV5d $\phi$	
40	S5001	7.10 sq in	PC	100m	400m	40m	11k							AD			
41	S5000	3.12 sq in	PC	400m	400m	160m	11k							AD			
42	S7600	3.0in DIA	PC	1.2	450m	500m	11k							AD			
43#	BPW35	1.45 in sq	SC	300n $\Delta$	380m					800n				AC	120°	PV50 $\square$	
44	B4Z	5.43 sq in <sup>s</sup>	SC	30u			10			565n				AC		PV51a $\square$	
45	A3Z	1.09 in dia <sup>s</sup>	SC	50u			10			565n				AC		PV5h $\phi$	
46	B2Z	1.06 sq in <sup>s</sup>	SC	55u			10			565n				AC		PV51 $\square$	
47	A1	2.46 in dia <sup>s</sup>	SC	90u			10			565n				AC		PV5g $\phi$	
48	B5Z	1.66 sq in <sup>s</sup>	SC	90u			10			565n				AC		PV51b $\square$	
49	SS300-1	240 in dia	SC	1.1m $\Delta$	400m $\Delta$		1.0k			800n		6H		AD	A	PV57 $\phi$	
50	SS300-2	240 in dia	SC	1.1m $\Delta$	400m $\Delta$		1.0k			800n		6H		AD	E	PV58 $\phi$	
51	SS300-3	240 in dia	SC	1.1m $\Delta$	400m $\Delta$		1.0k			800n		6H		AD	E	PV57 $\phi$	
52	SS300-4	240 in dia	SC	1.1m $\Delta$	400m $\Delta$		1.0k			800n		6H		AD	E	PV58 $\phi$	
53	SS23	0.155 sq in	SC	1.5m	400m	600u			100m	800n		6H	P	AD		PV1bg $\square$	
54	VTS2011	0.13 sq in	SC	1.7m	400m $\uparrow$	680u			100m	800n		5C	P	AD		PV1 $\square$	
55	VTS3011	0.13 sq in	SC	1.7m	400m $\uparrow$	680u			100m	800n		5C	P	AD		PV1 $\square$	
56	ST203	0.15 sq in	SC	1.8m $\uparrow$	400m $\uparrow$	7.2m $\uparrow$						6H	P	AD		PV1z $\square$	
57	VTS2012	0.16 sq in	SC	2.0m	400m $\uparrow$	800u			100m	800n		6H	P	AD		PV1 $\square$	
58	VTS3012	0.16 sq in	SC	2.0m	400m $\uparrow$	800u			100m	800n		5C	P	AD		PV1a $\square$	
59#	BPY70	557 in sq	SC	2.6m $\Delta$	400m					850n	1.0	2A*	N	AD	120°	PV31 $\square$	
60#	SS22	0.31 sq in	SC	3.0m	400m	1.2m			100m	800n		6H	P	AD		PV1b $\square$	
61	ST202	0.31 sq in	SC	3.8m $\uparrow$	400m $\uparrow$	1.5m $\uparrow$						6H	P	AD			
62	VTS2013	0.32 sq in	SC	4.2m	400m $\uparrow$	1.6m			100m	800n		5C	P	AD		PV1 $\square$	
63	VTS3013	0.32 sq in	SC	4.2m	400m $\uparrow$	1.6m			100m	800n		5C	P	AD		PV1ab $\square$	
64	SS21	0.62 sq in	SC	6.0m	400m	2.4m			100m	800n		6H	P	AD		PV1be $\square$	
65	SS12	0.69 sq in	SC	7.0m	400m	2.8m			100m	800n		6H	P	AD		PV1bc $\square$	
66	ST102	0.69 sq in	SC	7.5m $\uparrow$	400m $\uparrow$	3.0m $\uparrow$						6H	P	AD			
67	ST201	0.62 sq in	SC	7.5m $\uparrow$	400m $\uparrow$	3.0m $\uparrow$						6H	P	AD			
68	VTS2014	0.65 sq in	SC	8.4m	400m $\uparrow$	3.36m			100m	800n		5C	P	AD		PV1u $\square$	
69	VTS3014	0.65 sq in	SC	8.4m	400m $\uparrow$	3.36m			100m	800n		5C	P	AD		PV1ac $\square$	
70	SS20	1.24 sq in	SC	12m	400m	4.8m				800n		6H	P	AD		PV1bd $\square$	
71	SS11	1.395 sq in	SC	14m	400m	5.6m			100m	800n		6H	P	AD		PV1bb $\square$	
72	SS50	1.55 sq in	SC	15m	400m	6.0m			100m	800n		6H	P	AD		PV1bj $\square$	
73	SS100	1.00x1.00 $\square$	SC	15m	400m	6.0m			100m	800n		6H	P	AD		PV53 $\square$	
74	ST200	1.24 sq in	SC	15m $\uparrow$	400m $\uparrow$	6.0m $\uparrow$						6H	P	AD	A		
75	ST500	1.55 sq in	SC	15m $\uparrow$	400m $\uparrow$	6.0m $\uparrow$						6H	P	AD			
76	ST101	1.39 sq in	SC	17m $\uparrow$	400m $\uparrow$	6.8m $\uparrow$						6H	P	AD			
77	VTS2018	1.30 sq in	SC	17m	400m $\uparrow$	6.8m			100m	800n		5C	P	AD		PV1v $\square$	
78	VTS3018	1.30 sq in	SC	17m	400m $\uparrow$	6.8m			100m	800n		5C	P	AD		PV1ad $\square$	
79	SS31	2.232 sq in	SC	18m	400m	7.2m				800n		6H	P	AD		PV60 $\phi$	
80	VTS2020	1.40 sq in	SC	18m	400m $\uparrow$	7.2m			100m	800n		5C	P	AD		PV1w $\square$	
81	VTS3020	1.40 sq in	SC	18m	400m $\uparrow$	7.2m			100m	800n		5C	P	AD		PV1ae $\square$	
82	VTS3020N	1.40 sq in	SC	18m	400m $\uparrow$	7.2m			100m	800n		5C	P	AD		PV1ae $\square$	
83	ST301	1.86 sq in	SC	20m $\uparrow$	400m $\uparrow$	8.0m $\uparrow$						6H	N	AD			
84	VTS2022	1.40 sq in	SC	21m	430m $\uparrow$	9.03m			100m	800n		5C	P	AD		PV1w $\square$	
85	VTS3022	1.40 sq in	SC	21m	430m $\uparrow$	9.03m			100m	800n		5C	P	AD		PV1ae $\square$	
86	SS10	2.79 sq in	SC	28m	400m	11.2m			100m	800n		6H	P	AD		PV1ba $\square$	
87	ST100	2.79 sq in	SC	35m $\uparrow$	400m $\uparrow$	14m $\uparrow$						6H	P	AD			
88	SP2A40B	1.55x1.55 in	SC														

# 17. SENSOR: PHOTOVOLTAIC CELL

IN ORDER OF: (1) CELL USE (2) MIN. OUTPUT CURR. (3) MIN. OUTPUT VOLT. & (4) TYPE No.

LINE No.	TYPE No	ACTIVE SURFACE	CELL USE	2 MIN. OUTPUT CURR-Io (A)	3 MIN. OUTPUT VOLT-Vo (V)	MIN. OUTPUT PWR. Po (W)	TEST CONDITIONS			S O U R C E	PEAK WAVE LENGTH λp (m)	MAX. REV. VOLT VR (V)	TEMP. RNG. CODE	POL ARITY	MATERIAL & FEATURES	LEAD CODE	DRAWING
							Ee (W/cm2)		Ee (W/cm2)								
							FT.C (fc)	LUX (lx)									
1#	SS200A	1.312 sq in	SC	60m	400m	24m			100m			6H					PV420
2#	MS11BE	.664 in	SC	60mΔ	550mΔ				100m			58*		AD			PV420
3#	N210CG10		SC	61.9m	430m†	26.6m			140m				N	AD			PV93a
4#	N210CGL10		SC	61.9m	430m†	26.6m			140m				N	AD			PV93a
5#	N120CG11		SC	64.5m	430m†	27.7m			140m				N	AD			PV1bu
6#	N120CGL11		SC	64.5m	430m†	27.7m			140m				N	AD			PV1bu
7#	N210CG11		SC	68.1m	430m†	29.3m			140m				N	AD			PV93a
8#	N210CGL11		SC	68.1m	430m†	29.3m			140m				N	AD			PV93a
9#	SP2C80B	1.60x.75 in	SC	72m	1.6	115m			100m					AD			PV2a
10#	SS30	.744 sq in	SC	75m	400m	30m			100m			6H	P	AD			PV5f
11#	VTS2028	.610 sq in	SC	79m	400m†	31.6m			100m			5C	P	AD			PV1y
12#	VTS3028	.610 sq in	SC	79m	400m†	31.6m			100m			5C	P	AD			PV1ag
13#	ST400	.589 sq in	SC	80m†	400m†	32m†						6H	P	AD			
14#	ST400G	.589 sq in	SC	80m†	430m†	32m†						6H	P	AD			
15#	SP2D96B	1.60x.75 in	SC	80m	1.6	128m			100m			28		AD			PV2a
16#	S2900E7M	1.25 in Dia	SC	90m	400m	36m			100m			28		AD			PV540
17#	SS200B	1.312 sq in	SC	90m	400m	36m			100m			6H		AD			PV540
18#	ST300	.744 Sq In	SC	90m†	400m†	36m†						6H	P	AD			
19#	S224		SC	90mΔ	5.5 Δ	360m			100m			38*		AD			PV122
20#	N220CG8		SC	99.1m	430m†	42.6m			140m				N	AD			PV1bn
21#	VTS2050	.850 sq in	SC	110m	400m†	44m			100m			5C	P	AD			PV5e
22#	VTS3050	.850 sq in	SC	110m	400m†	44m			100m			5C	P	AD			PV5e
23#	N220CG9		SC	111m	430m†	47.9m			140m				N	AD			PV1bn
24#	MS12	.875 in dia	SC	120mΔ	330mΔ		3.0k		140m			58*		AD			PV450
25#	S2900E9.5M	1.25 in Dia	SC	120m	400m	48m			100m			28		AD			PV540
26#	SS200C	1.312 sq in	SC	120m	400m	48m			100m			6H		AD			PV540
27#	N220CG10		SC	123m	430m†	53.2m			140m				N	AD			PV1br
28#	SS2020G	.5673 sq in	SC	125m	430m†	55.9m†			140m			X2*	N	AD			PV86
29#	N220CG11		SC	136m	430m†	58.5m			140m				N	AD			PV1br
30#	SS202MG		SC	140mΔ	540mΔ	55.9m			140m			5A*		AD			PV86
31#	FRB150	.787x.757 in	SC	140mΔ	550mΔ				100m			6H		AD			PV480
32#	SS200D	1.312 sq in	SC	150m	400m	60m			100m					AD			PV540
33#	N240CG8		SC	197m	430m†	85.1m			140m				N	AD			PV1bs
34#	N240CGL8		SC	197m	430m†	85.1m			140m				N	AD			PV1bs
35#	N240CG9		SC	222m	430m†	95.8m			140m				N	AD			PV1bs
36#	N240CGL9		SC	222m	430m†	95.8m			140m				N	AD			PV1bs
37#	MST10	1.978 sq in	SC	240m†	535mΔ	100m†			100m				N	AD			PV139
38#	N240CG10		SC	247m	430m†	106m			140m				N	AD			PV1bs
39#	N240CGL10		SC	247m	430m†	106m			140m				N	AD			PV1bs
40#	N240CG11		SC	272m	430m†	117m			140m				N	AD			PV1bs
41#	N240CGL11		SC	272m	430m†	117m			140m				N	AD			PV1bs
42#	S225		SC	500mΔ	3.0 Δ	900m			100m			4C*		AD			PV123
43#	MST12	3.816 sq in	SC	585m†	580mΔ	250m†			100m				N	AD			PV140
44#	ST223-2	.020x.125 in	TC	85u								6C*		AD			PV67a
45#	ST223-1	.055x.125 in	TC	250u	250m							6C*		AD			PV670
46#	STN-EC080-080-060S	.080x.080 in	TC	280uΔ			800						N	AD Ag Wire			PV68
47#	STN-EC080-080-060W	.080x.080 in	TC	280uΔ			800						N	AD			PV68
48#	STP-EC080-080-060S	.080x.080 in	TC	280uΔ			800						P	AD Ag Wire			PV68
49#	MS9A	.084x.039 in	TC	300uΔ	500mΔ		3.0k					5C*		AD			PV37a
50#	MS9AE	.084x.039 in	TC	300uΔ	500mΔ		3.0k					58*		AD			PV34
51#	MS9B	.084x.039 in	TC	300uΔ	500mΔ		3.0k					5C*		AD			PV37a
52#	MS9BE	.084x.039 in	TC	300uΔ	500mΔ		3.0k					58*		AD			PV34
53#	STN-EC200-100-060S	.200x.100 in	TC	550uΔ			500						N	AD Ag Wire			PV68b
54#	STN-EC200-100-060W	.200x.100 in	TC	550uΔ			500						N	AD			PV68b
55#	STP-EC200-100-060S	.200x.100 in	TC	550uΔ			500						P	AD Ag Wire			PV68b
56#	STP-EC200-100-060W	.200x.100 in	TC	550uΔ			500						P	AD			PV68b
57#	STN-EC200-080-060S	.200x.080 in	TC	570uΔ			700						N	AD Ag Wire			PV68a
58#	STN-EC200-080-060W	.200x.080 in	TC	570uΔ			700						N	AD			PV68a
59#	STP-EC200-080-060S	.200x.080 in	TC	570uΔ			700						P	AD Ag Wire			PV68a
60#	STP-EC200-080-060W	.200x.080 in	TC	570uΔ			700						P	AD			PV68a
61#	MPS1A	.137x.072 in	TC	1.0mΔ	500mΔ		3.0k							AD			PV33
62#	MPS1AE	.137x.072 in	TC	1.0mΔ	500mΔ		3.0k							AD			PV34
63#	MPS1B	.137x.072 in	TC	1.0mΔ	500mΔ		3.0k							AD			PV33
64#	MPS1BE	.137x.072 in	TC	1.0mΔ	500mΔ		3.0k							AD			PV34
65#	MS1A	.15x.084 in	TC	1.0mΔ	500mΔ		3.0k					5C*		AD			PV33
66#	MS1AE	.15x.084 in	TC	1.0mΔ	500mΔ		3.0k					58*		AD			PV34
67#	MS1B	.15x.084 in	TC	1.0mΔ	500mΔ		3.0k					5C*		AD			PV33
68#	MS1BE	.15x.084 in	TC	1.0mΔ	500mΔ		3.0k					58*		AD			PV34
69#	STP-EC080-080-060W	.080x.080 in	TC	280 Δ			800						P	AD			PV68

# 18. SENSOR: PHOTOVOLTAIC ARRAY

IN ORDER OF: (1)TYPE OF ARRAY (2)PWR OUTPUT  
(3)OUTPUT CURR. (4)OUTPUT VOLT. &(5)TYPE No.

LINE No.	TYPE No.	TYPE OF ARRAY	NO OF ELEM	PWR OUT Po (W)	3 O/P CURR. lo Δ-Isc (A)	4 O/P VOLT Vo Δ-Voc (V)	RESP. TIME (S)	TEST CONDITIONS					TEMP. RING. CODE	ACT. IVE AREA (in <sup>2</sup> )	CENTER SPACING (in)	POLAR. ITY	MATER. IAL	SCHEM. ATIC	DRAWING NO. Ø-RND. ▽-RECT. △-STRIP * CHIP
								Ev		Ee (W/cm <sup>2</sup> )	S R C	RL (Ω)							
								FT.C (fc)	LUX (lx)										
1	3SM1020GE8PL	PC	3	43n	36m	1.2						28	919m	P	AD		PV1d		
2	5SM1020GE10T	PC	5	90n	45m	2.0						28	1.5	P	AD		PV1h		
3	VTS2060	PC	3	10m	8.4m	1.2	20u					5C	195m	P	AD		PV1ah		
4	VTS3060	PC	3	10m	8.4m	1.2	20u					5C	195m	P	AD		PV1as		
5	2SM1020A4	PC	2	14m	18m	800m						28	621m	N	AD		PV1a		
6	2SM1020A4PL	PC	2	14m	18m	800m						28	621m	N	AD		PV1a		
7	2SM1020A4T	PC	2	14m	18m	800m						28	621m	N	AD		PV1b		
8	2SM1020E4	PC	2	14m	18m	800m						28	621m	N	AD		PV1c		
9	2SM1020E4PL	PC	2	14m	18m	800m						28	621m	N	AD		PV1a		
10	2SM1020E4T	PC	2	14m	18m	800m						28	621m	N	AD		PV1b		
11	VTS2064	PC	3	16m	8.4m	2.0	20u					5C	325m	P	AD		PV1an		
12	VTS3064	PC	3	16m	8.4m	2.0	20u					5C	325m	P	AD		PV1aw		
13	2SM1020A5	PC	2	18m	21.5m	800m						28	621m	N	AD		PV1a		
14	2SM1020A5PL	PC	2	18m	21.5m	800m						28	621m	N	AD		PV1a		
15	2SM1020A5T	PC	2	18m	21.5m	800m						28	621m	N	AD		PV1b		
16	2SM1020E5	PC	2	18m	21.5m	800m						28	621m	N	AD		PV1c		
17	2SM1020E5PL	PC	2	18m	21.5m	800m						28	621m	N	AD		PV1a		
18	2SM1020E5T	PC	2	18m	21.5m	800m						28	621m	N	AD		PV1b		
19	VTS2061	PC	3	20m	17m	1.2	20u					5C	390m	P	AD		PV1aj		
20	VTS3061	PC	3	20m	17m	1.2	20u					5C	390m	P	AD		PV1at		
21	3SM1020A4	PC	3	21m	18m	1.2						28	919m	N	AD		PV1c		
22	3SM1020A4PL	PC	3	21m	18m	1.2						28	919m	N	AD		PV1d		
23	3SM1020A4T	PC	3	21m	18m	1.2						28	919m	N	AD		PV1e		
24	3SM1020E4	PC	3	21m	18m	1.2						28	919m	N	AD		PV1c		
25	3SM1020E4PL	PC	3	21m	18m	1.2						28	919m	N	AD		PV1d		
26	3SM1020E4T	PC	3	21m	18m	1.2	20u					28	919m	N	AD		PV1e		
27	VTS2062	PC	3	21m	18m	1.2	20u					5C	420m	P	AD		PV1ak		
28	VTS3062	PC	3	21m	18m	1.2	20u					5C	420m	P	AD		PV1au		
29	2SM1020A6	PC	2	21m	27m	800m						28	621m	N	AD		PV1a		
30	2SM1020A6PL	PC	2	21m	27m	800m						28	621m	N	AD		PV1a		
31	2SM1020A6T	PC	2	21m	27m	800m						28	621m	N	AD		PV1b		
32	2SM1020E6	PC	2	21m	27m	800m						28	621m	N	AD		PV1c		
33	2SM1020E6PL	PC	2	21m	27m	800m						28	621m	N	AD		PV1a		
34	2SM1020E6T	PC	2	21m	27m	800m						28	621m	N	AD		PV1b		
35	2SM1020A7	PC	2	25m	31.6m	800m						28	621m	N	AD		PV1a		
36	2SM1020A7PL	PC	2	25m	31.6m	800m						28	621m	N	AD		PV1a		
37	2SM1020A7T	PC	2	25m	31.6m	800m						28	621m	N	AD		PV1b		
38	2SM1020E7	PC	2	25m	31.6m	800m						28	621m	N	AD		PV1c		
39	2SM1020E7PL	PC	2	25m	31.6m	800m						28	621m	N	AD		PV1a		
40	2SM1020E7T	PC	2	25m	31.6m	800m						28	621m	N	AD		PV1b		
41	3SM1020A5	PC	3	27m	21.5m	1.2						28	919m	N	AD		PV1c		
42	3SM1020A5PL	PC	3	27m	21.5m	1.2						28	919m	N	AD		PV1d		
43	3SM1020A5T	PC	3	27m	21.5m	1.2						28	919m	N	AD		PV1e		
44	3SM1020E5	PC	3	27m	21.5m	1.2						28	919m	N	AD		PV1c		
45	3SM1020E5PL	PC	3	27m	21.5m	1.2						28	919m	N	AD		PV1d		
46	3SM1020E5T	PC	3	27m	21.5m	1.2						28	919m	N	AD		PV1e		
47	2SM1020A8	PC	2	28m	36m	800m						28	621m	N	AD		PV1a		
48	2SM1020A8PL	PC	2	28m	36m	800m						28	621m	N	AD		PV1a		
49	2SM1020A8T	PC	2	28m	36m	800m						28	621m	N	AD		PV1b		
50	2SM1020GE8	PC	2	28m	36m	800m						28	621m	N	AD		PV1c		
51	2SM1020GE8PL	PC	2	28m	36m	800m						28	621m	N	AD		PV1a		
52	2SM1020GE8T	PC	2	28m	36m	800m						28	621m	N	AD		PV1b		
53	3SM1020A6	PC	3	32m	27m	1.2						28	919m	N	AD		PV1c		
54	3SM1020A6PL	PC	3	32m	27m	1.2						28	919m	N	AD		PV1d		
55	3SM1020A6T	PC	3	32m	27m	1.2						28	919m	N	AD		PV1e		
56	3SM1020E6	PC	3	32m	27m	1.2						28	919m	N	AD		PV1c		
57	3SM1020E6PL	PC	3	32m	27m	1.2						28	919m	N	AD		PV1d		
58	3SM1020E6T	PC	3	32m	27m	1.2						28	919m	N	AD		PV1e		
59	2SM1020GE9	PC	2	32m	40.5m	800m						28	621m	N	AD		PV1a		
60	2SM1020GE9PL	PC	2	32m	40.5m	800m						28	621m	N	AD		PV1a		
61	2SM1020GE9T	PC	2	32m	40.5m	800m						28	621m	N	AD		PV1b		
62	VTS2065	PC	5	34m	17m	2.0	20u					5C	650m	P	AD		PV1ap		
63	VTS3065	PC	5	34m	17m	2.0	20u					5C	650m	P	AD		PV1ax		
64	5SM1020A4	PC	5	36m	18m	2.0						28	1.5	N	AD		PV1f		
65	5SM1020A4PL	PC	5	36m	18m	2.0						28	1.5	N	AD		PV1g		
66	5SM1020A4T	PC	5	36m	18m	2.0						28	1.5	N	AD		PV1h		
67	5SM1020E4	PC	5	36m	18m	2.0						28	1.5	N	AD		PV1f		
68	5SM1020E4PL	PC	5	36m	18m	2.0						28	1.5	N	AD		PV1g		
69	5SM1020E4T	PC	5	36m	18m	2.0						28	1.5	N	AD		PV1h		
70	VTS2066	PC	5	36m	18m	2.0	20u					5C	700m	P	AD		PV1aq		
71	VTS3066	PC	5	36m	18m	2.0	20u					5C	700m	P	AD		PV1ay		
72	2SM1020GE10	PC	2	36m	45m	800m						28	621m	P	AD		PV1i		
73	2SM1020GE10PL	PC	2	36m	45m	800m						28	621m	P	AD		PV1a		
74	2SM1020GE10T	PC	2	36m	45m	800m						28	621m	P	AD		PV1b		
75	3SM1020A7	PC	3	37m	31.6m	1.2						28	919m	N	AD		PV1c		
76	3SM1020A7PL	PC	3	37m	31.6m	1.2						28	919m	N	AD		PV1d		
77	3SM1020A7T	PC	3	37m	31.6m	1.2						28	919m	N	AD		PV1e		
78	3SM1020E7	PC	3	37m	31.6m	1.2						28	919m	N	AD		PV1c		
79	3SM1020E7PL	PC	3	37m	31.6m	1.2						28	919m	N	AD		PV1d		
80	3SM1020E7T	PC	3	37m	31.6m	1.2						28	919m	N	AD		PV1e		
81	3SM1020A8	PC	3	43m	36m	1.2						28	919m	N	AD		PV1c		
82	3SM1020A8PL	PC	3	43m	36m	1.2						28	919m	N	AD		PV1d		
83	3SM1020A8T	PC	3	43m	36m	1.2						28	919m	N	AD		PV1e		
84	3SM1020GE8	PC	3	43m	36m	1.2						28	919m	N	AD		PV1c		
85	3SM1020GE8T	PC	3	43m	36m	1.2						28	919m	N	AD		PV1e		
86	5SM1020A5	PC	5	45m	21.5m	2.0						28	1.5	N	AD		PV1f		
87	5SM1020A5PL	PC	5	45m	21.5m	2.0						28	1.5	N	AD		PV1g		
88	5SM1020A5T	PC	5	45m	21.5m	2.0						28	1.5	N	AD		PV1h		
89	5SM1020E5	PC	5	45m	21.5m	2.0						28	1.5	N	AD		PV1f		
90	5SM1020E5PL	PC	5	45m	21.5m	2.0						28	1.5	N	AD		PV1g		
91	5SM1020E5T	PC	5	45m	21.5m	2.0						28	1.5	N	AD		PV1h		
92	VTS2063	PC	3	45m	38m	1.2	20u					5C	870m	P	AD		PV1am		
93	VTS3063	PC	3	45m	38m	1.2	20u					5C	870m	P	AD		PV1av		
94	3SM1020GE9	PC	3	48m	40.5m	1.2						28	919m	P	AD		PV1c		
95	3SM1020GE9PL	PC	3	48m	40.5m	1.2						28	919m	P	AD		PV1d		
96	3SM1020GE9T	PC	3	48m	40.5m	1.2						28	919m	P	AD		PV1e		
97	5SM1020A6	PC	5	54m	27m	2.0						28	1.5	N	AD		PV1f		
98	5SM1020A6PL	PC	5	54m	27m														

# 18. SENSOR: PHOTOVOLTAIC ARRAY

IN ORDER OF: (1)TYPE OF ARRAY (2)PWR OUTPUT (3)OUTPUT CURR. (4)OUTPUT VOLT. &(5)TYPE No.

LINE No.	TYPE No.	TYPE OF ARR	NO OF ELEM	PWR OUT Po (W)	O/P CURR. lo Δ-Isc (A)	O/P VOLT Vo Δ-Voc (V)	RESP. TIME (S)	TEST CONDITIONS					TEMP RNG. CODE	ACT IVE AREA (in <sup>2</sup> )	CENTER SPACING (in)	POLARITY	MATER IAL	SCHEMATIC	DRAWING Q-RND. Δ-RECT. Δ-STRIP * CHIP		
								Ev		Ee (W/cm <sup>2</sup> )	S R C	RL (Ω)								+	-
								FT.C (fc)	LUX (lx)												
1	5SM1020E7T	PC	5	63m	31.6m	2.0						100m	28	1.5		AD		PV1h			
2	5SM1020A8	PC	5	72m	36m	2.0						100m	28	1.5		AD		PV1f			
3	5SM1020A8PL	PC	5	72m	36m	2.0						100m	28	1.5		AD		PV1g			
4	5SM1020A8T	PC	5	72m	36m	2.0						100m	28	1.5		AD		PV1h			
5	5SM1020GE8	PC	5	72m	36m	2.0						100m	28	1.5		AD		PV1i			
6	5SM1020GE8PL	PC	5	72m	36m	2.0						100m	28	1.5		AD		PV1j			
7	5SM1020GE8T	PC	5	72m	36m	2.0						100m	28	1.5		AD		PV1k			
8#	HSP2-40	PC		72m	36m	2.0						100m				AD		PV1l			
9	VTS2067	PC	5	76m	38m	2.0	20u					100m	5C	1.4		AD		PV1a			
10	VTS3067	PC	5	76m	38m	2.0	20u					100m	5C	1.4		AD		PV1a			
11	5SM1020GE9	PC	5	81m	40.5m	2.0						100m	28	1.5		AD		PV1f			
12	5SM1020GE9PL	PC	5	81m	40.5m	2.0						100m	28	1.5		AD		PV1g			
13	5SM1020GE9T	PC	5	81m	40.5m	2.0						100m	28	1.5		AD		PV1h			
14	5SM1020GE10	PC	5	90m	45m	2.0						100m	28	1.5		AD		PV1i			
15	5SM1020GE10PL	PC	5	90m	45m	2.0						100m	28	1.5		AD		PV1j			
16	SPM75-16	PC		640m	40m	16						100m				AD		PV52i			
17	SPM75-8	PC		640m	80m	8.0						100m				AD		PV52j			
18	SPM75-4	PC		640m	160m	4.0						100m				AD		PV52k			
19	SPM75-2	PC		640m	320m	2.0						100m				AD		PV52l			
20	SPM100-24	PC		960m	40m	24						100m				AD		PV52a			
21	SPM100-12	PC		960m	80m	12						100m				AD		PV52a			
22	SPM100-4	PC		960m	240m	4.0						100m				AD		PV52a			
23	SPM100-2	PC		960m	480m	2.0						100m				AD		PV52a			
24#	CSP4.7	PC	12	1.0		4.7						100m	6E*					PV89j			
25#	CSP7	PC	12	1.0		7.0						100m	6E*					PV89j			
26#	CSP14	PC	12	1.0		14						100m	6E*					PV89j			
27#	CSP16.5	PC	12	1.0		16.5						100m	6E*					PV89j			
28#	CSP28	PC	12	1.0		28						100m	6E*					PV89j			
29	SPM200-18	PC		1.0	60m	180						100m				AD		PV52c			
30	SPM200-6	PC		1.0	180m	60						100m				AD		PV52c			
31	SPM150-3.6	PC		1.0	300m	3.6						100m				AD		PV52b			
32	SPM200-2	PC		1.0	400m	2.0						100m				AD		PV52c			
33	SPM150-36	PC		1.4	40m	36						100m				AD		PV52b			
34	SPM150-18	PC		1.4	80m	18						100m				AD		PV52b			
35	SPM150-12	PC		1.4	120m	12						100m				AD		PV52b			
36	SPM150-6	PC		1.4	240m	6.0						100m				AD		PV52b			
37	SPM150-2	PC		1.4	720m	2.0						100m				AD		PV52b			
38	49-2666	PC	17	2.3	30	7.5	11k					100m	46			AD		PV135			
39	49-2653	PC	32	4.5	30	15	11k					100m	46			AD		PV135			
40#	MSP26A05	PC	36	7.3	440m	15.8						100m	48*			AD		PV146			
41#	MSP26A10	PC	36	8.3	500m	15.8						100m	48*			AD		PV146			
42#	MSP26A30	PC	36	9.1	550m	15.8						100m	48*			AD		PV146			
43#	BPX47A	PC	34	10	730m	20						100m				AD		PV104			
44	SS10-8	PC	8	11	28m	400m	20u					100m	6H	279m		P		PV61Δ			
45#	MSPO2A05	PC	36	16	980m	15.8						100m	48*			AD		PV135			
46#	MSPO2A10	PC	36	18	1.10	15.8						100m	48*			AD		PV135			
47	49-2591	PC	33	18	1.2	15						100m	46			AD		PV135			
48#	MSPO2A30	PC	36	20	1.20	15.8						100m	48*			AD		PV135			
49#	MSPO1A05	PC	48	22	980m	21.1						100m	48*			AD		PV134			
50#	MSPO1B05	PC	48	22	1.96	10.5						100m	48*			AD		PV134			
51#	MSPO1D05	PC	48	22	3.92	5.28						100m	48*			AD		PV134			
52#	MSPO1E05	PC	48	22	5.88	3.52						100m	48*			AD		PV134			
53#	MSPO1A10	PC	48	24	1.10	21.1						100m	48*			AD		PV134			
54#	MSPO1B10	PC	48	24	2.20	10.5						100m	48*			AD		PV134			
55#	MSPO1D10	PC	48	24	4.40	5.28						100m	48*			AD		PV134			
56#	MSPO1E10	PC	48	24	6.59	3.52						100m	48*			AD		PV134			
57#	MSPO1A30	PC	48	26	1.20	21.1						100m	48*			AD		PV134			
58#	MSPO1B30	PC	48	26	2.40	10.5						100m	48*			AD		PV134			
59#	MSPO1D30	PC	48	26	4.80	5.28						100m	48*			AD		PV134			
60#	MSPO1E30	PC	48	26	7.19	3.52						100m	48*			AD		PV134			
61	HPC2	RO	2		205u#							F	1.0k			100m	P,N	AD	PV91Δ		
62#	HPC3	RO	3		260u	260m	10u					F				100m	P,N	AD	PV91Δ		
63#	HPC4	RO	4		260u	260m	10u					F				100m	P,N	AD	PV91Δ		
64#	HPC5	RO	5		260u	260m	10u					F				100m	P,N	AD	PV91Δ		
65#	HPC6	RO	6		260u	260m	10u					F				100m	P,N	AD	PV91Δ		
66#	HPC7	RO	7		260u	260m	10u					F				100m	P,N	AD	PV91Δ		
67#	HPC8	RO	8		260u	260m	10u					F				100m	P,N	AD	PV91Δ		
68#	HPC9	RO	9		260u	260m	10u					F				100m	P,N	AD	PV91Δ		
69#	HPC10	RO	10		260u	260m	10u					F				100m	P,N	AD	PV91Δ		
70	STN-EC9-080-080-060	RO	9		280uΔ											80m	N	AD	PV69bΔ		
71	STN-EC12-080-080-060	RO	12		280uΔ											80m	N	AD	PV69bΔ		
72	STP-EC9-080-080-060	RO	9		280uΔ											80m	P	AD	PV69bΔ		
73	STP-EC12-080-080-060	RO	12		280uΔ											80m	P	AD	PV69bΔ		
74	STN-EC9-200-100-060	RO	9		540uΔ											100m	N	AD	PV69Δ		
75	STN-EC12-200-100-060	RO	12		540uΔ											100m	N	AD	PV69Δ		
76	STP-EC9-200-100-060	RO	9		540uΔ											100m	P	AD	PV69Δ		
77	STP-EC12-200-100-060	RO	12		540uΔ											100m	P	AD	PV69Δ		
78	STN-EC9-200-080-060	RO	9		560uΔ											80m	N	AD	PV69aΔ		
79	STN-EC12-200-080-060	RO	12		560uΔ											80m	N	AD	PV69aΔ		
80	STP-EC9-200-080-060	RO	9		560uΔ											80m	P	AD	PV69aΔ		
81	STP-EC12-200-080-060	RO	12		560uΔ											80m	P	AD	PV69aΔ		
82	SSR10-002	RO	10	32m	225uΔ	325mΔ	20u					F	6H	8.4m		100m		AD	PV39Δ		
83	SSR4-001	RO	4	73m	250uΔ	325mΔ	20u					F	6H	10m		100m		AD	PV39aΔ		
84	SSR5-001	RO	5	73m	250uΔ	325mΔ	20u					F	6H	10m		100m		AD	PV39aΔ		
85	SSR6-001	RO	6	73m	250uΔ	325mΔ	20u					F	6H	10m		100m		AD	PV39aΔ		
86	SSR7-001	RO	7	73m	250uΔ	325mΔ	20u					F	6H	10m		100m		AD	PV39aΔ		
87	SSR8-001	RO	8	73m	250uΔ	325mΔ	20u					F	6H	10m		100m		AD	PV39aΔ		
88	SSR9-001	RO	9	73m	250uΔ	325mΔ	20u					F	6H	10m		100m		AD	PV39aΔ		
89	SSR10-001	RO	10	73m	250uΔ	325mΔ	20u					F	6H	10m		100m		AD	PV39aΔ		
90	SSRH4-001	RO	4	90m	300uΔ	325mΔ	10u					F	6H	8.7m		100m	N	AD	PV56Δ		
91	SSRH5-001	RO	5	90m	300uΔ	325mΔ	10u					F	6H	8.7m		100m	N	AD	PV56aΔ		
92	SSRH6-001	RO	6	90m	300uΔ	325mΔ	10u					F	6H	8.7m		100m	N	AD	PV56bΔ		
93	SSRH7-001	RO	7	90m	300uΔ	325mΔ	10u					F	6H	8.7m		100m	N	AD	PV56cΔ		
94	SSRH8-001	RO	8	90m	300uΔ	325mΔ	10u					F	6H	8.							

# 18. SENSOR: PHOTOVOLTAIC ARRAY

IN ORDER OF: (1)TYPE OF ARRAY (2)PWR OUTPUT  
(3)OUTPUT CURR. (4)OUTPUT VOLT. &(5)TYPE No.

LINE No.	TYPE No.	TYPE OF ARR-AY	NO OF ELEM	PWR OUT Po (W)	3 O/P CURR. Io Δ-Isc (A)	4 O/P VOLT Vo Δ-Voc (V)	RESP. TIME (S)	TEST CONDITIONS					TEMP RING. CODE	ACT IVE AREA (in <sup>2</sup> )	CENTER SPACING (in)	POLAR ITY	MATER IAL	SCHEM ATIC	DRAWING Ø-RND. Δ-RECT. Δ-STRIP * CHIP	
								Ev (fc)	Ee (lx)	S R (W/cm <sup>2</sup> )	RL (Ω)	+								-
1#	SC6	TC	3	188u#	480mΔ	2.0u	500					5A*	11m			AD		PV115b		
2#	SC31-002	TC	6	249u#	480mΔ	2.0u	500					5A*	15m	63m		AD		PV115g		
3#	SC32	TC	2	260u#	480mΔ	2.0u	500					5A*	16m			AD		PV115h		
4#	SC33	TC	11	297u#	480mΔ	2.0u	500					5A*	18m	39m		AD		PV115c		
5#	SC16	TC	2	322uΔ#	480mΔ	2.0u	500					5A*	20m			AD		PV115e		
6#	SC9	TC	5	327uΔ#	480mΔ	2.0u	500					5A*	20m			AD		PV115a		
7#	SC8	TC	12	499uΔ#	480mΔ	2.0u	500					5A*	30m			AD		PV115f		
8#	SC31-003	TC	12	499u#	480mΔ	2.0u	500					5A*	30m	63m		AD		PV115g		
9#	SC12	TC	9	1.7mΔ#	480mΔ	2.0u	500					5A*	108m	100m		AD		PV115		
10	SAR1-08B	TC	1	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	N	AD	PV10j		
11	SAR1-08BPL	TC	1	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	N	AD	PV10w		
12	SAR1-08PL	TC	1	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	N	AD	PV10at		
13	SAR2-08B	TC	2	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	N	AD	PV10a		
14	SAR2-08BPL	TC	2	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	N	AD	PV10x		
15	SAR2-08PL	TC	2	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	N	AD	PV10au		
16	SAR3-08B	TC	3	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	N	AD	PV10b		
17	SAR3-08BPL	TC	3	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	N	AD	PV10y		
18	SAR3-08PL	TC	3	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	N	AD	PV10av		
19	SAR4-08B	TC	4	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	N	AD	PV10c		
20	SAR4-08BPL	TC	4	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	N	AD	PV10z		
21	SAR4-08PL	TC	4	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	N	AD	PV10aw		
22	SAR5-08B	TC	5	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	N	AD	PV10d		
23	SAR5-08BPL	TC	5	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	N	AD	PV10aa		
24	SAR5-08PL	TC	5	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	N	AD	PV10ax		
25	SAR6-08B	TC	6	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	N	AD	PV10e		
26	SAR6-08BPL	TC	6	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	N	AD	PV10ab		
27	SAR6-08PL	TC	6	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	N	AD	PV10ay		
28	SAR7-08B	TC	7	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	N	AD	PV10f		
29	SAR7-08BPL	TC	7	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	N	AD	PV10ac		
30	SAR7-08PL	TC	7	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	N	AD	PV10az		
31	SAR8-08B	TC	8	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	N	AD	PV10g		
32	SAR8-08BPL	TC	8	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	N	AD	PV10ad		
33	SAR8-08PL	TC	8	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	N	AD	PV10ba		
34	SAR9-08B	TC	9	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	N	AD	PV10h		
35	SAR9-08BPL	TC	9	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	N	AD	PV10ae		
36	SAR9-08PL	TC	9	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	N	AD	PV10bb		
37	SAR10-08B	TC	10	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	N	AD	PV10i		
38	SAR10-08BPL	TC	10	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	N	AD	PV10af		
39	SAR10-08PL	TC	10	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	N	AD	PV10bc		
40	SPR1-08B	TC	1	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	P	AD	PV10k		
41	SPR1-08BPL	TC	1	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	P	AD	PV10w		
42	SPR1-08PL	TC	1	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	P	AD	PV10at		
43	SPR2-08B	TC	2	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	P	AD	PV10a		
44	SPR2-08BPL	TC	2	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	P	AD	PV10x		
45	SPR2-08PL	TC	2	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	P	AD	PV10au		
46	SPR3-08B	TC	3	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	P	AD	PV10b		
47	SPR3-08BPL	TC	3	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	P	AD	PV10y		
48	SPR3-08PL	TC	3	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	P	AD	PV10av		
49	SPR4-08B	TC	4	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	P	AD	PV10c		
50	SPR4-08BPL	TC	4	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	P	AD	PV10z		
51	SPR4-08PL	TC	4	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	P	AD	PV10aw		
52	SPR5-08B	TC	5	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	P	AD	PV10d		
53	SPR5-08BPL	TC	5	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	P	AD	PV10aa		
54	SPR5-08PL	TC	5	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	P	AD	PV10ax		
55	SPR6-08B	TC	6	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	P	AD	PV10e		
56	SPR6-08BPL	TC	6	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	P	AD	PV10ab		
57	SPR6-08PL	TC	6	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	P	AD	PV10ay		
58	SPR7-08B	TC	7	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	P	AD	PV10f		
59	SPR7-08BPL	TC	7	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	P	AD	PV10ac		
60	SPR7-08PL	TC	7	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	P	AD	PV10az		
61	SPR8-08B	TC	8	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	P	AD	PV10g		
62	SPR8-08BPL	TC	8	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	P	AD	PV10ad		
63	SPR8-08PL	TC	8	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	P	AD	PV10ba		
64	SPR9-08B	TC	9	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	P	AD	PV10h		
65	SPR9-08BPL	TC	9	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	P	AD	PV10ae		
66	SPR9-08PL	TC	9	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	P	AD	PV10bb		
67	SPR10-08B	TC	10	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	P	AD	PV10i		
68	SPR10-08BPL	TC	10	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	P	AD	PV10af		
69	SPR10-08PL	TC	10	32u	250 Δ	325 Δ	2.0u	500			F	1.0k	28	14m	87m	P	AD	PV10bc		
70	SAR1-10B	TC	1	73u	315 Δ	325 Δ	2.0u	500			F	1.0k	28	17m	100m	N	AD	PV10k		
71	SAR1-10BPL	TC	1	73u	315 Δ	325 Δ	2.0u	500			F	1.0k	28	17m	100m	N	AD	PV10ag		
72	SAR1-10PL	TC	1	73u	315 Δ	325 Δ	2.0u	500			F	1.0k	28	17m	100m	N	AD	PV10bd		
73	SAR2-10B	TC	2	73u	315 Δ	325 Δ	2.0u	500			F	1.0k	28	17m	100m	N	AD	PV10m		
74	SAR2-10BPL	TC	2	73u	315 Δ	325 Δ	2.0u	500			F	1.0k	28	17m	100m	N	AD	PV10ah		
75	SAR2-10PL	TC	2	73u	315 Δ	325 Δ	2.0u	500			F	1.0k	28	17m	100m	N	AD	PV10bg		
76	SAR3-10B	TC	3	73u	315 Δ	325 Δ	2.0u	500			F	1.0k	28	17m	100m	N	AD	PV10n		
77	SAR3-10BPL	TC	3	73u	315 Δ	325 Δ	2.0u	500			F	1.0k	28	17m	100m	N	AD	PV10aj		
78	SAR3-10PL	TC	3	73u	315 Δ	325 Δ	2.0u	500			F	1.0k	28	17m	100m	N	AD	PV10bj		
79	SAR4-10B	TC	4	73u	315 Δ	325 Δ	2.0u	500			F	1.0k	28	17m	100m	N	AD	PV10o		
80	SAR4-10BPL	TC	4	73u	315 Δ	325 Δ	2.0u	500			F	1.0k	28	17m	100m	N	AD	PV10p		
81	SAR4-10PL	TC	4	73u	315 Δ	325 Δ	2.0u	500			F	1.0k	28	17m	100m	N	AD	PV10ak		
82	SAR5-10B	TC	5	73u	315 Δ	325 Δ	2.0u	500			F	1.0k	28	17m	100m	N	AD	PV10q		
83	SAR5-10BPL	TC	5	73u	315 Δ	325 Δ	2.0u	500			F									



# 18. SENSOR: PHOTOVOLTAIC ARRAY

IN ORDER OF: (1)TYPE OF ARRAY (2)PWR OUTPUT  
(3)OUTPUT CURR. (4)OUTPUT VOLT. &(5)TYPE No.

LINE No.	TYPE No.	TYPE OF ARRAY	NO OF ELEM	PWR OUT Po (W)	O/P CURR. Io Δ-Isc (A)	O/P VOLT Vo Δ-Voc (V)	RESP. TIME (S)	TEST CONDITIONS				TEMP. RING. CODE	ACT. IVE AREA (in <sup>2</sup> )	CENTER SPACING (in)	POLARITY	MATERIAL	SCHEMATIC	DRAWING	
								Ev		Ee (W/cm <sup>2</sup> )	S R C								RL (Ω)
								FT.C (fc)	LUX (lx)										
1	SPR4-10PL	TC	4	73u	315 Δ	325 Δ	2.0u	500			F	1.0k	28	17m	100m	P	AD	PV10bg	
2	SPR5-10B	TC	5	73u	315 Δ	325 Δ	2.0u	500			F	1.0k	28	17m	100m	P	AD	PV10q	
3	SPR5-10BPL	TC	5	73u	315 Δ	325 Δ	2.0u	500			F	1.0k	28	17m	100m	P	AD	PV10am	
4	SPR5-10PL	TC	5	73u	315 Δ	325 Δ	2.0u	500			F	1.0k	28	17m	100m	P	AD	PV10bh	
5	SPR6-10B	TC	6	73u	315 Δ	325 Δ	2.0u	500			F	1.0k	28	17m	100m	P	AD	PV10r	
6	SPR6-10BPL	TC	6	73u	315 Δ	325 Δ	2.0u	500			F	1.0k	28	17m	100m	P	AD	PV10an	
7	SPR6-10PL	TC	6	73u	315 Δ	325 Δ	2.0u	500			F	1.0k	28	17m	100m	P	AD	PV10bj	
8	SPR7-10B	TC	7	73u	315 Δ	325 Δ	2.0u	500			F	1.0k	28	17m	100m	P	AD	PV10s	
9	SPR7-10BPL	TC	7	73u	315 Δ	325 Δ	2.0u	500			F	1.0k	28	17m	100m	P	AD	PV10ap	
10	SPR7-10PL	TC	7	73u	315 Δ	325 Δ	2.0u	500			F	1.0k	28	17m	100m	P	AD	PV10bk	
11	SPR8-10B	TC	8	73u	315 Δ	325 Δ	2.0u	500			F	1.0k	28	17m	100m	P	AD	PV10t	
12	SPR8-10BPL	TC	8	73u	315 Δ	325 Δ	2.0u	500			F	1.0k	28	17m	100m	P	AD	PV10aq	
13	SPR8-10PL	TC	8	73u	315 Δ	325 Δ	2.0u	500			F	1.0k	28	17m	100m	P	AD	PV10bm	
14	SPR9-10B	TC	9	73u	315 Δ	325 Δ	2.0u	500			F	1.0k	28	17m	100m	P	AD	PV10u	
15	SPR9-10BPL	TC	9	73u	315 Δ	325 Δ	2.0u	500			F	1.0k	28	17m	100m	P	AD	PV10ar	
16	SPR9-10PL	TC	9	73u	315 Δ	325 Δ	2.0u	500			F	1.0k	28	17m	100m	P	AD	PV10bn	
17	SPR10-10B	TC	10	73u	315 Δ	325 Δ	2.0u	500			F	1.0k	28	17m	100m	P	AD	PV10v	
18	SPR10-10BPL	TC	10	73u	315 Δ	325 Δ	2.0u	500			F	1.0k	28	17m	100m	P	AD	PV10as	
19	SPR10-10PL	TC	10	73u	315 Δ	325 Δ	2.0u	500			F	1.0k	28	17m	100m	P	AD	PV10bp	

# 25. PHOTOCOUPLER: PHOTOCELL (LDR,VOLTAIC) OUTPUT

IN ORDER OF: (1)TYPE OF PHOTOCELL  
(2)ISOLATION VOLT. VIO & (3) TYPE No.

LINE No.	TYPE No.	TYPE OF PHOTO CELL	MAX. PWR. DISS. -CASE (W)	TEMP. RING CODE	COUPLED CHAR.			INPUT TYPE	SOURCE RATED		DC CELL			OPEN CKT.V Vcc (V)	ON RESIS. Ron (Ω)	OFF RESIS. Roff (Ω)	MATER. & FEATURE MAT	SCHEM -ATIC	DRAWING Ø-RND. Δ-RECT. Δ-STRIP *CHIP
					2   VIO ISOL VOLT (V)	RISE TIME (S)	DECAY TIME (S)		VOLT Δ-VR (V)	CURR. Δ-IR (A)	VOLT *AC ΔPk (V)	SHORT CKT.I Isc (A)							
1	CK2060	LDR		46					6.0	120m							CA11	PH1050	
2	CLM5H10A	LDR	90m	27		120m	70m	INC	10	17m	100	Δ		3.0k	10M	BA 5.0s		PH230	
3	CLM7H16A	LDR	75m	27		90m	100m	INC	16	17m	170	Δ		550	10M	BA 5.0s		PH230	
4	MCL702A	LDR	80m			16m	100m	INC	3.0	16m				400	1.0M			PH39	
5	MCL703C	LDR	80m			10m	120m	INC	1.0	16m				400	5.0M			PH39	
6	MCL716A	LDR	200m			8.0m	40m	INC	5.0	30m				500	1.0M			PH39	
7	MCL723C	LDR	200m			8.0m	60m	INC	1.0	16m				250	5.0M			PH39	
8	MCN701A	LDR	60m			2.0m	80m	GAS	100	1.9m				500	3.0M			PH39	
9	MCN721A	LDR	200m			1.0m	40m	GAS	100	1.9m				400	5.0M			PH39	
10	MTL703C	LDR	70m			8.0m	60m		1.0	16m				200	5.0M			PH39	
11	MTL716A	LDR	150m			6.0m	60m		5.0	30m				150	1.0M			PH39	
12	MTL726A	LDR	150m			6.0m	60m		5.0	30m				60	5.0M			PH39	
13#	MCD735	LDR	125m	27	50	3.0m	8.0m	LED	1.9	15m	3.0k			150	1.0M			PH650	
14#	MCD5211%	LDR	125m	27	150	1.0m	40m	LED	1.8	30m	800			1.0k	3.0M			PH640	
15#	MTD533-6%	LDR	75m	27	300	3.0m	5.0m	LED	2.0	20m	1.5k			10k	100M			PH660	
16#	CHS74GS2	LDR	80m	35	400	4.0	80	LED	3.0	10m	200	Δ		3.0k	10M	BA;5s	CA7	PH1090	
17	CK1114	LDR	100m	56	500	25m	275m	INC	1.0	18m	100	Δ		650	10M	BB	CA2	PH17g	
18	CK1115	LDR	100m	56	500	35m	300m	INC	4.0	55m	200	Δ		200	10M	BB	CA2	PH17g	
19	CK1116	LDR	100m	56	500	30m	350m	INC	4.0	20m	100	Δ		350	10M	BB	CA2	PH17g	
20	CK1117	LDR	100m	26	500	30m	300m	INC	3.0	15m	100	Δ		400	10M	BB		PH17g	
21	CK1121W	LDR	100m	500		35m	300m	INC	5.0	55m	100	Δ		150	10M	BB		PH1030	
22	CK2000B	LDR	100m	26	500	40m	400m	INC	25	37m	100	Δ		40	10M	BB		PH1030	
23	CK2003	LDR	100m	26	500	30m	250m	INC	10	18m	100	Δ		225	10M	BB		PH1030	
24	CK2013	LDR	100m	37	500	35m	700m	INC	25	37m	100	Δ		100	1.0M	CF		PH1030	
25	CK2028B	LDR	100m	37	500	40m	850m	INC	25	37m	100	Δ		200	1.0M	BA		PH1030	
26	CK2039	LDR	100m	26	500	30m	300m	INC	1.0	18m	100	Δ		800	1.0M	BB		PH17g	
27	CK2046	LDR	100m	26	500	25m	300m	INC	1.0	18m	100	Δ		350	1.0M	BB		PH17g	
28	CK2070	LDR	100m	37	500	25m	550m	INC	1.0	18m	100	Δ		2.5k	1.0M	BA		PH17g	
29	CK2071	LDR	100m	56	500	35m	850m	INC	4.0	55m	100	Δ		1.0k	1.0M	BA	CA2	PH17g	
30	CK2072	LDR	100m	56	500	30m	600m	INC	4.0	20m	100	Δ		1.8k	1.0M	BA	CA2	PH17g	
31	CK2080	LDR	150m	26	500	35m	550m	INC	4.0	55m	240	Δ		750	100M	BB		PH17g	
32	CK2095	LDR	75m	37	500	35m	850m	INC	4.0	20m	75	Δ		1.2k	1.0M	BA		PH17g	
33	CK2101	LDR	100m	26	500	20m	500m	INC	5.0	22m	100	Δ		50	1.0M	BB		PH17g	
34	CK2112	LDR	125m	37	500	35m	350m	INC	10	18m	150	Δ		300	10M	CF		PH1030	
35	CK2118	LDR	100m	37	500	35m	300m	INC	4.0	55m	100	Δ		100	1.0M	CF		PH17g	
36	CK2124	LDR	100m	37	500	25m	800m	INC	3.0	15m	100	Δ		450	1.0M	CF		PH17g	
37	CK2127	LDR	100m	37	500	25m	700m	INC	3.0	15m	100	Δ		700	1.0M	CF		PH17g	
38	CK2140	LDR	145m	36	500	2.0m	15m	LED	3.0	25m	100	Δ		7.5k	50M	BB	CA3	PH17g	
39	CK2141	LDR	170m	36	500	4.0m	120m	LED	3.0	25m	150	Δ		5.0k	50M	BB	CA3	PH17g	
40	CK2143	LDR	170m	37	500	5.0m	650m	LED	3.0	25m	150	Δ		500	10M	CF	CA3	PH17g	
41	CK2143	LDR	170m	37	500	5.0m	850m	LED	3.0	25m	150	Δ		3.0k	5.0M	CF	CA3	PH17g	
42	CK2150	LDR	125m	36	500	40m	800m	INC	5.0	55m	75	Δ		300	1.0M	Dual	CA14	PH990	
43	CK2151	LDR	125m	37	500	60m	850m	INC	5.0	55m	75	Δ		850	1.0M	Dual	CA14	PH990	
44	CK2153	LDR	125m	36	500	50m	800m	INC	3.0	15m	75	Δ		1.0k	1.0M	Dual	CA14	PH990	
45	CK2154	LDR	125m	37	500	50m	850m	INC	3.0	15m	75	Δ		8.0k	1.0M	Dual	CA14	PH990	
46	CK2155	LDR	150m	26	500	10m	500m	LED	3.0	40m	75	Δ		900	1.0M	CF	Dual	CA14	PH990
47	CK2157	LDR	150m	37	500	10m	650m	LED	3.0	40m	75	Δ		600	1.0M	BA	Dual	CA14	PH990
48	CK2170	LDR	150m	36	500	35m	800m	INC	10	18m	75	Δ		850	1.0M	Dual	CA13	PH1060	
49	CK2171	LDR	150m	37	500	35m	950m	INC	10	18m	75	Δ		2.0k	1.0M	Dual	CA13	PH1060	
50	CK2172	LDR	150m	26	500	45m	950m	INC	25	37m	75	Δ		300	1.0M	CF	Dual	PH1060	
51	CK2173	LDR	150m	37	500	10m	650m	LED	3.0	25m	75	Δ		600	1.0M	CF	Dual	PH1060	
52	MCD5211H	LDR	125m	38	500	1.0m	40m	LED	3.0	30m	150	Δ		1.0k	3.0M	BB	5.0s	PH39	
53	MCD5211L	LDR	125m	38	500	2.0m	60m	LED	3.0	30m	150	Δ		600	1.0M	BB	5.0s	PH39	
54	MCD522H	LDR	125m	38	500	1.0m	40m	LED	3.0	30m	150	Δ		1.0k	3.0M	BB	5.0s	PH39	
55	MCD522L	LDR	125m	38	500	2.0m	60m	LED	3.0	30m	150	Δ		600	1.0M	BB	5.0s	PH39	
56	MTD533	LDR	75m	37	500	500u	3.0m	LED	3.0	20m	200	Δ		10k	100M	BB	5.0s	CA6	PH39
57	MTD533-6	LDR	75m	37	500	500u	3.0m	LED	3.0	20m	200	Δ		10k	100M	BB	5.0s	CA7	PH39
58	MTD733-5	LDR	60m	37	500	3.0m	6.0m	LED	3.0	20m	150	Δ		5.0k	1.5M	BB	5.0s	CA6a	PH39
59	VTL1A1	LDR	100m	57	500	65m	350m	INC	1.5	50m	150	Δ		500	10M	5.0s	CA2	PH70	
60	VTL1A2	LDR	100m	57	500	50m	400m	INC	6.0	40m	150	Δ		250	10M	5.0s	CA2	PH70	
61	VTL1A3	LDR	100m	57	500	50m	150m	INC	10	14m	150	Δ		800	10M	5.0s	CA2	PH70	
62	VTL1A4	LDR	100m	57	500	75m	500m	INC	12	25m	150	Δ		250	10M	5.0s	CA2	PH70	
63	VTL1B5	LDR	100m	57	500	3.0m	60m	GAS	150	1.5m	150	Δ		1.0k	10M	5.0s	CA2	PH70	
64	VTL1B6	LDR	100m	57	500	5.0m	60m	GAS	90	300u	150	Δ		5.0k	10M	5.0s	CA2	PH70	
65	VTL2C1	LDR	100m	57	500	500u	3.5m	LED	2.0	40m	70	Δ		10k	100M	5.0s	CA3	PH7a0	
66	VTL2C2	LDR	100m	57	500	3.5m	500m	LED	2.0	40m	100	Δ		500	1.0M	5.0s	CA3	PH7a0	
67	VTL2C3	LDR	100m	57	500	2.5m	35m	LED	2.0	40m	300	Δ		2.0k	10M	5.0s	CA3	PH7a0	
68	VTL2C4	LDR	100m	57	500	6.0m	1.5	LED	2.0	40m	70	Δ		100	400k	5.0s	CA3	PH7a0	
69	VTL9A1	LDR	400m	47	500	70m	350m	INC	1.5	50m	100	Δ		400	10M	5.0s	CA1	PH60	
70	VTL9A2	LDR	400m	47	500	50m	350m	INC	6.0	40m	100	Δ		60	10M	5.0s	CA1	PH60	
71	VTL9A3	LDR	400m	47	500	55m	160m	INC	10	14m	100	Δ		250	10M	5.0s	CA1	PH60	
72	VTL9A4	LDR	400m	47	500	80m	400m	INC	10	22m	100	Δ		300	10M	5.0s	CA1	PH60	
73	VTL9A5	LDR	400m	47	500	80m	225m	INC	10	22m	200	Δ		1.5k	10M	5.0s	CA1	PH60	
74	VTL9A9	LDR	400m	47	500	55m	250m	INC	6.0	40m	300	Δ		200	10M	5.0s	CA1	PH60	
75	VTL9A10	LDR	400m	47	500	60m	150m	INC	10	14m	300	Δ		800	10M	5.0s	CA1	PH60	
76	VTL9A11	LDR	400m	47	500	90m	250m	INC	12	25m	300	Δ		600	10M	5.0s	CA1	PH60	
77	VTL9B6	LDR	400m	47	500	3.0m	400m	GAS	125	1.5m	200	Δ		300	1.0M	5.0s	CA1	PH60	
78	VTL9B7	LDR	400m	47	500	3.0m	90m	GAS	125	1.5m	300	Δ		800	10M	5.0s	CA1	PH60	
79	VTL9B8	LDR	400m	47	500	5.0m	70m	GAS	80	300u	300	Δ		2.0k	10M	5.0s	CA1	PH60	
80	CK1121	LDR	100m	56	1.0k	35m	300m	INC	5.0	55m	100	Δ		150	10M	BB		PH103	
81	CK1122	LDR	100m	56	1.0k	30m	300m	INC	10	18m	100	Δ		750	10M	BB		PH103	
82	CK1122B	LDR	125m	1.0k		30m	225m	INC	10	18m	200	Δ		600	100M	BB			

# 25. PHOTOCOUPLER: PHOTOCELL (LDR,VOLTAIC) OUTPUT

IN ORDER OF: (1)TYPE OF PHOTOCELL  
(2)ISOLATION VOLT. VIO & (3) TYPE No.

LINE No.	TYPE No.	TYPE OF PHOTO CELL	MAX. PWR. DISS. CASE (W)	TEMP. RING CODE	COUPLED CHAR.			INPUT SOURCE		OUTPUT PHOTOCELL @ RATED		SHORT CKT.I (Isc)	OPEN CKT.V (Voc)	ON RESIS. Ron (Ω)	OFF RESIS. Roff (Ω)	MATER. & FEATUR. MAT	SCHEM -ATIC	DRAWING Ø-RND. (RECT. Δ-STRIP *CHIP)
					2 (VIO) ISOL VOLT (V)	RISE TIME (S)	DECAY TIME (S)	TYPE	VOLT Δ-VR (V)	CURR. Δ-IR (A)	DC CELL VOLT *AC ΔPK (V)							
1	CK1111	LDR		56	1.5k	2.0mΔ	105m#	GAS	120	3.0m	300	30k	25m				PH100	
2	CK1111P	LDR		56	1.5k	2.0mΔ	105m#	GAS	120	3.0m	300	30k	25m				PH101	
3	CK1112	LDR		56	1.5k	3.0m	400m	INC	10	18m	100	700	10m				PH100	
4	CK1112P	LDR	100mΔ	56	1.5k	3.0m	400m	INC	10	18m	100	700	10m				PH101	
5	CK1113	LDR	100mΔ	26	1.5k	5.0m	175m	LED	3.0	25m	100	400	10m				PH100	
6	CK1113P	LDR	100mΔ	26	1.5k	5.0m	175m	LED	3.0	25m	100	400	10m				PH101	
7	CK2008P	LDR	100mΔ	27	1.5k	5.0m	120m	GAS	120	3.5m	100	300	10m	BB			PH101	
8	CK2025P	LDR	100mΔ	37	1.5k	3.0m	650m	INC	10	18m	200	1.0k	1.0m	BA			PH101	
9	CK2033	LDR	250mΔ	36	1.5k	4.0	500	INC	10	18m	200	500	10m			Dual	PH104	
10	CK2037	LDR	250mΔ	26	1.5k	12m	450m	LED	3.0	25m	200	1.2k	1.0m	CF	Dual		PH104	
11	CK2038	LDR	250mΔ	37	1.5k	45m	850m	INC	10	18m	200	1.5k	1.0m			Dual	PH104	
12	CK2040	LDR	300mΔ	26	1.5k	55m	500m	INC	25	37m	200	300	10m	BB	Dual		PH111	
13	CK2041	LDR	250mΔ	26	1.5k	8.0m	100m	GAS	120	3.5m	150	1.0k	1.0m	BB	Dual		PH111	
14	CK2042	LDR	250mΔ	37	1.5k	35m	950m	INC	10	18m	150	1.0k	1.0m	CF	Dual		PH105	
15	CK2043	LDR	250mΔ	37	1.5k	45m	950m	INC	25	37m	150	300	10m	CF			PH105	
16	CK2145	LDR	120m	37	1.5k	3.0m	900m	LED	3.0	25m	60	250	500k			CA3a	PH23e	
17	CK2146	LDR	170m	37	1.5k	2.0m	30m	LED	3.0	25m	100	2.5k	10m			CA3a	PH23e	
18	CK2160	LDR	150m	36	1.5k	35m	450m	INC	10	18m	75	850	10m		Dual	CA12	PH107	
19	CK2161	LDR	150m	37	1.5k	35m	850m	INC	10	18m	75	3.0k	1.0m		Dual	CA12	PH107	
20	CK2162	LDR	150m	26	1.5k	10m	600m	LED	3.0	25m	75	1.5k	1.0m	CF	Dual	CA12	PH107	
21	CLM6000	LDR	50m	47%	1.5k	3.5m	500m	LED	2.0	20m	60	250	500k			CA3	PH19	
22#	MOC003	LDR	120m	26%	1.5k	10m	10m	LED	1.9	15m	80	3.0k	500k	CF-1		CA3a	PH97	
23	PLF5S380	LDR	250m	66	1.5k			LED	2.0	25m	320	250	10m	BB			PH95	
24	PLF5S387	LDR	250m	66	1.5k			LED	2.0	25m	320	4.0k	100m	BB			PH95	
25	VTL3A11	LDR	550m	47	1.5k	80m	300m	INC	1.5	55m	100	350m	5.0m			CA2	PH9	
26	VTL3A12	LDR	550m	47	1.5k	40m	150m	INC	3.0	15m	100	350m	5.0m			CA2	PH9	
27	VTL3A13	LDR	550m	47	1.5k	50m	250m	INC	4.0	60m	100	160m	5.0m			CA2	PH9	
28	VTL3A14	LDR	550m	47	1.5k	50m	200m	INC	6.0	40m	100	180m	5.0m			CA2	PH9	
29	VTL3A15	LDR	550m	47	1.5k	55m	200m	INC	10	14m	100	350m	5.0m			CA2	PH9	
30	VTL3A16	LDR	550m	47	1.5k	70m	300m	INC	12	25m	100	400m	5.0m			CA2	PH9	
31	VTL3A17	LDR	550m	47	1.5k	25m	150m	INC	12	40m	100	180m	5.0m			CA2	PH9	
32	VTL3A21	LDR	550m	47	1.5k	80m	300m	INC	1.5	55m	200	800m	1.0m			CA2	PH9	
33	VTL3A22	LDR	550m	47	1.5k	60m	300m	INC	3.0	15m	200	600m	1.0m			CA2	PH9	
34	VTL3A23	LDR	550m	47	1.5k	80m	500m	INC	4.0	60m	200	300m	1.0m			CA2	PH9	
35	VTL3A24	LDR	550m	47	1.5k	80m	300	INC	6.0	40m	200	350	1.0m			CA2	PH9	
36	VTL3A25	LDR	550m	47	1.5k	120m	300	INC	10	14m	200	600	1.0m			CA2	PH9	
37	VTL3A26	LDR	550m	47	1.5k	80m	500	INC	12	25m	200	500	1.0m			CA2	PH9	
38	VTL3A27	LDR	550m	47	1.5k	80m	400	INC	12	40m	200	150	1.0m			CA2	PH9	
39	VTL3A31	LDR	550m	47	1.5k	100m	100	INC	1.5	55m	250	7.5k	1.0m		Dual	CA2a	PH9	
40	VTL3A31/2	LDR	550m	47	1.5k	100m	100	INC	1.5	55m	125	4.0k	1.0m		Dual	CA2	PH9	
41	VTL3A32	LDR	550m	47	1.5k	55m	100	INC	3.0	15m	250	6.0k	1.0m		Dual	CA2a	PH9	
42	VTL3A32/2	LDR	550m	47	1.5k	55m	100	INC	3.0	15m	125	500	1.0m			CA2	PH9	
43	VTL3A33	LDR	550m	47	1.5k	90m	175	INC	4.0	60m	250	500	1.0m			CA2	PH9	
44	VTL3A33/2	LDR	550m	47	1.5k	90m	175	INC	4.0	60m	125	750	1.0m		Dual	CA2a	PH9	
45	VTL3A34	LDR	550m	47	1.5k	100m	150	INC	6.0	40m	250	800	1.0m			CA2	PH9	
46	VTL3A34/2	LDR	550m	47	1.5k	100m	150	INC	6.0	40m	125	1.2k	1.0m		Dual	CA2a	PH9	
47	VTL3A35	LDR	550m	47	1.5k	75m	100	INC	10	14m	250	4.0k	1.0m		Dual	CA2a	PH9	
48	VTL3A35/2	LDR	550m	47	1.5k	75m	100	INC	10	14m	125	2.0k	1.0m		Dual	CA2	PH9	
49	VTL3A36	LDR	550m	47	1.5k	90m	150	INC	12	25m	250	3.0k	1.0m		Dual	CA2a	PH9	
50	VTL3A36/2	LDR	550m	47	1.5k	90m	150	INC	12	25m	125	2.0k	1.0m		Dual	CA2	PH9	
51	VTL3A37	LDR	550m	47	1.5k	50m	150m	INC	12	40m	250	300	1.0m			CA2	PH9	
52	VTL3A37/2	LDR	550m	47	1.5k	50m	150m	INC	12	40m	125	450	1.0m		Dual	CA2a	PH9	
53	VTL3A41	LDR	550m	47	1.5k	80m	900m	INC	1.5	55m	100	200	1.0m			CA2	PH9	
54	VTL3A41/2	LDR	550m	47	1.5k	80m	900m	INC	1.5	55m	50	300	1.0m		Dual	CA2a	PH9	
55	VTL3A42	LDR	550m	47	1.5k	40m	750m	INC	3.0	15m	100	200	1.0m			CA2	PH9	
56	VTL3A42/2	LDR	550m	47	1.5k	40m	750m	INC	3.0	15m	50	300	1.0m		Dual	CA2a	PH9	
57	VTL3A43	LDR	550m	47	1.5k	40m	900m	INC	4.0	60m	100	55	1.0m			CA2	PH9	
58	VTL3A43/2	LDR	550m	47	1.5k	40m	900m	INC	4.0	60m	50	82.5	1.0m		Dual	CA2a	PH9	
59	VTL3A44	LDR	550m	47	1.5k	50m	800m	INC	6.0	40m	100	55	1.0m			CA2	PH9	
60	VTL3A44/2	LDR	550m	47	1.5k	50m	800m	INC	6.0	40m	50	82.5	1.0m		Dual	CA2a	PH9	
61	VTL3A45	LDR	550m	47	1.5k	55m	750m	INC	10	14m	100	150	1.0m			CA2	PH9	
62	VTL3A45/2	LDR	550m	47	1.5k	55m	750m	INC	10	14m	50	225	1.0m		Dual	CA2a	PH9	
63	VTL3A46	LDR	550m	47	1.5k	75m	900m	INC	12	25m	100	100	1.0m			CA2	PH9	
64	VTL3A46/2	LDR	550m	47	1.5k	75m	900m	INC	12	25m	50	150	1.0m		Dual	CA2a	PH9	
65	VTL3A47	LDR	550m	47	1.5k	25m	900m	INC	12	40m	100	40	1.0m			CA2	PH9	
66	VTL3A47/2	LDR	550m	47	1.5k	25m	900m	INC	12	40m	50	60	1.0m		Dual	CA2a	PH9	
67	VTL3B18	LDR	550m	47	1.5k	10m	30m	GAS	120	3.0m	100	7.0k	50m			CA5	PH9a	
68	VTL3B19	LDR	550m	47	1.5k	5.0m	30m	GAS	120	3.0m	100	1.1k	1.0m			CA5	PH9a	
69	VTL3B28	LDR	550m	47	1.5k	20m	200m	GAS	120	3.0m	200	5.0k	1.0m			CA5	PH9a	
70	VTL3B29	LDR	550m	47	1.5k	8.0m	200m	GAS	120	3.0m	200	650	1.0m			CA5	PH9a	
71	VTL3B38	LDR	550m	47	1.5k	20m	35m	GAS	120	3.0m	250	15k	1.0m			CA5	PH9a	
72	VTL3B38/2	LDR	550m	47	1.5k	20m	35m	GAS	120	3.0m	125	22.5	1.0m		Dual	CA5a	PH9c	
73	VTL3B39	LDR	550m	47	1.5k	5.0m	35m	GAS	120	3.0m	250	6.0k	1.0m			CA5	PH9a	
74	VTL3B39/2	LDR	550m	47	1.5k	5.0m	35m	GAS	120	3.0m	125	9.0k	1.0m		Dual	CA5a	PH9c	
75	VTL3B48	LDR	550m	47	1.5k	20m	600m	GAS	120	3.0m	100	1.0k	1.0m			CA5	PH9a	
76	VTL3B48/2	LDR	550m	47	1.5k	20m	600m	GAS	120	3.0m	50	1.5k	1.0m		Dual	CA5a	PH9c	
77	VTL3B49	LDR	550m	47	1.5k	5.0m	600m	GAS	120	3.0m	100	160k	1.0m			CA5	PH9a	
78	VTL3B49/2	LDR	550m	47	1.5k	5.0m	600m	GAS	120	3.0m	50	240	1.0m		Dual	CA5a	PH9c	
79	VTL5C1	LDR	175mΔ	57	1.5k	2.5m	35m	LED	2.0	40m	100	500	50m			CA4a	PH8a	
80	VTL5C2	LDR	175mΔ	57	1.5k	3.5m	500m	LED	2.0	40m	200	500	1.0m			CA4a	PH8a	
81	VTL5C3	LDR	175mΔ	57	1.5k	2.5m	35m	LED	2.0	40m	250	2.0k	10m			CA4a	PH8a	
82	VTL5C3/2	LDR	175mΔ	57	1.5k	3.0m	50m	LED	2.0	40m	100	3.0k	10m		Dual	CA4	PH8	
83	VTL5C4	LDR	175mΔ	57	1.5k	6.0m	1.5	LED	2.0	40m	50	200	400k			CA4	PH8	
84	VTL5C4/2	LDR	175mΔ	57	1.5k	6.0m	1.5	LED	2.0	40m	30	300	400k		Dual	CA4	PH8	
85	VTL5C6	LDR	175mΔ	57	1.5k	3.5m	50m	LED										

# 25. PHOTOCOUPLER: PHOTOCELL (LDR,VOLTAIC) OUTPUT

IN ORDER OF: (1)TYPE OF PHOTOCELL  
(2)ISOLATION VOLT. VIO & (3) TYPE No.

LINE No.	3 TYPE No.	1 TYPE OF PHOTO CELL	MAX. PWR. DISS. CASE (W)	TEMP. RNG. CODE	COUPLED CHAR.			INPUT SOURCE TYPE	OUTPUT PHOTOCELL @ RATED INPUT			MATER. & FEATURE MAT	SCHEM -ATIC	DRAWING Ø-RND. <input checked="" type="checkbox"/> -RECT. <input checked="" type="checkbox"/> -STRIP *CHIP		
					2 VIO ISOL (V)	RISE TIME (S)	DECAY TIME (S)		RATED VOLT Δ-VR (V)	CURR. Δ-IR (A)	DC CELL VOLT *AC ΔPk (V)				SHORT CKT.I Isc (A)	OPEN CKT.V Voc (V)
1#	MCD526	LDR	180m	27	3.0k	2.0m	80m	LED	1.9	6.0m	150	<input checked="" type="checkbox"/>	2.0k	3.0M	BB	PH650
2#	MCD527	LDR	210m	27	3.0k	1.0m	60m	LED	1.7	30m	150	<input checked="" type="checkbox"/>	1.0k	2.0M	BB	PH650
3#	MCD537	LDR	165m	27	3.0k	3.0m	5.0m	LED	1.8	30m	300	<input checked="" type="checkbox"/>	5.0k	100M	BB	PH650
4#	MCD718	LDR	100m		3.0k	20m	30m	LED	2.1	40m	250	<input checked="" type="checkbox"/>	26k	2.0M	BB	PH650
5#	MCD725	LDR	225m	26*	3.0k	10m	10m	LED	2.0	20m	350	<input checked="" type="checkbox"/>	1.1k	1.0M	CF-5s	PH960
6#	PL2H33-1	LDR	250m		3.0k	300mΔ	30m#	GAS	120	2.0m	80		100	10M	BB	PH930
7#	PL2H36-1	LDR	250m		3.0k	300mΔ	30m#	GAS	120	2.0m	320		400	100M	BB	PH930
8#	PL3A33-1	LDR	250m		3.0k	10mΔ	30m#	GAS	100	2.0m	80		150	10M	BB	PH930
9#	PL3A36-1	LDR	250m		3.0k	10mΔ	30m#	GAS	100	2.0m	320		500	100M	BB	PH930
10	PL5S33-1	LDR	250m		3.0k			LED	2.0	25m	80		200	10M	BB	PH930
11	PL5S36-1	LDR	250m		3.0k			LED	2.0	25m	320		2.0k	100M	BB	PH930
12#	PL1033-1	LDR	250m	66	3.0k	50mΔ	75m#	INC	10	15m	80		100	10M	BB	PH930
13#	PL1036-1	LDR	250m	66	3.0k	50mΔ	75m#	INC	10	15m	320		400	100M	BB	PH930
14	CLM9000	LDR	400m		4.0k	50mΔ	20m	LED	2.8	16m	3.5kΔ		1.2k	100M	BB	PH930
15#	CHS70GE1	LDR	30m	17	5.0k	3.0	20	LED	3.0	10m	60	<input checked="" type="checkbox"/>	300	1.0M	BB-5s	PH230
16	PLM5S310	LDR	200m		5.0k			LED	2.0	25m	80		500	10M	BB	PH940
17	PLM5S387	LDR	200m		5.0k			LED	2.0	25m	320		5.0k	100M	BB	PH940
18#	PLT2H387	LDR	100m		7.5k	300mΔ	30m#	GAS*	200	2.0m	320		10k	100M	BB	PH640
19#	PLT3A384	LDR	100m		7.5k	10mΔ	30m#	GAS*	100	2.0m	80		750	10M	BB	PH640
20#	PLT3A387	LDR	100m		7.5k	10mΔ	30m#	GAS*	100	2.0m	320		15k	100M	BB	PH640
21#	CHS70ANE1	LDR	50m	39	10k	6.0m	30m	GAS	100	300u	120		3.0k	10M	BB	PH100a
22	CK2029	LDR	250m	36	10k	35m	325m	INC	10	35m	250	<input checked="" type="checkbox"/>	2.0k	100M	BB	PH100a
23	CK2032	LDR	250m	36	10k	30m	300m	INC	10	18m	250	<input checked="" type="checkbox"/>	450	10M	BB	PH100a
24	CK2034	LDR	250m	37	10k	5.0m	175m	LED	3.0	25m	250	<input checked="" type="checkbox"/>	500	10M	CF	PH100a
25	CK2035	LDR	200m	37	10k	8.0m	350m	GAS	120	3.5m	250	<input checked="" type="checkbox"/>	1.0k	10M	CF	PH100a
26	CK2129	LDR	250m	37	10k	10m	350m	GAS	120	3.5m	250	<input checked="" type="checkbox"/>	2.0k	10M	CF	PH100a
27	PLS5S380	LDR	250m	66	10k			LED	2.0	25m	80		250	10M	BB	PH230
28	PLS5S387	LDR	250m	66	10k			LED	2.0	25m	320		4.0k	100M	BB	PH230
29#	PLT2H384	LDR	100m		10k	300mΔ	30m#	GAS	200	2.0m	80		500	10M	BB	PH640
30#	PLT10384	LDR	100m		10k	90mΔ	125m#	INC	10	15m	80		400	10M	BB	PH640
31#	PLT10387	LDR	100m		10k	90mΔ	100m#	INC	10	15m	320		5.0k	100M	BB	PH640
32	CK1105	LDR	250mΔ	56	25k	10m	800m	GAS	120	3.5m	300	<input checked="" type="checkbox"/>	10k	10M	BB	PH102
33	CK1106	LDR	250mΔ	26	25k	50m	700m	GAS	120	25m	250	<input checked="" type="checkbox"/>	300	10M	BB	PH102
34	CK1108	LDR	250m	56	25k	40m	650m	INC	5.0	200m	300	<input checked="" type="checkbox"/>	250	10M	BB	PH102
35	CK2030	LDR	250m	26	25k	30m	450m	INC	10	18m	300	<input checked="" type="checkbox"/>	700	10M	CF	PH102
36	CK2065	LDR	250m	27	25k	30m	500m	INC	10	18m	300	<input checked="" type="checkbox"/>	500	10M	CF	PH102
37	CK2066	LDR	250m	27	25k	40m	650m	INC	25	37m	300	<input checked="" type="checkbox"/>	350	10M	CF	PH102
38	CK2067	LDR	250m	26	25k	10m	650m	LED	3.0	40m	300	<input checked="" type="checkbox"/>	1.0k	10M	CF	PH102
39#	CHS70BGE1	LDR	50m	39	50k	6.0m	30m	LED	2.0	10m	120		1.0k	10M	BB	PH102

# 26. PHOTOCOUPLER: PHOTOTRANSISTOR OUTPUT

IN ORDER OF: (1) PWR DISS. Pcase (2) IC (3) CURR. TRANSFER RATIO & (4) TYPE No.

LINE No.	TYPE No.	MAXIMUM RATINGS @ 25°C				FWD. CURR. (A)	ISOL. VOLT (V)	TEMP. RNG. CODE	COUPLED CHARACTS.			MAX INPUT DIODE CHAR.			MAX. O/P TRANS. CHAR.			P O L L	SCHEM -ATIC	DRAWING		
		1 PWR. DISS. (W)	2 COLL. CURR. (A)	C/E VOLT VCEO (V)	REV. VOLT VVR (V)				3 CTR=IC/IF(MIN) CURR (hF)	IF (A)	VCE (V)	RESP. TIME (S)	FWD. VOLT (V)	VF (V)	IF (A)	COLL. SAT. VOLT VCE(SAT) (V)	IC (A)				IF (A)	
1	STOC1420																					
2	STOC1430																					
3	CNY18-1			32	3.0	60m	800	48*	10m	15m	6.0	2.0u#	1.5	15m	300m	100u	20m	AD	AD	PH90c		
4	OPI5010																			PH91c		
5	STOC1421																			PH7d		
6	STOC1431																			CB3c		
7	CNY18-2			32	3.0	60m	800	48*	10m	15m	6.0	2.0u#	1.5	15m	300m	100u	20m	AD	AD	PH7d		
8	CNY18-3																			CB3c		
9	STOC1422																			PH7d		
10	STOC1432																			PH90c		
11	CNY17-1			70	3.0	60m	4.0k	47*	250m	15m	6.0	2.0u#	1.5	15m	300m	200u	15m	AD	AD	PH91c		
12	CNY18-4			32	3.0	60m	800		3.0k	47*	250m	15m	6.0	2.0u#	1.5	15m	300m	200u	15m	AD	AD	PH16g*
13	CNY17-2			70	3.0	60m	4.0k		4.0k		630m	10m									PH16g*	
14	CNY17-3			70	3.0	60m	4.0k		1.0		1.0	10m									PH16g*	
15	CNY17-4			70	3.0	60m	4.0k		1.6		1.6	10m									PH16g*	
16#	ON3100	75m	30m	30	3.0	50m	1.5k	28	200m	5.0m	10	4.0u	1.5	50m	400m	2.0m	20m	N	N	PH16g*		
17#	CNY44	80m*	30m	50	3.0	30m	1.0k	5C5	300m	10m	10	2.0u#	1.6	30m	400m	3.0m	10m	NAD	CB1	PH7c		
18#	CNY46	80m*	30m	50	3.0	30m	1.0k	5C5	300m	10m	10	2.0u#	1.6	30m	400m	3.0m	10m	NAD	CB1	PH7c		
19	SPX1003-1	85m	10	2.0	30m	500	6A*	26m	15m	5.0	3.0u	2.0	30m	300m	200u	15m	NAD	CB1	PH38z			
20	SPX1003-2	85m	50	6.0	30m	500	6A*	133m	15m	5.0	3.0u	1.5	30m	300m	200u	15m	NAD	CB1	PH38z			
21#	TLP501	100m	45	6.0	60m	1.0k	3A*	100m	10m	10	5.0u#	1.2	10m								PH14a	
22	EL74A	100m	30	3.0	60m	1.5k	5A5	125m	10m	5.0	2.0u#	1.4	16m	400m	2.0m	16m	NAD	CB4	PH58a			
23	OPI110	100m	30	3.0	40m	10k	48	125m	16m	5.0	2.0u#	1.5	20m	400m	1.8m	16m	NAD	CB3a	PH81z			
24#	OPI1264A	100m	32	3.0	40m	10k	48	250m	10m	5.0	4.0u#	1.5	20m	400m	1.6m	10m	NAD	CB3a	PH135z			
25#	OPI1264B	100m	32	3.0	40m	10k	48	500m	10m	5.0	1.5	20m	400m	1.6m	10m	NAD	CB3a	PH135z				
26#	OPI1264C	100m	32	3.0	40m	10k	48	1.0	10m	5.0	1.5	20m	400m	1.6m	10m	NAD	CB3a	PH135z				
27#	ON1105	100m	20m	30	3.0	50m	3A*				6.0	1.5	50m	300m	100u	50m	NAD	FA23a	PH113			
28#	ON1102	100m	20m	30	3.0	50m	2.5k	28	100m	20m	10	4.0u	1.5	50m	400m	1.0m	50m	N	CB20	PH113z		
29#	CNY17	100m*	150m	32	3.0	60m	2.5k	5A*	100m	10m	5.0	1.6	60m	300m	2.5m	10m	AD	N	PH31a			
30#	ON3101	120m	50m	30	3.0	80m	2.5k	28	1.0	5.0m	10	4.0u	1.5	50m	400m	1.0m	5.0m	N	N	PH16z		
31	TIL107	150m	35	2.0	50m	1.0k	5F	33m	15m	5.0	5.0u#	1.5	15m	300m	125u	15m	NAD			PH14z		
32#	TIL153	150m	30	3.0	100m	3.5k	5F*	100m	10m	10	2.0u#	1.4	10m	400m	1.0m	10m	NBC			PH14z		
33	TIL108	150m	35	2.0	50m	1.0k	5F	106m	15m	5.0	5.0u#	1.5	15m	300m	125u	15m	NAD			PH14z		
34#	TIL154	150m	30	3.0	100m	3.5k	5F*	200m	10m	10	2.0u#	1.4	10m	400m	1.0m	10m	NBC			PH14z		
35#	TIL155	150m	30	3.0	100m	3.5k	5F*	500m	10m	10	2.0u#	1.4	10m	400m	1.0m	10m	NBC			PH14z		
36#	CNY47	150m*	30m	30	3.0	30m	2.0k	5A5	200m	10m	400m	3.0u	1.5	10m	400m	2.0m	10m	NAD	CB4	PH16z		
37#	CNY47A	150m*	30m	30	3.0	30m	2.0k	5A5	400m	10m	400m	5.0u	1.5	10m	400m	4.0m	10m	NAD	CB4	PH16z		
38#	SFH6001	150m*	50m	70	6.0*	60m	2.8k	5A			3.0u	1.2	60m	300m	5.0m	10m	NAD			PH11*		
39#	SFH6001I	150m*	50m	70	6.0*	60m	2.8k	5A			3.0u	1.2	60m	300m	10m	10m	NAD			PH11*		
40#	SFH6001II	150m*	50m	70	6.0*	60m	2.8k	5A			4.0u	1.2	60m	300m	16m	10m	NAD			PH11*		
41#	SFH6001V	150m*	50m	70	6.0*	60m	2.8k	5A			4.0u	1.2	60m	300m	25m	10m	NAD			PH11*		
42#	CNY181	150m	100m	32	3.0	60m	500	5A*	100m	10m	5.0	2.0u	1.7	60m	200m	1.0m	10m	NAD		PH7d		
43	H11A4	150m*	100m	30	3.0	60m	1.5k	5A*	100m	10m	10	2.0u	1.5	10m	400m	500u	10m	NAD	CB4	PH50z		
44	H11A5	150m*	100m	30	3.0	60m	1.0k	5A*	100m	10m	10	2.0u	2.0	10m	400m	500u	10m	NAD	CB4	PH50z		
45	H15A2	150m*	100m	30	3.0	60m	4.0k	58*	100m	10m	10	3.0u	1.7	10m	400m	500u	10m	NAD	CB18	PH51z		
46#	CNY181I	150m	100m	32	3.0	60m	500	5A*	160m	10m	5.0	2.0u	1.7	60m	200m	1.0m	10m	NAD		PH7d		
47	H11A2	150m*	100m	30	3.0	60m	1.5k	5A*	200m	10m	10	2.0u	1.5	10m	400m	500u	10m	NAD	CB4	PH50z		
48	H11A3	150m*	100m	30	3.0	60m	2.5k	5A*	200m	10m	10	2.0u	1.5	10m	400m	500u	10m	NAD	CB4	PH50z		
49	H15A1	150m*	100m	30	3.0	60m	4.0k	58*	200m	10m	10	3.0u	1.7	10m	400m	500u	10m	NAD	CB18	PH51z		
50#	CNY181II	150m	100m	32	3.0	60m	500	5A*	250m	10m	5.0	2.0u	1.7	60m	200m	1.0m	10m	NAD		PH7d		
51#	CNY181V	150m	100m	32	3.0	60m	500	5A*	400m	10m	5.0	2.0u	1.7	60m	200m	1.0m	10m	NAD		PH7d		
52	H11A1	150m*	100m	30	3.0	60m	2.5k	5A*	500m	10m	10	2.0u	1.5	10m	400m	500u	10m	NAD	CB4	PH50z		
53	TIL120	190m	50m	35	3.0	40m	1.0k	5C	250m	10m	5.0	3.0u#	1.3	10m	300m	2.5m	20m	NAD		PH17z		
54	TIL121	190m	50m	35	3.0	40m	1.0k	5C	500m	10m	5.0	6.0u#	1.3	10m	300m	10m	20m	NAD		PH17z		
55	OPI150	200m	25	3.0	60m	50k	48	100m	10m	5.0	2.0u#	1.6	50m	500m	1.0m	16m	NAD			PH82z		
56	IL74	200m	20	3.0	100m	1.5k	5A	125m	16m	5.0	6.0u	1.3	100m	500m	2.0m	16m	NBC	CB4	PH31z			
57#	TLP503	200m	20	6.0	60m	2.0k	3A*	150m	10m	5.0	5.0u#	1.2	10m							PH16c		
58#	PC503	200m	35	6.0	70m	1.5k	2A*	500m	5.0m	5.0	2.0u#	1.4	20m	400m	1.0m	5.0m	N	CB4	PH16m			
59#	PC504	200m	35	6.0	70m	1.5k	2A*	500m	5.0m	5.0	2.0u#	1.4	20m	400m	1.0m	5.0m	N	CB4a	PH16m			
60#	PC507	200m	35	6.0	70m	1.5k	2A*	500m	20m	5.0	2.0u#	1.4	20m	400m	1.0m	20m	N	CB3a	PH116z			
61#	PC5072	200m	35	6.0	70m	1.5k	2A*	500m	20m	5.0	2.0u#	1.4	20m	400m	1.0m	20m	N	CB16#	PH56Bz			
62#	PC5073	200m	35	6.0	70m	1.5k	2A*	500m	20m	5.0	2.0u#	1.4	20m	400m	1.0m	20m	N	CB17#	PH117z			
63#	3N243	200m*	30m	2.0	40m	1.0k	5C*	150m	10m	10	1.0u#	1.3	10m	300m	1.5	20m	NAD	CB3b	TO206AFz			
64	OPI140	200m*	30m	3.0	40m	1.0k	5C*	150m	10m	10	2.0u#	1.5	40m	500m	1.6m	40m	NAD			PH17d		
65#	CNY22	200m*	30m	5.0	2.0	30m	2.8k	5C5	250m	8.0m	5.0	5.0u	1.6	8.0m	400m	2.0m	8.0m	NAD	CB4	PH54z		
66#	CNY42	200m*	30m	5.0	2.0	30m	2.8k	5C5	250m	8.0m	5.0	5.0u	1.6	8.0m	400m	2.0m	8.0m	NAD	CB1	PH55z		
67	3N244	200m*	30m	2.0	40m	1.0k	5C*	300m	10m	10	1.0u#	1.3	10m	300m	3.0	20m	NAD	CB3b	TO206AFz			
68#	CNY23	200m*	30m	2.0	30m	2.0k	5C5	500m	8.0m	5.0	5.0u	1.6	8.0m	400m	4.0m	8.0m	NAD	CB4	PH54z			
69#	CNY43	200m*	30m	2.0	30m	2.0k	5C5	500m	8.0m	5.0	5.0u	1.6	8.0m	400m	4.0m	8.0m	NAD	CB1	PH55z			
70	3N245	200m*	30m	2.0	40m	1.0k	5C*	600m	10m	10	1.5u#	1.3	10m	300m	6.0	20m	NAD	CB3b	TO206AFz			
71#	PC613	200m	50m	35	6.0	70m	2.0k	2A*	500m	5.0m	5.0	4.0u#	1.4	20m	200m	1.0m	20m	N	CB4	PH16n		
72#	PC614	200m	50m	35	6.0	70m	2.0k	2A*	500m	5.0m	5.0	4.0u#	1.4	20m	200m	1.0m	20m	N	CB4a	PH16n		
73#	PC617	200m	70m	35	6.0	70m	2.0k	2A*	500m	5.0m	5.0	4.0u#	1.4	20m	200m	1.0m	20m	N	CB3a	PH116z		
74#	PC627	200m	70m	35	6.0	70m	2.0k	2A*</														



# 26. PHOTOCOUPLER: PHOTOTRISTOR OUTPUT

IN ORDER OF: (1) PWR DISS. Pcase (2) IC (3) CURR. TRANSFER RATIO & (4) TYPE No.

LINE No.	TYPE No.	MAXIMUM RATINGS @ 25°C							TEMP RNG. CODE	COUPLED CHARACTS.				MAX INPUT DIODE CHAR.		MAX/O/P TRANS. CHAR.			P M O L T	SCHEM -ATIC	DRAWING Ø-RND. Δ-STRIP *CHIP
		1 PWR. DISS. Pcase (W)	2 COLL. CURR. IC (A)	C/E VOLT VCEO (V)	REV. VOLT VR (V)	FWD. CURR. IF (A)	ISOL. VOLT VIO (V)	CTR = IC/IF (MIN)		3 CURR TRANSF hF	IF (A)	VCE (V)	RESP. TIME (S)	FWD VOLT VF (V)	IF (A)	VCE (SAT) (V)	IC (A)	IF (A)			
1	OP17002	250m		30	3.0	60m	6.0k	5F	200m	10m	10	3.0uΔ	1.7	10m	400m	500u	10m	NAD	♦	PH128Z	
2	TIL116	250m		30	3.0	100m	2.5k	5F	200m	10m	10	2.0u#	1.5	60m	400m	2.2m	15m	NAD	♦	PH16Z	
3	TIL125	250m		30	3.0	100m	5.0k	5F	200m	10m	10	2.0u#	1.4	10m	400m	1.0m	10m	NAD	CB4	PH16Z	
4	SPX2083	250m		35	2.0	50m	1.0k	5C*	250m	10m		2.0u	1.3	50m	300m	2.5m	20m	NAD	CB2	PH13Z	
5	SPX2E	250m		30	3.0	150m	5.0k	5A*	300m	10m		5.0u#	1.5	50m	400m	2.0m	20m	NAD	CB4	PH58bZ	
6	SPX33	250m		30	3.0	150m	3.5k	5A*	300m	10m	5.0	5.0u#	1.5	50m	400m	2.0m	20m	NAD	CB4	PH58eZ	
7	SPX7130	250m		30	3.0	150m	4.0k	5A*	300m	1.0m	5.0	5.0u	1.5	20m	400m	2.0m	16m	NAD	CB4	PH114aZ	
8	SPX7530	250m		30	3.0	150m	4.0k	5A*	300m	5.0m	5.0	5.0u	1.5	20m	400m	2.0m	16m	NAD	CB4	PH114aZ	
9	STOC1700	250m		30	3.0	150m	5.0k	5A*	300m	10m		2.0u#	1.5	50m	400m	2.0m	20m	NAD	CB4	PH16Z	
10	STOC1710	250m		30	3.0	150m	5.0k	5A*	300m	10m		2.0u#	1.5	50m	400m	2.0m	20m	NAD	CB4	PH16Z	
11	STOC1800	250m		15	3.0	150m	5.0k	5A*	300m	10m		2.0u#	1.7	50m	600m	2.0m	20m	NAD	CB4	PH16Z	
12	STOC1900	250m		30	3.0	150m	5.0k	5A*	300m	10m		2.0u#	1.7	50m	600m	2.0m	20m	NAD	CB4	PH16Z	
13	SPX314.1B	250m		50	6.0	150m	5.0k	5A*	400m	10m		8.0u#	1.5	50m	300m	200u	20m	NAD	CB3a	PH84Z	
14	SPX314.4A	250m		50	6.0	150m	5.0k	5A*	400m	10m		8.0u#	1.5	50m	300m	200u	20m	NAD	CB3a	PH84Z	
15	SPX7271	250m		30	3.0	150m	4.0k	5A*	450m	10m	5.0	5.0u	1.5	20m	400m	2.0m	16m	NAD	CB4	PH114aZ	
16	IL5	250m		30	3.0	150m	2.5k	5A	500m	10m	10	2.0u	1.5	60m	400m	2.2m	15m	NBC		PH3Z	
17	SPX6	250m		30	3.0	150m	5.0k	5A*	500m	10m		5.0u#	1.5	50m	400m	2.0m	20m	NAD	CB4	PH58bZ	
18	SPX53	250m		30	3.0	150m	3.5k	5A*	500m	10m	5.0	5.0u#	1.5	50m	400m	2.0m	20m	NAD	CB4	PH58eZ	
19	SPX7150	250m		30	3.0	150m	4.0k	5A*	500m	1.0m	5.0	5.0u	1.5	20m	400m	2.0m	16m	NAD	CB4	PH114aZ	
20	SPX7550	250m		30	3.0	150m	4.0k	5A*	500m	5.0m	5.0	5.0u	1.5	20m	400m	2.0m	16m	NAD	CB4	PH114aZ	
21	TIL117	250m		30	3.0	100m	2.5k	5F	500m	10m	10	2.0u#	1.4	16m	400m	500u	10m	NAD	♦	PH16Z	
22	TIL126	250m		30	3.0	100m	5.0k	5F	500m	10m	10	2.0u#	1.4	10m	400m	1.0m	10m	NAD	CB4	PH16Z	
23	SPX7272	250m		30	3.0	100m	4.0k	5A*	750m	10m	5.0	5.0u	1.5	20m	400m	2.0m	16m	NAD	CB4	PH16Z	
24	SPX7590	250m		30	3.0	150m	4.0k	5A*	900m	5.0m	5.0	5.0u	1.5	20m	400m	2.0m	16m	NAD	CB4	PH114aZ	
25	OP17010	250m		30	3.0	60m	6.0k	5B	1.0	10m	10	3.0uΔ	1.7	10m	500m	5.0m	10m	NAD	♦	PH128Z	
26	SPX35	250m		30	3.0	150m	5.0k	5A*	1.0	10m		8.0u#	1.5	50m	400m	2.0m	20m	NAD	CB4	PH58bZ	
27	SPX103	250m		30	3.0	150m	3.5k	5A*	1.0	10m	5.0	8.0u#	1.5	50m	400m	2.0m	20m	NAD	CB4	PH58eZ	
28	SPX2084	250m		35	2.0	50m	1.0k	5C*	1.0	10m		4.0u	1.3	50m	400m	5.0m	10m	NAD	CB2	PH13Z	
29	STOC1500	250m		30	3.0	150m	5.0k	5A*	1.0	10m		8.0u#	1.5	50m	400m	2.0m	20m	NAD	CB4	PH16Z	
30	STOC1510	250m		30	3.0	150m	5.0k	5A*	1.0	10m		8.0u#	1.5	50m	400m	2.0m	20m	NAD	CB4	PH16Z	
31	STOC1520	250m		30	3.0	150m	5.0k	5A*	1.0	10m		8.0u#	1.5	50m	400m	2.0m	20m	NAD	CB4	PH16Z	
32	STOC1600	250m		30	3.0	150m	5.0k	5A*	1.0	10m		8.0u#	1.5	50m	400m	2.0m	20m	NAD	CB4	PH16Z	
33	SPX7273	250m		30	3.0	150m	4.0k	5A*	1.2	10m	5.0	5.0u	1.5	20m	400m	2.0m	16m	NAD	CB4	PH114aZ	
34	MOC1006	250m	3.0m†	30	3.0	80m	5.0k	5A5	250	†	500u	5.0	2.0u#	1.5	10m	500m	2.0m	50m	NAD		PH1Z
35	MOC1005	250m	5.0m†	30	3.0	80m	5.0k	5A5	250	†	500u	5.0	800n#	1.5	10m	500m	2.0m	50m	NAD		PH1Z
36	FCD836	250m*	20m	20	3.0	60m	2.1k	5A*	60m	10m	10	1.6u#	1.5	10m	700m	2.0m	50m	NAD	CB4	PH16gZ	
37	FCD836C	250m*	20m	20	3.0	60m	5.0k	5A*	60m	10m	10	1.6u#	1.5	10m	700m	2.0m	50m	NAD	CB4	PH16gZ	
38	FCD831	250m*	20m	30	3.0	60m	2.1k	5A*	100m	10m	10	1.6u#	1.5	60m	500m	2.0m	50m	NAD	CB4	PH16gZ	
39	FCD831C	250m*	20m	30	3.0	60m	5.0k	5A*	100m	10m	10	1.6u#	1.5	60m	500m	2.0m	50m	NAD	CB4	PH16gZ	
40	FCD830	250m*	20m	30	3.0	60m	2.1k	5A*	200m	10m	400m	1.6u#	1.5	60m	400m	2.0m	10m	NAD	CB4	PH16gZ	
41	FCD830C	250m*	20m	30	3.0	60m	5.0k	5A*	200m	10m	10	1.6u#	1.5	60m	400m	2.2m	15m	NAD	CB4	PH16gZ	
42#	OPT800	250m*	25m	30	3.0	100m	2.5k	5A*	85m	500u	400m	3.0u	1.5	10m	400m	100u	1.0m	NAD	CB4	PH16hZ	
43	FCD810	250m*	25m	20	3.0	60m	2.1k	5A*	100m	10m	10	4.0u#	1.5	10m	700m	2.6m	50m	NAD	CB4	PH16gZ	
44	FCD810C	250m*	25m	20	3.0	60m	5.0k	5A*	100m	10m	10	4.0u#	1.5	10m	700m	2.6m	50m	NAD	CB4	PH16gZ	
45#	OPT801	250m*	25m	30	3.0	100m	2.5k	5A*	100m	1.0m	400m	3.0u	1.5	10m	400m	100u	1.0m	NAD	CB4	PH16hZ	
46	FCD820	250m*	25m	30	3.0	60m	2.1k	5A*	200m	10m	400m	2.5u#	1.5	60m	400m	2.0m	10m	NAD	CB4	PH16gZ	
47	FCD820C	250m*	25m	30	3.0	60m	5.0k	5A*	200m	10m	10	2.5u#	1.5	60m	400m	2.2m	15m	NAD	CB4	PH16gZ	
48#	OPT600	250m*	25m	30	3.0	100m	1.5k	5A*	200m	10m	10	3.0u	1.5	10m	500m	1.0m	10m	NAD	CB4	PH16hZ	
49#	OPT602	250m*	25m	65	3.0	100m	1.5k	5A*	200m	10m	10	3.0u	1.5	10m	500m	1.0m	10m	NAD	CB4	PH16hZ	
50#	OPT604	250m*	25m	100	3.0	100m	1.5k	5A*	200m	10m	10	3.0u	1.5	10m	500m	1.0m	10m	NAD	CB4	PH16hZ	
51#	OPT700	250m*	25m	30	3.0	100m	2.5k	5A*	200m	10m	10	3.0u	1.5	10m	500m	1.0m	10m	NAD	CB4	PH16hZ	
52#	OPT702	250m*	25m	65	3.0	100m	2.5k	5A*	200m	10m	10	3.0u	1.5	10m	500m	1.0m	10m	NAD	CB4	PH16hZ	
53#	OPT704	250m*	25m	100	3.0	100m	2.5k	5A*	200m	10m	10	3.0u	1.5	10m	500m	1.0m	10m	NAD	CB4	PH16hZ	
54	FCD825	250m*	25m	30	3.0	60m	2.1k	5A*	500m	10m	10	3.5u#	1.5	60m	400m	2.0m	10m	NAD	CB4	PH16gZ	
55	FCD825C	250m*	25m	30	3.0	60m	5.0k	5A*	500m	10m	10	3.5u#	1.5	60m	400m	2.0m	10m	NAD	CB4	PH16gZ	
56#	OPT601	250m*	25m	30	3.0	100m	1.5k	5A*	500m	10m	10	3.0u	1.5	10m	500m	1.0m	10m	NAD	CB4	PH16hZ	
57#	OPT603	250m*	25m	65	3.0	100m	1.5k	5A*	500m	10m	10	3.0u	1.5	10m	500m	1.0m	10m	NAD	CB4	PH16hZ	
58#	OPT605	250m*	25m	100	3.0	100m	1.5k	5A*	500m	10m	10	3.0u	1.5	10m	500m	1.0m	10m	NAD	CB4	PH16hZ	
59#	OPT701	250m*	25m	30	3.0	100m	2.5k	5A*	500m	10m	10	3.0u	1.5	10m	500m	1.0m	10m	NAD	CB4	PH16hZ	
60#	OPT703	250m*	25m	65	3.0	100m	2.5k	5A*	500m	10m	10	3.0u	1.5	10m	500m	1.0m	10m	NAD	CB4	PH16hZ	
61#	OPT705	250m*	25m	100	3.0	100m	2.5k	5A*	500m	10m	10	3.0u	1.5	10m	500m	1.0m	10m	NAD	CB4	PH16hZ	
62#	OPT606	250m*	25m	30	3.0	100m	1.5k	5A*	1.0	10m	10	3.0u	1.5	10m	500m	1.0m	10m	NAD	CB4	PH16hZ	
63#	OPT607	250m*	25m	65	3.0	100m	1.5k	5A*	1.0	10m	10	3.0u	1.5	10m	500m	1.0m	10m	NAD	CB4	PH16hZ	
64#	OPT608	250m*	25m	100	3.0	100m	1.5k	5A*	1.0	10m	10	3.0u	1.5	10m	500m	1.0m	10m	NAD	CB4	PH16hZ	
65#	OPT706	250m*	25m	30	3.0	100m	2.5k	5A*	1.0	10m	10	3.0u	1.5	10m	500m	1.0m	10m	NAD	CB4	PH16hZ	
66#	OPT707	250m*	25m	65	3.0	100m	2.5k	5A*	1.0	10m	10	3.0u	1.5	10m	500m	1.0m	10m	NAD	CB4	PH16hZ	
67#	OPT708	250m*	25m	100	3.0	100m	2.5k	5A*	1.0	10m	10	3.0u	1.5	10m	500m	1.0m	10m	NAD	CB4	PH16hZ	
68	FCD885	250m*	30m	6.0	3.0	60m	4.0k	5A*	100m	10m	10	2.0u#	1.5	60m	300m	250u	20m				

# 26. PHOTOCOUPLER: PHOTOTRANSISTOR OUTPUT

IN ORDER OF: (1) PWR DISS., Pcase (2) IC (3) CURR. TRANSFER RATIO & (4) TYPE No.

LINE No.	TYPE No.	MAXIMUM RATINGS @ 25°C						TEMP RNG	COUPLED CHARACTS.				MAX INPUT DIODE CHAR.		MAX. O/P TRANS. CHAR.			P M S C H E M O T L L	S C H E M - A T I C	D R W I N G Ø-RND. ▭-RECT. △-STRIP * -CHIP		
		1 PWR DISS. (W)	2 COLL. CURR. (A)	C/E VOLT VCEO (V)	REV. VOLT VR (V)	FWD. CURR. IF (A)	ISOL. VOLT VIO (V)		3 CTR=IC/IF (MIN)	hF	IF (A)	VCE (V)	RESP. TIME (S)	VF (V)	IF (A)	V (V)	IC (A)				IF (A)	VCE(SAT)
1	4N22A	300m*	50m	35	2.0	40m	1.0k	5C*	250m	10m	5.0	15u#	1.3	10m	300m	2.5m	20m	NAD	CB2b	PH130		
2	OPI102	300m*	50m	35	2.0	40m	1.0k	5C*	250m	10m	5.0	3.0u#	1.3	10m	300m	2.5m	20m	NAD	CB2	PH130		
3	TIL102	300m*	50m	35	2.0	40m	1.0k	5C	250m	10m	5.0	3.0u#	1.3	10m	300m	2.5m	20m	NAD	CB2	PH130		
4	4N23	300m*	50m	35	2.0	40m	1.0k	5C*	600m	10m	5.0	15u#	1.3	10m	300m	5.0m	20m	NAD	CB2	PH130		
5	4N23A	300m*	50m	35	2.0	40m	1.0k	5C*	600m	10m	5.0	15u#	1.3	10m	300m	5.0m	20m	NAD	CB2b	PH130		
6	4N24	300m*	50m	35	2.0	40m	1.0k	5C*	1.0	10m	5.0	20u#	1.3	10m	300m	10m	20m	NAD	CB2	PH130		
7	4N24A	300m*	50m	35	2.0	40m	1.0k	5C*	1.0	10m	5.0	20u#	1.3	10m	300m	10m	20m	NAD	CB2b	PH130		
8	4N47	300m*	50m	35	2.0	40m	1.0k	5C*	1.0	1.0	5.0	20u#	1.5	10m	300m	1.0m	1.0m	NAD	CB13	PH130		
9	OPI103	300m*	50m	35	2.0	40m	1.0k	5C*	1.0	10m	5.0	3.0u#	1.3	10m	300m	10m	20m	NAD	CB2	PH130		
10	TIL103	300m*	50m	35	2.0	40m	1.0k	5C	1.0	10m	5.0	6.0u#	1.3	10m	300m	2.5m	20m	NAD	CB2	PH130		
11	4N48	300m*	50m	35	2.0	40m	1.0k	5C*	2.0	1.0	5.0	20u#	1.5	10m	300m	1.0m	1.0m	NAD	CB13	PH130		
12	4N49	300m*	50m	35	2.0	40m	1.0k	5C*	2.0	1.0	5.0	20u#	1.5	10m	300m	1.0m	1.0m	NAD	CB13	PH130		
13	H11D4	300m*	100m	7.0	6.0	60m	1.5k	5A*	100m	10m	10	5.0u	1.5	10m	400m	500u	10m	NAD	CB4	PH50Z		
14	H11D1	300m*	100m	7.0	6.0	60m	2.5k	5A*	200m	10m	10	5.0u	1.5	10m	400m	500u	10m	NAD	CB4	PH50Z		
15	H11D2	300m*	100m	7.0	6.0	60m	1.5k	5A*	200m	10m	10	5.0u	1.5	10m	400m	500u	10m	NAD	CB4	PH50Z		
16	H11D3	300m*	100m	7.0	6.0	60m	1.5k	5A*	200m	10m	10	5.0u	1.5	10m	400m	500u	10m	NAD	CB4	PH50Z		
17	CL19	300m*	200m	30	3.0	60m	2.5k	XA	60m	10m	10	3.0u#	1.5	16m	500m	2.0m	50m	NAD	CB4	PH11Z		
18	CL1506	300m*	200m	30	3.0	60m	2.5k	XA	60m	10m	10	15u#	1.5	16m	500m	2.0m	50m	NAD	CB4	PH11Z		
19	CL1506B	300m*	200m	30	3.0	60m	2.5k	XA	60m	10m	10	15u#	1.5	16m	500m	2.0m	50m	NAD	CB4	PH11Z		
20	CL17	300m*	200m	30	3.0	60m	2.5k	XA	120m	16m	400m	5.0u#	1.5	16m	500m	2.0m	16m	NAD	CB4	PH11Z		
21	CL18	300m*	200m	30	3.0	60m	2.5k	XA	200m	10m	10	4.0u#	1.5	16m	500m	2.0m	50m	NAD	CB4	PH11Z		
22	CL125	300m*	200m	40	4.0	60m	2.5k	XA	200m	10m	10	5.0u#	1.5	16m	400m	500u	10m	NAD	CB19	PH11Z		
23	CL126	300m*	200m	40	4.0	60m	2.5k	XA	400m	10m	10	5.0u#	1.5	16m	400m	500u	10m	NAD	CB19	PH11Z		
24	CL16	300m*	200m	40	3.0	60m	2.5k	XA	500m	10m	10	5.0u#	1.5	16m	500m	2.0m	50m	NAD	CB4	PH11Z		
25	CL14	300m*	200m	40	3.0	60m	2.5k	XA	1.5	10m	10	5.0u#	1.5	16m	500m	2.0m	50m	NAD	CB4	PH11Z		
26	JAN4N22	300m*	1.0	35	2.0	40m	1.0k	5C*	250m	10m	5.0	15u#	1.3	10m	300m	2.5m	20m	NAD	CB13	PH130		
27	JAN4N22A	300m*	1.0	35	2.0	40m	1.0k	5C*	250m	10m	5.0	15u#	1.3	10m	300m	2.5m	20m	NAD	CB13a	PH130		
28	JAN4N23	300m*	1.0	35	2.0	40m	1.0k	5C*	600m	10m	5.0	15u#	1.3	10m	300m	5.0m	20m	NAD	CB13	PH130		
29	JAN4N23A	300m*	1.0	35	2.0	40m	1.0k	5C*	600m	10m	5.0	15u#	1.3	10m	300m	5.0m	20m	NAD	CB13a	PH130		
30	JAN4N24	300m*	1.0	35	2.0	40m	1.0k	5C*	1.0	10m	5.0	20u#	1.3	10m	300m	10m	20m	NAD	CB13	PH130		
31	JAN4N24A	300m*	1.0	35	2.0	40m	1.0k	5C*	1.0	10m	5.0	20u#	1.3	10m	300m	10m	20m	NAD	CB13a	PH130		
32#	3C63B	330m	100m	30	7.0	100m	5.0k	5C*	200m	10m	5.0	5.0u#	1.4	100m	400m	2.0m	50m	NAD	CB1	PH25Z		
33#	3C63C	330m	100m	30	7.0	100m	5.0k	5C*	400m	10m	5.0	9.0u#	1.4	100m	400m	2.0m	50m	NAD	CB1	PH25Z		
34#	3C63	330m*	100m	30	7.0	100m	5.0k	5C*	5.0	10m	5.0	15u#	1.8	100m	400m	2.0m	50m	NAD	CB1	PH25Z		
35	OPI120	350m	50m	25	3.0	150m	1.5k	5A*	200m	10m	5.0	2.0u#	1.5	30m	500m	1.0m	30m	N	CB4	PH86Z		
36	OPI6100	400m	200	30	3.0	60m	1.5k	5A	100m	10m	5.0	5.0u	1.5	10m	400m	500u	10m	N	CB4	PH16Z		
37	ILD74	400m	20	3.0	100m	1.5k	5A	125m	16m	5.0	6.0u	1.3	100m	500m	2.0m	16m	NBC	CB5#	PH32Z			
38#	TLP504	400m	20	3.0	60m	2.0k	3A*	150m	10m	5.0	5.0u#	1.2	10m	400m	2.0m	40m	NAD	CB5#	PH56aZ			
39	OPI6000	400m	300	3.0	60m	1.5k	5A	200m	10m	5.0	5.0u	1.5	10m	400m	500u	10m	N	CB4	PH16Z			
40	MCT66	400m*	30m	3.0	60m	1.5k	5A*	60m	10m	10	15u#	1.5	20m	400m	2.0m	40m	NAD	CB5#	PH29Z			
41	ILCT6	400m	30m	7.0	3.0	60m	1.5k	5A	200m	10m	10	5.0u	1.5	60m	400m	2.0m	16m	NBC	CB5#	PH32Z		
42	MCT6	400m	30m	3.0	60m	1.5k	5A*	200m	10m	10	15u#	1.5	20m	400m	2.0m	16m	NAD	CB5#	PH29Z			
43	CNY35	400m	100m	30	6.0	60m	950	5A*	100m	10m	10	10u	1.5	10m	400m	500u	10m	NAD	CB12	PH50bZ		
44	CNY33	400m	100m	300	6.0	60m	1.5k	5A*	200m	10m	10	5.0u	1.5	10m	400m	500u	10m	NAD	CB4	PH50bZ		
45	H11A520	400m*	100m	30	6.0	60m	5.0k	5A*	200m	10m	10	10u	1.5	10m	400m	2.0m	20m	NAD	CB4	PH50bZ		
46	H11A550	400m*	100m	30	6.0	60m	5.0k	5A*	500m	10m	10	10u	1.5	10m	400m	2.0m	20m	NAD	CB4	PH50bZ		
47	CNY51	400m	100m	70	6.0	60m	5.0k	5A*	1.0	10m	10	5.0u	1.6	60m	400m	2.0m	20m	NAD	CB4	PH50bZ		
48	H11A5100	400m*	100m	30	6.0	60m	5.0k	5A*	1.0	10m	10	10u	1.5	10m	400m	2.0m	20m	NAD	CB4	PH50bZ		
49	ILQ74	500m	20	3.0	100m	1.5k	5A	125m	16m	5.0	6.0u	1.3	100m	500m	2.0m	16m	NBC	CB6#	PH33Z			
50	4N35	500m*	60m	30	6.0	60m	3.5k	5A*	1.0	10m	10	10u	1.5	10m	300m	500u	10m	NAD	CB4	MO001AMZ		
51	4N36	500m*	60m	30	6.0	60m	2.5k	5A*	1.0	10m	10	10u	1.5	10m	300m	500u	10m	NAD	CB4	MO001AMZ		
52	4N37	500m*	60m	30	6.0	60m	1.5k	5A*	1.0	10m	10	10u	1.5	10m	300m	500u	10m	NAD	CB4	PH50Z		
53	H11A10	500m*	100m	30	6.0	60m	1.5k	5A*	100m	10m	10	5.0u	1.5	10m	400m	500u	10m	NAD	CB4	PH50Z		
54	H11AA2	500m*	100m	30	6.0	60m	1.5k	5A*	100m	10m	10	5.0u	1.8	10m	400m	500u	10m	NAD	CB12	PH50Z		
55	H11AA1	500m*	100m	30	6.0	60m	1.5k	5A*	200m	10m	10	5.0u	1.5	10m	400m	500u	10m	NAD	CB12	PH50Z		

# 27. PHOTOCOUPLER: PHOTODARLINGTON OUTPUT

IN ORDER OF: (1) PWR DISS. P-case (2) IC (3) CURR. TRANSFER RATIO & (4) TYPE No.

LINE No.	TYPE No.	MAX. RATINGS @ 25°C				TEMP RING CODE	COUPLED CHARACTS.				MAX. INPUT		MAX O/P DARL. CHARACTS.		POLAR. & MATER.	SCHEMATIC	DRAWING	
		1 PWR DISS. Pcase (W)	2 COLL. CURR. IC (A)	C/E VOLT VCEO (V)	REV. VOLT VR (V)		FWD. CURR. IF (A)	ISOL. VOLT VIO (V)	3 CTR=IC/IF (MIN)	CURR TRANSF RATIO	RESP. TIME (S)	DIODE CHAR.		DARK CURR.				
												FWD. VOLT VF (V)	IF (A)	VCE (V)				IF (A)
1	STOC1400					3.0k	48*	300m	2.0m	6.0	25u#	1.5	15m	1.0u	10	AD	PH90	
2	STOC1401					3.0k	48*	900m	2.0m	6.0	30u#	1.5	15m	250n	10	AD	PH90	
3	ILCA-30			30	3.0	2.5k		1.0	10m				1.0n	5.0			PH31*	
4	ILCA-55			55	3.0	2.5k		1.0	10m				1.0n	5.0			PH31*	
5	STOC1402					3.0k	48*	2.7	2.0m	6.0	60u#	1.5	15m	250n	10	AD	PH90	
6	STOC1300					1.5k	47*	5.0	3.0m	6.0	50u#	1.7	15m	100n	10	AD	PH13	
7	MOC1200		30m			1.5k											PH1	
8#	5C75A		100m	60	7.0	500	5C	4.0	2.0m	5.0	17u#	1.3	2.0m	200n	5.0	NAD	CC5	
9#	5C75B		100m	60	7.0	500	5C	10	2.0m	5.0	17u#	1.3	2.0m	200n	5.0	NAD	CC5	
10	SPX2003-1	85m		10	2.0	1.0	500	67*	2.7	10m	50u#	1.3	50m	250n	10	NAD	CC3	
11	SPX2003-2	85m		10	2.0	1.0	500	67*	2.7	10m	50u#	1.3	50m	250n	10	NAD	CC3	
12	OPI113	100m		25	3.0	40m	10k	48	500m	16m	2.0	3.2u#	1.5	10m	100n	10	NAD	PH81
13	4N45	100m*	60m*	7.0	5.0	40m	3.0k*	47*	2.5	1.0m	5.0n#	1.7	1.0m	250u	5.0	NCA	CC7	
14	MCC671	100m*	60m*	5.0	5.0	20m	3.0k*	07*	3.0	1.6m	4.5*	1.0uΔ	1.7	1.6m	100u	18	NBC	CC8
15	4N46	100m*	60m*	20	5.0	40m	3.0k*	47*	3.5	500u	1.0	5.0n#	1.7	1.0m	100u	18	NCA	CC7
16	MCC670	100m*	60m	5.0	5.0	20m	3.0k*	07*	4.0	500u	4.5*	10uΔ	1.7	1.6m	100n	10	NBC	CC8
17	TIL156	150m		30	3.0	100m	3.5k	5F%	3.0	10m	1.0	300u#	1.5	10m	100n	10	NBC	PH142
18	TIL157	150m		30	3.0	100m	3.5k	5F%	3.0	10m	2.0	300u#	1.5	10m	100n	10	NBC	PH142a
19	H11B3	150m*	100m	25	3.0	60m	1.5k	5A*	1.0	1.0m	5.0	125u#	1.5	50m	100n	10	NAD	CC1
20	H11B2	150m*	100m	25	3.0	60m	1.5k	5A*	2.0	1.0m	5.0	100u	1.5	10m	100n	10	NAD	CC1
21	H11B1	150m*	100m	25	3.0	60m	2.5k	5A*	5.0	1.0m	5.0	125u#	1.5	10m	100n	10	NAD	CC1
22	H11G3	150m*	100m	55	6.0	60m	2.1k	5A	200	1.0m	5.0	5.0uΔ	1.5	10m	100n	30	NBC	CC9
23	H15B2	150m*	150m	25	3.0	60m	4.0k	58*	2.0	5.0m	5.0	100u	1.7	10m	100n	10	NAD	CC3
24	H15B1	150m*	150m	25	3.0	60m	4.0k	58*	4.0	5.0m	5.0	125u#	1.7	10m	100n	10	NAD	CC3
25	H11G1	150m*	150m	100	6.0	60m	3.5k	5A	500	1.0m	5.0	5.0uΔ	1.5	10m	100n	80	NBC	CC9
26	H11G2	150m*	150m	80	6.0	60m	3.5k	5A	500	1.0m	5.0	5.0uΔ	1.5	10m	100n	60	NBC	CC9
27#	PC505	170m		35	6.0	50m	1.5k	2A*	4.0	10m	2.0	60u#	1.4	10m	1.0u	10	N	CC3b
28	OPI153	200m		25	3.0	150	50k	48	250m	20m	5.0	25u#	1.5	10m	100n	10	NAD	PH82
29#	PS2002	200m*	50m	40	4.0	50m	2.5k	28*	1.0	5.0m	2.0	120u*	1.9	5.0m	400n	10	NAD	CC3b
30	CLA7D	200m	100m	40	3.0	40m	6.0k	4A*	4.0	10m	10	150u#	1.5	10m	100n	10	N	CC3
31#	PC515	225m		35	5.0	50m	1.5k	2A*	3.0	5.0m	2.0	650u#		1.0u	10	N	CC3b	
32	4N31	250m*		10	3.0	80m	1.5k	5A*	500m	10m	10*	5.0u	1.5	10m	100n	10	AD	CC1
33	SPX314-3B	250m		30	2.0	150m	5.0k	5A*	800m	10m	10	32u#	2.0	50m	1.0u	10	NAD	CC3a
34	SPX314-6A	250m		10	2.0	150m	5.0k	5A*	800m	10m	10	32u#	2.0	50m	1.0u	10	NAD	CC3a
35	4N29	250m*		30	3.0	80m	2.5k	5A*	1.0	10m	10*	5.0u	1.5	10m	100n	10	AD	CC1
36	4N29A	250m*		30	3.0	80m	2.5k	5A*	1.0	10m	10*	5.0u	1.5	10m	100n	10	AD	CC1
37	4N30	250m*		30	3.0	80m	1.5k	5A*	1.0	10m	10*	5.0u	1.5	10m	100n	10	AD	CC1
38	SPX314-7B	250m		15	6.0	150m	5.0k	5A*	1.5	10m	5.0	50u#	1.5	50m	250n	10	NAD	CC3a
39	SPX314-8A	250m		15	6.0	150m	5.0k	5A*	1.5	10m	5.0	50u#	1.5	50m	250n	10	NAD	CC3a
40	SPX2082	250m		15	2.0	50m	1.0k	5C*	1.5	10m	5.0	50u	1.3	50m	250n	10	NAD	CC4a
41	FCD860D	250m		30	3.0	80m	6.0k	5A*	2.0	1.0m	1.0	80u#	1.5	20m	100n	10	NAD	CC1
42	OPI7320	250m		30	3.0	60m	6.0k	58	2.0	5.0m	5.0		1.5	10m	100n	10		PH128
43	TIL113	250m		30	3.0	100m	1.5k	5F	3.0	10m	1.0	50u#	1.5	10m			NBC	PH16
44	TIL119	250m		30	3.0	100m	1.5k	5F	3.0	10m	2.0	50u#	1.5	10m			NBC	PH16
45	TIL127	250m		30	3.0	100m	5.0k	5F%	3.0	10m	1.0	50n#	1.5	10m	100n	10	NAD	CC1
46	TIL128	250m		30	3.0	100m	5.0k	5F%	3.0	10m	2.0	50n#	1.5	10m	100n	10	NAD	CC1
47	FCD865D	250m		30	3.0	80m	6.0k	5A*	4.0	500u	1.0	80u#	1.5	20m	100n	10	NAD	CC1
48	OPI7340	250m		30	3.0	60m	6.0k	58	4.0	5.0m	5.0		1.5	10m	100n	10		PH128
49	4N32	250m*		30	3.0	80m	2.5k	5A*	5.0	10m	10*	5.0u	1.5	10m	100n	10	AD	CC1
50	4N32A	250m*		30	3.0	80m	2.5k	5A*	5.0	10m	10*	5.0u	1.5	10m	100n	10	AD	CC1
51	4N33	250m*		30	3.0	80m	1.5k	5A*	5.0	10m	10*	5.0u	1.5	10m	100n	10	AD	CC1
52	MOC119	250m	45m*	30	3.0	100m	7.0k	5A*	3.0	10m	2.0	50u#	1.5	10m	100n	10	NAD	CE12
53	H11BX522	250m*	100m	25	3.0	60m	1.0k	5A*	2.0	500u	6.0	3.0u	1.1	500u	10	12	NAD	CC1
54	CNY31	250m	100m	30	3.0	60m	3.5k	58*	4.0	5.0m	5.0	125uΔ	1.7	10m	100n	10	NAD	CC3
55#	CNY48	250m	100m	30	3.0	60m	1.5k	5A*	6.0	10m	1.0	50u#	1.5	10m	100n	10	NAD	CC1
56	MOC8030	250m	150m*	80	3.0	80m	7.0k	5A*	3.0	10m	1.5	13u#	2.0	10m	1.0m	60	NAD	CE12
57	OPI3150	250m	150m	30	3.0	60m	1.5k	5A	3.0	10m	2.0	3.0u#	1.5	10m	100n	10	NAD	CC1
58	OPI3151	250m	150m	30	3.0	60m	1.5k	5A	3.0	10m	1.0	3.0u#	1.5	10m	100n	10	NAD	CC1
59	OPI3152	250m	150m	55	3.0	60m	1.5k	5A	3.0	10m	1.0	3.0u#	1.5	10m	100n	10	NAD	CC1
60	OPI3250	250m	150m	30	3.0	60m	2.5k	5A	3.0	10m	2.0	3.0u#	1.5	10m	100n	10	NAD	CC1
61	OPI3251	250m	150m	30	3.0	60m	2.5k	5A	3.0	10m	1.0	3.0u#	1.5	10m	100n	10	NAD	CC1
62	OPI3252	250m	150m	55	3.0	60m	2.5k	5A	3.0	10m	1.0	3.0u#	1.5	10m	100n	10	NAD	CC1
63	MOC8050	250m	150m*	80	3.0	80m	7.0k	5A*	5.0	10m	1.5	13u#	2.0	10m	1.0m	60	NAD	CE12
64	OPI3153	250m	150m	30	3.0	60m	1.5k	5A	5.0	1.0m	5.0	3.0u#	1.5	10m	100n	10	NAD	CC1
65	OPI3253	250m	150m	30	3.0	60m	2.5k	5A	5.0	1.0m	5.0	3.0u#	1.5	10m	100n	10	NAD	CC1
66#	PS2004	250m*	200m	30	5.0	50m	2.5k	28*	13	5.0m	2.0	100u#	1.4	20m	400n	10	NAD	CC1
67	MCA231	275m*		30	3.0	60m	1.5k	5A*	5.0	10m	5.0	80u#	1.5	10m	100n	10	NAD	CC1
68	MCA230	300m*		30	3.0	60m	1.5k	5A*	1.0	10m	5.0	35u	1.5	60m	100n	10	NAD	CC1
69	MCA255	300m*		55	3.0	60m	1.5k	5A*	1.0	10m	5.0	35u	1.5	60m	100n	10	NAD	CC1
70	OPI130	300m*	50m	25	2.0	40m	1.0k	5C*	2.0	10m	2.0	50u#	1.5	10m	100n	10	NAD	CC4a
71	H11B255	300m*	100m	55	3.0	60m	660	5A*	1.0	10m	5.0	125u	1.5	20m	100n	10	NAD	CC1
72	ILA30	300m	100m	30	3.0	60m	1.5k	5A	1.0	10m	5.0	10u	1.5	60m	1.0u	5.0	NBC	PH31
73	ILA55	300m	100m	55	3.0	60m	1.5k	5A	1.0	10m	5.0	10u	1.5	60m	1.0u	5.0	NBC	PH31
74	FCD860	300m*	100m	30	3.0	80m	2.1k	5A*	2.0	1.0m	1.0	80u#	1.5	20m	100n	10	NAD	CC1
75	FCD860C	300m*	100m	30	3.0	80m	5.0k	5A*	2.0	1.0m	1.0	80u#	1.5	20m	100n	10	NAD	CC1
76	FCD865	300m*	100m	30	3.0	80m	2.1k	5A*	4.0	500u	1.0	80u#	1.5	20m	100n	10	NAD	CC1
77	FCD865C	300m*	100m	30	3.0	80m	5.0k	5A*	4.0	500u	1.0	80u#	1.5	20m	100n	10	NAD	CC1
78	FCD850	300m*	125m	30	3.0	60m	2.1k	5A*	1.0	10m	5.0	15u#	1.5	20m	100n	10	NAD	CC1

# 28. PHOTOCOUPLER: PHOTOTHYRISTOR OUTPUT

IN ORDER OF: (1)MAX. IT(RMS) (2)MAX.OFF-ST V  
(3)INPUT TRIGGER CURR. & (4) TYPE No.

LINE No.	TYPE No.	MAXIMUM RATINGS @ 25°C						TEMP. RNG. CODE	COUPLED CHARACTS.			INPUT DIODE CHARACTS.		OUTPUT THYR. CHAR.			MATER. & FEAT. MAT	SCHEM -ATIC	DRAWING Ø-RND. Δ-STRIP *-CHIP
		1 IT (RMS) (A)	2 REP OFF-ST V.VDRM (V)	SURGE CURR. (A)	REV VOLT VR (V)	FWD. CURR. (A)	ISOL. VOLT VIO (V)		3 MAX INPUT TRIGGER CUR (A)	TURN ON ton (S)	VF (V)	IF (A)	ON-STATE VOLT (V)	MAX REV I-IDM Δ-IRM (A)					
1#	TLP505D	100m	200	1.0	5.0	50m	2.0k	3A	15m	6.0	10u	1.2	10m	1.3	100m	100u	BC	CD1	PH16c
2#	TLP506D	100m	200	1.0	5.0	50m	2.0k	3A	15m	6.0	10u	1.2	10m	1.3	100m	100u	BC	CD2	PH56a
3	MOC3011	100m	250	1.2	3.0	50m	7.5k	4A <sup>s</sup>	10m	3.0		1.5	10m	3.0	100m <sup>s</sup>	100n	BC AD	CD3	PH129
4	MOC3010	100m	250	1.2	3.0	50m	7.5k	4A <sup>s</sup>	15m	3.0		1.5	10m	3.0	100m <sup>s</sup>	100n	BC AD	CD3	PH129
5#	TLP505G	100m	400	1.0	5.0	50m	2.0k	3A	15m	6.0	10u	1.2	10m	1.3	100m	100u	BC	CD1	PH16c
6#	TLP506G	100m	400	1.0	5.0	50m	2.0k	3A	15m	6.0	10u	1.2	10m	1.3	100m	100u	BC	CD2	PH56a
7	MCS6200	150m			3.0	40m	1.5k	5A*	14m	100	4.0u	1.5	40m	1.3	100m	2.0u		CD2	PH29
8	MCS6201	150m			3.0	40m	2.5k	5A*	14m	100	4.0u	1.5	40m	1.3	100m	2.0u		CD2	PH29
9	MCS2	150m	200		3.0	40m	1.5k	5A*	14m	100	2.0u	1.5	40m	1.3	100m	2.0u	BC	CD1	PH11
10	MCS2400	150m	400		3.0	40m	1.5k	5A*	14m	100	4.0u	1.5	40m	1.3	100m	2.0u	BC	CD1	PH11
11	SCS11C1	300m	200	5.0	6.0	60m	5.0k	5A	11m	50		1.5	10m	1.5	140m	50u		CD1	PH50c
12	SCS11C3	300m	200	5.0	6.0	60m	5.0k	5A	14m	50		1.5	10m	1.5	140m	50u		CD1	PH50c
13	CNY30	300m <sup>s</sup>	200	10	6.0	60m	1.5k	5A*	20m	50	9.0u	1.5	10m	1.3	300m	50u	BC AD	CD1	PH50b
14	H11C1	300m	200	5.0	6.0	60m	2.5k	5A*	20m	50		1.5	10m	1.3	300m	50u	AD	CD1	PH50
15	H11C2	300m	200	5.0	6.0	60m	2.1k	5A*	20m	50		1.5	10m	1.3	300m	50m	AD	CD1	PH50
16	4N39	300m <sup>s</sup>	200	10	200	60m	660	5A*	30m	50	50m	1.5	10m	1.3	300m	50uΔ	AD	CD1	PH50b
17	H11C3	300m	200	5.0	6.0	60m	1.5k	5A*	30m	50		1.5	10m	1.3	300m	50u	AD	CD1	PH50
18	CNY34	300m <sup>s</sup>	400	10	6.0	60m	1.5k	5A*	20m	50	9.0u	1.5	10m	1.3	300m	150u	BC AD	CD1	PH50b
19	H11C4	300m	400	5.0	6.0	60m	2.5k	5A*	20m	50		1.5	10m	1.3	300m	150u	AD	CD1	PH50a
20	H11C5	300m	400	5.0	6.0	60m	2.1k	5A*	20m	50		1.5	10m	1.3	300m	150u	AD	CD1	PH50a
21	4N40	300m <sup>s</sup>	400	10	400	60m	660	5A*	30m	50	50m	1.5	10m	1.3	300m	150uΔ	AD	CD1	PH50b
22	H11C6	300m	400	5.0	6.0	60m	1.5k	5A*	30m	50		1.5	10m	1.3	300m	150u	AD	CD1	PH50a
23	H74C1	400m <sup>*</sup>	200	5.0	6.0	60m	1.5k	07*					1.3	250m	50u	AD	CD1	PH50a	
24	H74C2	400m <sup>*</sup>	400	5.0	6.0	60m	1.5k	07*					1.3	250m	50u	AD	CD1	PH50a	
25▼	AND516	1.0 %	600	10		50m	1.5k	38	10m			2.0	30m	2.0	2.0	100u	AD BC	CD4	PH136

# 29. PHOTOCOUPLER: PHOTOCIRCUIT (IC) OUTPUT

IN ORDER OF: (1) OUTPUT FUNCTION CODE  
(2) PWR DISS. Pcase (3) SUPP. VOLT & (4) TYPE No

LINE No.	TYPE No.	OUTPUT		I/P EMIT TER CODE	MAX. RATINGS @ 25°C				TEMP RNG. CODE	PROP. DELAY TIME (tpd)	MAX IN @VR IR (A)	OUTPUT LOGIC LEVEL		DESCRIPTION	SCHEM -ATIC	DRAWING Ø-RND. ▽-RECT. Δ-STRIP *-CHIP	
		FUN -CT	SENS ELEM CODE		2 PWR. DISS. Pcase (W)	3 SUPP. REV. ΔVs Pk-Pk (V)	VOLT VR (V)	FWD. CURR. IF (A)				ISOL. VOLT VIO (V)	'1' V. (V)				MAX. '0' V. (V)
1	MCL601	31-10	LED	100m*	8.0	3.0	20m	2.0k∅	07*	200n	10u		.400	CE10	PH29∇		
2	MCL611	31-10	LED	100m*	8.0	3.0	20m	2.0k∅	07*	200n	10u		.400	CE10	PH29∇		
3#	6EX77A	31-10	LED	230m	15	3.0	50m	500	5C	100u				CE2	PH28∅		
4#	6EX77B	31-10	LED	230m	15	7.0	50m	500	5C	100u				CE2	PH28∅		
5	IL100	31-11	LED	100m	5.5	5.0	10m	2.5k	07*	65n		2.0	.80	CE14	PH32∇		
6	IL101	31-11	LED	100m	5.5	5.0	10m	1.5k	07*	100n		2.0	.80	CE14	PH32∇		
7	6N138	32-10	LED	35m		5.0	20m		07*	60u∇				CE5	PH29∇		
8	6N139	32-10	LED	35m		5.0	20m		07*	60u∇				CE5	PH29∇		
9	HCPL-2730	32-10s	LED	35m#	7.0	5.0	20m#	3.0k	48*	10u	10u	\$	.40	CE19#	PH29∇		
10	HCPL-2530	32-10s	LED	35m#	15	5.0	25m#	3.0k	5A*	400n	10u	15∇\$	.40	CE3#	PH29∇		
11	HCPL-2531	32-10s	LED	35m#	15	5.0	25m#	3.0k	5A*	300n	10u	15∇\$	.40	CE3#	PH29∇		
12	HP5082-4354	32-10s	LED	35m#	15	5.0	25m#	3.0k	5A*	400n	10u	\$	.40	CE3	PH29∇		
13	HP5082-4355	32-10s	LED	35m#	15	5.0	25m#	3.0k	5A*	400n	10u	\$	.40	CE3	PH29∇		
14	HCPL-2731	32-10s	LED	35m#	18	5.0	20m#	3.0k	48*	100u	10u	\$	.40	CE19#	PH29∇		
15	6N135	32-10	LED	45m		5.0	25m		5A*	1.5u∇				CE6a	PH29∇		
16	6N136	32-10	LED	45m		5.0	25m		5A*	1.5u∇				CE6a	PH29∇		
17	SCH4350	32-10	LED	45m	15	5.0	25m	3.0k	5A*	1.5u	10u	5.0t\$	.40	CE6a	PH29∇		
18	SCH4351	32-10	LED	45m	15	5.0	25m	3.0k	5A*	800n	10u	5.0t\$	.40	CE6a	PH29∇		
19	HP5082-4370	32-10s	LED	100m	7.0	5.0	20m	3.0k	07*	4.0u	10u	\$	.40	CE5	PH29∇		
20	HCPL-2502	32-10s	LED	100m	15	5.0	25m	3.0k	5A*	800n∇	10u	15∇\$	.40	CE6	PH29∇		
21	HP5082-4350	32-10s	LED	100m	15	5.0	25m	3.0k	5A*	1.5u∇	10u	\$	.40	CE6	PH29∇		
22	HP5082-4351	32-10s	LED	100m	15	5.0	25m	3.0k	5A*	800n∇	10u	\$	.40	CE6	PH29∇		
23	HP5082-4352	32-10s	LED	100m	15	5.0	25m	3.0k	5A*	800n∇	10u	\$	.40	CE6	PH29∇		
24	HP5082-4371	32-10s	LED	100m	18	5.0	20m	3.0k	07*	5.0u		\$	.40	CE5	PH29∇		
25	SCH4370	32-10	LED	135m		5.0	20m	3.0k	07*	35u∇				CE5	PH29∇		
26	SCH4371	32-10	LED	135m		5.0	20m	3.0k	07*	60u∇				CE5	PH29∇		
27#	6D73	32-10	LED	280m		7.0	100m	5.0k	5C	100u				CE1	PH27∇		
28	HCPL-2602	33-10s	LED	40m	7.0	.95 #	60m	3.0k	07*	45n	5.0m	\$	.60	CE18	PH29∇		
29	HCPL-2770	34-10s	LED	50m	20	5.0	10m	1.5k	5A*	35u	10u	15∇\$		CE21#	PH30∇		
30	C30121	35-10	LED			2.0	50m	1.0k	48*	700n#				PH46∅			
31	STOC1410	35-10	LED					3.0k	48*	1.0u#∇				PH80∅			
32	STOC1411	35-10	LED					3.0k	48*	1.0u#∇				PH80∅			
33	STOC1412	35-10	LED					3.0k	48*	1.0u#∇				PH80∅			
34	SPX0003-1	35-10	LED	50m		2.0	30m	500	6A*	800n				CE9b	PH38∇		
35	SPX0003-2	35-10	LED	50m		6.0	30m	500	6A*	800n				CE9b	PH38∇		
36	HCPL-2601	36-10s	LED	40m	7.0	5.0	20m	3.0k	07*	35n	10u	7.0∇\$	.60	CE17	PH29∇		
37	HP5082-4361	36-10s	LED	40m	7.0	5.0	20m	3.0k	07*	35n	10u	\$	.60	CE17	PH29∇		
38	HP5082-4365	36-10s	LED	40m	7.0	5.0	20m	1.5k	5C*	55n	10u	\$	.60	CE4	PH30∇		
39	HCPL-2630	36-10s	LED	60m	7.0	5.0	10m	3.0k	07*	55n	10u	7.0∇	.60	CE15#	PH29∇		
40	HP5082-4364	36-10s	LED	60m	7.0	5.0	10m	3.0k	07*	55n	10u	\$	.60	CE15#	PH29∇		
41	6N137	36-10	LED	85m	7.0	7.0	10m	3.0k	5A*	75n∇				CE17	PH29∇		
42	HP5082-4360	36-10	LED	85m	7.0	5.0	10m	3.0k	07*	45n	10u	\$	.60	CE17	PH29∇		
43	6N134	36-10	LED	348m%		5.0	20m	1.5k	5A*	90n∇	10u	5.5t	.60	CE16	PH30a		



### 35. DISPLAY: LED

IN ORDER OF: (1) NO. DIGITS (2) TYPE DISPLAY  
(3) CHAR. HT. (4) PWR. DISS. Pcase & (5) TYPE No.

LINE No.	5	TYPE No.	1	2	C O L R	3	MAX. RATINGS @ 25°C				TEMP RING. CODE	MAX. FWD. VOLT		PEAK WAVE-LENGTH λp (m)	LUMINOUS INTENSITY Iv (cd)		LUMIN -ANCE Lv *FT-L (nt)	MATERIAL & FEATURES MAT	SCHEM -ATIC	DRAWING Ø-RND. ▽-RECT. Δ-STRIP *CHIP
							4	IF DISS. Pcase (W)	VR Δ-/seg #/dio (A)	VR Δ-/seg (V)		VF (V)	IF (A)		IF (A)					
1	EZ19G	1	01SE	5	190m	115m	50m	5.0	5A	2.4	10m	560n	3.0m	30m		BD		PY259		
2	EZ19R	1	01SE	2	190m	115m	50m	5.0	5A	2.4	10m	697n	3.0m	30m		BD		PY259		
3	EZ19Y	1	01SE	4	190m	115m	50m	5.0	5A	2.4	10m	580n	3.0m	30m		BD		PY259		
4	EZ20G	1	01SE	5	190m	115m	50m	5.0	5A	2.4	10m	560n	3.0m	30m		BD		PY259a		
5	EZ20R	1	01SE	2	190m	115m	50m	5.0	5A	2.4	10m	697n	3.0m	30m		BD		PY259a		
6	EZ20Y	1	01SE	4	190m	115m	50m	5.0	5A	2.4	10m	580n	3.0m	30m		BD		PY259a		
7	HP5082-4732	1	01SH	2	120m			500m	5A	5.0	30m	655n	700u	12m		CA Vth 2.9Vmax	EA16	PY53		
8	RLC410	1	01SH	2				500m	5A	4.5	50m	650n	400u	3.0				PY423		
9	558-0101-001	1	02FH	2				100m	5.0	2.0	20m	655n	800u	20m				PY235		
10	558-0101-003	1	02FH	2				100m	5.0	2.0	20m	655n	800u	20m				PY235		
11	558-0102-001	1	02FH	2				100m	7.0	5A	5.0	20m	655n	800u	5.0			PY235		
12	558-0102-003	1	02FH	2				100m	5.0	2.0	20m	655n	800u	5.0				PY235		
13	559-0101-001	1	02FH	2				100m	2.0	2.0	20m	655n	800u	20m				PY235a		
14	559-0101-003	1	02FH	2				100m	2.0	2.0	20m	655n	800u	20m				PY235a		
15	559-0102-001	1	02FH	2				100m	2.0	3.0	20m	655n	800u	5.0				PY235a		
16	559-0102-003	1	02FH	2				100m	3.0	5A	5.0	20m	655n	800u	5.0			PY235a		
17	HP5082-4787	1	02FH	2				100m*	50m	4.0	20m	655n	1.0m	20m		CA Isolat Case		PY371		
18	558-0201-001	1	02FH	5				112m	40m	5.0	2.8	10m	560n	1.5m	10m			PY235		
19	558-0201-003	1	02FH	5				112m	40m	5.0	2.8	10m	560n	1.5m	10m			PY235		
20	558-0202-001	1	02FH	5				112m	7.0	2A	5.0	20m	560n	2.0m	5.0			PY235		
21	558-0202-003	1	02FH	5				112m	5.0	2.0	20m	560n	2.0m	5.0				PY235		
22	558-0301-001	1	02FH	4				112m	40m	5.0	2A	2.4	10m	580n	1.5m	10m			PY235	
23	558-0301-003	1	02FH	4				112m	40m	5.0	2A	2.4	10m	580n	1.5m	10m			PY235	
24	558-0302-001	1	02FH	4				112m	7.0	2A	5.0	20m	580n	2.0m	5.0			PY235		
25	558-0302-003	1	02FH	4				112m	5.0	2.0	20m	580n	2.0m	5.0				PY235		
26	559-0201-001	1	02FH	5				112m	2.8	10m	2A	2.8	10m	560n	800u	20m			PY235a	
27	559-0201-003	1	02FH	5				112m	2.8	10m	2A	2.8	10m	560n	800u	20m			PY235a	
28	559-0202-001	1	02FH	5				112m	3.0	3.0	2A	5.0	20m	560n	1.5m	5.0			PY235a	
29	559-0202-003	1	02FH	5				112m	3.0	3.0	2A	5.0	20m	560n	1.5m	5.0			PY235a	
30	559-0301-001	1	02FH	4				112m	2.4	10m	2A	2.4	10m	580n	800u	20m			PY235a	
31	559-0301-003	1	02FH	4				112m	2.4	10m	2A	2.4	10m	580n	800u	20m			PY235a	
32	559-0302-001	1	02FH	4				112m	3.0	3.0	2A	5.0	20m	580n	1.5m	5.0			PY235a	
33	559-0302-003	1	02FH	4				112m	3.0	3.0	2A	5.0	20m	580n	1.5m	5.0			PY235a	
34	559-2101-001	1	02FH	2				120m	30m	5.0	5A	3.0	10m	635n	4.0m	10m			PY235a	
35	559-2101-003	1	02FH	2				120m	30m	5.0	5A	3.0	10m	635n	4.0m	10m			PY235a	
36	559-2201-001	1	02FH	5				120m	30m	5.0	5A	3.0	10m	565n	3.0m	20m			PY235a	
37	559-2201-003	1	02FH	5				120m	30m	5.0	5A	3.0	10m	565n	3.0m	20m			PY235a	
38	559-2301-001	1	02FH	4				120m	30m	5.0	5A	3.0	20m	585n	3.0m	10m			PY235a	
39	559-2301-003	1	02FH	4				120m	30m	5.0	5A	3.0	20m	585n	3.0m	10m			PY235a	
40	HP5082-4587	1	02FH	4				120m*	35m	5.0	5A	3.0	20m	583n	2.5m	20m		CA Isolat Case	PY371	
41	HP5082-4687	1	02FH	2				120m*	35m	5.0	5A	3.0	20m	635n	2.5m	20m		CA Isolat Case	PY371	
42	HP5082-4987	1	02FH	5				120m*	35m	5.0	5A	3.0	25m	565n	1.6m	25m		BD Isolat Case	PY371	
43	559-0103-001	1	02FH	2				180m	20m	7.0	5.0	12	15m	665n	800u	15m			PY235a	
44	559-0103-003	1	02FH	2				180m	20m	7.0	5.0	12	15m	665n	800u	15m			PY235a	
45	249-7867-3331-504	1	02FH	2				281m	64m			47	3.6	18m				PY234		
46	249-7967-3332-504	1	02FH	5				281m	64m			47	3.6	18m				PY234		
47	249-8067-3333-504	1	02FH	4				281m	64m			47	3.6	18m				PY234		
48	249-8167-3331-504	1	02FH	2				281m	64m			47	3.6	18m				PY234		
49	249-8267-3332-504	1	02FH	5				281m	64m			47	3.6	18m				PY234		
50	249-8367-3333-504	1	02FH	4				281m	64m			47	3.6	18m				PY234		
51	507-4756-3331-500	1	02FH	2				281m	64m			47	3.6	18m				PY233		
52	507-4856-3332-500	1	02FH	5				281m	64m			47	3.6	18m				PY233		
53	507-4956-3333-500	1	02FH	3				281m	64m			47	3.6	18m				PY233		
54	249-7868-3331-504	1	02FH	2				281m	90m			47	5.0	18m				PY234		
55	249-7968-3332-504	1	02FH	5				281m	90m			47	5.0	18m				PY234		
56	249-8068-3333-504	1	02FH	4				281m	90m			47	5.0	18m				PY234		
57	249-8168-3331-504	1	02FH	2				281m	90m			47	5.0	18m				PY234		
58	249-8268-3332-504	1	02FH	5				281m	90m			47	5.0	18m				PY234		
59	249-8368-3333-504	1	02FH	4				281m	90m			47	5.0	18m				PY234		
60	507-4757-3331-500	1	02FH	2				281m	90m			47	5.0	18m				PY233		
61	507-4857-3332-500	1	02FH	5				281m	90m			47	5.0	18m				PY233		
62	507-4957-3333-500	1	02FH	3				281m	90m			47	5.0	18m				PY233		
63	249-7869-3331-504	1	02FH	2				281m	108m			47	6.0	18m				PY234		
64	249-7969-3332-504	1	02FH	5				281m	108m			47	6.0	18m				PY234		
65	249-8069-3333-504	1	02FH	4				281m	108m			47	6.0	18m				PY234		
66	249-8169-3331-504	1	02FH	2				281m	108m			47	6.0	18m				PY234		
67	249-8269-3332-504	1	02FH	5				281m	108m			47	6.0	18m				PY234		
68	249-8369-3333-504	1	02FH	4				281m	108m			47	6.0	18m				PY234		
69	507-4758-3331-500	1	02FH	2				281m	108m			47	6.0	18m				PY233		
70	507-4858-3332-500	1	02FH	5				281m	108m			47	6.0	18m				PY233		
71	507-4958-3333-500	1	02FH	3				281m	108m			47	6.0	18m				PY233		
72	249-7870-3331-504	1	02FH	2				281m	180m			47	10	18m				PY234		
73	249-7970-3332-504	1	02FH	5				281m	180m			47	10	18m				PY234		
74	249-8070-3333-504	1	02FH	4				281m	180m			47	10	18m				PY234		
75	249-8170-3331-504	1	02FH	2				281m	180m			47	10	18m				PY234		
76	249-8270-3332-504	1	02FH	5				281m	180m			47	10	18m				PY234		
77	249-8370-3333-504	1	02FH	4				281m	180m			47	10	18m				PY234		

### 35. DISPLAY: LED

IN ORDER OF: (1)NO. DIGITS (2)TYPE DISPLAY  
(3)CHAR. HT. (4)PWR.DISS.Pcase &(5)TYPE No.

LINE No.	TYPE No.	NO. OF DIGITS	TYPE OF DISPLAY	C O L O R	3 CHAR. HGHT. (in)	MAX. RATINGS @25°C			TEMP RNG. CODE	MAX. FWD. VOLT (V)	PEAK WAVE-LENGTH λp (m)	LUMINOUS INTENSITY Iv (cd)		LUMINANCE Lv *-FT-L (nt)	MATERIAL & FEATURES MAT	SCHEM -ATIC	DRAWING Ø-RND. Ø-RECT. Δ-STRIP *-CHIP
						4 PWR. DISS. Pcase (W)	IF Δ-/seg #-/dio (A)	VR Δ-/seg (V)				IF (A)	IF (A)				
1	507-4759-3331-500	1	02FH	2	281m	180m			47	10	18m						♦ PY233
2	507-4859-3332-500	1	02FH	5	281m	180m			47	10	18m						♦ PY233
3	507-4959-3333-500	1	02FH	3	281m	180m			47	10	18m						♦ PY233
4	249-7871-3331-504	1	02FH	2	281m	252m			47	14	18m						♦ PY234
5	249-7971-3332-504	1	02FH	5	281m	252m			47	14	18m						♦ PY234
6	249-8071-3333-504	1	02FH	4	281m	252m			47	14	18m						♦ PY234
7	249-8171-3331-504	1	02FH	2	281m	252m			47	14	18m						♦ PY234
8	249-8271-3332-504	1	02FH	5	281m	252m			47	14	18m						♦ PY234
9	249-8371-3333-504	1	02FH	4	281m	252m			47	14	18m						♦ PY234
10	507-4760-3331-500	1	02FH	2	281m	252m			47	14	18m						♦ PY233
11	507-4860-3332-500	1	02FH	5	281m	252m			47	14	18m						♦ PY233
12	507-4960-3333-500	1	02FH	3	281m	252m			47	14	18m						♦ PY233
13	249-7872-3331-504	1	02FH	2	281m	504m			47	28	18m						♦ PY234
14	249-7972-3332-504	1	02FH	5	281m	504m			47	28	18m						♦ PY234
15	249-8072-3333-504	1	02FH	4	281m	504m			47	28	18m						♦ PY234
16	249-8172-3331-504	1	02FH	2	281m	504m			47	28	18m						♦ PY234
17	249-8272-3332-504	1	02FH	5	281m	504m			47	28	18m						♦ PY234
18	249-8372-3333-504	1	02FH	4	281m	504m			47	28	18m						♦ PY234
19	507-4761-3331-500	1	02FH	2	281m	504m			47	28	18m						♦ PY233
20	507-4861-3332-500	1	02FH	5	281m	504m			47	28	18m						♦ PY233
21	507-4961-3333-500	1	02FH	3	281m	504m			47	28	18m						♦ PY233
22#	TLG314	1	03NR	5	296m	250m*	25mΔ	3.0	27*	2.8	20m	560n	110u	10m	BD	EA40a	PY102b
23#	TLG315	1	03NR	5	296m	250m*	25mΔ	3.0	27*	2.8	20m	560n	110u	10m	BD	EA40	PY102b
24	HDSP-3536	1	03PV	2	290m	83m%	30mΔ	6.0	48*	3.1	100mΔ	635n	2.3mΔ	100m	CA	EA110	PY60a
25	HDSP-4036	1	03PV	4	290m	83m%	30mΔ	6.0	48*	3.1	100mΔ	583n	2.7mΔ	100m	CA	EA110	PY60a
26	HDSP-3736	1	03PV	2	408m	83m%	30mΔ	6.0	48*	3.1	100mΔ	635n	2.3mΔ	100m	CA	EA110	PY60a
27	HDSP-4136	1	03PV	4	408m	83m%	30mΔ	6.0	48*	3.1	100mΔ	583n	2.7mΔ	100m	CA	EA110	PY60a
28	HDSP-3406	1	03PV	2	743m	100m*	50mΔ	6.0	48*	2.0	20mΔ	655n	900uΔ	20m	BD	EA146	PY473b
29	730-6005	1	04P	2	370m	400m*	30mΔ	3.0	27*	2.8	10mΔ	700n	300u	10m	BD	EA41a	PY372
30#	TLR307	1	04P	2	370m	400m*	35mΔ	3.0	27*	2.8	30m	700n	300u	10m	BD	EA41a	PY104
31#	TLR309	1	04P	2	370m	400m*	35mΔ	3.0	27*	2.8	30m	700n	300u	10m	BD	EA41a	PY104
32	730-6010	1	04P	2	600m	104m*	30mΔ	3.0	27*	2.0	13m	700n	300u	10m	BD	EA41	PY104
33	MAN3630A	1	04PV	3	294m	250m*	100m	3.0	48*	2.5	20m	630n	510u	10m	BD	EA198	PY560
34#	COY81B	1	05N	2	280m	400m*	30mΔ	3.0	67*	2.0	20m	650n	200u	20m	CA	EA175b	PY81b
35#	AL113K	1	07N	2	51m	88m	5.5mΔ		67*	2.0	5.0mΔ		5.0m	600	CE		PY438
36#	AL113L	1	07N	2	51m	88m	5.5mΔ		67*	2.0	5.0mΔ		5.0m	350	CE		PY438
37#	AL113M	1	07N	2	51m	88m	5.5mΔ		67*	2.0	5.0mΔ		5.0m	120	CE		PY438
38#	AL113N	1	07N	2	51m	88m	5.5mΔ		67*	2.0	5.0mΔ		5.0m	600	CE		PY438
39#	AL113R	1	07N	2	51m	88m	5.5mΔ		67*	2.0	5.0mΔ		5.0m	350	CE		PY438
40#	AL113S	1	07N	2	51m	88m	5.5mΔ		67*	2.0	5.0mΔ		5.0m	120	CE		PY438
41#	AL113A	1	07N	2	78m	88m	5.5mΔ		67*	2.0	5.0mΔ		5.0m	600	CE		PY438
42#	AL113B	1	07N	2	78m	88m	5.5mΔ		67*	2.0	5.0mΔ		5.0m	350	CE		PY438
43#	AL113D	1	07N	2	78m	88m	5.5mΔ		67*	2.0	5.0mΔ		5.0m	120	CE		PY438
44#	AL113E	1	07N	2	78m	88m	5.5mΔ		67*	2.0	5.0mΔ		5.0m	600	CE		PY438
45#	AL113G	1	07N	2	78m	88m	5.5mΔ		67*	2.0	5.0mΔ		5.0m	350	CE		PY438
46#	AL113I	1	07N	2	78m	88m	5.5mΔ		67*	2.0	5.0mΔ		5.0m	120	CE		PY438
47#	AL113SZ	1	07N	2	78m	88m	5.5mΔ		67*	2.0	5.0mΔ		5.0m	350	CE		PY438
48#	AL113V	1	07N	2	78m	88m	5.5mΔ		67*	2.0	5.0mΔ		5.0m	120	CE		PY438
49#	ALS13A5	1	07N	2	101m				68*	1.6	5.0m	660n			BI		PY439
50#	KL105A	1	07N	3	197m				68*	6.0	10m		70m	15	BI		PY311
51#	KL105B	1	07N	4	197m				68*	3.5	10m		80m	40	BI		PY311
52#	KL105V	1	07N	4	197m				68*	6.0	10m		80m	40	BI		PY311
53	TL509	1	07N	2	300m				5A*	5.5	800u	655n	700u	5.0	w/Decoder	EA12	PY38
54#	GL8P03	1	07N	2	300m	200m	10mΔ	5.0	37*	2.5	5.0m	695n	60u	5.0m	BD	EA111	PY410
55#	GL9P03	1	07N	2	300m	200m	10mΔ	5.0	37*	2.5	5.0m	695n	60u	5.0m	BD	EA105	PY415
56#	GL8G03	1	07N	2	300m	300m	15mΔ	5.0	37*	2.5	10m	555n	30u	10m	BD	EA111	PY410
57#	GL9G03	1	07N	2	300m	300m	15mΔ	5.0	37*	2.5	10m	555n	30u	10m	BD	EA105	PY415
58#	GL8R03	1	07N	2	300m	400m	25mΔ	5.0	37*	2.0	20m	655n	60u	20m	CA	EA111	PY410
59#	GL9R03	1	07N	2	300m	400m	25mΔ	5.0	37*	2.0	20m	655n	60u	20m	CA	EA105	PY415
60#	GL8P04	1	07N	2	400m	200m	10mΔ	5.0	37*	2.5	5.0m	695n	60u	5.0m	BD	EA116	PY377
61#	GL9P04	1	07N	2	400m	200m	10mΔ	5.0	37*	2.5	5.0m	695n	60u	5.0m	BD	EA105	PY377
62#	GL8G04	1	07N	2	400m	300m	15mΔ	5.0	37*	2.5	10m	555n	30u	10m	BD	EA116	PY377
63#	GL9G04	1	07N	2	400m	300m	15mΔ	5.0	37*	2.5	10m	555n	30u	10m	BD	EA105	PY377
64	1737R	1	07NB	2	300m				28	2.0	20m	655n	250uΔ	20m	CA	EA129	PY29
65#	LT302	1	07NB	2	300m				28	2.0	20m	655n	500u	20m	CA	EA8	PY29
66	SPX302	1	07NB	2	300m				28	2.0	20m	655n	500u	20m	CA	EA8	PY29
67	TIL312	1	07NB	2	300m				28	2.0	20m	655n	500u	20m	CA	EA8	PY29
68#	LRT1737R	1	07NB	2	300m	340m	25mΔ	3.0	28*	2.0	20mΔ	655n	500u	20mΔ	CA	Common A	PY29
69#	LRT1737E	1	07NB	2	300m	400m	20mΔ	5.0	28	2.8	20m	655n	800u	20m	EB	Common A	PY29
70#	LRT1737G	1	07NB	5	300m	400m	20mΔ	5.0	28	2.8	20m	565n	2.5m	20m	BD	Common A	PY29
71#	LRT1737Y	1	07NB	5	300m	400m	20mΔ	5.0	28	2.8	20m	585n	3.0m	20m	EB	Common A	PY29
72	EP21G	1	07NB	5	305m	400m	25m	5.0	2A	2.4	10m	560n	250u	10m	BD		EA24b
73	EP21R	1	07NB	4	305m	400m	25m	5.0	2A	2.4	10m	697n	250u	10m	BD		EA24b
74	EP21Y	1	07NB	4	305m	400m	25m	5.0	2A	2.4	10m	580n	250u	10m	BD		EA24b
75#	COY82	1	07NB	2	433m	520m	30mΔ	3.0	48%	2.0	20m	650n	200u	20m	CA		PY434
76#	COY82A	1	07NB	2	433m	520m	30mΔ	3.0	48%	2.0	20m	650n	200u	20m	CA		PY434
77#	COX88A,K	1*	07NBPV	3	511m	750m	25m#	5.0	28%	3.0	20m	660n	700uΔ	20m	CA	W/± Sign	EA220
78#	COX88A,K	1*	07NBPV	3	511m	750m	25m#	5.0	28%	3.0	20m	630n	1.5uΔ	20m	EB	W/± Sign	EA220
79#	COX90A,K	1*	07NBPV	5	511m	750m	25m#	5.0	28%	3.2	20m	560n	700uΔ	20m	BD	W/± Sign	EA220
80#	COX92A,K	1*	07NBPV	4	511m	750m	25m#	5.0	28%	3.2	20m	590n	1.0uΔ	20m	CA	W/± Sign	EA220
81	SLA1C	1	07NK	2	750m	40m	5.5		2.1	↑	15m		1.0m	15m	EA69		PY
82	NSLATC	1	07NK	2	334m	750m	40m	5.5	2.1	↑	15m		1.0m	15m	EA173		PY511
83	SLA7Δ	1	07NL	2	750m	40m	3.0		2.2	↑	20m		300u	20m	EA69		PY
84	SLA1	1	07NL	2	780m	40m	5.5		2.1	↑	15m		1.0m	15m	EA69		PY
85	4N4	1	07NL	2	270m												

# 35. DISPLAY: LED

IN ORDER OF: (1) NO. DIGITS (2) TYPE DISPLAY (3) CHAR. HT. (4) PWR/DISS. Pcase & (5) TYPE No.

LINE No.	TYPE No.	NO. OF DIGITS	TYPE OF DISPLAY	C O L O R	CHAR. HGHT. (in)	MAX. RATINGS @25°C			TEMP. RNG. CODE	MAX. FWD. VOLT		PEAK WAVELENGTH λp (m)	LUMINOUS INTENSITY Iv		LUMIN. -ANCE Lv (nt)	MATERIAL & FEATURES (MAT)	SCHEM. ATIC	DRAWING Ø-RND. □-RECT. △-STRIP *-CHIP	
						4. PWR/DISS. Pcase (W)	IF Δ-/seg #-/dio (A)	VR Δ-/seg (V)		VF (V)	IF (A)		(cd)	IF (A)					
1	TIL306	1	07NL	2	270m				5.2	08	5.2	800u	660n	1.2m	5.0	w/Counter	EA5	PY27	
2	TIL308	1	07NL	2	270m				5.2	08	5.2	800u	660n	1.2m	5.0	w/Latch,Dec	EA6	PY27	
3	1706R	1	07NL	2	270m				5.2	08	5.2	800u	660n	1.2m	5.0	W/Latch,Dec	EA6	PY27	
4	1705R	1	07NL	2	270m	600mf			5.2	08	5.2	800u	660n	1.2m	5.0	W/Counter	EA5	PY27	
5	DL10A	1	07NL	2*	270m	650m	200m	6.0	2A	4.0		700n	700n	1.2m	5.0	CA	EA19	PY67	
6	745-0008	1	07NL	2*	270m	750mf	230m	5.2	07*			650n	650n	1.2m	5.0	w/Logic	EA6	PY52	
7	DL10	1	07NL	2*	270m	750m	240m	6.0	2A	4.0		700n	700n	1.2m	5.0	w/Logic	EA19	PY67	
8	745-0009	1	07NL	2*	270m	825mf	250m	5.2	07*			650n	650n	1.2m	5.0	W/Latch,DEC	EA5	PY52	
9	LK1706R	1	07NL	2	270m	900m*			5.2	08		660n	660n	1.2m	5.0	W/Logic	EA6	PY27	
10	LK1705R	1	07NL	2	270m	1.0*			5.2	08		660n	660n	1.2m	5.0	W/Latch,DEC	EA5	PY27	
11	5082-7730	1	07NL	2	300m		150m	6.0	4	2.0		655n	350u	20m		Common A	EA228	PY635	
12	745-0017	1	07NL	2	300m	40m			25m	6.0	4	28*	2.0	20m		CA	EA54	PY568	
13	749-1801	1	07NL	2	300m	40m			25m	6.0	4	28*	2.0	20m		CA	EA54	PY568	
14	HDSP-3530	1	07NL	2	300m	83m			30m	6.0	4	48*	3.1	100m		CA	EA100	PY60b	
15	HDSP-4030	1	07NL	4	300m	83m			30m	6.0	4	48*	3.1	100m		CA	EA109	PY60b	
16	7730R	1	07NL	2	300m	294m			25m	6.0	4	28*	2.0	20m		Common A	EA100	PY60b	
17	HP5082-7730	1	07NL	2	300m	336m*			25m	6.0	4	28*	2.0	20m		CA	EA100	PY60b	
18	7610R	1	07NL	2	300m	350m			20m	6.0	4	28*	2.5	20m		Common A	EA100	PY60b	
19	7620Y	1	07NL	4	300m	350m			20m	6.0	4	28*	2.5	20m		Common A	EA100	PY60b	
20	7630G	1	07NL	5	300m	350m			20m	6.0	4	28*	2.5	20m		Common A	EA100	PY60b	
21	XAN3062	1	07NL	2	300m	350m*			25m	5.0	4	28*	2.2	20m		CA	EA54	PY457	
22	1352G	1	07NL	5	300m	400m*			20m	3.0	4	48*	3.5	20m		Common A	EA175a	PY64e	
23	1362E	1	07NL	3	300m	400m*			20m	3.0	4	48*	2.5	20m		Common A	EA175a	PY64e	
24	1382Y	1	07NL	4	300m	400m*			20m	3.0	4	48*	3.5	20m		Common A	EA175a	PY64e	
25	CQY81	1	07NL	2	300m	400m			30m	3.0	4	28*	2.0	20m		CA	EA72	PY304	
26	HP5082-7610	1	07NL	2	300m	400m*			20m	6.0	4	28*	2.5	20m		CA	EA100	PY60b	
27	HP5082-7620	1	07NL	4	300m	400m*			20m	6.0	4	28*	2.5	20m		CA	EA100	PY60b	
28	HP5082-7630	1	07NL	5	300m	400m*			20m	6.0	4	28*	2.5	20m		BD	EA100	PY60b	
29	MAN52A	1	07NL	5	300m	400m*	160m	3.0	4	48*	3.5	20m	565n	125u	10m		EA175a	PY81	
30	MAN82A	1	07NL	4	300m	400m*	160m	3.0	4	48*	3.5	20m	565n	320u	10m		EA175a	PY81	
31	MAN3620A	1	07NL	3	300m	400m	160m	3.0	4	48*	2.5	20m	630n	510u	10m		BD	EA175a	PY81
32	XAN3052	1	07NL	5	300m	400m*			20m	5.0	4	28*	2.8	10m		BD	EA54	PY457	
33	XAN3072	1	07NL	2	300m	400m*			20m	5.0	4	28*	2.8	10m		BD	EA54	PY457	
34	XAN3082	1	07NL	4	300m	400m*			20m	5.0	4	28*	2.8	10m		BD	EA54	PY457	
35	DL307	1	07NL	2	300m	480m			30m	3.0	4	28*	2.0	20m			EA54	PY540	
36	DL702	1	07NL	2	300m	500m	240m	3.0	4	28*	2.0	20m	700n	1.4m	20m		EA24b	PY64	
37	DL707	1	07NL	2	300m	500m	240m	3.0	4	28*	4.0	20m	700n	1.4m	20m		EA24	PY64	
38	DLG307	1	07NL	5	300m	600m			25m	3.0	4	28*	3.0	20m			EA54	PY540	
39	DLO307	1	07NL	3	300m	600m			25m	3.0	4	28*	2.5	20m			EA54	PY540	
40	DLY307	1	07NL	4	300m	600m			25m	3.0	4	28*	3.0	20m			EA54	PY540	
41	1372R	1	07NL	2	300m	700m*			30m	5.0	4	48*	2.0	20m		Common A	EA175a	PY64e	
42	MAN72A	1	07NL	2	300m	700m*	240m	5.0	4	48*	2.0	20m	660n	300u	10m		EA175a	PY81	
43	740-3012	1	07NL	2	300m	875m	15m		07	5.0						CA Dec Dvr,Lat		PY569	
44	740-3014	1	07NL	2	300m	875m	15m		07	5.0					CA Dvr,Lat,Cnt		PY569		
45	749-1801	1	07NL	2	300m	875m	15m		07	5.0		175m			CA Dec Dvr Lat		PY569		
46	749-1701	1	07NL	2	300m	875m	15m		07	5.0		175m			CA Dvr,Lat,Cnt		PY569		
47	740-3006	1	07NL	2	300m	1.0	15m		07	5.0					CA W/Dec Dvr		PY569		
48	749-1501	1	07NL	2	300m	1.0	15m		07	5.0		210m			CA W/Dec Dvr		PY569		
49	NSLA1	1	07NL	2	334m	750m	40m	5.5	4	2.1	15m			1.0m	15m		EA172	PY510	
50	HDSP-3730	1	07NL	2	430m	83m	30m	6.0	4	48*	3.1	100m	635n	2.3m	100m		CA	EA109	PY54a
51	HDSP-4130	1	07NL	4	430m	83m	30m	6.0	4	48*	3.1	100m	583n	2.7m	100m		CA	EA100	PY54a
52	7750R	1	07NL	2	430m	294m			25m	6.0	4	28*	2.0	20m		Common A	EA100	PY170	
53	DL7750	1	07NL	2	430m	336m			25m	6.0	4	28*	2.0	20m		CA	EA193	PY553	
54	HP5082-7750	1	07NL	2	430m	336m*			25m	6.0	4	28*	2.0	20m		CA	EA100	PY54d	
55	7650R	1	07NL	2	430m	350m			20m	6.0	4	28*	2.5	20m		Common A	EA100	PY170	
56	7660Y	1	07NL	4	430m	350m			20m	6.0	4	28*	2.5	20m		Common A	EA100	PY170	
57	7670G	1	07NL	5	430m	350m			20m	6.0	4	28*	2.5	20m		Common A	EA100	PY170	
58	DLO7650	1	07NL	2	430m	400m			20m	6.0	4	28*	2.5	20m			EA193	PY553	
59	DLY7660	1	07NL	4	430m	400m			20m	6.0	4	28*	3.0	20m			EA193	PY553	
60	HP5082-7650	1	07NL	2	430m	400m*			20m	6.0	4	28*	2.5	20m		CA	EA100	PY54a	
61	HP5082-7660	1	07NL	4	430m	400m*			20m	6.0	4	28*	2.5	20m		CA	EA100	PY54a	
62	HP5082-7670	1	07NL	5	430m	400m*			20m	6.0	4	28*	2.5	20m		BD	EA100	PY54a	
63	XAN6520	1	07NL	5	600m	400m*			20m	5.0	4	38*	2.8	10m		BD	EA54c	PY459	
64	XAN6540	1	07NL	5	600m	400m*			20m	5.0	4	38*	2.8	10m		BD	EA54d	PY459	
65	XAN6620	1	07NL	2	600m	400m*			25m	5.0	4	28*	2.2	20m		CA	EA54c	PY459	
66	XAN6640	1	07NL	2	600m	400m*			25m	5.0	4	28*	2.2	20m		CA	EA54d	PY459	
67	XAN6820	1	07NL	4	600m	400m*			20m	5.0	4	38*	2.8	10m		CA	EA54c	PY459	
68	XAN6840	1	07NL	4	600m	400m*			20m	5.0	4	38*	2.8	10m		CA	EA54d	PY459	
69	XAN6920	1	07NL	2	600m	400m*			20m	5.0	4	28*	2.8	10m		BD	EA54c	PY459	
70	XAN6940	1	07NL	2	600m	400m*			20m	5.0	4	28*	2.8	10m		BD	EA54d	PY459	
71	DL747	1	07NL	2	630m							20m		5.0m	20m			EA22	PY65
72	DL750	1	07NL	2	630m							20m		5.0m	20m			EA22a	PY65
73	1804R	1	07NL	2	630m	430m			25m	6.0	4	27*	2.0	20m		Common A	EA210	PY599	
74	1805R	1	07NL	2	630m	430m			25m	6.0	4	27*	2.0	20m		Common K	EA210a	PY599	
75	1808R	1	07NL	2	630m	430m			25m	6.0	4	27*	2.0	20m		Common A	EA213	PY599	
76	1809R	1	07NL	2	630m	430m			25m	6.0	4	27*	2.0	20m		Common K	EA76b	PY599	
77	#LT1804	1	07NL	2	630m	430m*			125m	6.0	4	27*	2.0	20m		Common A	EA76b	PY599	
78	#LT1805	1	07NL	2	630m	430m*			125m	6.0	4	27*	2.0	20m		Common K	EA76c	PY599	
79	1800R	1	07NL	2	630m	715m			25m	6.0	4	27*	4.0	20m		Common A	EA76b	PY599	
80	1801R	1	07NL	2	630m	715m			25m	6.0	4	27*	4.0	20m		Common K	EA76c	PY599	
81	1812R	1	07NL	2	630m	715m			25m	6.0	4	27*	4.0	20m		Common A	EA213	PY599	
82	1813R	1	07NL	2	630m	715m			25m	6.0	4	27*	4.0	20m		Common K	EA76b	PY599	
83	#LT1800	1	07NL	2	630m	715m*			200m	6.0	4	27*	3.8	20m		Common A	EA76b	PY599	
84	#LT1801</																		

# 35. DISPLAY: LED

IN ORDER OF: (1) NO. DIGITS (2) TYPE DISPLAY (3) CHAR. HT. (4) PWR/DISS. Pcase & (5) TYPE No.

LINE No.	TYPE No.	NO. OF DIGITS	TYPE OF DISPLAY	C O L O R	CHAR. HGT. (in)	MAX. RATINGS @ 25°C	IF Δ-/seg #/dio	VR Δ-/seg (V)	TEMP. RING. CODE	MAX. FWD. VOLT (V)	PEAK WAVELENGTH λp (m)	LUMINOUS INTENSITY Iv		LUMIN. ANCE Lv *FT-L (nt)	MATERIAL & FEATURES MAT	SCHEM. ATIC	DRAWING Ø-RND. Δ-RECT. Δ-STRIP *-CHIP	
												IF (A)	IF (A)					
1	1702R	1	07NR	2	270m		240m	6.0 Δ	07*	3.8	20m	660n	275u	20m			PY25a	
2	1736R	1	07NR	2	270m		240m	5.2 Δ	08*	5.2	800u	660n	1.2m	5.0 Δ	CA W/Counter	EA5	PY27	
3	TIL303	1	07NR	2	270m		200mΔ	6.0 Δ	07*	3.8	20m	660n	275u	20m			PY25a	
4	TIL307	1	07NR	2	270m			5.2 Δ	08*	5.2	800u	660n	1.2m	5.0 Δ	w/Counter	EA5	PY27	
5	TIL309	1	07NR	2	270m			5.2 Δ	08*	5.2	800u	660n	1.2m	5.0 Δ	w/Latch Dec	EA6	PY27	
6	LTK1717R	1	07NR	2	270m	900m*		5.2 Δ	08			660n	1.2m	5.0 Δ	w/Latch;DEC	EA6	PY27	
7	LTK1736R	1	07NR	2	270m	1.0 *		5.2 Δ	08			660n	1.2m	5.0 Δ	W/Counter	EA5	PY27	
8	AL309A	1	07NR	2	275m	352m	22m		17*	2.0	20mΔ	150uΔ	20m		CE		PY437	
9	AL309B	1	07NR	2	275m	352m	22m		17*	2.0	20mΔ	100uΔ	20m		CE		PY437	
10	AL309D	1	07NR	2	275m	352m	22m		17*	2.5	20mΔ	150uΔ	20m		CE		PY437	
11	AL309E	1	07NR	2	275m	352m	22m		17*	2.5	20mΔ	100uΔ	20m		CE		PY437	
12	AL309G	1	07NR	2	275m	352m	22m		17*	2.5	20mΔ	300uΔ	20m		CE		PY437	
13	AL309I	1	07NR	2	275m	352m	22m		17*	2.0	20mΔ	100uΔ	20m		CA		PY437	
14	AL309K	1	07NR	2	275m	352m	22m		17*	2.0	20mΔ	50uΔ	20m		CA		PY437	
15	AL309SZ	1	07NR	2	275m	352m	22m		17*	2.0	20mΔ	150uΔ	20m		CA		PY437	
16	AL309V	1	07NR	2	275m	352m	22m		17*	2.0	20mΔ	300uΔ	20m		CE		PY437	
17	TLR314	1	07NR	2	295m	170m	15mΔ	3.0	27*	2.4	15m	700n	110u	5.0m	BD	EA40a	PY169	
18	TLR315	1	07NR	2	295m	170m	15mΔ	3.0	27*	2.4	15m	700n	110u	5.0m	BD	EA40	PY169	
19	LNS13GA	1	07NR	2	299m	50m*	20m	5.0	27	2.1 †	20m	560n	500u	10m	BD	EA176	PY520	
20	LNS13GK	1	07NR	5	299m	50m*	20m	5.0	27	2.1 †	20m	560n	500u	10m	BD	EA176a	PY520	
21	LNS13RA	1	07NR	2	299m	50m*	20m	5.0	27	2.1 †	20m	700n	300u	5.0m	BD	EA176	PY520	
22	LNS13RK	1	07NR	2	299m	50m*	20m	5.0	27	2.1 †	20m	700n	300u	5.0m	BD	EA176a	PY520	
23	1738R	1	07NR	2	300m		25mΔ	3.0	28	2.0	20m	655n	250u	20m	CA	EA129a	PY29j	
24	5082-7731	1	07NR	2	300m		150mΔ	6.0 Δ	48	2.0	20m	655n	350u	20m	Common A	EA228a	PY635a	
25	5082-7736	1	07NR	2	300m		150mΔ	6.0 Δ	48	2.0	20m	655n	350u	20m	Universal	EA228b	PY635a	
26	5082-7740	1	07NR	2	300m		150mΔ	6.0 Δ	48	2.0	20m	655n	200u	100m	Common K	EA228c	PY635b	
27	LT303	1	07NR	2	300m		25m	3.0 Δ	28	2.0	20m	655n	500u	20m	CA	EA8a	PY29f	
28	SPX303	1	07NR	2	300m		150mΔ	3.0 Δ	28	2.0	20m	655n	500u	20m	CA	EA8a	PY29g	
29	TIL313	1	07NR	2	300m		25mΔ	3.0 Δ	28	2.0	20mΔ	655n	500u	20mΔ	CA	EA8a	PY29d	
30	HDSP-3531	1	07NR	2	300m	83m%	30mΔ	6.0 Δ	48*	3.1	100mΔ	635n	2.3mΔ	100m	CA	EA109	PY60c	
31	HDSP-3533	1	07NR	2	300m	83m%	30mΔ	6.0 Δ	48*	3.1	100mΔ	635n	2.3mΔ	100m	CA	EA18	PY61i	
32	HDSP-4031	1	07NR	4	300m	83m%	30mΔ	6.0 Δ	48*	3.1	100mΔ	583n	2.7mΔ	100m	CA	EA100	PY60c	
33	HDSP-4033	1	07NR	4	300m	83m%	30mΔ	6.0 Δ	48*	3.1	100mΔ	583n	2.7mΔ	100m	CA	EA18	PY61j	
34	7731R	1	07NR	2	300m	294m	25mΔ	6.0 Δ	28	2.0	20m	655n	200u	100m	Common A	EA109	PY60b	
35	7740R	1	07NR	2	300m	294m	25mΔ	6.0 Δ	28	2.0	20m	655n	200u	100m	Common K	EA215	PY60b	
36	HP5082-7740	1	07NR	2	300m	336m*	25mΔ	6.0 Δ	28*	2.0	20mΔ	655n	200uΔ	100m	CA	EA18	PY61a	
37	LRT1738R	1	07NR	2	300m	340m	25mΔ	3.0 Δ	28	2.0	20m	655n	800u	20m	CA	Common K	EA129a	PY29j
38	7611R	1	07NR	2	300m	350m	20mΔ	6.0 Δ	28	2.5	20m	635n	250u	5.0m	Common A	EA109	PY60b	
39	7613R	1	07NR	2	300m	350m	20mΔ	6.0 Δ	28	2.5	20m	635n	250u	5.0m	Common K	EA215	PY60b	
40	7621Y	1	07NR	4	300m	350m	20mΔ	6.0 Δ	28	2.5	20m	583n	200u	5.0m	Common A	EA109	PY60b	
41	7623Y	1	07NR	4	300m	350m	20mΔ	6.0 Δ	28	2.5	20m	583n	200u	5.0m	Common K	EA215	PY60b	
42	7631G	1	07NR	5	300m	350m	20mΔ	6.0 Δ	28	2.5	20m	565n	300u	10m	Common A	EA109	PY60b	
43	7633G	1	07NR	5	300m	350m	20mΔ	6.0 Δ	28	2.5	20m	565n	300u	10m	Common K	EA215	PY60b	
44	XAN3061	1	07NR	2	300m	350m*	25mΔ	5.0 Δ	28	2.2	20m	655n	450uΔ	20m	CA	EA54a	PY457	
45	XAN3064	1	07NR	2	300m	350m*	25mΔ	5.0 Δ	28	2.2	20m	655n	450uΔ	20m	CA	EA54b	PY457	
46	1351G	1	07NR	5	300m	400m*	20mΔ	3.0 Δ	48	3.5	20m	565n	250u	10m	Common A	EA175	PY64f	
47	1354G	1	07NR	5	300m	400m*	20mΔ	3.0 Δ	48	3.5	20m	565n	250u	10m	Common K	EA175c	PY64f	
48	1361E	1	07NR	3	300m	400m*	20mΔ	3.0 Δ	48	2.5	20m	630n	1.0m	10m	Common A	EA175	PY64f	
49	1364E	1	07NR	3	300m	400m*	20mΔ	3.0 Δ	48	2.5	20m	630n	1.0m	10m	Common K	EA175c	PY64f	
50	1381Y	1	07NR	4	300m	400m*	20mΔ	3.0 Δ	48	3.5	20m	585n	600u	10m	Common A	EA175	PY64f	
51	1384Y	1	07NR	4	300m	400m*	20mΔ	3.0 Δ	48	3.5	20m	585n	600u	10m	Common K	EA175c	PY64f	
52	CQV81A	1	07NR	2	300m	400m*	30mΔ	3.0 Δ	28%	2.0	20m	650n	200u	20m	CA	EA72	PY304a	
53	HP5082-7611	1	07NR	2	300m	400m*	20mΔ	6.0 Δ	28	2.5	20mΔ	635n	250uΔ	5.0m	CA	EA109	PY60c	
54	HP5082-7613	1	07NR	2	300m	400m*	20mΔ	6.0 Δ	28	2.5	20mΔ	635n	250uΔ	5.0m	CA	EA18	PY61a	
55	HP5082-7621	1	07NR	4	300m	400m*	20mΔ	6.0 Δ	28	2.5	20mΔ	583n	200uΔ	5.0m	CA	EA109	PY60c	
56	HP5082-7623	1	07NR	4	300m	400m*	20mΔ	6.0 Δ	28	2.5	20mΔ	583n	200uΔ	5.0m	CA	EA18	PY61a	
57	HP5082-7631	1	07NR	5	300m	400m*	20mΔ	6.0 Δ	28	2.5	20mΔ	565n	300uΔ	10m	BD	EA109	PY60c	
58	HP5082-7633	1	07NR	5	300m	400m*	20mΔ	6.0 Δ	28	2.5	20mΔ	565n	300uΔ	10m	BD	EA18	PY61a	
59	LRT1738E	1	07NR	3	300m	400m	20mΔ	5.0 Δ	28	2.8	20m	635n	4.0m	20m	EB Common K	EA175	PY29j	
60	LRT1738G	1	07NR	5	300m	400m	20mΔ	5.0 Δ	28	2.8	20m	655n	2.5m	20m	BD Common K	EA175	PY29j	
61	LRT1738Y	1	07NR	4	300m	400m	20mΔ	5.0 Δ	28	2.8	20m	585n	3.0m	20m	EB Common K	EA175	PY29j	
62	MAN51A	1	07NR	5	300m	400m*	160m	3.0 Δ	48	3.5	20m	565n	125uΔ	10m		EA175	PY81a	
63	MAN54A	1	07NR	5	300m	400m*	160m	3.0 Δ	48	3.5	20m	565n	125uΔ	10m		EA175c	PY81c	
64	MAN81A	1	07NR	4	300m	400m*	160m	3.0 Δ	48	3.5	20m	585n	320uΔ	10m		EA175	PY81a	
65	MAN84A	1	07NR	4	300m	400m*	160m	3.0 Δ	48	3.5	20m	585n	320uΔ	10m		EA175c	PY81c	
66	MAN3610A	1	07NR	3	300m	400m	160m	3.0 Δ	48	2.5	20m	630n	510u	10m		EA175	PY81a	
67	MAN3640A	1	07NR	3	300m	400m	160m	3.0 Δ	48	2.5	20m	630n	510u	10m		EA175c	PY81c	
68	XAN3051	1	07NR	5	300m	400m*	20mΔ	5.0 Δ	28	2.8	10m	565n	500uΔ	10m	BD	EA54a	PY457	
69	XAN3054	1	07NR	5	300m	400m*	20mΔ	5.0 Δ	28	2.8	10m	565n	500uΔ	10m	BD	EA54b	PY457	
70	XAN3071	1	07NR	2	300m	400m*	20mΔ	5.0 Δ	28	2.8	10m	697n	500u	10m	BD	EA54a	PY457	
71	XAN3074	1	07NR	2	300m	400m*	20mΔ	5.0 Δ	28	2.8	10m	697n	500u	10m	BD	EA54b	PY457	
72	XAN3081	1	07NR	4	300m	400m*	20mΔ	5.0 Δ	28	2.8	10m	585n	300u	10m	BD	EA54a	PY457	
73	XAN3084	1	07NR	4	300m	400m*	20mΔ	5.0 Δ	28	2.8	10m	585n	300u	10m	BD	EA54b	PY457	
74	DL304	1	07NR	2	300m	480m	30mΔ	3.0 Δ	28	2.0	20m	660n	1.4m	10m		EA54b	PY540	
75	DL704	1	07NR	2	300m	500m	240m	3.0 Δ	2A	2.0	20m	700n	1.4m	20m		EA24a	PY64f	
76	DL707R	1	07NR	2	300m	500m	240m	3.0 Δ	28	4.0	20m	700n	1.4m	20m		EA24b	PY64a	
77	1371R	1	07NR	2	300m	700m*	30mΔ	5.0 Δ	48	2.0	20m	660n	300u	10m	Common A	EA175	PY64f	
78	1374R	1	07NR	2	300m	700m*	30mΔ	5.0 Δ	48	2.0	20m	660n	300u	10m	Common K	EA175c	PY64f	
79	MAN71A	1	07NR	2	300m	700m*	240m	5.0 Δ	48	2.0	20m	660n	125uΔ	10m		EA175	PY81a	
80	MAN74A	1	07NR	2	300m	700m*	240m	5.0 Δ	48	2.0	20m	660n	125uΔ					



# 35. DISPLAY: LED

IN ORDER OF: (1) NO. DIGITS (2) TYPE DISPLAY (3) CHAR. HT. (4) PWR/DISS. Pcase & (5) TYPE No.

LINE No.	TYPE No.	NO. OF DIGITS	TYPE OF DISPLAY	COLOR	CHAR. HGHT. (in)	MAX. RATINGS @25°C				TEMP. RNG. CODE	MAX. FWD. VOLT. VF	PEAK WAVE-LENGTH λp (m)	LUMINOUS INTENSITY Iv		LUMIN -ANCE Lv *-FT-Lv (nt)	MATERIAL & FEATURES	SCHEM -ATIC	DRAWING Ø-RND. □-RECT. △-STRIP *-CHIP
						PWR. DISS. Pcase (W)	IF Δ-/seg #-/dio (A)	VR Δ-/seg (V)	IF (A)				(cd)	IF (A)				
1	HDSP-3733	1	07NR	2	430m	83m%	30mΔ	6.0 Δ	48*	3.1	100mΔ	635n	2.3mΔ	100mΔ	100mΔ	CA	EA52	PY64□
2	HDSP-4131	1	07NR	2	430m	83m%	30mΔ	6.0 Δ	48*	3.1	100mΔ	635n	2.7mΔ	100mΔ	100mΔ	CA	EA109	PY64□
3	HDSP-4133	1	07NR	2	430m	83m%	30mΔ	6.0 Δ	48*	3.1	100mΔ	635n	2.7mΔ	100mΔ	100mΔ	CA	EA52	PY64□
4	7751R	1	07NR	2	430m	294m	25mΔ	6.0 Δ	28	2.0	20m	655n	350u	100m	Common K	EA109	PY170	
5	7760R	1	07NR	2	430m	294m	25mΔ	6.0 Δ	28	2.0	20m	655n	350u	100m	Common K	EA52	PY170	
6	DL7751	1	07NR	2	430m	336m	25mΔ	6.0 Δ	28	2.0	20m	655n	350u	100m	Common K	EA193a	PY653□	
7	DL7760	1	07NR	2	430m	336m*	25mΔ	6.0 Δ	28	2.0	20m	655n	350u	100m	Common K	EA193b	PY653□	
8	HP5082-7760	1	07NR	2	430m	336m*	25mΔ	6.0 Δ	28*	2.0	20mΔ	655n	400uΔ	20m	CA	EA52	PY64□	
9	7651R	1	07NR	2	430m	350m	20mΔ	6.0 Δ	28	2.5	20m	635n	300u	5.0m	Common A	EA109	PY170	
10	7653R	1	07NR	2	430m	350m	20mΔ	6.0 Δ	28	2.5	20m	635n	300u	5.0m	Common K	EA52	PY170	
11	7661Y	1	07NR	4	430m	350m	20mΔ	6.0 Δ	28	2.5	20m	583n	250u	5.0m	Common A	EA109	PY170	
12	7663Y	1	07NR	4	430m	350m	20mΔ	6.0 Δ	28	2.5	20m	583n	250u	5.0m	Common K	EA52	PY170	
13	7671G	1	07NR	4	430m	350m	20mΔ	6.0 Δ	28	2.5	20m	565n	250u	10m	Common K	EA109	PY170	
14	7673G	1	07NR	5	430m	350m	20mΔ	6.0 Δ	28	2.5	20m	565n	250u	10m	Common K	EA52	PY170	
15	DLG7670	1	07NR	5	430m	400m	20mΔ	6.0 Δ	28	3.0	20m	565n	640u	20m	Common K	EA193	PY553□	
16	DLG7671	1	07NR	5	430m	400m	20mΔ	6.0 Δ	28	3.0	20m	565n	640u	20m	Common K	EA193a	PY553□	
17	DLG7673	1	07NR	5	430m	400m	20mΔ	6.0 Δ	28	3.0	20m	565n	640u	20m	Common K	EA193b	PY553□	
18	DLO7651	1	07NR	2	430m	400m	20mΔ	6.0 Δ	28	2.5	20m	635n	1.7m	20m	Common K	EA193a	PY553□	
19	DLO7653	1	07NR	2	430m	400m	20mΔ	6.0 Δ	28	2.5	20m	635n	1.7m	20m	Common K	EA193b	PY553□	
20	DLY7661	1	07NR	4	430m	400m	20mΔ	6.0 Δ	28	3.0	20m	583n	1.5m	20m	Common K	EA193a	PY553□	
21	DLY7663	1	07NR	4	430m	400m	20mΔ	6.0 Δ	28	3.0	20m	583n	1.5m	20m	Common K	EA193b	PY553□	
22	HP5082-7651	1	07NR	2	430m	400m*	20mΔ	6.0 Δ	28*	2.5	20m	635n	300uΔ	5.0m	CA	EA109	PY54a□	
23	HP5082-7653	1	07NR	2	430m	400m*	20mΔ	6.0 Δ	28*	2.5	20m	635n	300uΔ	5.0m	CA	EA52	PY54a□	
24	HP5082-7661	1	07NR	4	430m	400m*	20mΔ	6.0 Δ	28*	2.5	20m	583n	250uΔ	5.0m	CA	EA109	PY54a□	
25	HP5082-7663	1	07NR	4	430m	400m*	20mΔ	6.0 Δ	28*	2.5	20m	583n	250uΔ	5.0m	CA	EA52	PY54a□	
26	HP5082-7671	1	07NR	5	430m	400m*	20mΔ	6.0 Δ	28*	2.5	20m	565n	250uΔ	10m	BD	EA109	PY54a□	
27	HP5082-7673	1	07NR	5	430m	400m*	20mΔ	6.0 Δ	28*	2.5	20m	565n	250uΔ	10m	BD	EA52	PY54a□	
28	LN514GA	1	07NR	5	433m	50m*	20m	5.0	27	2.1	20m	560n	500u	10m	BD	EA176	PY520a	
29	LN514GK	1	07NR	5	433m	50m*	20m	5.0	27	2.1	20m	560n	500u	10m	BD	EA176a	PY520a	
30	LN514RA	1	07NR	2	433m	50m*	20m	5.0	27	2.1	20m	700n	300u	5.0m	BD	EA176	PY520a	
31	LN514RK	1	07NR	2	433m	50m*	20m	5.0	27	2.1	20m	700n	300u	5.0m	BD	EA176a	PY520a	
32	COX82A	1	07NR	2	433m	50m*	30	Δ	3.0	27	2.0	20m	650n	200u	20m	CA	EA182	PY54
33	FND500	1	07NR	2	500m	25mΔ	3.0	28	2.0	20m	665n	600uΔ	20m	35 *	CA	EA53a	PY178a□	
34	FND507	1	07NR	2	500m	25mΔ	3.0	28	2.0	20m	665n	600uΔ	20m	104 *	CA	EA53	PY178a□	
35	FND530	1	07NR	5	500m	20mΔ	3.0	28	3.2	20m	565n	2.0mΔ	20m	104 *	CD	EA53	PY178a□	
36	FND537	1	07NR	5	500m	20mΔ	3.0	28	3.2	20m	565n	2.0mΔ	20m	104 *	CD	EA53	PY178a□	
37	FND540	1	07NR	4	500m	20mΔ	3.0	28	3.2	20m	585n	1.0mΔ	20m	52 *	DB	EA53a	PY178a□	
38	FND547	1	07NR	4	500m	20mΔ	3.0	28	3.2	20m	585n	1.0mΔ	20m	52 *	DB	EA53	PY178a□	
39	FND550	1	07NR	3	500m	20mΔ	3.0	28	3.2	20m	635n	2.0mΔ	20m	104 *	DB	EA53a	PY178a□	
40	FND557	1	07NR	3	500m	20mΔ	3.0	28	3.2	20m	635n	2.0mΔ	20m	104 *	DB	EA53	PY178a□	
41	FND560	1	07NR	2	500m	25mΔ	3.0	28	2.0	20m	665n	1.2mΔ	20m	70 *	CA	EA53a	PY178a□	
42	FND567	1	07NR	2	500m	25mΔ	3.0	28	2.0	20m	665n	1.2mΔ	20m	70 *	CA	EA53	PY178a□	
43	SPX502	1	07NR	2	500m	200mΔ	3.0	Δ	28	2.0	20m	655n	600u	20m	CA	↑	PY30□	
44	SPX503	1	07NR	2	500m	200mΔ	3.0	Δ	28	2.0	20m	655n	600u	20m	CA	↑	PY30a□	
45	TIL321A	1	07NR	2	500m	25mΔ	3.0	Δ	28	2.0	20mΔ	655n	600u	20m	CA	EA166	PY50□	
46	TIL322A	1	07NR	2	500m	25mΔ	3.0	Δ	28	2.0	20mΔ	655n	600u	20m	CA	EA166a	PY50□	
47	XAN500	1	07NR	2	500m	300m*	25mΔ	3.0	Δ	38	2.0	20mΔ	655n	500u	20m	CA	↑	PY30a□
48	XAN507	1	07NR	2	500m	300m*	25mΔ	3.0	Δ	38	2.0	20mΔ	655n	500u	20m	CA	↑	PY30□
49	LRT1826R	1	07NR	2	500m	340m	25mΔ	3.0	Δ	27	2.0	20m	655n	600u	20m	CA	EA218	PY168a□
50	LRT1827R	1	07NR	2	500m	340m	25mΔ	3.0	Δ	27	2.0	20m	655n	600u	20m	CA	EA218a	PY168a□
51	LRT1826E	1	07NR	3	500m	400m	20mΔ	5.0	27	2.8	20m	635n	3.3m	20m	EB	EA218	PY168a□	
52	LRT1826G	1	07NR	5	500m	400m	20m	5.0	27	2.8	20m	565n	2.4m	20m	BD	EA218	PY168a□	
53	LRT1826HR	1	07NR	2	500m	400m	20m	5.0	Δ	27	2.8	20m	635n	3.3m	20m	EB	EA218	PY168a□
54	LRT1826Y	1	07NR	4	500m	400m	20m	5.0	27	2.8	20m	585n	2.2m	20m	EB	EA218	PY168a□	
55	LRT1827E	1	07NR	3	500m	400m	20mΔ	5.0	27	2.8	20m	635n	3.3m	20m	EB	EA218a	PY168a□	
56	LRT1827G	1	07NR	5	500m	400m	20m	5.0	27	2.8	20m	565n	2.4m	20m	BD	EA218a	PY168a□	
57	LRT1827HR	1	07NR	2	500m	400m	20m	5.0	Δ	27	2.8	20m	635n	3.3m	20m	EB	EA218a	PY168a□
58	LRT1827Y	1	07NR	4	500m	400m	20m	5.0	27	2.8	20m	585n	2.2m	20m	EB	EA218a	PY168a□	
59	#LT502	1	07NR	2	500m	400m*	25m	3.0	Δ	28	2.0	20m	655n	600u	20m	CA	↑	PY30□
60	#LT503	1	07NR	2	500m	400m*	25m	3.0	Δ	28	2.0	20m	655n	600u	20m	CA	↑	PY30a□
61	DLG507	1	07NR	5	500m	600m	25mΔ	3.0	28	3.0	20m	565n	2.5m	20m	CA	EA53	PY544	
62	DLO507	1	07NR	3	500m	600m	25mΔ	3.0	28	2.5	20m	630n	3.0m	20m	CA	EA53	PY544	
63	DLY507	1	07NR	4	500m	600m	25mΔ	3.0	28	3.0	20m	585n	2.5m	20m	CA	EA53	PY544	
64	DL500	1	07NR	2	500m	960m	30mΔ	3.0	Δ	28	2.0	20m	660n	2.8m	20m	CA	EA53a	PY544□
65	DL507	1	07NR	2	500m	960m	30mΔ	3.0	Δ	28	2.0	20m	660n	2.8m	20m	CA	EA53	PY544□
66	DL721	1*	07NR	2	510m	450m*	30mΔ	3.0	Δ	28*	2.5	20m	650n	2.8m	20m	CA	EA47	PY157□
67	DL722	1*	07NR	2	510m	450m*	30mΔ	3.0	Δ	28*	2.5	20m	650n	2.8m	20m	CA	EA47	PY157□
68	2666E	1	07NR	3	560m	400m	20mΔ	3.0	Δ	48	2.5	20m	630n	1.0m	10m	Common A	EA166	PY225b
69	2668E	1	07NR	3	560m	400m	20mΔ	3.0	Δ	48	2.5	20m	630n	1.0m	10m	Common K	EA166a	PY225b
70	2676R	1	07NR	2	560m	400m	20mΔ	5.0	Δ	48	2.0	20m	650n	200u	10m	Common A	EA166	PY225b
71	2678R	1	07NR	2	560m	400m	20mΔ	5.0	Δ	48	2.0	20m	650n	200u	10m	Common K	EA166a	PY225b
72	MAN6660	1	07NR	3	560m	400m*	160m	3.0	Δ	48*	2.5	20m	630n	510u	10m	CA	EA86	PY225b□
73	MAN6680	1	07NR	3	560m	400m*	160m	3.0	Δ	48*	2.5	20m	630n	510u	10m	CA	EA86a	PY225b□
74	MAN6760	1	07NR	2	560m	400m	160m	5.0	Δ	48	2.0	20m	650n	125u	10m	CA	EA86	PY472□
75	MAN6780	1	07NR	2	560m	400m	160m	5.0	Δ	48	2.0	20m	650n	125u	10m	CA	EA86a	PY472□
76	MAN6630	1*	07NR	3	560m	650m*	260m	3.0	Δ	48*	2.5	20m	630n	510u	10m	CA	EA55	PY225a□
77	MAN6650	1*	07NR	3	560m	650m*	260m	3.0	Δ	48*	2.5	20m	630n	510u	10m	CA	EA56	PY225a□
78	MAN6730	1*	07NR	2	560m	650m												



### 35. DISPLAY: LED

IN ORDER OF: (1) NO. DIGITS (2) TYPE DISPLAY  
(3) CHAR. HT. (4) PWR. DISS. Pcase & (5) TYPE No.

LINE No.	5 TYPE No.	1 NO. OF DIGITS	2 TYPE OF DISPLAY	C COLOR	3 CHAR. HGT. (in)	MAX. RATINGS @ 25°C				TEMP. RING. CODE	MAX. FWD. VOLT		PEAK WAVE-LENGTH λp (nm)	LUMINOUS INTENSITY Iv		LUMIN. ANGLE *Ft-L (ft)	MATERIAL & FEATURES MAT	SCHEM. -ATIC	DRAWING Ø-RND. ▢-RECT. ▣-STRIP ▲-CHIP
						4 DISS. Pcase (W)	IF Δ-/seg #/dio (A)	VR Δ-/seg (V)	±		V (V)	IF (A)		(cd)	IF (A)				
1#	COY84	1	07NR	2	771m	400m*	30mA	3.0	28*	2.0	20m	650n	100u	20m		CA	EA85	PY310	
2	FND800	1	07NR	2	800m		25mA	3.0	28*	2.0	20m	665n	1.2mΔ	20m	64 *	CA	EA65	PY261	
3	FND807	1	07NR	2	800m		25mA	3.0	28*	2.0	20m	665n	1.2mΔ	20m	64 *	CA	EA65a	PY261	
4	HDSP-3401	1	07NR	2	800m	100m%	50mA	6.0 Δ	28*	2.0	20mΔ	655n	900uΔ	20m		CA	EA143	PY473a	
5	HDSP-3403	1	07NR	2	800m	100m%	50mA	6.0 Δ	28*	2.0	20mΔ	655n	900uΔ	20m		CA	EA144	PY473a	
6	MAN8610	1	07NR	2	800m	800m	240m	6.0 Δ	4A*	2.5	20mΔ	630n	1.0m	10m		EB	EA177	PY522	
7	MAN8640	1	07NR	2	800m	800m	240m	6.0 Δ	4A*	2.5	20mΔ	630n	1.0m	10m		EB	EA177b	PY522	
8	1720R	1	07NR	2	1.0	715m	25mA	6.0 Δ	27*	3.8	20m	655n	500u	20m		CA	EA75	PY285	
9	1723R	1	07NR	2	1.0	715m	25mA	6.0 Δ	27*	3.8	20m	655n	500u	20m		CA	EA75a	PY285	
10	EP1000	1	07NR	2	1.0	715m	25mA	6.0 Δ	27*	3.8	20m	655n	250u	20m		CA	EA284	PY284	
11#	GLR810	1	07NR	2	1.0	715m	25mA	5.0 Δ	27*	3.8	20m	655n	200u	20m		CA	EA103	PY375	
12#	GL9R10	1	07NR	2	1.0	715m	25mA	5.0 Δ	27*	3.8	20m	655n	200u	20m		CA	EA103	PY375	
13▼	LRT1720R	1	07NR	2	1.0	715m	25mA	6.0 Δ	27*	3.8	20m	655n	500u	20m		Common A	EA75	PY285	
14▼	LRT1723R	1	07NR	2	1.0	715m	25mA	6.0 Δ	27*	3.8	20m	655n	500u	20m		Common K	EA75a	PY285	
15▼	LT1720	1	07NR	2	1.0	715m*	200m	6.0 Δ	27*	3.8	20m	655n	500u	20m		Common A	EA75	PY284	
16▼	LT1723	1	07NRV	2	1.0	715m*	200m	6.0 Δ	27*	3.8	20m	655n	500u	20m		Common K	EA75a	PY284	
17	MAN6750	1*	07NRV	2	560m	650m*	260m	5.0 Δ	48*	2.0	20m	650n	125u	10m		CA	EA56	PY225a	
18	1739R	1	07NV	2	290m		25mA	3.0	28	2.0	20m	655n	250u	20m		CA	EA129b	PY29j	
19	SLA2	1	07P	2		750m	40m	5.5		2.1 †	15m	1.0m	15m			EA69	PY		
20	SLA9	1	07P	2		750m	40m	3.0		2.2	20m	300u	20m			EA69	PY		
21#	SN715	1	07P	2	280m	220m	30mA	3.0	27*	1.8	15m	660n			CA tr 5.0ns	EA90	PY325		
22	SPX304	1	07PD	2	300m		150mA	3.0 Δ	28	2.0	20m	655n	500u	20m		CA	EA8b	PY29h	
23▼	LT304	1	07PLV	2	290m		25mA	3.0	28	2.0	20m	655n	500u	20m		CA	EA8b	PY29f	
24#	FND368	1	07PR	2	362m		25mA	3.0	28*	2.0	20m	685n	900uΔ	20m	52 *	CA	EA62	PY260	
25	FND358	1	07PR	2	362m	300m	25mA	3.0	28*	2.0	20m	665n	450uΔ	20m	26 *	CA	EA62	PY260	
26#	GL4R04A	1	07PR	2	381m	300m	25mA	5.0 Δ	27*	2.0	20m	655n	60u	20m		CA	EA102	PY374	
27#	GL5R04A	1	07PR	2	381m	300m	25mA	5.0 Δ	27*	2.0	20m	655n	60u	20m		CA	EA102	PY374	
28#	SN714	1	07PR	2	390m	220m	120m	3.0	27*	1.8	15m	660n			CA tr 5.0ns	EA89	PY324		
29	FND501	1	07PR	2	500m		25mA	3.0	28*	2.0	20m	665n	600uΔ	20m	35 *	CA	EA64	PY176b	
30	FND508	1	07PR	2	500m		25mA	3.0	28*	2.0	20m	665n	600uΔ	20m	35 *	CA	EA64a	PY176c	
31	FND531	1	07PR	5	500m		20mA	3.0	28*	3.2	20m	565n	2.0mΔ	20m	104 *	CD	EA64	PY176b	
32	FND538	1	07PR	5	500m		20mA	3.0	28*	3.2	20m	565n	2.0mΔ	20m	104 *	CD	EA64a	PY176b	
33	FND541	1	07PR	4	500m		20mA	3.0	28*	3.2	20m	570n	2.0mΔ	20m	104 *	DB	EA64	PY176b	
34	FND548	1	07PR	4	500m		20mA	3.0	28*	3.2	20m	570n	2.0mΔ	20m	104 *	DB	EA64a	PY176b	
35	FND551	1	07PR	3	500m		20mA	3.0	28*	3.2	20m	635n	2.0mΔ	20m	104 *	DB	EA64	PY176b	
36	FND558	1	07PR	3	500m		20mA	3.0	28*	3.2	20m	635n	2.0mΔ	20m	104 *	DB	EA64a	PY176b	
37	FND561	1	07PR	2	500m		25 Δ	3.0	28*	2.0	20m	665n	1.2mΔ	20m	70 *	CA	EA64	PY176b	
38	FND568	1	07PR	2	500m		25 Δ	3.0	28*	2.0	20m	665n	1.2mΔ	20m	70 *	CA	EA64a	PY176b	
39	SPX504	1	07PR	2	500m		200mA	3.0 Δ	28	2.0	20m	655n	600u	20m		CA	EA64	PY30b	
40#	GL4R06A	1	07PR	2	590m	300m	25mA	5.0 Δ	27*	2.0	20m	655n	170u	20m		CA	EA115	PY414	
41#	GL5R06A	1	07PR	2	590m	300m	25mA	5.0 Δ	27*	2.0	20m	655n	60u	20m		CA	EA102	PY414	
42#	GL4R10A	1	07PR	2	984m	430m	25mA	5.0 Δ	27*	2.0	20m	655n	100u	20m		CA	EA114a	PY413	
43#	GL5R10A	1	07PR	2	984m	430m	25mA	5.0 Δ	27*	2.0	20m	655n	100u	20m		CA	EA114	PY413	
44▼	7616R	1	07PRV	2	290m	200m	20mA	6.0 Δ	28	2.5	20m	635n	250u	5.0m		Universal	EA110	PY60d	
45▼	7626Y	1	07PRV	4	290m	200m	20mA	6.0 Δ	28	2.5	20m	583n	200u	5.0m		Universal	EA110	PY60d	
46▼	7636G	1	07PRV	5	290m	200m	20mA	6.0 Δ	28	2.5	20m	565n	300u	10m		Universal	EA110	PY60d	
47	HP5082-7736	1	07PRV	2	290m	252m*	25mA	6.0 Δ	28*	2.0	20mΔ	655n	350uΔ	20m		CA	EA110	PY60d	
48▼	7736R	1	07PRV	2	290m	294m	25mA	6.0 Δ	28	2.0	20m	655n	200u	100m		Universal	EA110	PY60d	
49	HP5082-7616	1	07PRV	2	290m	300m*	20mA	6.0 Δ	28	2.5	20mΔ	635n	250uΔ	5.0m		CA	EA110	PY60d	
50	HP5082-7626	1	07PRV	4	290m	300m*	20mA	6.0 Δ	28	2.5	20mΔ	583n	200uΔ	5.0m		CA	EA110	PY60d	
51	HP5082-7636	1	07PRV	5	290m	300m*	20mA	6.0 Δ	28	2.5	20mΔ	565n	300uΔ	10m		BD	EA110	PY60d	
52▼	1453G	1	07PRV	5	400m	250m*	20mA	3.0 Δ	48	3.5	20m	565n	250u	10m		Common A	EA175d	PY600a	
53▼	1463E	1	07PRV	3	400m	250m*	20mA	3.0 Δ	48	2.5	20m	630n	1.0m	10m		Common A	EA175d	PY600a	
54▼	1483Y	1	07PRV	4	400m	250m*	20mA	3.0 Δ	48	3.5	20m	585n	600u	10m		Common A	EA175d	PY600a	
55▼	1473R	1	07PRV	2	400m	350m*	30mA	5.0 Δ	48	2.0	20m	660n	300u	10m		Common A	EA175d	PY600a	
56▼	7656R	1	07PRV	2	408m	200m	20mA	6.0 Δ	28	2.5	20m	635n	300u	5.0m		Universal	EA147	PY170a	
57▼	7666Y	1	07PRV	4	408m	200m	20mA	6.0 Δ	28	2.5	20m	583n	250u	5.0m		Universal	EA147	PY170a	
58▼	7676G	1	07PRV	5	408m	200m	20mA	6.0 Δ	28	2.5	20m	565n	250u	10m		Universal	EA147	PY170a	
59	HP5082-7756	1	07PRV	2	408m	252m*	25mA	6.0 Δ	28*	2.0	20mΔ	655n	400uΔ	20m		CA	EA147	PY54e	
60▼	7756R	1	07PRV	2	408m	294m	25mA	6.0 Δ	28	2.0	20m	655n	350u	100m		Universal	EA147	PY170a	
61	HP5082-7656	1	07PRV	2	408m	300m*	20mA	6.0 Δ	28*	2.5	20m	635n	300uΔ	5.0m		CA	EA147	PY54b	
62	HP5082-7666	1	07PRV	4	408m	300m*	20mA	6.0 Δ	28*	2.5	20m	583n	250uΔ	5.0m		CA	EA147	PY54b	
63	HP5082-7676	1	07PRV	5	408m	300m*	20mA	6.0 Δ	28*	2.5	20m	565n	250uΔ	10m		BD	EA147	PY54b	
64	TIL330A	1	07PRV	2	500m		25mA	3.0 Δ	28*	2.0	20mΔ	655n	600u	20m		CA	EA166b	PY506a	
65▼	LRT1828E	1	07PRV	3	500m	250m	20mA	5.0	27	2.8	20m	635n	3.3m	20m		EB Common A	EA219	PY169a	
66▼	LRT1828G	1	07PRV	5	500m	250m	20m	5.0	27	2.8	20m	565n	2.4m	20m		BD Common A	EA219	PY169a	
67▼	LRT1828HR	1	07PRV	2	500m	250m	20m	5.0	27	2.8	20m	635n	3.3m	20m		Common A	EA219	PY169a	
68▼	LRT1828Y	1	07PRV	4	500m	250m	20m	5.0	27	2.8	20m	585n	2.2m	20m		EB Common A	EA219	PY169a	
69▼	LRT1829E	1	07PRV	3	500m	250m	20mA	5.0	27	2.8	20m	635n	3.3m	20m		EB Common K	EA219a	PY169a	
70▼	LRT1829G	1	07PRV	5	500m	250m	20m	5.0	27	2.8	20m	565n	2.4m	20m		BD Common K	EA219a	PY169a	
71▼	LRT1829HR	1	07PRV	2	500m	250m	20m	5.0	27	2.8	20m	635n	3.3m	20m		Common K	EA219a	PY169a	
72▼	LRT1829Y	1	07PRV	4	500m	250m	20m	5.0	27	2.8	20m	585n	2.2m	20m		EB Common K	EA219a	PY169a	
73▼	LRT1828R	1	07PRV	2	500m	255m	25mA	3.0 Δ	27	2.0	20m	655n	600u	20m		CA Common A	EA219	PY169a	
74▼	LRT1829R	1	07PRV	2	500m	255m	25mA	3.0 Δ	27	2.0	20m	655n	600u	20m		CA Common K	EA219a	PY169a	
75▼	LT504	1	07PRV	2	500m	400m*	25m	3.0 Δ	28	2.0	20m	655n	600u	20m		CA	EA219a	PY30b	
76▼	2663E	1*	07PRV	3	560m	650m	20mA	3.0 Δ	48	2.5	20m	630n	1.0m	10m		Common A	EA169a	PY225a	
77▼	2665E	1*	07PRV	3	560m	650m	20mA	3.0 Δ											

# 35. DISPLAY: LED

IN ORDER OF: (1) NO. DIGITS (2) TYPE DISPLAY (3) CHAR. HT. (4) PWR. DISS. Pcase & (5) TYPE No.

LINE No.	TYPE No.	NO. OF DIGITS	TYPE OF DISPLAY	C O L O R	CHAR. HGHT. (in)	MAX. RATINGS @25°C			TEMP. RNG. CODE	MAX. FWD. VOLT		PEAK WAVELENGTH λp (m)	LUMINOUS INTENSITY Iv (cd)		LUMIN. ANGLE *-FT-L (nt)	MATERIAL & FEATURES MAT	SCHEMATIC	DRAWING Ø-RND. Δ-RECT. *CHIP	
						4. PWR. DISS. Pcase (W)	IF Δ-/seg #-/dio (A)	VR Δ-/seg (V)		V (V)	IF (A)		IF (A)	IF (A)					
1▼	LRT1739G	1	07PV	5	300m	400m	20mA	5.0 Δ	28	2.8	20m	565n	2.5m	20m	BD	Common A	EA222	PY29jZ	
2▼	LRT1739Y	1	07PV	4	300m	400m	20mA	5.0 Δ	28	2.8	20m	585n	3.0m	20m	EB	Common A	EA222	PY29jZ	
3▼	DL701	1	07PV	2	300m	500m	240m	3.0 Δ	28	4.0	20m	700n	1.4m	20m			EA25	PY64bZ	
4▼	MAN4505	1*	07PV	5	400m	250m*	100m	3.0	48	3.0	20m	565n	320u	10m		Universal	EA222	PY615a	
5▼	MAN4605	1*	07PV	3	400m	250m*	100m	3.0	48	2.5	20m	630n	510u	10m		Universal	EA222	PY615a	
6▼	MAN4630	1*	07PV	3	400m	250m*	100m	3.0	48*	2.5	20m	630n	510u	10m		Common A	EA222c	PY615a	
7▼	MAN4805	1*	07PV	4	400m	250m*	100m	3.0	48	3.0	20m	585n	510u	10m		Universal	EA222	PY615a	
8▼	MAN4705	1*	07PV	2	400m	400m*	100m	3.0	48*	2.0	20m	660n	200u	10m		Universal	EA222	PY615a	
9▼	DL7756	1	07PV	2	408m	210m	25mA	6.0 Δ	28	2.0	20m	655n	350u	100m			EA194	PY554Z	
10▼	DLG7676	1	07PV	5	408m	250m	20mA	6.0 Δ	28	3.0	20m	565n	640u	20m			EA194	PY554Z	
11▼	DLO7656	1	07PV	2	408m	250m	20mA	6.0 Δ	28	2.5	20m	635n	1.7m	20m			EA194	PY554Z	
12▼	DLY7666	1	07PV	4	408m	250m	20mA	6.0 Δ	28	3.0	20m	583n	1.5m	20m			EA194	PY554Z	
13▼	1820R	1	07PV	2	587m	430m	25mA	6.0 Δ	27	2.0	20m	655n	300u	20m		Common A	EA213a	PY599a	
14▼	1821R	1	07PV	2	587m	430m	25mA	6.0 Δ	27	2.0	20m	655n	300u	20m		Common K	EA213e	PY599a	
15▼	1816R	1	07PV	2	587m	715m	25mA	6.0 Δ	27	4.0	20m	655n	900uΔ	20m		Common A	EA213a	PY599a	
16▼	1817R	1	07PV	2	587m	715m	25mA	6.0 Δ	27	4.0	20m	655n	900uΔ	20m		Common K	EA213b	PY599a	
17▼	XAN6530	1	07PV	5	600m	250m*	20mA	5.0 Δ	38*	2.8	10m	565n	1.5mΔ	20m		BD	EA97b	PY460Z	
18▼	XAN6550	1	07PV	5	600m	250m*	20mA	5.0 Δ	38*	2.8	10m	565n	1.5mΔ	20m		BD	EA97c	PY460Z	
19▼	XAN6630	1	07PV	2	600m	250m*	25mA	5.0 Δ	28	2.2	20m	655n	550uΔ	20m		CA	EA97b	PY460Z	
20▼	XAN6650	1	07PV	2	600m	250m*	25mA	5.0 Δ	28	2.2	20m	655n	550uΔ	20m		CA	EA97c	PY460Z	
21▼	XAN6830	1	07PV	4	600m	250m*	20mA	5.0 Δ	38*	2.8	10m	585n	700uΔ	10m		CA	EA97b	PY460Z	
22▼	XAN6850	1	07PV	4	600m	250m*	20mA	5.0 Δ	38*	2.8	10m	585n	700uΔ	10m		CA	EA97c	PY460Z	
23▼	XAN6930	1	07PV	2	600m	250m*	20mA	5.0 Δ	28	2.8	10m	697n	500uΔ	10m		BD	EA97b	PY460Z	
24▼	XAN6950	1	07PV	2	600m	250m*	20mA	5.0 Δ	28	2.8	10m	697n	500uΔ	10m		BD	EA97c	PY460Z	
25▼	DL746	1	07PV	2	630m					3.4	20m		5.0m	20m			EA23	PY65aZ	
26▼	DL749	1	07PV	2	630m					3.4	20m		5.0m	20m			EA23a	PY65aZ	
27▼	DL846	1	07PV	2	800m	450m*	30mA	3.0 Δ	58	4.0	20m	660n	2.8m	20m			EA23	PY545aZ	
28▼	DL849	1	07PV	2	800m	450m*	30mA	3.0 Δ	58	4.0	20m	660n	2.8m	20m			EA23a	PY545aZ	
29▼	XAN3053	1	07PVL	5	300m	300m*	20mA	5.0 Δ	28	2.8	10m	565n	500uΔ	10m		BD	EA97	PY458Z	
30▼	XAN3063	1	07PVL	2	300m	300m*	25mA	5.0 Δ	28	2.2	20m	655n	450uΔ	20m		CA	EA97	PY458Z	
31▼	XAN3073	1	07PVL	2	300m	300m*	20mA	5.0 Δ	28	2.8	10m	697n	500u	10m		BD	EA97	PY458Z	
32▼	XAN3083	1	07PVL	4	300m	300m*	20mA	5.0 Δ	28	2.8	10m	585n	300u	10m		BD	EA97	PY458Z	
33▼	XAN508	1	07PVR	2	500m	300m*	25mA	3.0 Δ	38*	2.0	20mΔ	555n	500u	20m		CA	EA97	PY30bZ	
34#	MSD162	1	09N	2	600m	300m*	20mA	5.0	27	1.7 ↑	10m	660n	400u	10m			EA136	PY446Z	
35▼	1707R	1	13HB	2	300m					5.5 ↓	08*	5.5	1.6m ↓	10m		W/Latch;Dec	EA7	PY28Z	
36▼	TIL311	1	13HB	2	300m					6.5 ↓	08*	5.5	1.6m ↓	10m		w/Latch;Dec	EA7	PY28Z	
37▼	AND370R	1	16A	2	500m					8.0 Δ	3.0	37*	2.5	15m		BD	Common K	EA225	PY581Z
38▼	AND371R	1	16A	2	500m					8.0 Δ	3.0	37*	2.5	15m		BD	Common A	EA225a	PY581Z
39▼	HP5082-7340	1	47H	2	290m	935m				5.5	170m	655n	70u			Dec Driver	EA17a	PY56bZ	
40▼	HP5082-7359	1	47H	2	290m	935m				5.5*		655n	40uΔ			w/Dec.Mem	EA79a	PY56bZ	
41▼	HP5082-7395	1	47H	2	290m	935m				5.5*		655n	40uΔ			w/Dec.Mem	EA79a	PY56bZ	
42▼	745-0007	1	47HB	2*	270m	990m	90m	6.5 ↓	07*	5.5 ↓	90m	660n	100u	5.0 ↓		w/Logic	EA7	PY28Z	
43▼	749-2001	1	47HB	2*	270m	990m	90m	6.5 ↓	07*	5.5 ↓	90m	660n	100u	5.0 ↓		CA Dec Dvr.Lat	EA7	PY572Z	
44▼	TIL505	1	47HB	2	300m					5.5 ↓	5.0mΔ	660n	100u	5.0m		Dec Driver	EA7a	PY507	
45▼	LRK1707R	1	47HB	2	300m	900m*	20m	7.0 ↓	08*	5.5 ↓	08*	660n	100u	5.0 ↓		W/Latch;DEC	EA7	PY28Z	
46▼	HP5082-7300	1	47N	2	290m	935m				5.5	170m	655n	70u			Dec Driver	EA17	PY56Z	
47▼	HP5082-7302	1	47N	2	290m	935m				5.5	170m	655n	70u			Dec Driver	EA17	PY56aZ	
48▼	HP5082-7357	1	47NL	2	290m	935m				5.5*		655n	40uΔ			w/Dec.Mem	EA79	PY56aZ	
49▼	HP5082-7392	1	47NL	2	290m	935m				5.5*		655n	40uΔ			w/Dec.Mem	EA79	PY56aZ	
50▼	HP5082-7304	1	47NP	2	290m	320m	10m	4.0	28	2.0	10m	655n	70u			±.1,Decimal	EA128	PY56cZ	
51▼	HP5082-7358	1	47NP	2	290m	320m	10m	4.0	28	2.0	10m	655n	70u	6.0m		±.1,Decimal	EA128	PY56dZ	
52▼	HP5082-7393	1	47NPR	2	290m	320m	10m	4.0	28	2.0	10m	655n	40u	6.0m			EA128	PY56dZ	
53▼	HP5082-7356	1	47NR	2	290m	935m				5.5*		655n	40uΔ			w/Dec.Mem	EA79	PY56Z	
54▼	HP5082-7391	1	47NR	2	290m	935m				5.5*		655n	40uΔ			w/Dec.Mem	EA79	PY56Z	
55▼	LRT1704E	1	57A	3	300m	750m*	20m	5.0	27	2.8	10m	635n	450u	10m		EB X-Y Select	EA4	PY26aZ	
56▼	LRT1704G	1	57A	5	300m	750m*	20m	5.0	27	2.8	10m	565n	450u	10m		BD X-Y Select	EA4	PY26aZ	
57▼	LRT1704HR	1	57A	2	300m	750m*	20m	5.0	27	2.8	10m	635n	450u	10m		EB X-Y Select	EA4	PY26aZ	
58▼	LRT1704R	1	57A	2	300m	750m*	20m	3.0	27	2.0	10m	655n	400u	10m		CA X-Y Select	EA4	PY26aZ	
59▼	LRT1704Y	1	57A	4	300m	750m*	20m	5.0	27	2.8	10m	585n	450u	10m		EB X-Y Select	EA4	PY26aZ	
60▼	LRT1057E	1	57A	3	1.1	750m*	20m	5.0	27	2.8	10m	635n	600u	10m		EB X-Y Select	EA216	PY601Z	
61▼	LRT1057G	1	57A	5	1.1	750m*	20m	5.0	27	2.8	10m	565n	480u	10m		BD X-Y Select	EA216	PY601Z	
62▼	LRT1057R	1	57A	2	1.1	750m*	20m	3.0	27	2.0	10m	655n	450u	10m		CA X-Y Select	EA216	PY601Z	
63▼	LRT1057Y	1	57A	4	1.1	750m*	20m	5.0	27	2.8	10m	585n	550u	10m		EB X-Y Select	EA216	PY601Z	
64#	GPD520	1	57AL	4	250m	2.0	80mΔ	6.0 Δ	6A	4.0	80m	575n	2.5m	80m	12k*	BD 1ms Pulses		PY633Z	
65▼	1704R	1	57AL	2	300m					0.7*	2.0	10m	660n	110u	10m		EA4	PY26aZ	
66▼	TIL305	1	57AL	2	300m					0.7*	2.0	10m	660n	110u	10m		EA4	PY26Z	
67▼	TIL504	1	57AL	2	300m					0.5*	2.0	10mΔ	660n	150u	10m			EA4a	PY36Z
68▼	TIL507	1	57AL	2	300m					0.5*	1.0m	655n	110u	10m		w/Driver	EA13	PY39Z	
69▼	749-1301	1	57AL	2*	300m	1.7m	400m	3.0	07*	2.0</									

# 35. DISPLAY: LED

IN ORDER OF: (1)NO. DIGITS (2)TYPE DISPLAY  
(3)CHAR. HT. (4)PWR.DISS.-Pcase & (5)TYPE No.

LINE No.	TYPE No.	1 NO. OF DIGITS	2 TYPE OF DISPLAY	C O L O R	3 CHAR. HGHT. (in)	MAX. RATINGS @25°C			TEMP. RNG. CODE	MAX. FWD. VOLT		PEAK WAVE-LENGTH λp (m)	LUMINOUS INTENSITY Iv		LUMIN.-ANCE LV-Lt (nt)	MATERIAL & FEATURES MAT	SCHEM-ATIC	DRAWING Ø-RND. □-RECT. △-STRIP *-CHIP
						4 MAX. PWR. DISS. Pcase (W)	IF Δ-/dio (#/dio)	VR Δ-/seg (V)		VF (V)	IF (A)		(cd)	IF (A)				
1	NSN381	2	07NR	2	300m		20mΔ	3.0 Δ	27*	2.0	10mΔ	680n	100uΔ	10mΔ	CA	EA119c	PY418□	
2	NSN382	2	07NR	2	300m		20mΔ	3.0 Δ	27*	2.0	10mΔ	660n	100uΔ	10mΔ	CA	EA119d	PY418□	
3#	LN524GA	2	07NR	5	433m	50m*	20m	5.0	27	2.1 ↑	20m	560n	500u	10m	BD	EA179	PY349a	
4#	LN524GK	2	07NR	5	433m	50m*	20m	5.0	27	2.1 ↑	20m	560n	500u	10m	BD	EA179a	PY349a	
5#	LN524RA	2	07NR	2	433m	50m*	20m	5.0	27	2.1 ↑	20m	700n	300u	10m	BD	EA179	PY349a	
6#	LN524RK	2	07NR	2	433m	50m*	20m	5.0	27	2.1 ↑	20m	700n	300u	10m	BD	EA179a	PY349a	
7	NSN534	2	07NR	2	500m		20mΔ	3.0 Δ	27*	2.0	10mΔ	660n	100uΔ	10mΔ	CA	EA120	PY418a□	
8	NSN581	2	07NR	2	500m		20mΔ	3.0 Δ	27*	2.0	10mΔ	660n	100uΔ	10mΔ	CA	EA120a	PY418a□	
9	NSN582	2	07NR	2	500m		20mΔ	3.0 Δ	27*	2.0	10mΔ	660n	100uΔ	10mΔ	CA	EA120b	PY418a□	
10	NSN583	2	07NR	2	500m		20mΔ	3.0 Δ	27*	2.0	10mΔ	660n	100uΔ	10mΔ	CA	EA120c	PY418a□	
11	NSN584	2	07NR	2	500m		20mΔ	3.0 Δ	27*	2.0	10mΔ	660n	100uΔ	10mΔ	CA	EA120d	PY418a□	
12▼	TIL839	2	07NR	2	500m		200mΔ	3.0 Δ	28	2.0	10m	655n	600u	20m	Common A	EA227	PY634Δ	
13▼	TIL840	2	07NR	2	500m		200mΔ	3.0 Δ	28	2.0	10m	655n	600u	20m	Common K	EA227a	PY634Δ	
14▼	TIL841	2	07NR	2	500m		200mΔ	3.0 Δ	28	2.0	10m	655n	600u	20m	Common K	EA227b	PY634Δ	
15▼	TIL842	2	07NR	2	500m		200mΔ	3.0 Δ	28	2.0	10m	655n	600u	20m	Common A	EA227c	PY634Δ	
16#	TLR324	2	07NR	2	500m		20mΔ	3.0	37*	2.5	15m	700n	250uΔ	5.0m	BD	EA161	PY501□	
17#	TLR325	2	07NR	2	500m		20mΔ	3.0	37*	2.5	15m	700n	250uΔ	5.0m	BD	EA161a	PY501□	
18#	TLR326	2	07NR	2	500m		20mΔ	3.0	37*	2.5	15m	700n	250uΔ	5.0m	BD	EA161b	PY502□	
19#	TLR327	2	07NR	2	500m		20mΔ	3.0	37*	2.5	15m	700n	250uΔ	5.0m	BD	EA161c	PY502□	
20▼	1791R	2	07NR	2	500m	400m	200m	3.0 Δ	48	1.7	20m	655n	600u	20m	Common A	EA121b	PY597□	
21▼	1792R	2	07NR	2	500m	400m	200m	3.0 Δ	48	1.7	20m	655n	600u	20m	Common K	EA121c	PY597□	
22▼	LT512	2	07NR	2	500m	400m*	25m	3.0 Δ	48	1.7 ↑	20m	655n	600u	20m	CA	EA208	PY597	
23▼	LT513	2	07NR	2	500m	400m*	25m	3.0 Δ	48	1.7 ↑	20m	655n	600u	20m	CA	EA208b	PY597	
24	DL727	2	07NR	2	510m	900m*	30mΔ	3.0 Δ	28*	2.5	20m	650n	2.8m	20m		EA46	PY157a□	
25	DL728	2	07NR	2	510m	900m*	30mΔ	3.0 Δ	28*	2.5	20m	650n	2.8m	20m		EA48	PY157a□	
26▼	COX87A,K	2	07NR	2	511m	900m	25m#	5.0	28%	3.0	20m	660n	700uΔ	20m	CA	EA220a	PY613	
27▼	COX89A,K	2	07NR	3	511m	900m	25m#	5.0	28%	3.0	20m	630n	1.5uΔ	20m	EB	EA220a	PY613	
28▼	COX91A,K	2	07NR	5	511m	900m	25m#	5.0	28%	3.2	20m	560n	700uΔ	20m	BD	EA220a	PY613	
29▼	COX93A,K	2	07NR	4	511m	900m	25m#	5.0	28%	3.2	20m	590n	1.0uΔ	20m	CA	EA220a	PY613	
30	FND6710	2	07NR	2	560m		25mΔ	5.0	48*	2.0	20m	665n	250uΔ	10m	CA	EA169	PY508□	
31	FND6740	2	07NR	2	560m		25mΔ	5.0	48*	2.0	20m	665n	250uΔ	10m	CA	EA169a	PY508□	
32▼	2661E	2	07NR	3	560m	800m	20mΔ	3.0 Δ	48	2.5	20m	630n	1.0m	10m	Common A	EA125a	PY225	
33▼	2664E	2	07NR	3	560m	800m	20mΔ	3.0 Δ	48	2.5	20m	630n	1.0m	10m	Common K	EA125c	PY225	
34▼	2671R	2	07NR	2	560m	800m	20mΔ	5.0 Δ	48	2.0	20m	650n	200u	10m	Common A	EA125a	PY225	
35▼	2674R	2	07NR	2	560m	800m	20mΔ	5.0 Δ	48	2.0	20m	650n	200u	10m	Common K	EA125c	PY225	
36	MAN6610	2	07NR	3	560m	800m*	320m	3.0 Δ	48*	2.5	20m	630n	510u	10m	CA	EA46	PY225□	
37	MAN6640	2	07NR	3	560m	800m*	320m	3.0 Δ	48*	2.5	20m	630n	510u	10m	CA	EA48	PY225□	
38	MAN6710	2	07NR	2	560m	800m*	320m	3.0 Δ	48*	2.0	20m	650n	125u	10m	CA	EA46	PY225□	
39	MAN6740	2	07NR	2	560m	800m*	320m	3.0 Δ	48*	2.0	20m	650n	125u	10m	CA	EA48	PY225□	
40#	LN526GA	2	07NR	5	567m	50m*	20m	5.0	27	2.1 ↑	20m	560n	500u	10m	BD	EA179	PY349b	
41#	LN526GK	2	07NR	5	567m	50m*	20m	5.0	27	2.1 ↑	20m	560n	500u	10m	BD	EA179a	PY349b	
42#	LN526RA	2	07NR	2	567m	50m*	20m	5.0	27	2.1 ↑	20m	700n	300u	10m	BD	EA179	PY349b	
43#	LN526RK	2	07NR	2	567m	50m*	20m	5.0	27	2.1 ↑	20m	700n	300u	10m	BD	EA179a	PY349b	
44#	MSD261	2	07NR	2	600m	300m*	20mΔ	5.0	Δ	27	1.7 ↑	10m	660n	400u	10m	CA	PYΔ	
45	739-0261-601	2	07NR	2	600m	750m	30mΔ	3.0	28	2.8	10mΔ	700n	300uΔ	10mΔ	BD	EA101	PY373□	
46	NSN734	2	07NR	2	700m		20mΔ	3.0 Δ	27*	2.0	10mΔ	660n	100uΔ	10mΔ	CA	EA121	PY418b□	
47	NSN781	2	07NR	2	700m		20mΔ	3.0 Δ	27*	2.0	10mΔ	660n	100uΔ	10mΔ	CA	EA121a	PY418b□	
48	NSN782	2	07NR	2	700m		20mΔ	3.0 Δ	27*	2.0	10mΔ	660n	100uΔ	10mΔ	CA	EA121b	PY418b□	
49	NSN783	2	07NR	2	700m		20mΔ	3.0 Δ	27*	2.0	10mΔ	660n	100uΔ	10mΔ	CA	EA121c	PY418b□	
50	NSN784	2	07NR	2	700m		20mΔ	3.0 Δ	27*	2.0	10mΔ	660n	100uΔ	10mΔ	CA	EA121d	PY418b□	
51	DL2130	2	07NR	2	1.0		30mΔ	3.0	28	4.0	20m	700n	1.5m	10m	CA	EA186	PY546□	
52▼	LRT1784R	2	14AR	2	540m	1.5 *	25mΔ	3.0 Δ	28	2.0	20m	655n	600u	20m	CA	Common K	EA130a	PY427□
53▼	LRT1785R	2	14AR	2	540m	1.5 *	25mΔ	3.0 Δ	28	2.0	20m	655n	600u	20m	CA	Common K	EA130	PY427□
54	1785RC	2	14NR	2	540m	750m	25mΔ	3.0	27	2.0	20m	655n	600uΔ	20m	CA	EA130	PY427□	
55	DL57	2	57AL	2	320m	750m	200m	3.0	2A	2.0	10m	650m	10m	300 *	CA	EA21	PY50a□	
56	HP5082-7402	3	07ND	2	110m	80m	5.0m	5.0	47*	2.0	10mΔ	655n	5.0uØ	10mΔ	CA	Rgt Cluster	EA149	PY57□
57	HP5082-7403	3	07ND	2	110m	80m	5.0m	5.0	47*	2.0	10mΔ	655n	5.0uØ	10mΔ	CA	Lft Cluster	EA149a	PY57□
58▼	TIL829	3*	07NE	2	500m		25mΔ	3.0	28	2.0	10m	655n	600u	20m	Alarm Ind	EA229	PY637Δ	
59▼	TIL830	3*	07NE	2	500m		25mΔ	3.0	28	2.0	10m	655n	600u	20m	PM Ind	EA229	PY637aΔ	
60▼	TIL831	3*	07NE	2	500m		25mΔ	3.0	28	2.0	10m	655n	600u	20m	Degree Ind	EA229	PY637bΔ	
61	739-0361-602	3	07NRP	2	600m	750m	30mΔ	3.0 Δ	28	2.8	10mΔ	700n	300uΔ	10mΔ	BD	EA101	PY373h□	
62▼	TIL835	3*	07NPP	2	500m		200m	3.0	28	2.0	10m	655n	600u	20m	Common A	EA230	PY638Δ	
63▼	TIL836	3*	07NPP	2	500m		200m	3.0	28	2.0	10m	655n	600u	20m	Common K	EA230a	PY638Δ	
64▼	NSB5388	3*	07NPPM	2	500m		75mΔ	3.0 Δ	27	2.0	10mΔ	660n	200uΔ	10mΔ	CA	EA224	PY618□	
65▼	NSA0038	3	07NR	2	100m		70mΔ	3.0	27	2.0	5.0mΔ	660n	370uΔ	2.5mΔ	CA	EA106a	PY624	
66	DL330M	3	07NR	2	110m		10mΔ	3.0	27	2.0	20m	660n	1.5m	5.0m	CA	EA185	PY541□	
67	HP5082-7412	3	07NR	2	110m	80m	5.0m	5.0	47*	2.0	10mΔ	655n	5.0uØ	10mΔ	CA	Rgt Cluster	EA149d	PY57□
68	HP5082-7413	3	07NR	2	110m	80m	5.0m	5.0	47*	2.0	10mΔ	655n	5.0uØ	10mΔ	CA	Lft Cluster	EA149e	PY57□
69	HP5082-7433	3	07NR	2	110m	240m	5.0mΔ	5.0	47*	2.0	5.0mΔ	655n	1.0uØ	5.0mΔ	CA	EA150a	PY171□	
70#	DL430M	3	07NR	2	150m		10mΔ	4.30	28	2.0	20m	700n	1.5m	5.0m		EA185	PY542□	
71	739-0361-601	3	07NR	2	600m	750m	30mΔ	3.0	28	2.8	10mΔ	700n	300uΔ	10mΔ	BD	EA101	PY373a□	
72	DL3100	3	07NR	2	1.0		30mΔ	3.0	28	4.0	20m	700n	1.5m	10m		EA187	PY547□	
73	DL3130	3	07NR	2	1.0		30mΔ	3.0	28	4.0	20m	700n	1.5m	10m		EA187a	PY547□	
74	DL3531	3*	07NRP	2	500m		30mΔ	8.0 Δ	58*	3.0	20mΔ	660n	500u	10mΔ	CA	EA67	PY264□	
75	DL5122	3*	07NWW	2	112m	500m	10mΔ	3.0	27	1.7	5.0m	670n	680u			EA67	PY160Δ	
76	AN3	3	09AE	2	100m	500m*	10mΔ	3.0 Δ	29*	2.0	20m	700n	1.5m	5.0m	CA	EA107	PY408□	
77	HP5082-7100	3	57A	2	270m	700m	10m#	7.0	59□	2.0	50m#	655n	2.2m	100m#		EA152	PY63□	
78	TIL560	3	57A	2	500m		7.0	58*	5.5	1.6m#	650n	7.0u	5.0	5.0	w/Shift Reg	EA15	PY41□	

### 35. DISPLAY: LED

IN ORDER OF: (1)NO. DIGITS (2)TYPE DISPLAY  
(3)CHAR. HT. (4)PWR.DISS.-Pcase & (5)TYPE No.

LINE No.	TYPE No.	NO. OF DIGITS	TYPE OF DISPLAY	C O L	3 CHAR. HGHT. (in)	MAX. RATINGS @25°C			TEMP. RANG. CODE	MAX. FWD. VOLT		PEAK WAVE-LENGTH λp (m)	LUMINOUS INTENSITY Iv		LUMINANCE Lv *-FT-L (nt)	MATERIAL & FEATURES	SCHEMATIC	DRAWING Ø-RND. Δ-RECT. Δ-STRIP *-CHIP
						4 PWR. DISS. Pcase (W)	IF #/dio (A)	VR Δ-/seg (V)		(V)	IF (A)		(cd)	IF (A)				
1#	LT698PG-12	4	07AC	5	600m	2.4 *	30mA	5.0	26	3.0	10m	550n	200u	10m	AM/PM,Alarm	EA206a	PY596gΔ	
2#	LT699G-12	4	07AC	5	600m	2.4 *	30mA	5.0	26	3.0	10m	565n	300u	10m	AM/PM,Ind	EA207	PY596hΔ	
3#	LT699PG-12	4	07AC	5	600m	2.4 *	30mA	5.0	26	3.0	10m	550n	200u	10m	AM/PM,Ind	EA207	PY596hΔ	
4#	ALS311B	4	07N	2	118m		110m	5.0 Δ	15*	2.0	4.0m	660n	210u	600u	CA		PY440Z	
5#	ALS311G	4	07N	2	118m		110m	5.0 Δ	15*	2.0	4.0m	660n	80u	600u	CA		PY440Z	
6#	TLR2037	4	07NC	2	590m		15m	3.0 Δ	27*	2.5	10m	700n	80u	10m	BD	EA91a	PY308cΔ	
7#	TLR4030	4	07NC	2	590m		15m	3.0 Δ	27*	2.5	10m	700n	80u	10m	BD	EA91b	PY308cΔ	
8#	TLR4032	4	07NC	2	590m		15m	3.0 Δ	27*	2.5	10m	700n	80u	10m	BD	EA91	PY308aΔ	
9#	MCD461-A2	4	07NC	2	600m	300m	20m	5.0	28	1.7	10m	660n	200u	10m	CA 12 Hr	EA95b	PY441Δ	
10#	MCD461-A4	4	07NC	2	600m	300m	20m	5.0	28	1.7	10m	660n	200u	10m	CA 24 Hr	EA95b	PY441Δ	
11#	MCD461-K2	4	07NC	2	600m	300m	20m	5.0	28	1.7	10m	660n	200u	10m	CA 12 Hr	EA95	PY441Δ	
12#	MCD461-K4	4	07NC	2	600m	300m	20m	5.0	28	1.7	10m	660n	200u	10m	CA 24 Hr	EA95	PY441Δ	
13#	MCD5461-A2	4	07NC	2	600m	300m	20m	5.0	28	1.7	10m	660n	400u	10m	CA 12 Hr	EA95b	PY441Δ	
14#	MCD5461-A4	4	07NC	2	600m	300m	20m	5.0	28	1.7	10m	660n	400u	10m	CA 24 Hr	EA95b	PY441Δ	
15#	MCD5461-K2	4	07NC	2	600m	300m	20m	5.0	28	1.7	10m	660n	400u	10m	CA 12 Hr	EA95	PY441Δ	
16#	MCD5461-K4	4	07NC	2	600m	300m	20m	5.0	28	1.7	10m	660n	400u	10m	CA 24 Hr	EA95	PY441Δ	
17#	MP464	4	07NC	2	600m	300m	20m	5.0 Δ	27	1.7	10m	660n	200u	10m	CA 24 Hr	EA183	PY536Δ	
18#	LT656-24	4	07NC	2	600m	2.0 *	20mA	3.0	26	2.2	10m	655n	300u	10m	Common K	EA205	PY596Δ	
19#	LT656T-24	4	07NC	2	600m	2.0 *	20mA	3.0	26	2.2	10m	655n	300u	10m	Common K	EA205	PY596Δ	
20#	LT667-24	4	07NC	2	600m	2.0 *	20mA	3.0	26	2.2	10m	655n	300u	10m	Common K	EA205	PY596bΔ	
21#	LT668-24	4	07NC	2	600m	2.0 *	20mA	3.0	26	2.2	10m	655n	300u	10m	Alarm	EA205	PY596cΔ	
22#	LT676-24	4	07NC	2	600m	2.0 *	20mA	3.0	26	2.2	10m	655n	300u	10m	Alarm	EA205a	PY596dΔ	
23#	LT677-24	4	07NC	2	600m	2.0 *	20mA	3.0	26	2.2	10m	655n	300u	10m	Alarm	EA205a	PY596bΔ	
24#	LT678-24	4	07NC	2	600m	2.0 *	20mA	3.0	26	2.2	10m	655n	300u	10m	Alarm C.A.	EA205a	PY596eΔ	
25#	LT697-24	4	07NC	2	600m	2.0 *	20mA	3.0	26	2.2	10m	655n	300u	10m	W/Alarm	EA207a	PY596mΔ	
26#	LT698-24	4	07NC	2	600m	2.0 *	20mA	3.0	26	2.2	10m	655n	300u	10m	W/Alarm	EA207a	PY596gΔ	
27#	LT699-24	4	07NC	2	600m	2.0 *	20mA	3.0	26	2.2	10m	655n	300u	10m	Alarm	EA206a	PY596hΔ	
28#	LT656G-24	4	07NC	5	600m	2.4 *	30mA	5.0	26	3.0	10m	565n	300u	10m	Common K	EA205	PY596Δ	
29#	LT656PG-24	4	07NC	5	600m	2.4 *	30mA	5.0	26	3.0	10m	550n	200u	10m	Common K	EA205	PY596Δ	
30#	LT656TG-24	4	07NC	5	600m	2.4 *	30mA	5.0	26	3.0	10m	565n	300u	10m	Common K	EA205	PY596aΔ	
31#	LT656TPG-24	4	07NC	5	600m	2.4 *	30mA	5.0	26	3.0	10m	550n	200u	10m	Common K	EA205	PY596aΔ	
32#	LT667G-24	4	07NC	5	600m	2.4 *	30mA	5.0	26	3.0	10m	565n	300u	10m	Common K	EA205	PY596bΔ	
33#	LT667PG-24	4	07NC	5	600m	2.4 *	30mA	5.0	26	3.0	10m	550n	200u	10m	Common K	EA205	PY596bΔ	
34#	LT668G-24	4	07NC	5	600m	2.4 *	30mA	5.0	26	3.0	10m	565n	300u	10m	Alarm	EA205	PY596cΔ	
35#	LT668PG-24	4	07NC	5	600m	2.4 *	30mA	5.0	26	3.0	10m	550n	200u	10m	Alarm	EA205	PY596cΔ	
36#	LT676G-24	4	07NC	5	600m	2.4 *	30mA	5.0	26	3.0	10m	565n	300u	10m	Alarm	EA205a	PY596dΔ	
37#	LT676PG-24	4	07NC	5	600m	2.4 *	30mA	5.0	26	3.0	10m	550n	200u	10m	Alarm	EA205a	PY596dΔ	
38#	LT677G-24	4	07NC	5	600m	2.4 *	30mA	5.0	26	3.0	10m	565n	300u	10m	Alarm	EA205a	PY596bΔ	
39#	LT677PG-24	4	07NC	5	600m	2.4 *	30mA	5.0	26	3.0	10m	550n	200u	10m	Alarm	EA205a	PY596bΔ	
40#	LT678G-24	4	07NC	5	600m	2.4 *	30mA	5.0	26	3.0	10m	565n	300u	10m	Alarm C.A.	EA205a	PY596eΔ	
41#	LT678PG-24	4	07NC	5	600m	2.4 *	30mA	5.0	26	3.0	10m	550n	200u	10m	Alarm C.A.	EA205a	PY596eΔ	
42#	LT697G-24	4	07NC	5	600m	2.4 *	30mA	5.0	26	3.0	10m	565n	300u	10m	W/Alarm	EA207a	PY596mΔ	
43#	LT697PG-24	4	07NC	5	600m	2.4 *	30mA	5.0	26	3.0	10m	550n	200u	10m	W/Alarm	EA207a	PY596mΔ	
44#	LT698G-24	4	07NC	5	600m	2.4 *	30mA	5.0	26	3.0	10m	565n	300u	10m	W/Alarm	EA206a	PY596gΔ	
45#	LT698PG-24	4	07NC	5	600m	2.4 *	30mA	5.0	26	3.0	10m	550n	200u	10m	W/Alarm	EA206a	PY596gΔ	
46#	LT699G-24	4	07NC	5	600m	2.4 *	30mA	5.0	26	3.0	10m	565n	300u	10m	Alarm	EA207	PY596hΔ	
47#	LT699PG-24	4	07NC	5	600m	2.4 *	30mA	5.0	26	3.0	10m	550n	200u	10m	Alarm	EA207	PY596hΔ	
48#	LT756	4	07NC	2	700m		20mA	3.0	26	2.2	10m	655n	300u	10m	12/24 hr	EA205	PY598	
49	SPX766	4	07NC	2	700m		200mA	3.0 Δ	28	1.7 †	20m	655n	500u	20m		EA96	PY353Z	
50	SPX767	4	07NC	2	700m		200mA	3.0 Δ	28	1.7 †	20m	655n	500u	20m		EA96	PY353Z	
51#	TLR2087	4	07NC	2	900m		15m	3.0 Δ	27*	2.5	10m	700n	100u	10m	BD	EA92a	PY332Z	
52#	TLR4080	4	07NC	2	900m		15m	3.0 Δ	27*	2.5	10m	700n	100u	10m	BD	EA92a	PY332aΔ	
53#	TLR4082	4	07NC	2	900m		15m	3.0 Δ	27*	2.5	10m	700n	100u	10m	BD	EA92a	PY332bΔ	
54#	TLR2057	4	07NC	2	905m		15m	3.0 Δ	27*	2.5	10m	700n	100u	10m	BD	EA92	PY332Δ	
55#	TLR4050	4	07NC	2	905m		15m	3.0 Δ	27*	2.5	10m	700n	100u	10m	BD	EA92	PY332aΔ	
56#	TLR4052	4	07NC	2	905m		15m	3.0 Δ	27*	2.5	10m	700n	100u	10m	BD	EA92	PY332bΔ	
57	HP5082-7404	4	07ND	2	110m	80m	5.0m	5.0	47*	2.0	10mΔ	655n	5.0u	10mΔ	CA	EA149b	PY57Z	
58#	TIL832	4	07NE	2	500m		25mA	3.0	28	2.0	10m	655n	600u	20m	Alarm Ind	EA229	PY637cΔ	
59#	TIL833	4	07NE	2	500m		25mA	3.0	28	2.0	10m	655n	600u	20m	PM Ind	EA229	PY637dΔ	
60#	TIL834	4	07NE	2	500m		25mA	3.0	28	2.0	10m	655n	600u	20m	Degree Ind	EA229	PY637eΔ	
61#	MP463	4	07NK	2	600m	300m*	20mA	5.0 Δ	27*	1.7 †	10m	660n	200u	10m	CA	EA165	PY503Δ	
62	DL4507	4	07NK	2	500m		30mA			2.0	20m	800u	10m			EA190	PY550Z	
63	DL4510	4	07NK	2	500m		30mA			2.0	20m	800u	10m			EA191	PY551Z	
64#	MCD461-C2	4	07NK	2	600m	300m*	20mA	5.0 Δ	27	1.7 †	10m	660n	200u	10m	CA 12hr		PYΔ	
65#	MCD461-C4	4	07NK	2	600m	300m*	20mA	5.0 Δ	27	1.7 †	10m	660n	200u	10m	CA 24hr		PYΔ	
66#	MCD5461-C2	4	07NK	2	600m	300m*	20mA	5.0 Δ	27	1.7 †	10m	660n	400u	10m	CA 12hr		PYΔ	
67#	MCD5461-C4	4	07NK	2	600m	300m*	20mA	5.0 Δ	27	1.7 †	10m	660n	400u	10m	CA 24hr		PYΔ	
68#	MID46-A2	4	07NK	2	600m	300m*	20mA	5.0 Δ	27*	1.7 †	10m	660n	200u	10m	CA Common A	EA95a	PY441Δ	
69#	MID46-A4	4	07NK	2	600m	300m*	20mA	5.0 Δ	27*	1.7 †	10m	660n	200u	10m	CA Common A	EA95	PY441Δ	
70#	MID46-K2	4	07NK	2	600m	300m*	20mA	5.0 Δ	27*	1.7 †	10m	660n	200u	10m	CA Common K	EA95a	PY441Δ	
71#	MID46-K4	4	07NK	2	600m	300m*	20mA	5.0 Δ	27*	1.7 †	10m	660n	200u	10m	CA Common K	EA95	PY441Δ	
72#	MID546-A2	4	07NK	2	600m	300m*	20mA	5.0 Δ	27	1.7 †	10m	660n	400u	10m	CA 12hr		PYΔ	
73#	MID546-A4	4	07NK	2	600m	300m*	20mA	5.0 Δ	27	1.7 †	10m	660n	400u	10m	CA 24hr		PYΔ	
74#	MID546-K2	4	07NK	2	600m	300m*	20mA	5.0 Δ	27	1.7 †	10m	660n	400u	10m	CA 12hr		PYΔ	
75#	MID546-K4	4	07NK	2	600m	300m*	20mA	5.0 Δ	27	1.7 †	10m	660n	400u	10m	CA 24hr		PYΔ	
76	DL4500	4	07NK	2	500m		30mA	8.0 Δ	58*	3.0	20mΔ	660n	500u	10mΔ		EA68a	PY267Z	
77	DL4520A	4	07NK	2	500m		30mA	8.0 Δ	58*	3.0	20mΔ	660n	500u	10mΔ		EA68b	PY268Z	
78#	TLR2047	4	07NK	2	600m		15m	3.0 Δ	26*	2.5	10m	700n	80u	5.0m	BD	EA91d	PY308bZ	
79#	TLR40																	



# 35. DISPLAY: LED

IN ORDER OF: (1)NO. DIGITS (2)TYPE DISPLAY  
(3)CHAR. HT. (4)PWR.DISS.Pcase &(5)TYPE No.

LINE No.	TYPE No.	NO. OF DIGITS	TYPE OF DISPLAY	COLOR	CHAR. HGT. (in)	MAX. RATINGS @25°C			TEMP. RNG. CODE	MAX. FWD. VOLT		PEAK WAVE-LENGTH Ap (m)	LUMINOUS INTENSITY Iv (cd)		LUMIN. -ANCE Lv *FT-L (nt)	MATERIAL & FEATURES MAT	SCHEM-ATIC	DRAWING	
						4 PWR. DISS. Pcase (W)	IF Δ-/seg #-/dio (A)	VR Δ-/seg (V)		VF (V)	IF (A)		IF (A)	IF (A)					
1	HDSP-2000	4	57A	2	146m	1.7 *			27			655n	200uΔ	5.0 *		On-board SR	EA98	PY362	
2	HP5082-7101	4	57A	2	270m	700m			59	2.0	50m\$	655n	2.2m	100m\$			EA152a	PY63a	
3#	ALS311A	5	07N	2	118m				15*	2.0	4.0m	660n	210u	600u	CA			PY440	
4#	ALS311V	5	07N	2	118m				5.0 Δ	2.0	4.0m	660n	80u	600u	CA			PY440	
5▼	TIL838	5	07N	2	270m				150m	27	2.0	10m	655n	150u	10m		EA231a	PY639a	
6	HP5082-7405	5	07ND	2	110m	80m			5.0m	5.0	47*	2.0	10mΔ	655n	5.0uØ	10mΔ	EA149c	PY587	
7	HP5082-7265	5	07ND	2	175m	625m*			7.0mΔ	5.0	27	2.0	10mΔ	655n	70uΔ	2.0m	EA99	PY363Δ	
8	NSB5917	5	07NPR	2	500m				20mΔ	3.0 Δ	27*	2.0	10mΔ	660n	100uΔ	10mΔ	EA118	PY417	
9	739-0561-602	5	07NPR	2	600m	750m			30mΔ	3.0 Δ	28	2.8	10mΔ	700n	300uΔ	10mΔ	EA101	PY373h	
10	HP5082-7415	5	07NR	2	110m	80m			5.0m	5.0	47*	2.0	10mΔ	655n	5.0uØ	10mΔ	EA149g	PY587	
11	HP5082-7285	5	07NR	2	175m	625m*			7.0mΔ	5.0	27	2.0	10mΔ	655n	70uΔ	2.0m	EA99	PY363Δ	
12▼	TIL837	5	07NR	2	270m				150m	3.0	27	2.0	10m	655n	150u	10m	EA231	PY639	
13	NSB5921	5	07NR	2	500m				20mΔ	3.0 Δ	27*	2.0	10mΔ	660n	100uΔ	10mΔ	EA118a	PY416	
14	NSB5922	5	07NR	2	500m				20mΔ	3.0 Δ	27*	2.0	10mΔ	660n	100uΔ	10mΔ	EA118b	PY416	
15	739-0561-601	5	07NR	2	600m	750m			30mΔ	3.0	28	2.8	10mΔ	700n	300uΔ	10mΔ	EA101	PY373c	
16	HP5082-7102	5	57A	2	270m	700m			10m#	4.0	59	2.0	50m\$	655n	2.2m	100m\$	EA152b	EA199a	
17	730-6023	6	02FH	2	770m	356m\$			3.0 Δ	3.0	07	2.2	27m			BD	EA202	PY564	
18	730-6025	6	02FH	2	770m	810m\$			3.0 Δ	3.0	07	5.0	27m			BD W/Resistors	EA202	PY564	
19	739-0661-602	6	07NPR	2	600m	750m			30mΔ	3.0 Δ	28	2.8	10mΔ	700n	300uΔ	10mΔ	EA101	PY373h	
20	TIL360	6	07NR	2	100m				10mΔ	2.0 Δ	07*	2.0	10m	660n	48uΔ	10m	EA9	PY310	
21	TIL393-6	6	07NR	2	102m				3.0 Δ	3.0	28	2.1	10m	660n	200u	10m	CA Calculator	EA58b	PY228
22	DL6500	6	07NR	2	500m				30mΔ	3.0	27	2.0	20m	660n	800u	10m	EA192	PY552	
23▼	NSB5931	6	07NR	2	500m				150mΔ	3.0	27	2.0	10mΔ	660n	200uΔ	10mΔ	CA	EA224b	PY619
24	739-0661-601	6	07NR	2	600m	750m			30mΔ	3.0	28	2.8	10mΔ	700n	300uΔ	10mΔ	BD	EA101	PY373d
25	DL6830	6	07NR	2	800m				30mΔ	3.0 Δ	28*	3.0	20mΔ	660n	500u	10mΔ	BD	EA126	PY422
26	739-0761-602	7	07NPR	2	600m	750m			30mΔ	3.0 Δ	28	2.8	10mΔ	700n	300uΔ	10mΔ	BD	EA101	PY373h
27	739-0761-601	7	07NR	2	600m	750m			30mΔ	3.0	28	2.8	10mΔ	700n	300uΔ	10mΔ	BD	EA101	PY373e
28	739-0861-602	8	07NPR	2	600m	750m			30mΔ	3.0 Δ	28	2.8	10mΔ	700n	300uΔ	10mΔ	BD	EA101	PY373h
29	TIL393-8	8	07NR	2	102m				3.0 Δ	3.0	28	2.1	10m	660n	200u	10m	CA Calculator	EA58a	PY228a
30	HP5082-7240	8	07NR	2	102m	400m			3.0mΔ	5.0	28*	1.6 †	5.0m	655n	12uΔ		CA Calculator	EA80	PY172
31	HP5082-7440	8	07NR	2	105m	400m			3.0mΔ	5.0	28*	1.5 †	5.0mΔ	655n	9.0uØ	5.0mΔ	CA Calculator	EA80	PY172b
32	HP5082-7448	8	07NR	2	105m	400m			3.0mΔ	5.0	28*	1.5 †	5.0mΔ	655n	9.0uØ	5.0mΔ	CA Calculator	EA80	PY172b
33▼	NSA1588A	8	07NR	2	140m				7.0mΔ	3.0	27	2.0	5.0mΔ	660n	400uΔ	5.0mΔ	CA	EA223	PY616
34	739-0861-601	8	07NR	2	600m	750m			30mΔ	3.0	28	2.8	10mΔ	700n	300uΔ	10mΔ	BD	EA101	PY373f
35	MAN2815	8	14AL	2	135m	640m*			20mΔ	5.0	48	2.0	20m	660n	120u	2.5m\$	CA	EA141	PY469
36▼	HDSP-6508	8	16AE	2	150m	138m			200mΔ	5.0	48	1.9	30m	655n	1.6m	30m	CA	EA221a	PY614a
37	739-0961-602	9	07NPR	2	600m	750m			30mΔ	3.0 Δ	28	2.8	10mΔ	700n	300uΔ	10mΔ	BD	EA101	PY373h
38▼	NSA598	9	07NR	2	100m				60mΔ	3.0	27	2.0	7.0mΔ	660n	200uΔ	7.0mΔ	CA	EA226	PY623
39	NSA1198	9	07NR	2*	100m				7.0mΔ	3.0	27*	2.0	5.0mΔ	660n	370u	2.5mΔ	CA		PY107A
40	TIL393-9	9	07NR	2	102m				3.0 Δ	3.0	28	2.1	10m	660n	200u	10m	CA Calculator	EA58	PY228b
41	HP5082-7241	9	07NR	2	102m	450m			3.0mΔ	5.0	28*	1.6 †	5.0m	655n	12uΔ		CA Calculator	EA80a	PY172
42	HP5082-7441	9	07NR	2	105m	450m			3.0mΔ	5.0	28*	1.5 †	5.0mΔ	655n	9.0uØ	5.0mΔ	CA Calculator	EA80a	PY172a
43	HP5082-7449	9	07NR	2	105m	450m			3.0mΔ	5.0	28*	1.5 †	5.0mΔ	655n	9.0uØ	5.0mΔ	CA Calculator	EA80a	PY172c
44	739-0961-601	9	07NR	2	600m	750m			30mΔ	3.0	28	2.8	10mΔ	700n	300uΔ	10mΔ	BD	EA101	PY373g
45	739-1061-602	10	07NPR	2	600m	750m			30mΔ	3.0 Δ	28	2.8	10mΔ	700n	300uΔ	10mΔ	BD	EA101	PY373h
46	739-1061-601	10	07NR	2	600m	750m			30mΔ	3.0 Δ	28	2.8	10mΔ	700n	300uΔ	10mΔ	BD	EA101	PY373h
47	HP5082-7442	12	07NR	2	100m	600m			3.0mΔ	5.0	28*	1.5 †	5.0mΔ	655n	35uΔ	5.0m\$	CA Calculator	EA151	PY474
48	HP5082-7445	12	07NR	2	100m	600m			3.0mΔ	5.0	28*	1.5 †	5.0mΔ	655n	35uΔ	5.0m\$	CA Calculator	EA151b	PY474a
49▼	NSA7120	12	07NR	2	110m				7.0mΔ	3.0	27	2.0	5.0mΔ	660n	350uΔ	5.0mΔ	CA	EA224a	PY617
50	TIL804	12	07NR	2	270m				25mΔ	3.0	27*	2.1	20m	655n	100u	10m	EA138	PY456Δ	
51	HP5082-7444	14	07NR	2	100m	700m			3.0mΔ	5.0	28*	1.5 †	5.0mΔ	655n	35uΔ	5.0m\$	CA Calculator	EA151a	PY475
52	NSA5140	14	07NR	2*	110m				20mΔ	3.0	27*	2.0	7.0mΔ	660n	450u	7.0mΔ	CA		PY108
53	HP5082-7447	14	07NR	2	112m	700m			3.0mΔ	5.0	28*	1.5 †	5.0mΔ	655n	35uΔ	5.0m\$	CA Calculator	EA151d	PY475a
54	HP5082-7275	15	07ND	2	175m	1.9 *			7.0mΔ	5.0	27	2.3	30mΔ	655n	90uΔ	2.0m	CA W/lens	EA99a	PY364Δ
55	HP5082-7295	15	07NR	2	175m	1.9 *			7.0mΔ	5.0	27	2.3	30mΔ	655n	90uΔ	2.0m	CA W/lens	EA99a	PY364Δ
56	HP5082-7446	16	07NR	2	115m	800m			3.0mΔ	5.0	28*	1.5 †	5.0mΔ	655n	35uΔ	5.0m\$	CA Calculator	EA151c	PY476
57	932	32	09AE	2	140m	7.0 *			10mΔ	3.0 Δ	29*	2.0	20m	700n	1.5m	5.0m	CA w/Mem-Log	EA108	PY409



# 36. DISPLAY: LIQUID CRYSTAL

IN ORDER OF: (1)TYPE DISPLAY (2)NO. DIGITS  
(3)CHAR. HT. (4)PWR CONSUMP & (5)TYPE No.

LINE No.	TYPE No.	TYPE OF DISPLAY	NO. OF DIGITS	CHAR. HGT. (in)	MAX. PWR. CONS. Δ-/seg (W)	TEMP. RNG. CODE	OPERATING VOLTAGE				CONTRAST RATIO	RISE TIME tr (S)	DECAY TIME tf (S)	LIFE (hrs)	COL -OR	FEATURES	SCHEM -ATIC	DRAWING Ø-RND. Δ-RECT. Δ-STRIP *-CHIP	
							MIN. VOLT (V)	MAX. VOLT (V)	MIN. FREQ. (Hz)	MAX. FREQ. (Hz)									
1	3510	01	1	700m	100t	08	1.5	20	30	100	10	200m	200m	30k	10	Light Valve		☑	
2	4X11	01	4	1.0	40u	08	1.5	20	30	100	10	200m	200m	30k	10	Light Valve		☑	
3	2220-29	02	36	250m	4.0u	08	4.0	15	30	100	20	100m	100m	50k	11	Dual Bar		☑	
4	41501A	02F	1	5.0		05*	18	↑		500		100m#	120m*	50k		Spot;Trn,DS		☑	
5	41521	02F	1	5.0		05*	18	↑		500		100m#	120m*	50k		Spot;Ref,DS		☑	
6	81501A	02F	1	10		05*	18	↑		500		100m#	120m*	50k		Spot;Trn,DS		☑	
7	81521	02F	1	10		05*	18	↑		500		100m#	120m*	50k		Spot;Ref,DS		☑	
8	11610A	02F	16	1.0		05*	18	↑		500		100m#	120m*	50k		Trn,DS		☑	
9	11612	02F	16	1.0		05*	18	↑		500		100m#	120m*	50k		Ref,DS		☑	
10	7805R10	07A	4	700m		15*	3.0		10	30	150	20†	50m	300m	50k		Ref,Trn,Trf		☑
11	7807R10	07A	4	700m		15*	7.0		20	30	150	20†	50m	300m	50k		Ref,Trn,Trf		☑
12	3624-25	07AH	4	500m	1.0u	08	4.0		15	30	100	20	100m	100m	50k		FE;9 Seg		☑
13	3391	07N	1	3.0	30u	06	15		90	30	100	15	200m	200m	50k		DS		☑
14	41N01A	07N	1	3.9		05*	18	↑		500		100m#	120m*	50k		Trn,DS		☑	
15	41N21	07N	1	3.9		05*	18	↑		500		100m#	120m*	50k		Ref,DS		☑	
16	3491	07N	1	4.0	45u	06	15		90	30	100	15	200m	200m	50k		DS		☑
17	60NT10	07N	1	6.0	14mΔ	06	20		60	60	60	†	100m#	250m*	50k		DS		☑
18	81N01A	07N	1	7.9		05*	18	↑		500		100m#	120m*	50k		Trn,DS		☑	
19	81N21	07N	1	7.9		05*	18	↑		500		100m#	120m*	50k		Ref,DS		☑	
20	3291	07N	1	12	50u	18	6.0		15	30	100	20	200m	200m	30k		FE		☑
21	3602	07N	2	500m	1.0u	18	4.0		12	30	100	20	100m	100m	50k		DS		☑
22	3812	07N	2	800m	1.2u	18	4.0		12	30	100	20	100m	100m	50k		FE		☑
23	3102	07N	2	1.0	4.0u	16	4.0		15	30	100	20	100m	100m	50k		FE		☑
24	3222	07N	2	1.6	8.0u	16	4.0		15	30	100	20	100m	100m	50k		FE		☑
25	3202	07N	2	2.0	15u	16	4.0		15	30	100	20	100m	100m	50k		FE		☑
26	3402	07N	2	4.0	45u	06	35		110	60	60	†	250m	250m	50k		DS		☑
27	60NT20	07N	2	6.0	14mΔ	06*	20		60	60	60	†	100m#	250m*	50k		DS		☑
28	3353	07N	3	300m	600nt	08	4.0		15	30	100	20	100m	100m	20k		FE		☑
29	3603	07N	3	350m	800nt	08	3.0		12	30	100	20	100m	100m	20k		FE		☑
30	3403	07N	3	400m	800nt	06	4.0		15	30	100	20	90m	90m	20k		FE		☑
31	5623	07N	3	500m	1.0u	06	4.0		15	30	100	20	90m	100m	20k		Digit w/Bar		☑
32	3703	07N	3	700m	1.0u	06	4.0		15	30	100	20	100m	100m	30k		FE		☑
33	3103	07N	3	900m	2.0u	06	4.0		15	30	100	20	150m	150m	30k		FE		☑
34	83D7R11	07N	3*	1.0		26*	7.0		20	30	150	20†	50m	300m	50k		Ref,Trn,Trf		☑
35	3203	07N	3	3.0	20u	06	15		90	30	100	15	200m	200m	50k		DS		☑
36	3233-9	07N	3	3.0	20u	06	5.0		15	30	100	20	100m	100m	50k		FE;DS SUBLIM		☑
37	3334	07N	4	300m	500nt	06	4.0		15	30	100	20	100m	100m	50k		FE		☑
38	3644	07N	4	400m	600nt	18	4.0		15	30	100	20	100m	100m	50k		FE		☑
39	3614	07N	4	500m	800nt	18	5.0		15	30	100	20	100m	100m	50k		FE		☑
40	3624-24	07N	4	500m	800nt	18	5.0		15	30	100	20	100m	100m	50k		FE		☑
41	3624-27	07N	4	500m	800nt	26*	5.0		15	30	100	20	80m	60m	30k		FE;MPLX		☑
42	3604	07N	4	500m	1.0u	08	4.0		15	30	100	20	100m	100m	50k		FE		☑
43	3624-06	07N	4	500m	1.0u	06	4.0		15	30	100	20	100m	100m	50k		FE		☑
44	3624-16	07N	4	500m	1.0u	08	4.0		15	30	100	20	100m	100m	50k		FE		☑
45	SX172-1	07N	4	500m	24u	05	2.5		15			20†	100m	100m	50k				☑
46	SX172.5	07N	4	500m	28u	26	3.0		15			20†	50m	50m	50k				☑
47	SX172.6	07N	4	500m	30u	28	4.0		15			20†	75m	75m	50k				☑
48	SX181-1	07N	4	700m	24u	05	2.5		15			20†	100m	100m	50k				☑
49	SX181-5	07N	4	700m	28u	26	3.0		15			20†	50m	50m	50k				☑
50	SX181-6	07N	4	700m	30u	28	4.0		15			20†	75m	75m	50k				☑
51	3804	07N	4	800m	3.0u	26	4.0		15	30	100	15	80m	60m	30k		FE;MPLX		☑
52	3124-45	07N	4	1.0	1.0u	06	4.0		15	30	100	20	100m	100m	50k		FE		☑
53	3104	07N	4*	1.0	4.0u	06	4.5		15	30	100	20	120m	120m	50k		FE		☑
54	3124	07N	4	1.0	4.0u	06	4.0		15	30	100	20	100m	100m	50k		FE		☑
55	3204	07N	4	2.0	20u	06	15		90	30	100	15	200m	200m	50k		DS		☑
56	3414	07N	4	4.0	45u	06	15		120	30	100	15	200m	200m	50k		DS		☑
57	47D5R03	07N	5	400m		15*	3.0		10	30	150	20†	50m	300m	50k		Ref,Trn,Trf		☑
58	47D7R03	07N	5	400m		26*	7.0		20	30	150	20†	50m	300m	50k		Ref,Trn,Trf		☑
59	3324-30	07N	5*	400m	400nt	18	3.0		15	30	100	20	80m	100m	50k		FE		☑
60	3125	07N	5	1.0	4.0u	06	4.5		15	30	100	20	120m	120m	50k		FE		☑
61	3135	07N	5	1.0	4.0u	06	4.5		15	30	100	20	120m	120m	50k		FE		☑
62	15NT50	07N	5	1.5	720uΔ	06*	20		60			60 †	100m#	250m*	50k		DS		☑
63	D5360-1	07N	6	300m	24u	05	2.5		15			20†	100m	100m	50k		FE		☑
64	D5360-5	07N	6	300m	28u	26	3.0		15			20†	50m	50m	50k		FE		☑
65	D5360-6	07N	6	300m	30u	28	4.0		15			20†	75m	75m	50k		FE		☑
66	60D5R05	07N	6	500m		15*	3.0		10	30	150	20†	50m	300m	50k		Ref,Trn,Trf		☑
67	60D7R05	07N	6	500m		26*	7.0		20	30	150	20†	50m	300m	50k		Ref,Trn,Trf		☑
68	3626	07N	6	500m	1.0u	06	4.5		15	30	100	20	100m	100m	50k		FE		☑
69	3627	07N	6	650m	3.0u	06	4.0		15	30	100	20	120m	120m	50k		FE;No DC		☑
70	70D5R10	07N	6	700m		15*	3.0		10	30	150	20†	50m	300m	50k		Ref,Trn,Trf		☑
71	70D7R10	07N	6	700m		26*	7.0		20	30	150	20†	50m	300m	50k		Ref,Trn,Trf		☑
72	3736-8	07N	6	700m	3.0u	06	5.0		15	30	100	20	100m	120m	50k		FE		☑
73	3736-18	07N	6	700m	3.0u	06	5.0		15	30	100	20	100m	120m	50k		FE		☑
74	SX179-1	07N	6	700m	24u	05	2.5		15			20†	100m	100m	50k				☑
75	SX179-5	07N	6	700m	28u	26	3.0		15			20†	50m	50m	50k				☑
76	SX179-6	07N	6	700m	30u	28	4.0		15			20†	75m	75m	50k				☑
77	3126	07N	6	1.0	4.0u	06	5.0		15	30	100	20	80m	60m	30k		FE;MPLX		☑
78	3306	07N	6	3.0	30u	06	5.0		15	30	100	20	200m	200m	50k		FE;DS		☑
79	65D5R09	07N	8	500m		15*	3.0		10	30	150	20†	50m	300m	50k		Ref,Trn,Trf		☑
80	65D7R09	07N	8	500m		26*	7.0		20	30	150	20†	50m	300m	50k		Ref,Trn,Trf		☑
81	3682	07N	8	500m	700nt	06	5.0		15	30	100	20	100m	100m	30k		FE		☑
82	36316	07N	16	500m	1.0u	08	4.5		15	30	100	20	120m</						

# 36. DISPLAY: LIQUID CRYSTAL

IN ORDER OF: (1)TYPE DISPLAY (2)NO. DIGITS  
(3)CHAR. HT. (4)PWR CONSUMP & (5)TYPE No.

LINE No.	5	TYPE No.	1	2	3	4	MAX. TEMP. RNG. CODE	OPERATING VOLTAGE			CONTRAST RATIO	RISE TIME tr (S)	DECAY TIME tf (S)	LIFE (hrs)	COL-OR	FEATURES	SCHEM-ATIC	DRAWING Ø-RND. □-RECT. △-STRIP *-CHIP
								CHAR. HGHT. (in)	PWR. CONS. Δ-/seg (W)	MIN. VOLT (V)								
1▼		C533A-1	07NC	3*	300m	24ut	05	2.5	15								PY591Δ	
2▼		C533A-5	07NC	3*	300m	28ut	26	3.0	15								PY591Δ	
3▼		C533A-6	07NC	3*	300m	30ut	28	4.0	15								PY591Δ	
4		46D7R03	07NC	3*	500m		26	7.0	20	30	150	20†	100m	50m	50m		AM/PM Clock	
5		3930-210	07NC	3*	500m		15	4.0	17	30	100	20†	50m	150m*	50k		AM/PM Clock	
6		3930-312	07NC	3*	500m		15	4.0	17	30	100	20†	75m	150m*	50k		AM/PM Clock	
7		3930-313	07NC	3*	500m		15	4.0	17	30	100	20†	75m	150m*	50k	11	Ref.Trn,Trf	
8		3624-26	07NC	3*	500m		15	4.0	17	30	100	20†	75m	150m*	50k	11	Trn	
9		3902-210	07NC	3*	500m		15	4.0	17	30	100	20†	100m	100m	50k	11	FE,AM/PM	
10		3902-312	07NC	3*	500m		15	4.0	17	30	100	20†	75m	150m*	50k	11	FE,Trn	
11		3902-313	07NC	3*	500m		15	4.0	17	30	100	20†	75m	150m*	50k	11	FE,Trn	
12▼		61050	07NC	3*	500m		15	4.0	17	30	100	20†	75m	150m*	50k	11	FE,Ref	
13▼		L563A-1	07NC	3*	600m		18	2.5	15	30	100	20	150m	150m	50k	11	Ref.Trn,Trf	
14▼		L563A-5	07NC	3*	600m		18	2.5	15	30	100	20	100m	100m	50k		12 hr AM/PM	
15▼		L563A-6	07NC	3*	600m		18	2.5	15	30	100	20	50m	50m	50k		12 hr AM/PM	
16		56D7R08	07NC	3*	700m		26	7.0	20	30	150	20†	75m	75m	50k		12 hr AM/PM	
17		3927-110	07NC	3*	700m		26	7.0	20	30	150	20†	50m	300m	50k	11	Ref.Trn,Trf	
18		3927-210	07NC	3*	700m		26	7.0	20	30	150	20†	75m	150m*	50k	11	Trn	
19		3927-312	07NC	3*	700m		26	7.0	20	30	150	20†	75m	150m*	50k	11	FE,Trn	
20		3927-313	07NC	3*	700m		26	7.0	20	30	150	20†	75m	150m*	50k	11	FE,Trf	
21▼		61075	07NC	3*	700m		26	7.0	20	30	150	20†	75m	150m*	50k	11	FE,Ref	
22▼		61100	07NC	3*	750m		18	2.5	15	30	100	20	150m	150m	50k	11	Ref.Trn,Trf	
23		3402-110	07NC	3*	1.0	150u	18	2.5	15	30	100	20	150m	150m	50k	11	Ref.Trn,Trf	
24		3402-210	07NC	3*	1.1		55	4.0	17	30	100	20†	75m	150m*	50k	11	Trn	
25		3402-312	07NC	3*	1.1		55	4.0	17	30	100	20†	75m	150m*	50k	11	Trn	
26		3402-313	07NC	3*	1.1		55	4.0	17	30	100	20†	75m	150m*	50k	11	Trf	
27		18CT12	07NC	3*	1.8	1.0mΔ	06*	2.0	60			60 †	100m	250m*	50k	11	Ref DS	
28		3906-110	07NC	4	400m	150ut	05*	4.0	17	30	100	20†	75m	150m*	50k	11	Trn	
29		3909-210	07NC	4*	400m	150ut	05*	4.0	17	30	100	20†	75m	150m*	50k	11	FE,Trn	
30		3909-312	07NC	4*	400m	150ut	05*	4.0	17	30	100	20†	75m	150m*	50k	11	FE,Trf	
31		3909-313	07NC	4*	400m	150ut	05*	4.0	17	30	100	20†	75m	150m*	50k	11	FE,Ref	
32		42D5R03	07NC	4	500m		15	3.0	10	30	150	20†	50m	300m	50k	11	Ref.Trn,Trf	
33		42D7R03	07NC	4	500m		26	7.0	20	30	150	20†	50m	300m	50k	11	Ref.Trn,Trf	
34		3929-210	07NC	4	500m		15	4.0	17	30	100	20†	75m	150m*	50k	11	Trn	
35		3929-312	07NC	4	500m		15	4.0	17	30	100	20†	75m	150m*	50k	11	Trf	
36		3929-313	07NC	4	500m		15	4.0	17	30	100	20†	75m	150m*	50k	11	Ref	
37		3906-210	07NC	4	500m	150ut	15	4.0	17	30	100	20†	75m	150m*	50k	11	FE,Trn	
38		3906-312	07NC	4	500m	150ut	15	4.0	17	30	100	20†	75m	150m*	50k	11	FE,Trf	
39		3906-313	07NC	4	500m	150ut	15	4.0	17	30	100	20†	75m	150m*	50k	11	FE,Ref	
40		3404-110	07NC	4	600m		55	4.0	17	30	100	20†	75m	150m*	50k	11	Trn	
41		3404-210	07NC	4	600m		55	4.0	17	30	100	20†	75m	150m*	50k	11	Trn	
42		3404-312	07NC	4	600m		55	4.0	17	30	100	20†	75m	150m*	50k	11	Trn	
43		3404-313	07NC	4	600m		55	4.0	17	30	100	20†	75m	150m*	50k	11	Trf	
44▼		L564C-1	07NC	4	600m	24ut	05	2.5	15				100m	100m	50k		24 hr Clock	
45▼		L564C-5	07NC	4	600m	28ut	26	3.0	15				50m	50m	50k		24 hr Clock	
46▼		L564C-6	07NC	4	600m	30ut	28	4.0	15				75m	75m	50k		24 hr Clock	
47		23.5C01A	07NC	4	1.9		05*	18 †				500	100m	120m*	50k		Trn,DS	
48		23.5C21	07NC	4	1.9		05*	18 †				500	100m	120m*	50k		Ref,DS	
49		43.5C01A	07NC	4	3.9		05*	18 †				500	100m	120m*	50k		Trn,DS	
50		43.5C21	07NC	4	3.9		05*	18 †				500	100m	120m*	50k		Ref,DS	
51▼		SH189-5	07NC	4	12	28ut	26	3.0	15				50m	50m	50k		Ref,DS	
52▼		SH189-6	07NC	4	12	30ut	28	4.0	15				75m	75m	50k			
53▼		SX135-1	07NC	6	500m	24ut	05	2.5	15				100m	100m	50k			
54▼		SX135-5	07NC	6	500m	28ut	26	3.0	15				50m	50m	50k			
55▼		SX135-6	07NC	6	500m	30ut	28	4.0	15				75m	75m	50k			
56		3918-110	07NC	6	500m	150ut	05*	4.0	17	30	100	20†	75m	150m*	50k	11	Trn	
57		3918-210	07NC	6	500m	150ut	05*	4.0	17	30	100	20†	75m	150m*	50k	11	FE,Trn	
58		3918-312	07NC	6	500m	150ut	05*	4.0	17	30	100	20†	75m	150m*	50k	11	FE,Trf	
59		3918-313	07NC	6	500m	150ut	05*	4.0	17	30	100	20†	75m	150m*	50k	11	FE,Ref	
60		3206	07NC	6	2.0	16ut	06	5.0	15	30	100	20	200m	200m	50k	11	FE	
61		3420	07NCK	4	330m		15	4.0	17	30	100	20	150m	300m*	50k		EB32	
62		3421	07NCK	4	405m		15	4.0	17	30	100	20	150m	300m*	50k		EB33	
63		3411	07NCK	4	500m		15	4.0	17	30	100	20	150m	300m*	50k		EB30	
64		3417	07NCK	4	500m		15	4.0	17	30	100	20	150m	300m*	50k		EB31	
65		734	07NDM	4	250m		05*	2.7	3.0 †	25	100	20	120m	185m*	50k	11	Inst Display	
66		46D5R03	07NEC	3*	500m		15	3.0	10	30	150	20†	50m	300m	50k		Ref.Trn,Trf	
67		56D5R08	07NEC	3*	700m		15	3.0	10	30	150	20†	50m	300m	50k		Ref.Trn,Trf	
68▼		FE0101	07NEC	4	300m		05	3.0	20	30			50m	120m	50k		FE	
69		MLC200	07NEC	4*	500m	20uΔ	05*	3.0	20	32 †			150m	190m*	50k	11	FE,Trn,Ref	
70		MLC200TW	07NEC	4*	500m	20uΔ	05*	3.0	20	32 †			150m	190m*	50k	10	FE,Trn,Ref	
71#		FW002R	07NEK	3*	236m	14m	55	6.0	20				75m	100m	50k		FE,Trn,Ref	
72▼		FE0402	07NEM	3*	500m		15	3.0	10	30	100	20†	30m	120m	50k		Ref.Trn,Trf	
73▼		FE0403	07NEM	4*	400m		15	3.0	10	30	100	20†	30m	120m	50k		Ref.Trn,Trf	
74▼		D5340-1	07NEP	4	300m	24ut	05	2.5	15				100m	100m	50k		FE	
75▼		D5340-5	07NEP	4	300m	28ut	26	3.0	15				75m	75m	50k		FE	
76▼		D5340-6	07NEP	4	300m	30ut	28	4.0	15				50m	50m	50k		FE	
77▼		H5540-1	07NEP	4	500m	24ut	05	2.5	15				100m	100m	50k		FE	
78▼		H5540-5	07NEP	4	500m	28ut	26	3.0	15				50m	50m	50k		FE	
79▼		H5540-6	07NEP	4	500m	30ut	28	4.0	15				75m	75m	50k		FE	
80▼		L5640-1	07NEP	4	600m	24ut	05	2.5	15				100m	100m	50k		FE	
81▼		L5640-5	07NEP	4	600m	28ut	26	3.0	15				75m	75m	50k		FE	
82▼		L5640-6	07NEP	4	600m	30ut	28	4.0	15				50m	50m	50k		FE	
83▼		M5740-1	07NEP	4	750m	24ut	05	2.5	15				100m	100m	50k		FE	
84▼		M5740-5	07NEP	4	750m	28ut	26	3.0	15				50m	50m	50k		FE	
85▼		M5740-6	07NEP	4	750m	30ut	28	4.0	15				75m	75m	50k		FE	
86▼		T5140-1	07NEP	4	1.0	24ut	05	2.5	15				100m	100m	50k		FE	
87▼		T5140-5	07NEP	4	1.0	28ut	26	3.0	15				50m	50m	50k		FE	

# 36. DISPLAY: LIQUID CRYSTAL

IN ORDER OF: (1)TYPE DISPLAY (2)NO. DIGITS  
(3)CHAR. HT. (4)PWR CONSUMP & (5)TYPE No.

LINE No.	TYPE No.	TYPE OF DISPLAY	NO. OF DIGITS	CHAR. HGHT.	PWR. CONS. Δ/seg (W)	RNG. CODE	TEMP. (V)	OPERATING VOLTAGE			CONTRAST RATIO	RISE TIME tr (S)	DECAY TIME tf (S)	LIFE (hrs)	COL-OR	FEATURES	SCHEM-ATIC	DRAWING Ø-RND. Δ-RECT. Δ-STRIP *-CHIP
								MIN. VOLT	MAX. VOLT	FREQ. (Hz)								
1	LCD1654R-12	07NEPV	3*	500m	48u	26	7.0	20	30	1.0k	20†	50m	300m	50k	FE;Ref	♦	PY333A	
2	65050	07NEPV	3*	500m	150u	18	2.5	15	30	100	20	150m	150m	50k	Ref,Trn,Trf		PY513A	
3	L5635-1	07NEPV	3*	600m	24u	05	2.5	15	30	100	20†	100m	100m	50k	FE		PY588aΔ	
4	L5635-5	07NEPV	3*	600m	28u	26	3.0	15	30	100	20†	50m	50m	50k	FE		PY588aΔ	
5	L5635-6	07NEPV	3*	600m	30u	28	4.0	15	30	1.0k	20†	75m	75m	50k	FE		PY588aΔ	
6	LCD1655R-06	07NEPV	3*	700m	40u	05	3.0	10	30	1.0k	20†	50m	300m	50k	FE;Ref	♦	PY334A	
7	LCD1655R-12	07NEPV	3*	700m	96u	26	7.0	20	30	1.0k	20†	50m	300m	50k	FE;Ref	♦	PY334A	
8	M5735-1	07NEPV	3*	750m	24u	05	2.5	15	30	100	20†	100m	100m	50k	FE		PY588bΔ	
9	M5735-5	07NEPV	3*	750m	28u	26	3.0	15	30	100	20†	50m	50m	50k	FE		PY588bΔ	
10	M5735-6	07NEPV	3*	750m	30u	28	4.0	15	30	100	20†	75m	75m	50k	FE		PY513A	
11	65075	07NEPV	3*	750m	150u	18	2.5	15	30	100	20	150m	150m	50k	Ref,Trn,Trf		PY513A	
12	T5135-1	07NEPV	3*	1.0	24u	05	2.5	15	30	100	20†	100m	100m	50k	FE		PY588cΔ	
13	T5135-5	07NEPV	3*	1.0	28u	26	3.0	15	30	100	20†	50m	50m	50k	FE		PY588cΔ	
14	T5135-6	07NEPV	3*	1.0	30u	28	4.0	15	30	100	20†	75m	75m	50k	FE		PY588cΔ	
15	65100	07NEPV	3*	1.0	150u	18	2.5	15	30	100	20	150m	150m	50k	Ref,Trn,Trf		PY513A	
16	SX162-1	07NEPV	3*	7.0	24u	05	2.5	15	30	100	20†	100m	100m	50k	FE		PY588dΔ	
17	SX162-5	07NEPV	3*	7.0	28u	26	3.0	15	30	100	20†	50m	50m	50k	FE		PY588dΔ	
18	SX162-6	07NEPV	3*	7.0	30u	28	4.0	15	30	100	20†	75m	75m	50k	FE		PY588dΔ	
19	D5345-1	07NEPV	4*	300m	24u	05	2.5	15	30	100	20†	100m	100m	50k	FE		PY621bΔ	
20	D5345-5	07NEPV	4*	300m	28u	26	3.0	15	30	100	20†	50m	50m	50k	FE		PY621bΔ	
21	D5345-6	07NEPV	4*	300m	30u	28	4.0	15	30	100	20†	75m	75m	50k	FE		PY621bΔ	
22	LCD1660R-06	07NEPV	4*	400m	15u	05	3.0	10	30	1.0k	20†	50m	300m	50k	FE;Ref	♦	PY339A	
23	LCD1660R-12	07NEPV	4*	400m	36u	26	7.0	20	30	1.0k	20†	50m	300m	50k	FE;Ref	♦	PY339A	
24	H5545-1	07NEPV	4*	500m	24u	05	2.5	15	30	100	20†	100m	100m	50k	FE		PY621aΔ	
25	SX177-1	07NEPV	4*	500m	24u	05	2.5	15	30	100	20†	100m	100m	50k	FE		PY621aΔ	
26	H5545-5	07NEPV	4*	500m	28u	26	3.0	15	30	100	20†	50m	50m	50k	FE		PY621aΔ	
27	SX177-5	07NEPV	4*	500m	28u	26	3.0	15	30	100	20†	50m	50m	50k	FE		PY621aΔ	
28	H5545-6	07NEPV	4*	500m	30u	28	4.0	15	30	100	20†	75m	75m	50k	FE		PY621aΔ	
29	SX177-6	07NEPV	4*	500m	30u	28	4.0	15	30	100	20†	75m	75m	50k	FE		PY621aΔ	
30	M5745-1	07NEPV	4*	750m	24u	05	2.5	15	30	100	20†	100m	100m	50k	FE		PY622A	
31	M5745-5	07NEPV	4*	750m	28u	26	3.0	15	30	100	20†	50m	50m	50k	FE		PY622A	
32	M5745-6	07NEPV	4*	750m	30u	28	4.0	15	30	100	20†	75m	75m	50k	FE		PY622A	
33	LCD1662R-06	07NEPV	4*	800m	65u	05	3.0	10	30	1.0k	20†	50m	300m	50k	FE;Ref	♦	PY340A	
34	LCD1662R-12	07NEPV	4*	800m	156u	26	7.0	20	30	1.0k	20†	50m	300m	50k	FE;Ref	♦	PY340A	
35	T5145-1	07NEPV	4*	1.0	24u	05	2.5	15	30	100	20†	100m	100m	50k	FE		PY622aΔ	
36	T5145-5	07NEPV	4*	1.0	28u	26	3.0	15	30	100	20†	50m	50m	50k	FE		PY622aΔ	
37	T5145-6	07NEPV	4*	1.0	30u	28	4.0	15	30	100	20†	75m	75m	50k	FE		PY622aΔ	
38	FC003T	07NEW	4	846m	200u	55	5.0	20	25	100	200	150m	200m	50k	FE,Ref,Trn	♦	PY252Z	
39	FW3005R	07NK	3*	157m	3.0m	56	2.8	6.0	30	100	200	80m	60m	50k	No Polarizer	♦	PY255Z	
40	FW3006R	07NK	3*	157m	3.0m	56	2.8	6.0	30	100	200	100m	80m	50k	Textured Ref	♦	PY256Z	
41	FW003R	07NK	3*	157m	1.0m	55	3.0	20	30	100	200	70m	80m	50k	Trf	♦	PY255Z	
42	FW005R	07NK	3*	157m	1.0m	55	3.0	20	30	100	200	50m	75m	50k	Trn	♦	PY255aZ	
43	FW006R	07NK	3*	157m	1.0m	55	3.0	20	30	100	200	70m	80m	50k	Trf	♦	PY256Z	
44	FW3014R	07NK	3*	197m	3.0m	56	2.8	6.0	30	100	200	100m	80m	50k	No Polarizer	♦	PY257Z	
45	FW014R	07NK	3*	197m	1.0m	55	3.0	20	30	100	200	70m	80m	50k	Trn	♦	PY257Z	
46	FC002R	07NK	3*	669m	200u	55	5.0	20	25	100	200	150m	200m	50k	FE,Ref,Trn	♦	PY251Z	
47	741-04	07NK	4	250m	05	7.1	10	10	25	100	200	120m	185m	50k	FE,Ref,Trn	♦	PY454aΔ	
48	737-01010	07NK	4	500m	15	3.0	15	30	120	200	200	100m	100m	30k	No Polarizer	♦	PY471A	
49	737-01020	07NK	4	500m	15	3.0	15	30	120	200	200	100m	100m	30k	Textured Ref	♦	PY471A	
50	737-01030	07NK	4	500m	15	3.0	15	30	120	200	200	100m	100m	30k	Trf	♦	PY471A	
51	737-01040	07NK	4	500m	15	3.0	15	30	120	200	200	100m	100m	30k	Trn	♦	PY471A	
52	737-01050	07NK	4	500m	15	3.0	15	30	120	200	200	100m	100m	30k	Smooth Ref	♦	PY471A	
53	739-04010	07NK	4	500m	15	3.0	20	30	300	200	200	100m	100m	30k	No Polarizer	♦	PY470A	
54	739-04020	07NK	4	500m	15	3.0	20	30	300	200	200	100m	100m	30k	Textured Ref	♦	PY470A	
55	739-04030	07NK	4	500m	15	3.0	20	30	300	200	200	100m	100m	30k	Trf	♦	PY470A	
56	739-04040	07NK	4	500m	15	3.0	20	30	300	200	200	100m	100m	30k	Trn	♦	PY470A	
57	739-04050	07NK	4	500m	15	3.0	20	30	300	200	200	100m	100m	30k	Smooth Ref	♦	PY470A	
58	710-01	07NKKW	3*	130m	05	2.7	10	25	100	200	200	120m	185m	50k	FE,Ref,Trn	♦	PY450A	
59	710-02	07NKKW	3*	150m	05	2.7	10	25	100	200	200	120m	185m	50k	FE,Ref,Trn	♦	PY450A	
60	706-01	07NKKW	3*	160m	05	2.7	10	25	100	200	200	120m	185m	50k	FE,Ref,Trn	♦	PY448A	
61	706-02	07NKKW	3*	180m	05	2.7	10	25	100	200	200	120m	185m	50k	FE,Ref,Trn	♦	PY448A	
62	708-01	07NKKW	3*	180m	05	2.7	10	25	100	200	200	120m	185m	50k	FE,Ref,Trn	♦	PY449A	
63	708-02	07NKKW	3*	220m	05	2.7	10	25	100	200	200	120m	185m	50k	FE,Ref,Trn	♦	PY449A	
64	712-01	07NKKW	4	180m	05	2.7	10	25	100	200	200	120m	185m	50k	FE,Ref,Trn	♦	PY452A	
65	713-01	07NKKW	4	180m	05	2.7	10	25	100	200	200	120m	185m	50k	FE,Ref,Trn	♦	PY453A	
66	711-01	07NKKW	6	120m	05	2.7	10	25	100	200	200	120m	185m	50k	FE,Ref,Trn	♦	PY451A	
67	711-02	07NKKW	6	180m	05	2.7	10	25	100	200	200	120m	185m	50k	FE,Ref,Trn	♦	PY451A	
68	3801-210	07NL	2	300m	150u	05	4.0	17	30	100	20†	75m	150m	50k	FE,Trn	♦	PY292	
69	3801-312	07NL	2	300m	150u	05	4.0	17	30	100	20†	75m	150m	50k	FE,Trf	♦	PY292	
70	3801-313	07NL	2	300m	150u	05	4.0	17	30	100	20†	75m	150m	50k	FE,Ref	♦	PY292	
71	3802-210	07NL	2	400m	150u	05	4.0	17	30	100	20†	75m	150m	50k	FE,Trn	♦	PY292a	
72	3802-312	07NL	2	400m	150u	05	4.0	17	30	100	20†	75m	150m	50k	FE,Trf	♦	PY292a	
73	3802-313	07NL	2	400m	150u	05	4.0	17	30	100	20†	75m	150m	50k	FE,Ref	♦	PY292a	
74	2805R19	07NL	2	500m	500nΔ	15	3.0	9.0	30	100	20	75	150	50k	FE,Ref	♦	PY534A	
75	2807R19	07NL	2	500m	500nΔ	16	9.0	20	30	100	20	25	75	50k	FE,Ref	♦	PY534A	
76	3803-210	07NL	2	500m	150u	05	4.0	17	30	100	20†	75m	150m	50k	FE,Trn	♦	PY292b	
77	3803-312	07NL	2	500m	150u	05	4.0	17	30	100	20†	75m	150m	50k	FE,Trf	♦	PY292b	
78	3803-313	07NL	2	500m	150u	05	4.0	17	30	100	20†	75m	150m	50k	FE,Ref	♦	PY292b	
79	3804-210	07NL	2	600m	150u	05	4.0	17	30	100	20†	75m	150m	50k	FE,Trn	♦	PY292c	
80	3804-312	07NL	2	600m	150u	05	4.0	17	30	100	20†	75m	150m	50k	FE,Trf	♦	PY2	

# 36. DISPLAY: LIQUID CRYSTAL

IN ORDER OF: (1)TYPE DISPLAY (2)NO. DIGITS (3)CHAR. HT. (4)PWR CONSUMP & (5)TYPE No.

LINE No.	TYPE No.	TYPE OF DISPLAY	NO. OF DIGITS	CHAR. HGT. (in)	MAX. PWR. CONS. Δ-/seg (W)	TEMP. RNG. CODE	OPERATING VOLTAGE				CONTRAST RATIO	RISE TIME tr (S)	DECAY TIME tf (S)	LIFE (hrs)	COL -OR	FEATURES	SCHEM -ATIC	DRAWING
							MIN. VOLT (V)	MAX. VOLT (V)	MIN. FREQ. (Hz)	MAX. FREQ. (Hz)								
1	3614-210	07NM	4*	600m	21u	05	4.0	7.0	30	100	20†	100m	200m		* FE,Trn	EB24e	PY224eΔ	
2	3614-312	07NM	4*	600m	21u	05	4.0	7.0	30	100	20†	100m	200m	11	FE,Trf	EB24e	PY224eΔ	
3	3614-313	07NM	4*	600m	21u	05	4.0	7.0	30	100	20†	100m	200m	11	FE,Ref	EB24e	PY224eΔ	
4	85D5R11	07NM	4*	800m		15*	3.0	10	30	150	20†	50m	300m	50k	Ref,Trn,Trf	↑	PY406Δ	
5	85D7R11	07NM	4*	800m		26*	7.0	20	30	150	20†	50m	300m	50k	Ref,Trn,Trf	↑	PY406Δ	
6	43D5R03	07NMC	3*	500m		15*	3.0	10	30	150	20†	50m	300m	50k	Ref,Trn,Trf	↑	PY382bΔ	
7	43D7R03	07NMC	3*	500m		26*	7.0	20	30	150	20†	50m	300m	50k	Ref,Trn,Trf	↑	PY382bΔ	
8	53D5R08	07NMC	3*	700m		15*	3.0	10	30	150	20†	50m	300m	50k	Ref,Trn,Trf	↑	PY383bΔ	
9	53D7R08	07NMC	3*	700m		26*	7.0	20	30	150	20†	50m	300m	50k	Ref,Trn,Trf	↑	PY383bΔ	
10	83D5R11	07NMC	3*	1.0		15*	3.0	10	30	150	20†	50m	300m	50k	Ref,Trn,Trf	↑	PY402aΔ	
11	44D5R03	07NMC	4	500m		15*	3.0	10	30	150	20†	50m	300m	50k	Ref,Trn,Trf	↑	PY382aΔ	
12	44D7R03	07NMC	4	500m		26*	7.0	20	30	150	20†	50m	300m	50k	Ref,Trn,Trf	↑	PY382aΔ	
13	54D5R08	07NMC	4	700m		15*	3.0	10	30	150	20†	50m	300m	50k	Ref,Trn,Trf	↑	PY383aΔ	
14	54D7R08	07NMC	4	700m		26*	7.0	20	30	150	20†	50m	300m	50k	Ref,Trn,Trf	↑	PY383aΔ	
15	84D5R11	07NMC	4	1.0		15*	3.0	10	30	150	20†	50m	300m	50k	Ref,Trn,Trf	↑	PY402A	
16	84D7R11	07NMC	4	1.0		26*	7.0	20	30	150	20†	50m	300m	50k	Ref,Trn,Trf	↑	PY402A	
17	MLC210-00	07NP	3*	500m		15*	3.0	12	25	100	20†	100m	150m*	50k	10 FE,Trn	↑	PY539	
18	MLC210-01	07NP	3*	500m		15*	3.0	12	25	100	20†	100m	150m*	50k	10 FE,Trf	↑	PY539	
19	MLC210-02	07NP	3*	500m		15*	3.0	12	25	100	20†	100m	150m*	50k	11 FE,Ref	↑	PY539	
20	MLC410-00	07NP	3*	500m		15*	3.0	12	25	100	20†	100m	150m*	50k	10 FE,Trn	↑	PY539a	
21	MLC410-01	07NP	3*	500m		15*	3.0	12	25	100	20†	100m	150m*	50k	11 FE,Trf	↑	PY539a	
22	MLC410-02	07NP	3*	500m		15*	3.0	12	25	100	20†	100m	150m*	50k	11 FE,Ref	↑	PY539a	
23	MLC410-03	07NP	3*	500m		15*	3.0	12	25	100	20†	100m	150m*	50k	10 FE,Trn	↑	PY539a	
24	MLC410-04	07NP	3*	500m		15*	3.0	12	25	100	20†	100m	150m*	50k	10 FE,Trf	↑	PY539a	
25	MLC410-05	07NP	3*	500m		15*	3.0	12	25	100	20†	100m	150m*	50k	11 FE,Ref	↑	PY539a	
26	3624-22	07NP	3	500m	700nt	18	4.0	15	30	100	20	100m	100m	30k	11 FE	↑	FE	
27	3600	07NP	3	500m	1.0ut	06	4.0	15	30	100	20	100m	100m	50k	11 FE	↑	FE	
28	3624-23	07NP	4*	400m	600nt	06	4.0	15	30	100	20	80m	100m	50k	11 FE	↑	FE	
29	3624-28	07NPE	3	500m	700nt	06	4.0	15	30	100	20	100m	100m	50k	11 FE, BAR	↑	FE	
30	C5335-1	07NPV	3*	300m	24ut	05	2.5	15			20†	100m	100m	50k	11 FE	↑	FE	
31	C5335-5	07NPV	3*	300m	28ut	26	3.0	15			20†	50m	50m	50k	FE	↑	PY587A	
32	C5335-6	07NPV	3*	300m	30ut	28	4.0	15			20†	75m	75m	50k	FE	↑	PY587A	
33	H2535-1	07NPV	3*	500m	24ut	05	2.5	15			20†	100m	100m	50k	FE	↑	PY587aΔ	
34	H2535-5	07NPV	3*	500m	28ut	26	3.0	15			20†	50m	50m	50k	FE	↑	PY587aΔ	
35	H2535-6	07NPV	3*	500m	30ut	28	4.0	15			20†	75m	75m	50k	FE	↑	PY587aΔ	
36	5201-1	07NR	1	2.0	24ut	05	2.5	15			20†	100m	100m	50k	Numeric	↑	PY593A	
37	5201-5	07NR	1	2.0	28ut	26	3.0	15			20†	50m	50m	50k	Numeric	↑	PY593A	
38	5201-6	07NR	1	2.0	30ut	28	4.0	15			20†	75m	75m	50k	Numeric	↑	PY593A	
39	5301-1	07NR	1	3.0	24ut	05	2.5	15			20†	100m	100m	50k	Numeric	↑	PY593a	
40	5301-5	07NR	1	3.0	28ut	26	3.0	15			20†	50m	50m	50k	Numeric	↑	PY593a	
41	5301-6	07NR	1	3.0	30ut	28	4.0	15			20†	75m	75m	50k	Numeric	↑	PY593a	
42	41N02A	07NR	1	3.9		05*	18	†		500		100m#	120m*	50k	Trn,DS	↑	PY149	
43	41N22	07NR	1	3.9		05*	18	†		500		100m#	120m*	50k	Ref,DS	↑	PY149	
44	40N10	07NR	1	4.0	6.0mΔ	06*	20	†	60		60	100m#	250m*	50k	DS	↑	PY200	
45	81N02A	07NR	1	7.9		05*	18	†		500		100m#	120m*	50k	Trn,DS	↑	PY149a	
46	81N22	07NR	1	7.9		05*	18	†		500		100m#	120m*	50k	Ref,DS	↑	PY149a	
47	34D5R02	07NR	4	350m	500nΔ	15*	3.0	†	9.0	30	100	20	75	150	50k	11	FE	
48	34D7R02	07NR	4	350m	500nΔ	16*	9.0	†	20	30	100	20	25	75	50k	11	FE	
49	3809	07NR	4	500m		15*	4.0	†	17	30	100	20	150m#	300m*	50k	†	EB34	
50	57D7R21GH	07NR	5	700m	700nΔ	18*	9.0	†	20	30	100	20	25	75	50k	11	FE	
51	F1001R	07NRP	4	354m	40u	55*	5.0	†	20			150m	150m					
52	735	07NT	3	250m		05*	2.7	†	3.0	25	100	20	120m#	185m*	50k	11	Temp Display	
53	LC150931-100	07NW	3*	142m		16	1.5	†	5.0	30	1.0k	80m	200m		9 FE,Trf	↑	PY455Δ	
54	LC161231-101	07NW	3*	169m		16	1.5	†	5.0	30	1.0k	80m	200m		9 FE,Trf	↑	PY573Δ	
55	LC161231-104	07NW	3*	169m		16	1.5	†	5.0	30	1.0k	80m	200m		9 FE,Trf	↑	PY603aΔ	
56	LC201131-002	07NW	3*	196m		16	1.5	†	5.0	30	1.0k	80m	200m		9 FE,Trf	↑	PY603bΔ	
57	FAN4055D	07NW	3*	196m	4.8u	16*	1.5	†	8.0	20	100	100m	200m		11 FE,Trn	↑	PY603A	
58	FAN4055R	07NW	3*	196m	4.8u	16*	1.5	†	8.0	20	100	100m	200m		9 FE,Ref	↑	PY384Δ	
59	LC513031-200	07NW	3*	500m		16*	3.0	†	6.0	30	300	100m	250m		9 FE,Trf	↑	PY584Δ	
60	LC150940-101	07NW	4	157m		16*	1.5	†	5.0	30	1.0k	80m	200m		9 FE,Trf	↑	PY574Δ	
61	MLC500	07NW	4	180m	1.8uΔ	05*	3.0	†	32	†	25	290m#	250m*		FE,Watch	↑	PY2A	
62	MLC501	07NW	4	180m	1.8uΔ	05*	3.0	†	32	†	25	290m#	250m*		FE,Watch	↑	PY2A	
63	LC201340-001	07NW	4*	181m		16	1.5	†	5.0	30	1.0k	80m	200m		9 FE,Trf	↑	PY604Δ	
64	LC201140-002	07NW	4	185m		16	1.5	†	5.0	30	1.0k	80m	200m		9 FE,Trf	↑	PY574aΔ	
65	LC201140-004	07NW	4	185m		16	1.5	†	5.0	30	1.0k	80m	200m		9 FE,Trf	↑	PY578Δ	
66	LC241151-000	07NW	5*	157m		16	1.5	†	5.0	30	1.0k	80m	200m		9 FE,Trf	↑	PY608Δ	
67	LC221352-001	07NW	5*	185m		16	1.5	†	5.0	30	1.0k	80m	200m		9 FE,Trf	↑	PY607Δ	
68	LC161260-100	07NW	6*	130m		16	1.5	†	5.0	30	1.0k	80m	200m		9 FE,Trf	↑	PY602Δ	
69	LC241156-001	07NW	6*	169m		16	1.5	†	5.0	30	1.0k	80m	200m		9 FE,Trf	↑	PY577A	
70	LC201156-001	07NW	6*	177m		16	1.5	†	5.0	30	1.0k	80m	200m		9 FE,Trf	↑	PY609aΔ	
71	LC201960-001	07NW	6*	177m		16	1.5	†	5.0	30	1.0k	80m	200m		9 FE,Trf	↑	PY606Δ	
72	LC241156-000	07NW	6*	177m		16	1.5	†	5.0	30	1.0k	80m	200m		9 FE,Trf	↑	PY609A	
73	LC221360-003	07NW	6*															



# 37. DISPLAY: OTHER

IN ORDER OF: (1) TYPE DISPLAY (2) NO. DIGITS  
(3) CHAR. HT. & (4) TYPE No.

LINE No.	TYPE No.	TYPE OF DISPLAY	NO. OF DIGITS	CHAR. HGT. (in)	COL OR	D.C.		POWER DISS. per seg	TEMP RING. CODE	RESP TIME (S)	LUMINANCE Lv		LIFE (hrs)	FEATURES	SCHEM-ATIC	DRAWING Ø-RND. ▽-RECT. △-STRIP *-CHIP
						VOLT (V)	CURR per seg (A)				(V)	(fL)				
1	DE320	FLR	20	200m	%	5.0	500m#	2.5						Display Subsystem W/Pwr Sup		PY625
2	BDS40832PD2	GAS		260m	3	250	120m		06*		5.0	250		SELF-SCAN Sys;256ALPHA;8x32	EC18	PY214
3	BDS40832-200	GAS		280m	3	250	120m		05*		250	250		SELF-SCAN Sys;256ALPHA;8.32	EC17	PY213
4	BDS40832-205	GAS		280m	3	250	120m		06*		250	250		SELF-SCAN Sys;256ALPHA;8x32	EC19	PY215
5	BDS40832-208	GAS		280m	3	250	120m		06*		250	250		SELF-SCAN Sys;256ALPHA;8x32	EC20	PY216
6	BDS40832S20	GAS		280m	3	250	120m		05*		250	250		SELF-SCAN Sys;256ALPHA;8x32	EC17	PY213
7	SP334	GAS	*	330m	3	180	180u	24m	07*	20u	210	180	100k	7 Segm;Planar;Num	EC39	PY10c
8	NL4998	GAS	1	310m	3	170	2.0m#		47					Readout Tube;Num		PY270
9	NL7009	GAS	1	310m	3	170	1.2m#		47					Readout Tube;Num		PY272
10	NL7977/4032	GAS	1	310m	3	170	1.4m#		47					Readout Tube;Num		PY271
11	NL8502	GAS	1	310m	3	120	1.1m#	30m#						Readout Tube		
12	NL8502/4021	GAS	1	310m	3	170	1.4m#		47					Readout Tube;Num		PY272
13	B5853	GAS	1	510m	3	200	14m	250m#	27*	15u	100m#	200		NIXIE;Numerical Indicator	EC10	PY186
14	B5853S	GAS	1	510m	3	200	14m	250m#	27*	15u	100m#	200		Nixie Num Indicator	EC10	PY186a
15	B5853ST	GAS	1	510m	3	200	14m	250m#	27*	15u	100m#	200		Nixie Num Indicator	EC10	PY186b
16	B-5866S	GAS	1	510m	3	170	12m		27*	2.0m	200m	170		NIXIE;Plus/Minus	EC24	PY315
17	B-5866S	GAS	1	510m	3	170	12m		27*	2.0m	200m	170		NIXIE;Plus/Minus	EC24	PY315a
18	B-5866ST	GAS	1	510m	3	170	12m		27*	2.0m	200m	170		NIXIE;Plus/Minus	EC24	PY315b
19	B-5870S	GAS	1	510m	3	200	3.0m	500m#	27*	15u	200	200		NIXIE;Num Indicator	EC10	PY186
20	B-5870S	GAS	1	510m	3	200	3.0m	500m#	27*	15u	200	200		NIXIE;NUM Indicator	EC10	PY186a
21	B-5870ST	GAS	1	510m	3	200	3.0m	500m#	27*	15u	200	200		NIXIE;Num Indicator	EC10	PY186b
22	AR01550	GAS	1	550m	3	170	350u		05*	20u				7 Seg;Num	EC49	PY505
23	NL840	GAS	1	600m	3	170	2.5m#	430m#						Readout Tube		
24	NL809	GAS	1	610m	3	170	3.0m#		47					Readout Tube;Lt Hand Dec		PY270b
25	NL841	GAS	1	610m	3	170	3.0m#		47					Readout Tube;Lt Hand Dec		PY278
26	NL842	GAS	1	610m	3	170	3.0m#		47					Readout Tube;Rt Hand Dec		PY278
27	NL843	GAS	1	610m	3	170	3.0m#		47					Readout Tube;Plus or Minus		PY278
28	NL848	GAS	1	610m	3	170	3.0m#		47					Readout Tube;2 Decimals		PY278
29	NL900	GAS	1	610m	3	170	3.0m#		47					Readout Tube;Num		PY279
30	NL901	GAS	1	610m	3	170	3.0m#		47					Readout Tube;Lt Hand Dec		PY279
31	NL902	GAS	1	610m	3	170	3.0m#		47					Readout Tube;Rt Hand Dec		PY279
32	NL903	GAS	1	610m	3	170	3.0m#		47					Readout Tube;Plus or Minus		PY279
33	NL904	GAS	1	610m	3	170	3.0m#		47					Readout Tube;Num		PY280
34	NL905	GAS	1	610m	3	170	3.0m#		47					Readout Tube;Lt Hand Dec		PY280
35	NL5440	GAS	1	610m	3	170	3.0m#		47					Readout Tube;Num		PY276
36	NL5440A	GAS	1	610m	3	170	3.0m#		47					Readout Tube;Num		PY277
37	NL5441	GAS	1	610m	3	170	3.0m#		47					Readout Tube;2 Decimals		PY276
38	NL5441A	GAS	1	610m	3	170	3.0m#		47					Readout Tube;2 Decimals		PY277
39	NL5442	GAS	1	610m	3	170	3.0m#		47					Readout Tube;Plus or Minus		PY276
40	NL5442A	GAS	1	610m	3	170	3.0m#		47					Readout Tube;Plus or Minus		PY277
41	NL5992	GAS	1	610m	3	170	3.0m#		47					Readout Tube;Plus or Minus		PY270a
42	NL8421/5092	GAS	1	610m	3	170	3.0m#		47					Readout Tube;Num		PY273
43	NL8422/5991	GAS	1	610m	3	170	3.0m#		47					Readout Tube;Num		PY278
44	NL8754/840	GAS	1	610m	3	170	3.0m#		47					Readout Tube;Plus or Minus		PY273
45	NL50911	GAS	1	610m	3	170	3.0m#		47					Readout Tube;Num		PY273
46	NL807	GAS	1	808m	3	170	4.5m#		47					Readout Tube;Num		PY281a
47	NL821	GAS	1	808m	3	170	4.5m#		47					Readout Tube;Lt Hand Dec		PY281a
48	NL6034	GAS	1	808m	3	170	4.0m#		47					Readout Tube;Plus or Minus		PY273a
49	NL8423/6091	GAS	1	808m	3	170	4.0m#		47					Readout Tube;Num		PY273a
50	SP101	GAS	1	1.0	3	180	700u	95m	07*	20u	225	180	100k	7 Segm;Planar	EC41	PY190
51	SP102	GAS	1	1.0	3	180	700u	95m	07*	20u	225	180	100k	7 Segment;Planar	EC42	PY461
52	NL8091	GAS	1	1.3	3	170	6.0m#		47					Readout Tube;Num		PY274
53	NL934	GAS	1	2.0	3	170	10m#		47					Readout Tube;Lt Hand Dec		PY282
54	NL7037	GAS	1	2.0	3	170	10m#		47					Readout Tube;Num		PY282
55	NL7094	GAS	1	2.0	3	170	7.0m#		47					Readout Tube;Num		PY274a
56	SP331	GAS	1*	330m	3	180	180u	24m	07*	20u	210	180	100k	7 Segm;Planar;Num	EC39	PY10
57	SM851	GAS	1*	550m	3	180	330u	45m	05*	20u	210	180	100k	7 Segm;Planar;Num w/Logic	EC44	PY9
58	SM855	GAS	1*	550m	3	180	330u	45m	05*	20u	210	180	100k	7 Segm;Planar;Num w/Logic	EC45	PY9
59	SP152	GAS	1*	550m	3	180	330u	45m	07*	20u	200	180	100k	7 Segm;Planar;Num;Clock	EC38	PY12a
60	SP351	GAS	1*	550m	3	180	330u	45m	07*	20u	210	180	100k	7 Segm;Planar;Num	EC39	PY11
61	HB332	GAS	2	330m	3	170	520u	485m	07	225	170	100k		7 Segment;Planar;Multiplex	EC64	PY10a
62	SP332	GAS	2	330m	3	180	180u	24m	07*	20u	210	180	100k	7 Segm;Planar;Num	EC39	PY10a
63	AR02550	GAS	2	550m	3	170	350u		05*	20u				7 Seg;Num	EC50	PY505a
64	HB352	GAS	2	550m	3	170	900u	800m	07	225	170	100k		7 Segment;Planar;Multiplex	EC64	PY11a
65	SM852	GAS	2	550m	3	180	330u	45m	05*	20u	210	180	100k	7 Segm;Planar;Num w/Logic	EC44a	PY9a
66	SM856	GAS	2	550m	3	180	330u	45m	05*	20u	210	180	100k	7 Segm;Planar;Num w/Logic	EC45a	PY9a
67	SP252	GAS	2	550m	3	180	300u	42m	07*	20u	210	180	100k	14 Segm;Planar;Alpha Num	EC40	PY19
68	SP352	GAS	2	550m	3	180	330u	45m	07*	20u	210	180	100k	7 Segm;Planar;Num	EC39	PY11a
69	SM854	GAS	2*	550m	3	180	330u	45m	05*	20u	210	180	100k	7 Segm;Planar;Num w/Logic	EC44c	PY9c
70	SM858	GAS	2*	550m	3	180	330u	45m	05*	20u	210	180	100k	7 Segm;Planar;Num w/Logic	EC45c	PY9c
71	SP354	GAS	2*	550m	3	180	330u	45m	07*	20u	210	180	100k	7 Segm;Planar;Num	EC39	PY11c
72	HB333	GAS	3	330m	3	170	520u	485m	07	225	170	100k		7 Segment;Planar;Multiplex	EC64	PY10b
73	SP333	GAS	3	330m	3	180	180u	24m	07*	20u	210	180	100k	7 Segm;Planar;Num	EC39	PY10b
74	AR03550	GAS	3	550m	3	170	350u		05*	20u				7 Seg;Num	EC51	PY505b
75	HB353	GAS	3	550m	3	170	900u	800m	07	225	170	100k		7 Segment;Planar;Multiplex	EC64	PY11b
76	SM853	GAS	3	550m	3	180	330u	45m	05*	20u	210	180	100k	7 Segm;Planar;Num w/Logic	EC44b	PY9b
77	SM857	GAS	3	550m	3	180	330u	45m	05*	20u	210	180	100k	7 Segm;Planar;Num w/Logic	EC45b	PY9b
78	SP353	GAS	3	550m	3	180	330u	45m	07*	20u	210	180	100k	7 Segm;Planar;Num	EC39	PY11b
79	SP151	GAS	3*	500m	3	180	300u	42m	07*	20u	200	180	100k	7 Segm;Planar;Num;Clock	EC38	PY12
80	SP355	GAS	3*	550m	3	180	330u	45m	07*	20u	210	180	100k	7 Segment;Planar;Numeric	EC39	PY192a
81	SP357															



### 37. DISPLAY: OTHER

IN ORDER OF: (1)TYPE DISPLAY (2)NO. DIGITS  
(3)CHAR. HT. & (4) TYPE No.

LINE No.	4	TYPE No.	1	2	3	CHAR. COL -OR	D.C.		POWER DISS. per seg	TEMP. RNG. CODE	RESP TIME	LUMINANCE		LIFE (hrs)	FEATURES	SCHEM -ATIC	DRAWING Ø-RND. ▽-RECT. △-STRIP *-CHIP
							VOLT	CURR per seg (A)				Lv	V SUPP.				
1		BR16254	GAS	12	250m	3	200	500u	05*	200u	50	200	10k	PANAPLEX;7 Seg,Num	EC11h	PY205h	
2		AR13451	GAS	12	400m	2	180	600u	05*	200u	50	70	10k	Numeric;7 Segment,Commas	EC11h	PY162c	
3		BR13451	GAS	12	400m	3	200	975u	05*	200u	50	200	10k	PANAPLEX;7/9 Seg,Num	EC11n	PY205n	
4		AR16252	GAS	16	250m	3	180	350u	05*	200u	50	70	10k	5700-6500 Angstroms	EC11g	PY283	
5		BR16252	GAS	16	250m	3	200	500u	05*	200u	50	200	10k	PANAPLEX;7 Seg,Num	EC11g	PY205g	
6		BR16452	GAS	16	400m	3	200	1.0m	05*	200u	50	200	10k	PANAPLEX;7/9 Seg,Num	EC11p	PY205p	
7		SSD1000-0030	GAS	16	400m	3	250	30m#	05*	200u	50	250	10k	Self-Scan Sys;Alpha	EC15	PY210	
8		SSD1000-0039	GAS	16	400m	3	250	30m#	05*	200u	50	250	10k	SELF-Scan Sys,w/o Char Gen	EC34	PY210	
9		SSD1000-0041	GAS	16	400m	3	250	30m#	05*	200u	50	250	10k	Self-Scan Sys;Alpha w/Mem	EC15a	PY210a	
10		SSD1000-0061	GAS	16	400m	3	250	30m#	05*	200u	50	250	10k	Self-Scan Sys;Alpha w/Mem	EC15b	PY210a	
11		SSD1000-0070	GAS	16	400m	3	250	30m#	05*	200u	50	250	10k	Self-Scan Sys;Alpha w/Mem	EC15c	PY210b	
12		SP452	GAS	16	500m	3	180	830u	05*	20u	105	200	50k	14 Segment, Planar	EC43	PY462	
13		SA252	GAS	16	550m	3	180	1.6m	07	20u	50	180	50k	14 Seg Alph w/uProcessor	EC26	PY317	
14		BA16701	GAS	16	700m	3	200	3.3m	05*	150u	50	200	50k	PANAPLEX;14 Seg,Num	EC22	PY463b	
15		3000-01-032G	GAS	16	210m	5	280	200u	05*	15u	25	50k	2 Line;ASCII,Panel	EC22	PY463b		
16		3000-01-032N	GAS	16	210m	3	240	200u	05*	15u	45	50k	2 Line;ASCII,Panel	EC22	PY463b		
17		3000-01-064G	GAS	16	210m	5	280	200u	05*	15u	25	50k	4 Line;ASCII,Panel	EC22	PY463e		
18		3000-01-064N	GAS	16	210m	3	240	200u	05*	15u	45	50k	4 Line;ASCII,Panel	EC22	PY463e		
19		3001-01-032G	GAS	16	330m	5	280	200u	05*	15u	25	50k	2 Line;ASCII,Panel	EC22	PY463d		
20		3001-01-032N	GAS	16	330m	3	240	200u	05*	15u	45	50k	2 Line;ASCII,Panel	EC22	PY463d		
21		3100-01-032G	GAS	16	330m	5	290	300u	05*	15u	25	50k	2 Line;ASCII,Panel	EC22	PY463c		
22		3100-01-032N	GAS	16	330m	3	290	300u	05*	15u	30	50k	2 Line;ASCII,Panel	EC22	PY463c		
23		3100-01-064G	GAS	16	330m	5	290	300u	05*	15u	25	50k	4 Line;ASCII,Panel	EC22	PY463f		
24		3100-01-064N	GAS	16	330m	3	290	300u	05*	15u	30	50k	4 Line;ASCII,Panel	EC22	PY463f		
25		C4103	GAS	16	200m	3	250	20m#	05*	20u	633	250	50k	Self Scan Sys W/64 Char Gen	EC30	PY320	
26		SI0120-0030	GAS	20	650m	3	250	88m#	05*	50	250	250	50k	Self Scan Sys W/64 Char Gen	EC21	PY217	
27		SI0120-0039	GAS	20	650m	3	250	88m#	05*	50	250	250	50k	Self Scan Sys W/O Char Gen	EC21a	PY217	
28		C4101C	GAS	24	470m	3	250	35m#	06*	65	250	250	50k	Self Scan Sys;24 Alph Num	EC29b	PY319	
29		SSD0132-0030	GAS	32	200m	3	250	30m#	05*	40	250	250	50k	Self-Scan Sys;Alpha	EC15d	PY210	
30		SSD0132-0039	GAS	32	200m	3	250	30m#	05*	40	250	250	50k	SELF-Scan Sys,w/o Char Gen	EC32	PY210	
31		SSD0132-0040	GAS	32	200m	3	250	30m#	05*	40	250	250	50k	Self-Scan Sys;Alpha w/Mem	EC15e	PY210a	
32		SSD0132-0060	GAS	32	200m	3	250	30m#	05*	40	250	250	50k	Self-Scan Sys;Alpha w/Mem	EC15f	PY210a	
33		SSD0132-0070	GAS	32	200m	3	250	30m#	05*	40	250	250	50k	Self-Scan Sys;Alpha w/Mem	EC15g	PY210b	
34		SSD0132-0081	GAS	32	200m	3	250	30m#	05*	40	250	250	50k	SELF-Scan Sys,Alpha	EC33	PY322	
35		BDS40832-201	GAS	32	280m	3	250	120m	05*	250	250	250	50k	SELF-Scan Sys;256Alpha;8x32	EC20	PY216	
36		BDS40832-209	GAS	32	280m	3	250	120m	06*	250	250	250	50k	SELF-Scan Sys;256Char;ASCII	EC20	PY216	
37		3200-01-032G	GAS	32	330m	5	280	30m#	05*	15u	45	50k	1 Line;ASCII,Panel	EC22	PY463a		
38		3200-01-032N	GAS	32	330m	3	240	30m#	05*	15u	45	50k	1 Line;ASCII,Panel	EC22	PY463a		
39		C4101B	GAS	32	190m	3	250	35m#	06*	65	250	250	50k	Self Scan Sys;3X32 AlphNum	EC29a	PY319	
40		3000-01-128G	GAS	32	210m	5	280	400u	05*	15u	25	50k	4 Line;ASCII,Panel	EC22	PY463j		
41		3000-01-128N	GAS	32	210m	3	240	400u	05*	15u	45	50k	4 Line;ASCII,Panel	EC22	PY463j		
42		3000-01-256G	GAS	32	210m	5	280	400u	05*	15u	25	50k	8 Line;ASCII,Panel	EC22	PY463m		
43		3000-01-256N	GAS	32	210m	3	240	400u	05*	15u	45	50k	8 Line;ASCII,Panel	EC22	PY463m		
44		3000-01-384G	GAS	32	210m	5	280	400u	05*	15u	25	50k	12 Line;ASCII,Panel	EC22	PY463r		
45		3000-01-384N	GAS	32	210m	3	240	400u	05*	15u	45	50k	12 Line;ASCII,Panel	EC22	PY463r		
46		3000-01-512G	GAS	32	210m	5	280	400u	05*	15u	25	50k	16 Line;ASCII,Panel	EC22	PY463t		
47		3000-01-512N	GAS	32	210m	3	240	400u	05*	15u	45	50k	16 Line;ASCII,Panel	EC22	PY463t		
48		3100-01-128G	GAS	32	260m	5	290	600u	05*	15u	25	50k	4 Line;ASCII,Panel	EC22	PY463k		
49		3100-01-128N	GAS	32	260m	3	290	600u	05*	15u	30	50k	4 Line;ASCII,Panel	EC22	PY463k		
50		3100-01-256G	GAS	32	260m	5	290	600u	05*	15u	25	50k	8 Line;ASCII,Panel	EC22	PY463n		
51		3100-01-256N	GAS	32	260m	3	290	600u	05*	15u	30	50k	8 Line;ASCII,Panel	EC22	PY463n		
52		C4101A	GAS	32	270m	3	250	35m#	06*	65	250	250	50k	Self Scan Sys;2X32 AlphNum	EC29	PY319	
53		BDS40832-206	GAS	32	280m	3	250	120m	06*	183	250	250	50k	Self Scan Sys;8X32 Char	EC19	PY215	
54		SI0140-0030	GAS	40	260m	3	250	20m# 125m	06*	44	250	250	50k	Self Scan Sys W/64 Char Gen	EC36	PY379	
55		SI0140-0039	GAS	40	260m	3	250	20m# 125m	06*	44	250	250	50k	Self Scan Sys W/O Char Gen	EC36a	PY379	
56		SI0640PD2	GAS	40	260m	3	250	70m#	06*	150	250	250	50k	Self Scan Sys;6X40 Char	EC31	PY321	
57		SI1240PD2	GAS	40	260m	3	250	200m# 104m	06*	50	250	250	50k	Self-Scan Sys;12X40 Char	EC35	PY378	
58		3000-01-320G	GAS	40	270m	5	280	500u	05*	15u	25	50k	8 Line;ASCII,Panel	EC22	PY463p		
59		3000-01-320N	GAS	40	270m	3	240	500u	05*	15u	45	50k	8 Line;ASCII,Panel	EC22	PY463p		
60		3000-01-480G	GAS	40	270m	5	280	500u	05*	15u	25	50k	12 Line;ASCII,Panel	EC22	PY463q		
61		3000-01-480N	GAS	40	270m	3	240	500u	05*	15u	45	50k	12 Line;ASCII,Panel	EC22	PY463q		
62		3000-01-960G	GAS	40	270m	5	280	500u	05*	15u	25	50k	24 Line;ASCII,Panel	EC22	PY463u		
63		3000-01-960N	GAS	40	270m	3	240	500u	05*	15u	45	50k	24 Line;ASCII,Panel	EC22	PY463u		
64		3200-01-080G	GAS	40	270m	5	280	500u	05*	15u	25	50k	2 Line;ASCII,Panel	EC22	PY463g		
65		3200-01-080N	GAS	40	270m	3	240	500u	05*	15u	45	50k	2 Line;ASCII,Panel	EC22	PY463g		
66		3200-01-120G	GAS	40	270m	5	280	500u	05*	15u	25	50k	3 Line;ASCII,Panel	EC22	PY463h		
67		3200-01-120N	GAS	40	270m	3	240	500u	05*	15u	45	50k	3 Line;ASCII,Panel	EC22	PY463h		
68		3200-01-320G	GAS	80	210m	5	280	500u	05*	15u	25	50k	4 Line;ASCII,Panel	EC22	PY463q		
69		3200-01-320N	GAS	80	210m	3	240	500u	05*	15u	45	50k	4 Line;ASCII,Panel	EC22	PY463q		
70		15-15	INC			10	1.5	15m	22m	5.0m	60m\$	1.5	800	Micro-miniature Lamp		PY128a	
71		30-30	INC			10	3.0	30m	90m	7.0m	250m\$	3.0	1.0k	Micro-miniature Lamp		PY128b	
72		60-20	INC			10	6.0	20m	120m	10m	400m\$	6.0	2.0k	Micro-miniature Lamp		PY128c	
73		L12-12	INC			10	1.2	12m	14m	5.0m	45m\$	1.2	1.0k	Micro-miniature Lamp		PY128d	
74		L15-30	INC			10	1.5	30m	45m	7.0m	160m\$	1.5	1.0k	Micro-miniature Lamp		PY128e	
75		L15-45	INC			10	1.5	45m	67m	10m	220m\$	1.5	1.0k	Micro-miniature Lamp		PY128f	
76		03-15DP	INC	1		10	1.5	7.5	11m		700	1.5	50k	Decimal Pt		PY130a	
77		04-30DP	INC	1		10	3.0	9.0m	27m	14m	1.4	3.0	100k	Decimal Pt		PY130c	
78		06-30DP	INC	1		10	3.0	9.0m	27m	14m	1.4	3.0	100k	Decimal Pt		PY130e	
79		06-40DP	INC	1		10	4.0	14m	56m	60m	9.0k	4.0	100k	Decimal Pt		PY130e	
80		06-50DP	INC	1		10	5.0	17m	85m	45m	9.0k	5.0	100k	Decimal Pt		PY130e	
81		08-50DP	INC	1		10	5.0	17m	85m	45m	7.0k	5.0	100k	Decimal Pt		PY130g	
82		04-30PM	INC	1	156m	10	3.0	8.0m	24m	18m	1.4k	3.0	100k	Plus/Minus		PY130b	
83		06-30PM	INC	1	156m	10	3.0	8.0m	24m	18m	1.4k	3.0	100k	Plus/Minus		PY130d	
84		06-40PM	INC	1	156m	10	4.0	17m	68m	16m	9.0k	4.0	100k	Plus/Minus		PY130g	
85		06-50PM	INC	1	156m	10	5.0	18m	90m	24m	9.0k	5.0	100k	Plus/Minus		PY130g	
86		DIP630PM	INC	1	156m	10	3.0	8.0m	24m	18m	1.4k	3.0	100k	Plus/Minus		PY130j	
87</																	

### 37. DISPLAY: OTHER

IN ORDER OF: (1)TYPE DISPLAY (2)NO. DIGITS  
(3)CHAR. HT. & (4) TYPE No.

LINE No.	4 TYPE No.	1 TYPE OF DISPLAY	2 NO. OF DIGITS	3 CHAR. HGHT. (in)	COL-OR	D.C.		POWER DISS. per seg	TEMP RNG. CODE	RESP TIME (S)	LUMINANCE Lv		LIFE (hrs)	FEATURES	SCHEM-ATIC	DRAWING Ø-RND. ∇-RECT. Δ-STRIP *-CHIP
						VOLT (V)	CURR per seg (A)				(fL)	V SUPP. (V)				
1	CM5-21	INC	1	308m		4.0	16	64m	58*	40m	8.0k	4.0	7 Seg,Alpha,Num	EC23c	PY303	
2	CM5-22	INC	1	308m		4.0	16	64m	58*	40m	8.0k	4.0	7 Seg,Alpha,Num	EC23c	PY303	
3	CM5-23	INC	1	308m		4.0	16	64m	58*	40m	8.0k	4.0	7 Seg,Alpha,Num	EC23b	PY302	
4	CM5-27	INC	1	308m		4.0	16	64m	58*	40m	8.0k	4.0	7 Seg,Alpha,Num	EC23	PY126	
5	CM5-29	INC	1	308m		4.0	16	64m	58*	40m	8.0k	4.0	7 Seg,Alpha,Num	EC23b	PY302	
6	CM5-31	INC	1	308m		4.0	16	64m	58*	40m	8.0k	4.0	7 Seg,Alpha,Num	EC23c	PY303	
7	CM5-32	INC	1	308m		4.0	16	64m	58*	40m	8.0k	4.0	7 Seg,Alpha,Num	EC23c	PY303	
8	5136	INC	1	310m	10	4.0	15m	60m	58		4.0k		7 Seg. Num		PY493	
9	06-30	INC	1	312m		3.0	8.0m	24m		18m	1.4k	3.0	Digit		PY130d	
10	06-30EW	INC	1	312m	10	3.0	8.0m	24m		18m	1.4k	3.0	100k East/West		PY131a	
11	06-30LR	INC	1	312m	10	3.0	8.0m	24m	5A*		1.4k	3.0	100k Left/Right		PY131c	
12	06-30NS	INC	1	312m	10	3.0	8.0m	24m		18m	1.4k	3.0	100k News Readout	EC9	PY131	
13	06-30XY	INC	1	312m	10	3.0	8.0m	24m	5A*		1.4k	3.0	100k X-Y(Direction)		PY131b	
14	06-40	INC	1	312m	10	4.0	17m	68m		16m	9.0k	4.0	100k Digit		PY130d	
15	06-40EW	INC	1	312m	10	4.0	17m	68m		16m	9.0k	4.0	100k East/West		PY131a	
16	06-40LR	INC	1	312m	10	4.0	17m	68m	5A*		9.0k	4.0	100k Left/Right		PY131c	
17	06-40NS	INC	1	312m	10	4.0	17m	68m		16m	9.0k	4.0	100k News Readout	EC9	PY131	
18	06-40XY	INC	1	312m	10	4.0	17m	68m	5A*		9.0k	4.0	100k X-Y(Direction)		PY131b	
19	06-50	INC	1	312m	10	5.0	18m	90m		24m	9.0k	5.0	100k Digit		PY130d	
20	06-50EW	INC	1	312m	10	5.0	18m	90m		24m	9.0k	5.0	100k East/West		PY131a	
21	06-50LR	INC	1	312m	10	5.0	18m	90m	5A*		9.0k	5.0	100k Left/Right		PY131c	
22	06-50NS	INC	1	312m	10	5.0	18m	90m		24m	9.0k	5.0	100k News Readout	EC9	PY131	
23	06-50XY	INC	1	312m	10	5.0	18m	90m	5A*		9.0k	5.0	100k X-Y(Direction)		PY131b	
24	06-150EW	INC	1	312m	10	5.0	15m	75m	5A*		4.5	5.0	100k East/West		PY131a	
25	06-150NS	INC	1	312m	10	5.0	15m	75m	5A*		4.5	5.0	100k North/South		PY131	
26	DIP630	INC	1	312m	10	3.0	8.0m	24m		18m	1.4k	3.0	100k Digit		PY132	
27	DIP631L	INC	1	312m	10	3.0	8.0m	24m		18m	1.4k	3.0	100k Digit w/L.H. Dec Pt		PY132	
28	DIP631R	INC	1	312m	10	3.0	8.0m	24m		18m	1.4k	3.0	100k Digit w/R.H. Dec.Pt		PY132	
29	DIP632	INC	1	312m	10	3.0	8.0m	24m		18m	1.4k	3.0	100k Digit w/Colon		PY132	
30	DIP640	INC	1	312m	10	4.0	17m	68m		16m	9.0k	4.0	100k Digit		PY132	
31	DIP641L	INC	1	312m	10	4.0	17m	68m		16m	9.0k	4.0	100k Digit w/L.H. Dec.Pt		PY132	
32	DIP641R	INC	1	312m	10	4.0	17m	68m		16m	9.0k	4.0	100k Digit w/R.H. Dec Pt		PY132	
33	DIP642	INC	1	312m	10	4.0	17m	68m		16m	9.0k	4.0	100k Digit w/Colon		PY132	
34	DIP650	INC	1	312m	10	5.0	18m	90m		24m	9.0k	5.0	100k Digit		PY132	
35	DIP651L	INC	1	312m	10	5.0	18m	90m		24m	9.0k	5.0	100k Digit w/L.H. Dec.Pt		PY132	
36	DIP651R	INC	1	312m	10	5.0	18m	90m		24m	9.0k	5.0	100k Digit w/R.H. Dec.Pt		PY132	
37	DIP652	INC	1	312m	10	5.0	18m	90m		24m	9.0k	5.0	100k Digit w/Colon		PY132	
38	MD630	INC	1	312m	10	3.0	8.0m	24m		18m	1.4k	3.0	100k Digit		PY134	
39	MD640	INC	1	312m	10	4.0	17m	68m		16m	9.0k	4.0	100k Digit		PY134	
40	MD650	INC	1	312m	10	5.0	18m	90m		24m	9.0k	5.0	100k Digit		PY134	
41	063	INC	1	312m	10	3.0	8.0m	24m		18m	1.4k	3.0	100k Alph		PY129a	
42	064	INC	1	312m	10	4.0	17m	68m		16m	9.0k	4.0	100k Alph		PY129a	
43	065	INC	1	312m	10	5.0	18m	90m		24m	9.0k	5.0	100k Alph		PY129a	
44	3015FBM10	INC	1	360m	10	5.0	10m	50m	58		1.7k	5.0	100k 7 Seg.Num		PY135	
45	3015FBM15	INC	1	360m	10	5.0	15m	75m	58		4.5k	5.0	100k 7 Seg.Num		PY135	
46	3015FBM20	INC	1	360m	10	5.0	20m	100m	58		5.5k	5.0	100k 7 Seg.Num		PY135	
47	3015FBM	INC	1	360m	10	5.0	8.0m	40m	58		7.0k	5.0	250k 7 Seg.Num		PY135	
48	3015FBN10	INC	1	360m	10	5.0	10m	50m	58		1.7k	5.0	100k 7 Seg.Num		PY135a	
49	3015FBN15	INC	1	360m	10	5.0	15m	75m	58		4.5k	5.0	100k 7 Seg.Num		PY135a	
50	3015FBN20	INC	1	360m	10	5.0	20m	100m	58		5.5k	5.0	100k 7 Seg.Num		PY135a	
51	3015FBN	INC	1	360m	10	5.0	8.0m	40m	58		7.0k	5.0	250k 7 Seg.Num		PY135a	
52	3015G10	INC	1	360m	10	5.0	10m	50m			1.7k	5.0	100k Plus.Minus.One.Decimal		PY136	
53	3015G	INC	1	360m	10	5.0	8.0m	40m	58		7.0k	5.0	250k Plus.Minus.One Decimal		PY136	
54	DA2100	INC	1	400m	% 4.5	24m	108m	57	15m	7.0k	4.5	100k 7 Seg:Alpha:Color Filters	EC8	PY125e		
55	DA2110	INC	1	400m	% 4.5	24m	108m	57	15m	7.0k	4.5	100k 7 Seg:Alpha:Color Filters	EC8a	PY125e		
56	DA2120	INC	1	400m	% 4.5	24m	108m	57	15m	7.0k	4.5	100k ± 1 Digit:Color Filters	EC8b	PY125e		
57	08-50	INC	1	453m	10	5.0	17m	85m		24m	7.0k	5.0	100k Digit		PY130f	
58	DIP850	INC	1	453m	10	5.0	17m	85m		24m	7.0k	5.0	100k Digit		PY132a	
59	DIP851L	INC	1	453m	10	5.0	17m	85m		24m	7.0k	5.0	100k Digit w/L.H. Dec.Pt		PY132a	
60	DIP851R	INC	1	453m	10	5.0	17m	85m		24m	7.0k	5.0	100k Digit w/R.H. Dec.Pt		PY132a	
61	DIP852	INC	1	453m	10	5.0	17m	85m		24m	7.0k	5.0	100k Digit w/Colon		PY132a	
62	DA1300	INC	1	472m	% 5.0	23m	115m	57	15m	6.0k	5.0	100k 7 Seg Num,Color filters.	EC8	PY124a		
63	DA1310	INC	1	472m	% 5.0	23m	115m	57	15m	6.0k	5.0	100k Decimal Point	EC8a	PY124a		
64	DA1320	INC	1	472m	% 5.0	23m	115m	57	15m	6.0k	4.5	100k ±1 Digit.	EC8b	PY124a		
65	DA2300	INC	1	472m	% 5.0	23m	115m	57	15m	6.0k	4.5	100k 7 Seg:Alpha:Color Filters	EC8	PY125a		
66	DA2310	INC	1	472m	% 5.0	23m	115m	57	15m	6.0k	4.5	100k 7 Seg:Alpha:Color Filters	EC8a	PY125a		
67	DA2320	INC	1	472m	% 5.0	23m	115m	57	15m	6.0k	4.5	100k ±1 Digit:Color Filters	EC8b	PY125a		
68	FFD11	INC	1	472m	% 5.0	15m		57*		4.5k	5.0	100k 7 Seg Num,Color filters.	EC4	PY120a		
69	FFD12	INC	1	472m	% 5.0	15m		57*		4.5k	5.0	100k Pol.Color filters.	EC5	PY120a		
70	FFD41	INC	1	472m	% 5.3	34m		57		1.3k	5.0	40k 7 Seg:Num:Color Filters	EC4	PY120		
71	DA2000	INC	1	600m	% 4.5	24m	108m	57	15m	7.0k	5.0	100k 7 Seg.No Dp,Color Filters	EC8	PY125d		
72	DA2010	INC	1	600m	% 4.5	24m	108m	57	15m	7.0k	4.5	100k 7-Seg.LDP	EC8a	PY125d		
73	DA2020	INC	1	600m	% 4.5	24m	108m	57	15m	7.0k	5.0	100k ±1 Digit	EC8b	PY125d		
74	FFD21	INC	1	614m	% 5.0	15m		57*		4.5k	5.0	100k 7 Seg Num,Color filters.	EC6	PY121		
75	FFD22	INC	1	614m	% 5.0	15m		57*		4.5k	5.0	100k Pol.Color filters.	EC7	PY121a		
76	FFD51	INC	1	614m	% 5.3	34m		57		1.3k	5.0	40k 7 Seg:Num:Color Filters	EC6	PY121		
77	DIP1050	INC	1	625m	10	5.0	17m	85m		28m	6.0k	5.0	100k 7-Seg Digital		PY133	
78	DIP1050A	INC	1	625m	10	5.0	17m	85m		28m	6.0k	5.0	100k 16-Seg Alphanumeric		PY133a	
79	DIP1050PM-1	INC	1	625m	10	5.0	17m	85m		28m	6.0k	5.0	100k Plus/Minus 1		PY133b	
80	DIP1051L	INC	1	625m	10	5.0	17m	85m		28m	6.0k	5.0	100k 7-Seg Dig Lf Hand Dec Pt		PY133	
81	DIP1051R	INC	1	625m	10	5.0	17m	85m		28m	6.0k	5.0	100k 7-Seg Dig Rt Hand Dec Pt		PY133	
82	DIP1052	INC	1	625m	10	5.0	17m	85m		28m	6.0k	5.0	100k 7-Seg Digital Colon		PY133	
83	710-0300-015	INC	1	1.0	% 6.0	40m	240m						50k 7 Seg:Alpha;Separable Halves		PY557	
84	710-0300-025	INC	1	1.0	% 15	18m	270m						5.0k 7 Seg:Alpha;Separable Halves		PY557	
85	710-0300-075	INC	1	1.0	% 5.0	30m	150m						50k 7 Seg:Alpha;Separable Halves		PY557a	
86	710-0301-015	INC	1	1.0	% 6.0	40m	240m						50k 7 Seg:Alpha;Separable Halves		PY557a	
87	710-0301-025	INC	1	1.0	% 15	18m	270m						5.0k 7 Seg:Alpha;Separable Halves		PY557a	
88	710-0301-075	INC	1	1.0	% 5.0	30m	150m						50k 7 Seg:Alpha;Separable Halves		PY557b	
89	710-0302-015	INC	1	1.0	% 6.0	40m	240m						50k 7 Seg:Alpha;Separable Halves		PY557b	
90	710-0302-025	INC	1	1.0	% 15	18m	270m						5.0k 7 Seg:Alpha;Separable Halves		PY557b	
91	710-0302-075	INC	1	1.0	% 5.0	30m	150m						50k 7 Seg:Alpha;Separable Halves		PY557b	
92	710-0304-015	INC	1	1.0	% 6.0	40m	240m						50k ±,Separable Halves		PY557d	
93	710-0304-025	INC	1</													

### 37. DISPLAY: OTHER

IN ORDER OF: (1) TYPE DISPLAY (2) NO. DIGITS  
(3) CHAR. HT. & (4) TYPE No.

LINE No.	TYPE No.	TYPE OF DISPLAY	NO. OF DIGITS	CHAR. HGHT. (in)	COL OR	D.C.		POWER DISS. per seg	TEMP RING. CODE	RESP TIME (S)	LUMINANCE		LIFE (hrs)	FEATURES	SCHEM-ATIC	DRAWING Ø-RND. Δ-RECT. *-CHIP
						VOLT (V)	CURR per seg (A)				Lv (fL)	V SUPP. (V)				
1▼	410XY3-35SC	LTR	1	4.1	%	10	250m	750m	47				100M\$	Elec-Mech;5x7 Matrix;Alpha	EC73	PY632a
2▼	840PE2-98	LTR	1	8.4	%	96	16	10 #	46				20M\$	Elec-Mech;7x14 Matrix;Num	EC79	PY629
3▼	FG48SA1	VFD			5	15	625u	13m	05	8.0u	180	15		Bar Graph;24 Seg 2 Lines	EC79	PY642ai
4▼	FG100SA1	VFD			5	35	400u	3.5m	05	8.0u	250	35		Bar Graph;100 Seg	EC79	PY642aj
5▼	FG100SB1	VFD			5	35	350u	3.6m	05	8.0u	250	35		Bar Graph;100 Seg W/3 Digit	EC79	PY642ak
6▼	FG120S1	VFD			5	35	600u	4.7m	05	8.0u	200	35		Bar Graph;120 Seg	EC79	PY642al
7▼	FG202SA2	VFD			5	35	250u	1.6m	05	8.0u	250	35		Bar Graph;101 Seg 2 Lines	EC79	PY646j
8▼	DM258X26B	VFD		656m	5	45	192u	400u	05	8.0u	200	45		258x26 Dot Matrix Column	EC77	PY648b
9▼	DM400B	VFD		3.0	5	35	250u	4.1m	05	8.0u	200	35		20x20 Dot Matrix Graphic Pa	EC77	PY648
10▼	DM80X80A	VFD		3.1	5	45	500u	800u	05	8.0u	250	45		80x80 Dot Matrix Graphic Pa	EC77	PY648a
11▼	LD8171	VFD	2	300m	5	12	850u		06		200	12		Fl Indicator Panel;Static	EC55	PY477
12▼	FG210B9	VFD	2	394m	5	12	114u	18m	05	8.0u	400	12		7 Seg Num W/Triangle(Static	EC78	PY647
13▼	FG213B9	VFD	2	496m	5	12	142u	20m	05	8.0u	400	12		7 Seg Num W/Triangle(Static	EC78	PY647a
14▼	FG46A5	VFD	4	217m	5	28	214u	4.4m	05	8.0u	500	28		7 Seg W/Colon,Clock	EC78	PY645
15▼	FG48C2	VFD	4	300m	5	12	142u	9.1m	05	8.0u	400	12		7 Seg W/Colon,Clock(Static)	EC78	PY646h
16▼	FG48E1	VFD	4	300m	5	24	214u	4.1m	05	8.0u	400	24		7 Seg W/Colon,Clock	EC78	PY642ad
17▼	FG48K6	VFD	4	300m	5	24	285u	7.5m	05	8.0u	400	24		7 Seg W/Colon,Clock	EC78	PY643n
18▼	FG48P2	VFD	4	300m	5	12	114u	10m	05	8.0u	600	12		7 Seg W/Colon,Clock(Static)	EC78	PY646i
19▼	LD8164	VFD	4	300m	5	12	800u		06		200			Fl Indicator Panel;Static	EC56	PY480
20▼	LD8165	VFD	4	300m	5	24	3.2m		06		200			Fl Indicator Panel;Dyn	EC57	PY481
21▼	FG48D6	VFD	4	315m	5	24	228u	4.1m	05	8.0u	400	24		7 Seg W/Colon,Symbol,Clock	EC78	PY643m
22▼	FG410E2	VFD	4	394m	5	15	150u	6.4m	05	8.0u	200	15		7 Seg Num W/DP,±(Static)	EC78	PY646g
23▼	FG410F1	VFD	4	394m	5	24	312u	5.4m	05	8.0u	250	24		7 Seg Num W/DP,±	EC78	PY642m
24▼	FG619B1	VFD	4	453m	5	26	750u	10m	05	8.0u	250	26		7 Seg W/Colon,Annunciator Clk	EC78	PY642ah
25▼	FG412D1	VFD	4	472m	5	26	428u	9.9m	05	8.0u	250	26		7 Seg W/Colon,AM,PM,Clock	EC78	PY642ae
26▼	FG413D1	VFD	4	492m	5	26	500u	13m	05	8.0u	250	26		7 Seg W/Colon,Clock	EC78	PY642af
27▼	LD8213	VFD	4	500m	5	15	1.5m		06		80			Fl Indicator Panel;Static	EC60	PY485
28▼	FG415E6	VFD	4	570m	5	24	625u	12m	05	8.0u	200	24		7 Seg Num W/DP,±,Arrow	EC78	PY643j
29▼	FG515B7	VFD	4	590m	5	15	214u	17m	05	8.0u	250	15		7 Seg W/Colon,AM,PM,ALM,Clk	EC78	PY643o
30▼	LD8195	VFD	4	600m	5	18	1.5m		06		100			Fl Indicator Panel;Static	EC59	PY484
31▼	LD8222	VFD	4	600m	5	18	1.5m		06		100			Fl Indicator Panel;Static	EC59	PY490
32▼	FG425A1	VFD	4	984m	5	35	928u	27m	05	8.0u	250	35		7 Seg W/Colon,AM,PM,Clock	EC78	PY642ag
33▼	FG510A1	VFD	5	394m	5	24	262u	5.8m	05	8.0u	200	24		7 Seg Num W/DP,±	EC78	PY642n
34▼	FG511E6	VFD	5	433m	5	24	437u	7.7m	05	8.0u	200	24		7 Seg Num W/DP,±,Arrow	EC78	PY643k
35▼	FG512A1	VFD	5	472m	5	24	375u	7.2m	05	8.0u	200	24		7 Seg Num W/DP,±	EC78	PY642o
36▼	FG512F1	VFD	5	492m	5	26	562u	11m	05	8.0u	200	26		7 Seg Num W/Colon,DP,Symbol	EC78	PY642p
37▼	FG514A1	VFD	5	550m	5	35	777u	10m	05	8.0u	250	35		8 Seg Num W/DP	EC78	PY642q
38▼	FG516B1	VFD	5	590m	5	45	1.7m	14m	05	8.0u	250	45		7 Seg Num W/DP,Comma	EC78	PY642r
39▼	LD8196	VFD	5	600m	5	18	1.5m		06		100			Fl Indicator Panel;Static	EC60	PY485
40▼	LD8223	VFD	5	600m	5	18	1.5m		06		100			Fl Indicator Panel;Static	EC60	PY491
41▼	FG610A1	VFD	6	374m	5	24	225u	4.9m	05	8.0u	200	24		7 Seg Num W/DP,±	EC78	PY642s
42▼	FG612A1	VFD	6	453m	5	24	375u	6.5m	05	8.0u	200	24		7 Seg Num W/DP,±	EC78	PY642t
43▼	FG614A1	VFD	6	550m	5	35	1.0m	11m	05	8.0u	250	35		8 Seg Num W/DP,Comma	EC78	PY642u
44▼	FG912E1	VFD	7	472m	5	35	666u	11m	05	8.0u	250	35		7 Seg W/DP,Comma,Kg,Symbol	EC78	PY642z
45▼	FG713ES1	VFD	7	496m	5	35	555u	13m	05	8.0u	250	35		7 Seg Num W/DP,Symbol	EC78	PY642y
46▼	FG715RS1	VFD	7	570m	5	35	777u	15m	05	8.0u	250	35		7 Seg W/DP,Comma,Annunciato	EC78	PY642w
47▼	FG85A1	VFD	8	177m	5	24	75u	900u	05	8.0u	160	24		7 Seg Num W/DP	EC78	PY642b
48▼	FG85C1	VFD	8	197m	5	24	75u	900u	05	8.0u	180	24		7 Seg Num W/DP	EC78	PY642c
49▼	FG85D2	VFD	8	199m	5	24	156u	800u	05	8.0u	200	24		14 Seg Alpha Num W/DP	EC74	PY641z
50▼	LD8198	VFD	8	200m	5	24	700u		06		90			Fl Indicator Panel;Dyn	EC61	PY487
51▼	FG99A2	VFD	8	374m	5	24	277u	3.9m	05	8.0u	200	24		7 Seg Num W/DP,Comma,Symbol	EC78	PY646
52▼	FG99C1	VFD	8	374m	5	24	333u	4.0m	05	8.0u	200	24		7 Seg W/DP,Comma,Annunciato	EC78	PY642x
53▼	FG99E1	VFD	8	374m	5	24	333u	4.0m	05	8.0u	200	24		7 Seg W/DP,Comma,Annunciato	EC78	PY642y
54▼	LD8217	VFD	8	430m	5	42	5.0m		06		80			Fl Indicator Panel;Dyn	EC61a	PY489
55▼	FG95B1	VFD	9	197m	5	24	87u	1.0m	05	8.0u	200	24		7 Seg Num W/DP	EC78	PY642d
56▼	FG95H6	VFD	9	197m	5	24	87u	1.0m	05	8.0u	200	24		7 Seg Num W/DP	EC78	PY643
57▼	DC95A2	VFD	9	199m	5	24	69u	500u	05	8.0u	250	24		5x7 Dot Matrix W/DP	EC75	PY641g
58▼	LD8191	VFD	9	200m	5	24	800u		06		170			Fl Indicator Panel;Dyn	EC61b	PY482
59▼	FG97D6	VFD	9	276m	5	26	22u	2.6m	05	8.0u	200	26		7 Seg Num W/DP	EC78	PY643
60▼	FG913ES1	VFD	9	496m	5	35	500u	11m	05	8.0u	250	35		7 Seg W/DP,Symbol	EC78	PY642aa
61▼	LD8194	VFD	9	500m	5	45	3.6m		06		70			Fl Indicator Panel;Dyn	EC58	PY483
62▼	FG914RB	VFD	9	550m	5	30	722u	8.7m	05	8.0u	250	30		7 Seg W/DP,Comma,Symbol	EC78	PY644a
63▼	FG915R1	VFD	9	570m	5	35	777u	13m	05	8.0u	250	35		7 Seg W/DP,Comma,Symbol	EC78	PY642ab
64▼	FG115E7	VFD	10	206m	5	24	150u	1.2m	05	8.0u	180	24		7 Seg Num W/DP,Comma,Symbol	EC78	PY643b
65▼	FG116A6	VFD	10	226m	5	24	150u	1.2m	05	8.0u	200	24		7 Seg Num W/DP,Symbol	EC78	PY643c
66▼	FG117C7	VFD	10	256m	5	26	200u	2.0m	05	8.0u	200	26		7 Seg Num W/DP,Comma,Symbol	EC78	PY643e
67▼	DE210	VFD	10	310m	%	34	10m	1.3	05*					1 Line;14 Seg;Com/Per,ASCII	EC63	PY517
68▼	FG108M1	VFD	10	315m	%	26	312u	2.4m	05	8.0u	200	26		14 Seg Alpha Num W/DP,Comma	EC74	PY642j
69▼	FG118A1	VFD	10	315m	%	26	111u	2.0m	05	8.0u	200	26		7 Seg Num W/DP,Comma,Symbol	EC78	PY642e
70▼	FG119A1	VFD	10	374m	5	30	311u	4.4m	05	8.0u	200	30		7 Seg Num W/DP,Comma,Symbol	EC78	PY642f
71▼	FG1013RS1	VFD	10	512m	5	35	454u	8.0m	05	8.0u	200	35		7 Seg W/DP,Comma,Annunciato	EC78	PY642ac
72▼	DC1015A2	VFD	10	551m	5	35	216u	3.0m	05	8.0u	250	35		5x7 Dot Matrix W/DP,Comma	EC75	PY641h
73▼	FG116C6	VFD	11	226m	5	22	88u	1.0m	05	8.0u	180	22		7 Seg Num W/DP	EC78	PY643d
74▼	FG124B2	VFD	12	146m	5	24	50u	600u	05	8.0u	180	24		7 Seg Num W/DP	EC78	PY646a
75▼	LD8197	VFD	12	170m	5	22	600u		06		80			Fl Indicator Panel;Dyn	EC54b	PY486
76▼	FG125A2	VFD	12	197m	5	24	125u	1.3m	05	8.0u	200	24		7 Seg Num W/DP	EC78	PY646b



# 45. SPECIAL DETECTORS

IN ORDER OF: (1) TYPE DETECTOR (2) OUTPUT CURR.  
(3) FWD CURR-IF & (4) TYPE No.

LINE No.	TYPE No.	TYPE OF DETECTOR	DETECTOR OUTPUT CURRENT			MAX. DETECT. SAT. VOLT		NOMIN. DIST. (in)	MAX. DIODE REV V VR (V)	MAX. DIODE FWD I F (A)	MAX. C/E VOLT VCE (V)	TEMP RNG. CODE	RESP TIME (S)	TYPE OF O/P CKT	DESCRIPTION	SCHEM-ATIC	DRAWING Ø-RND. [Z]-RECT. Δ-STRIP *-CHIP	
			IC (A)	IF (A)	#-VCE (V)	VCE(SAT)												
						(V)	(A)											
1#	SDA13	ES Array-09	3.0m	35m	5.0 #	700m	35m	100m	2.0	100m		6C	1.5u#	TR	LEA13,LSA13	FA16	PS84Z	
2#	CNY26	ES Array-09	4.0m	50m	5.0 #	400m	50m							TR			PS40Δ	
3	STA71SS	ES Array-09	4.5m	50m	5.0 #	700m	50m		5.0	75mΔ		4A*	20u	TR	MF650m	FA16	PS9A	
4	STA73SS	ES Array-10	4.5m	50m	5.0 #	700m	50m		5.0	75mΔ		4A*	20u	TR	MF650m	FA16	PS10Δ	
5#	SDA17	ES Array-12	3.0m	35m	5.0 #	700m	35m	100m	2.0	100m		6C	1.5u#	TR	LEA17,LSA17		PS84ΔZ	
6#	CNY27	ES Array-12	4.0m	50m	5.0 #	400m	50m							TR			PS40Δ	
7	STA74SS	ES Array-12	4.5m	50m	5.0 #	700m	50m		5.0	75mΔ		4A*	20u	TR	MF650m	FA16	PS11Δ	
8#	OPB505	ES ARRAY-06	1.6m	30m	5.0 #			100						TR			PS79Z	
9#	OPB508	ES ARRAY-09	1.6m	30m	5.0 #			100						TR			PS80Z	
10	PP910	ES ARRAY-09	3.2m	200m#	5.0	400m	3.2m#	20m				15\$	5.0u	ST	Tape/Crd Rdr	FA17	PS51Z	
11	PP910A	ES ARRAY-09	3.2m	200m#	5.0	400m	3.2m#	20m				15\$	5.0u	ST	Tape/Crd Rdr	FA17	PS51Z	
12	PP10B	ES ARRAY-09	3.2m	200m#	5.0	400m	3.2m#	20m				15\$	5.0u	ST	Tape/Crd Rdr	FA17	PS51Z	
13#	TIL133	ES ARRAY-09	4.0m	50m	5.0 #	700m	50m	100m	2.0	100m		6C	1.5u#	TR	See TIL131,2		PS40Δ	
14	PP900	ES ARRAY-09	4.0m	150m*	5.0	400m	4.0m#	100				5C*	900n#	ST	Tape/Crd Rdr	FA17	PS50Z	
15	PP900A	ES ARRAY-09	4.0m	150m*	5.0	400m	4.0m#	100				5C*	900n#	ST	Tape/Crd Rdr	FA17	PS50Z	
16#	OPB112	ES ARRAY-12	500uØ	40m	5.0 #	400m	40m	50m	2.0	40m		25	48*	3.0u#	TR	Reader		PS63Z
17#	OPB512	ES ARRAY-12	1.6mØ	50m	5.0 #	400m	30m	100m	2.0	50m		25	48*	3.0u#	TR	Reader		PS40aΔ
18#	TIL136	ES ARRAY-12	4.0m	50m	5.0 #	700m	50m	100m	2.0	100m		6C	1.5u#	TR	See TIL134,5		PS40aΔ	
19#	OPB113	ES ARRAY-12	4.5mØ	40m	5.0 #	400m	40m	50m	2.0	40m		25	48*	3.0u#	TR	Reader		PS63Z
20#	TIL141	ES ARRAY-12	1.6m	410m*	5.0	40	16m#	50m				07*	3.0u#	TR	12 Ch Reader	FA22	PS74Z	
21#	TIL142	ES ARRAY-12	1.6m	410m*	5.0	40	16m#	50m				07*	3.0u#	TR	12 Ch Reader	FA22	PS74Z	
22#	OPB518	ES ARRAY-18	1.6m	30m	5.0 #			100						TR			PA25Z	
23#	SDA20	EM-SENS	100u	35m	5.0 #	750m	35m	187m						TR	LS600,TIL23		PS85Z	
24	H17A1	EM-SENS	50uØ	20m	10 #	400m	20m		3.0	60m		30	5A*	5.0u	TR		FA6	PS33Z
25	OPS690	EM-SENS	50uØ	20m	10 #	400m	20m		2.0	3.0		30	48	TR	LED to NPN	FA2a	PS164Z	
26	L01008/P01014	EM-SENS	150u	20m	10 #	180m	20m	125m	2.0	3.0		30	06	TR	IR LED		PS144Ø	
27#	TLPS07	EM-SENS	500u	10m	5.0 #	500m	3.0m	5.0	40m	25	27*			DA		FA3a	PS92Z	
28	OPS691	EM-SENS	500uØ	20m	10 #	500m	20m	125m	2.0	3.0		30	48	TR	LED to NPN	FA2a	PS164Z	
29	H17B1	EM-SENS	1.0mØ	20m	5.0 #	1.2	20m	20m	3.0	60m		25	5A*	150u	TR	Darlington	FA3	PS33Z
30	OPS692	EM-SENS	1.0mØ	20m	10 #	500m	20m	125m	2.0	3.0		30	48	TR	LED to NPN	FA2a	PS164Z	
31#	H23A1	EM-SENS	1.5mØ	30m	5.0 #	400m	30m	125m	6.0	60m		30	5A	8.0u	TR			PSZ
32#	H23B1	EM-SENS	2.0mØ	10m	1.5 #	500m	10m	125m	6.0	60m		30	5A	45u	TR			PSZ
33	OPS693	EM-SENS	2.0mØ	20m	10 #	500m	20m	125m	2.0	3.0		30	48	TR	LED to NPN	FA2a	PS164Z	
34	L110/P110	EM-SENS	20m	20			72	5.0	125m\$				X7*		TR	PD 100mW		PS97bZ
35	L130/P130	EM-SENS	20m	20			72	5.0	125m\$				X7*		TR	PD 100mW		PS97aZ
36	L140/P140	EM-SENS	20m	20			216	5.0	125m\$				X7*		TR	PD 100mW		PS97Z
37	S17104-F172	EM-SENS-FO	250u	100m	5.0 #			1.2	300mZ	100m		20	07*	3.0u#	TR	LED w/IR FIL	FA30a	PS154bZ
38	S17104-F173	EM-SENS-FO	250u	100m	5.0 #			2.0	300mZ	100m		20	07*	3.0u#	TR	LED w/IR FIL	FA30a	PS154aZ
39	S17103-F172	EM-SENS-FO	700u	115m#	5.0 #			2.0	500mZ	115m		20	07*	3.0u#	TR	INC w/IR FIL	FA18a	PS154bZ
40	S17103-F173	EM-SENS-FO	700u	115m#	5.0 #			500mZ	115m	20		07*	3.0u#	TR	INC w/IR FIL	FA18a	PS154aZ	
41	S17105-F172	EM-SENS-FO	700u	115m#	5.0 #			500mZ	115m	15		07*	10m#	TR	INC.VIS FIL	FA18a	PS154bZ	
42	S17105-F173	EM-SENS-FO	700u	115m#	5.0 #			100mZ	115m	15		07*	10m#	TR	INC.VIS FIL	FA18a	PS154aZ	
43	CL1305	GAP	1.0uØ	10m	5.0 #	500m	20m	250m	3.0	60m		30	5A	5.0u#	AP	IREN/NPN	FA32	PS1aZ
44	OPB814	GAP	15u	50m	10 #	400m	10m	125m	3.0	50m		30	5A*	5.0u#	TR		FA23	PS4aZ
45#	GP505	GAP	50uØ	20m	10 #	550m	50m	125m	3.0	50m		30	07Z	5.0u#	TR	Limit Switch	FA23a	PS32Z
46	E0S2A2	GAP	50uØ	20m	10 #	400m	20m	125m	3.0	60m		30	58*	5.0u	TR		FA6	PS32Z
47	H13A2	GAP	50uØ	20m	10 #	400m	20m	125m	3.0	60m		30	58*	5.0u	TR		FA23a	PS32Z
48	H20A2	GAP	50uØ	20m	10 #	400m	20m	125m	3.0	60m		30	58*	5.0u	TR		FA23a	PS134Z
49	STIN135T2	GAP	50uØ	20m	10 #	400m	20m	125m	3.0	60m		30	58	5.0u#	TR			PS87Z
50	TIL144	GAP	50uØ	20m	10 #	400m	20m	100m	3.0	50m		30	6A*	5.0u#	TR			PS4Z
51#	OPB813S3	GAP	75uØ	20m	10 #	400m	20m	125m	3.0	50m		30	58	5.0u#	TR		FA23	PS197cZ
52	CL1210	GAP	100uØ	20m	5.0 #	500m	20m	100m	3.0	60m		40	5A	5.0u#	TR	IREN/NPN	FA2	PS58Z
53	MCT8	GAP	100uØ	20m	10 #	400m	20m	100	3.0	50m		30	5A*	6.0u	TR	ICEO 300nA	FA3	PS4Z
54#	PS4003	GAP	150uØ	10m	2.0 #	1.2	10m	78m	5.0	50m		30	28	200u	DA		FA3	PS4dZ
55#	PS4005	GAP	150uØ	10m	2.0 #	1.2	10m	78m	5.0	50m		30	28	200u	DA		FA3	PS184Z
56	STCT0A	GAP	150uØ	40m	5.0	400m	50m	60m				25	48	25u#	TR			PS28Z
57	STCT1A	GAP	150uØ	40m	5.0	400m	50m	190m				25	48	25u#	TR			PS28aZ
58	STCT2A	GAP	150uØ	40m	5.0	400m	50m	190m				25	48	25u#	TR			PS28aZ
59#	CNY36	GAP	200uØ	20m	10 #	400m	20m	120m	5.0	40m		32	48	2.1u#	TR		FA6	PS108Z
60#	E0S2A1	GAP	200uØ	20m	10 #	550m	50m	125m	3.0	50m		30	07Z	15u#	TR	Limit Switch	FA23a	PS32Z
61#	ON1103	GAP	200uØ	20m	10 #	300m	50m	118m	3.0	50m		30	28	6.0u	TR			PS4e
62	STIN135T1	GAP	200uØ	20m	10 #	400m	20m	125m	3.0	50m		30	58	5.0u#	TR			PS87Z
63	TIL143	GAP	200uØ	20m	10 #	400m	20m	100m	3.0	50m		30	6A*	5.0u#	TR			PS4Z
64	SPX1877-1	GAP	200uØ	30m	5.0 #		375m	2.0	100m	50		6A*	10u	TR				PS23Z
65	MCT8	GAP	250uØ	20m	10 #	400m	20m	100	3.0	50m		30	5A*	6.0u	TR	ICEO 350nA	FA3	PS4Z
66#	OPB813S5	GAP	250uØ	20m	10 #	400m	20m	125m	3.0	50m		30	58	5.0u#	TR		FA23	PS197bZ
67	STCT0B	GAP	330uØ	40m	5.0	400m	50m	60m				25	48	25u#	TR			PS28Z
68	STCT1B	GAP	330uØ	40m	5.0	400m	50m	190m				25	48	25u#	TR			PS28aZ
69	STCT2B	GAP	330uØ	40m	5.0	400m	50m	190m				25	48	25u#	TR			PS28aZ
70#	OPB813S7	GAP	350uØ	20m	10 #	400m	20m	125m	3.0	50m		30	58	5.0u#	TR		FA23	PS197aZ
71	CNY28	GAP	400uØ	20m	10 #	400m	20m	140mZ	3.0	60m		30	58*	5.0uΔ	TR	Interrupt	FA23a	PS32
72	H13A1	GAP	400uØ	20m	10 #	400m	20m	125	3.0	60m		30	58*	5.0u	TR		FA6	PS32Z
73	H20A1	GAP	400uØ	20m	10 #	400m	20m	125m	3.0	60m		30	58*	5.0u	TR		FA23a	PS134Z
74	SPX1875-1	GAP	400uØ	30m	5.0 #		200m	2.0	100m	50		6A*	10u	TR			FA2	PS21Z
75	SPX1876-1	GAP	400uØ	30m	5.0 #		200m	2.0	100m	50		6A*	10u	TR			FA2	PS22Z
76	CL1395	GAP	500uØ	10m	5.0 #	500m	20m	250m	3.0	60m		30	5A	5.0u#	TR	IREN/NPN	FA34	PS1aZ
77#	PS4001	GAP	500uØ	10m	2.0 #	1.2	10m	98m	5.0	50m		30	28*	200u#	DA		FA3	PS4Z
78	STIN135D2	GAP	500uØ	10m	5.0	1.2	10m	125m				25	58	150u#	DA			PS87Z
79	OPB804	GAP	500uØ	20m	10 #	400m	20m	150	3.0	50m		30	5A*	5.0u#	TR		FA23	PS68
80	OPB813	GAP	500uØ	20m	10 #	400m	20m	125m	3.0	50m		30	5A*	5.0u#	TR		FA23	PS4aZ
81#	OPB813S	GAP	500uØ	20m	10 #	400m	20m	125m	3.0	50m		30	5A*	5.0u#	TR		FA23	PS197Z
82	OPB816	GAP	500uØ</															



# 45. SPECIAL DETECTORS

IN ORDER OF: (1) TYPE DETECTOR (2) OUTPUT CURR.  
(3) FWD CURR-IF & (4) TYPE No.

LINE No.	TYPE No.	TYPE OF DETECTOR	DETECTOR OUTPUT CURRENT		MAX.DETE. SAT. VOLT VCE(SAT)		NOMIN. DIST. (in)	MAX. DIODE REV V VR (V)	MAX. DIODE FWD I IF (A)	MAX. C/E VOLT VCE (V)	TEMP. RING. CODE	RESP TIME (S)	TYPE OF O/P CKT	DESCRIPTION	SCHEM -ATIC	DRAWING Ø-RND. □-RECT. △-STRIP X-CHIP	
			IC (A)	VCC #-(V)CE (V)	IF (A)	IF (A)											
			(A)	(V)	(A)	(A)											
1	SPX1876-2	GAP	1.0m	30m	5.0 #	800m	30m	200m	2.0	100m	50	6A*	10u	TR		PS22□	
2	OS521-060	GAP	1.0m	35m	5.0	550m	35m	60m	3.0	40m	20	07□	25u#	TR	FA6	PS28□	
3	OS521-060L	GAP	1.0m	35m	5.0	550m	35m	60m	3.0	40m	20	07□	25u#	TR	FA6	PS28a□	
4	OS521-060LW	GAP	1.0m	35m	5.0	550m	35m	60m	3.0	40m	20	07□	25u#	TR	FA6	PS28a□	
5	OS521-060W	GAP	1.0m	35m	5.0	550m	35m	60m	3.0	40m	20	07□	25u#	TR	FA6	PS28□	
6	OS521-200	GAP	1.0m	35m	5.0	550m	35m	200m	3.0	40m	20	07□		TR	FA6	PS28□	
7	OS521-200L	GAP	1.0m	35m	5.0	550m	35m	200m	3.0	40m	20	07□		TR	FA6	PS28a□	
8	OS521-200LW	GAP	1.0m	35m	5.0	550m	35m	200m	3.0	40m	20	07□		TR	FA6	PS28a□	
9	OS521-200W	GAP	1.0m	35m	5.0	550m	35m	200m	3.0	40m	20	07□		TR	FA6	PS28□	
10	OS522-060L	GAP	1.0m	35m	5.0	550m	35m	60m	3.0	40m	20	07□	25u#	TR	Dual Channel	FA9#	PS28a□
11	OS522-060LW	GAP	1.0m	35m	5.0	550m	35m	60m	3.0	40m	20	07□	25u#	TR	Dual Channel	FA9#	PS28a□
12	OS522-200L	GAP	1.0m	35m	5.0	550m	35m	200m	3.0	40m	20	07□		TR	Dual Channel	FA9#	PS28a□
13	OS522-200LW	GAP	1.0m	35m	5.0	550m	35m	200m	3.0	40m	20	07□		TR	Dual Channel	FA9#	PS28a□
14	MCA81	GAP	1.2m	16m	5.0 #	1.0	50m	100	3.0	60m	30	5A*	150u	TR	CTR 20m	FA2	PS4□
15	SPX1872-2	GAP	1.2m	20m	5.0 #	600m	30m	100m	2.0	100m	50	6A*	10u	TR		FA2	PS25□
16	SPX1873-2	GAP	1.2m	20m	5.0 #	600m	30m	100m	2.0	100m	50	6A*	10u	TR		FA2	PS24□
17	SPX1874-2	GAP	1.2m	20m	5.0 #	600m	30m	120m	2.0	100m	50	6A*	10u	TR		FA2	PS73□
18	OPB806	GAP	1.6m	35m	5.0 #	500m	15m	125m	3.0	50m	30	5A*	2.5u#	TR			PS2a□
19	STIN140T1	GAP	1.6m	35m	500m#	400m	330m	125m	2.0	50m	50	48	3.0u#	TR			PS2□
20	OPB242	GAP	1.6m	40m	5.0 #	1.0	10m	60m	3.0	60m	30	5A*	2.5u#	TR		FA2	PS46□
21	STCDOA	GAP	1.6m	40m	5.0	1.0	50m	60m		25	48	150u#	DA				PS28□
22	STCD1A	GAP	1.6m	40m	5.0	1.0	50m	60m		25	48	150u#	DA				PS28□
23	STCD2A	GAP	1.6m	40m	5.0	1.0	50m	60m		25	48	150u#	DA				PS28□
24	TIL146	GAP	1.6m	50m	1.0 #	1.0	100m	3.0	50m	30	6A%	3.0u#	TR				PS4□
25	OPB815	GAP	1.8m	20m	600m#	600m	20m	125m	3.0	50m	30	5A*	5.0u#	TR		FA23	PS4a□
26#	H21B1	GAP	2.0m	10m	1.5 #	1.0	10m	125m	6.0	60m	30	5A	45u#	DA		FA20b	PS192□
27#	H21B4	GAP	2.0m	10m	1.5 #	1.0	10m	125m	6.0	60m	55	5A	45u#	DA		FA20b	PS192□
28#	H22B1	GAP	2.0m	10m	1.5 #	1.0	10m	125m	6.0	60m	30	5A	45u#	DA		FA20b	PS193□
29#	H22B4	GAP	2.0m	10m	1.5 #	1.0	10m	125m	6.0	60m	55	5A	45u#	DA		FA20b	PS193□
30#	ON1104	GAP	2.0m	10m	5.0 #	1.2	20m	118m	3.0	50m	30	28	100u	DA		FA20b	PS4a
31	TIL145	GAP	2.0m	16m	1.0 #	1.0	100m	3.0	50m	30	6A%	3.0u#	TR				PS4□
32	CL1230	GAP	2.0m	20m	5.0 #	1.0	20m	100m	3.0	60m	40	5A%	150u#	DA	IRED/NPN	FA3	PS58□
33#	H21A2	GAP	2.0m	20m	5.0 #	400m	20m	125m	6.0	60m	30	5A	8.0u#	TR		FA23a	PS192□
34#	H21A5	GAP	2.0m	20m	5.0 #	400m	20m	125m	6.0	60m	55	5A	8.0u#	TR		FA23a	PS192□
35#	H22A2	GAP	2.0m	20m	5.0 #	400m	20m	125m	6.0	60m	30	5A	8.0u#	TR		FA23a	PS193□
36#	H22A5	GAP	2.0m	20m	5.0 #	400m	20m	125m	6.0	60m	55	5A	8.0u#	TR		FA23a	PS193□
37	OPB810	GAP	2.0m	30m	5.0 #	1.0	200m	2.0	27					TR			PS69
38	OS581-060	GAP	2.0m	35m	5.0	1.0	35m	60m	3.0	40m	20	07□	150u#	DA		FA20	PS28□
39	OS581-060L	GAP	2.0m	35m	5.0	1.0	35m	60m	3.0	40m	20	07□	150u#	DA		FA20	PS28a□
40	OS581-060LW	GAP	2.0m	35m	5.0	1.0	35m	60m	3.0	40m	20	07□	150u#	DA		FA20	PS28a□
41	OS581-060W	GAP	2.0m	35m	5.0	1.0	35m	60m	3.0	40m	20	07□	150u#	DA		FA20	PS28□
42	OS581-200	GAP	2.0m	35m	5.0	1.0	35m	200m	3.0	40m	20	07□		DA		FA20	PS28□
43	OS581-200L	GAP	2.0m	35m	5.0	1.0	35m	200m	3.0	40m	20	07□		DA		FA20	PS28a□
44	OS581-200LW	GAP	2.0m	35m	5.0	1.0	35m	200m	3.0	40m	20	07□		DA		FA20	PS28a□
45	OS581-200W	GAP	2.0m	35m	5.0	1.0	35m	200m	3.0	40m	20	07□		DA		FA20	PS28□
46	OS582-060L	GAP	2.0m	35m	5.0	1.0	35m	60m	3.0	40m	20	07□	150u#	DA	Dual Channel	FA12	PS28a□
47	OS582-060LW	GAP	2.0m	35m	5.0	1.0	35m	60m	3.0	40m	20	07□	150u#	DA	Dual Channel	FA12	PS28a□
48	OS582-200L	GAP	2.0m	35m	5.0	1.0	35m	200m	3.0	40m	20	07□		DA	Dual Channel	FA12	PS28a□
49	OS582-200LW	GAP	2.0m	35m	5.0	1.0	35m	200m	3.0	40m	20	07□		DA	Dual Channel	FA12	PS28a□
50	CNY29	GAP	2.5m	20m	5.0 #	1.2	20m	125m	3.0	60m	25	58*	150u#	DA	Interrupt	FA20b	PS32
51	EOS8B1	GAP	2.5m	20m	10	1.0	50m	125m	3.0	50m	30	07□	25u#	DA	Limit Switch	FA20b	PS32□
52	H13B1	GAP	2.5m	20m	5.0 #	1.2	20m	125	3.0	60m	25	58*	150u	TR	Darlington	FA1	PS32□
53	H20B1	GAP	2.5m	20m	5.0 #	1.2	20m	125m	3.0	60m	30	58*	150u	DA		FA20b	PS134□
54	SSOS700	GAP	3.0m	20m	5.0 #	400m	110m	6.0	100m			6A	8.0u#	DI		FA4	PS14□
55	SSOS800	GAP	3.0m	20m	5.0 #	400m	120m	6.0	100m			6A	8.0u#	DI		FA4	PS15□
56	CL1325	GAP	3.0m	10m	5.0 #	1.0	10m	250m	3.0	60m	30	5A%	50u#	DA	IRED/NPN	FA3b	PS1a□
57	SPX1877-3	GAP	3.0m	30m	5.0 #	1.5	30m	375m	2.0	100m	15	6A*	500u	DA			PS23□
58	STCTOAE	GAP	3.0m	40m	5.0	400m	50m	60m		25	48*	10u#	TR	Switch			PS28□
59	STCT1AD	GAP	3.0m	40m	5.0	400m	50m	190m		25	48*	10u#	TR	Switch			PS28a□
60	STCT2AD	GAP	3.0m	40m	5.0	400m	50m	190m		25	48*	10u#	TR	Switch			PS28a□
61	OPB243	GAP	3.2m	40m	5.0 #	1.1	50m	125m	2.0	50m	15	07*	20u#	DA		FA2	PS46□
62	STCDOB	GAP	3.3m	40m	5.0	1.0	50m	60m		25	48*	150u#	DA				PS28□
63	STCD1B	GAP	3.3m	40m	5.0	1.0	50m	60m		25	48*	150u#	DA				PS28□
64	STCD2B	GAP	3.3m	40m	5.0	1.0	50m	60m		25	48*	150u#	DA				PS28□
65#	H21A3	GAP	4.0m	20m	5.0 #	400m	20m	125m	6.0	60m	30	5A	8.0u#	TR		FA23a	PS192□
66#	H21A6	GAP	4.0m	20m	5.0 #	400m	20m	125m	6.0	60m	55	5A	8.0u#	TR		FA23a	PS192□
67#	H22A3	GAP	4.0m	20m	5.0 #	400m	20m	125m	6.0	60m	30	5A	8.0u#	TR		FA23a	PS193□
68#	H22A6	GAP	4.0m	20m	5.0 #	400m	20m	125m	6.0	60m	55	5A	8.0u#	TR		FA23a	PS193□
69	OPB809	GAP	4.0m	20m	5.0 #	1.0	100m	3.0	50m	30				DA		FA20c	PS69a□
70	TIL147	GAP	4.0m	20m	5.0 #	1.0	100m	3.0	100m	30	4A	5.0u#	TR		FA2	PS6□	
71	SPX1875-3	GAP	4.0m	30m	5.0 #	1.5m	30m	200m	2.0	100m	15	6A*	500u	DA		FA2	PS21□
72	SPX1876-3	GAP	4.0m	30m	5.0 #	1.5	30m	200m	2.0	100m	15	6A*	500u	DA			PS22□
73	OS561A060	GAP	4.7m	35m	5.0	400m	35m	60m	3.0	40m	25	07□	15u#	TR		FA13	PS28□
74	OS561A060L	GAP	4.7m	35m	5.0	400m	35m	60m	3.0	40m	25	07□	15u#	TR		FA13	PS28a□
75	OS561A060LW	GAP	4.7m	35m	5.0	400m	35m	60m	3.0	40m	25	07□	15u#	TR		FA13a	PS28a□
76	OS561A060W	GAP	4.7m	35m	5.0	400m	35m	60m	3.0	40m	25	07□	15u#	TR		FA13a	PS28□
77	OS561A200	GAP	4.7m	35m	5.0	400m	35m	200m	3.0	40m	25	07□		TR		FA13	PS28□
78	OS561A200L	GAP	4.7m	35m	5.0	400m	35m	200m	3.0	40m	25	07□		TR		FA13	PS28a□
79	OS561A200LW	GAP	4.7m	35m	5.0	400m	35m	200m	3.0	40m	25	07□		TR		FA13a	PS28a□
80	OS561A200W	GAP	4.7m	35m	5.0	400m	35m	200m	3.0	40m	25	07□		TR		FA13a	PS28□
81	OS562A060L	GAP	4.7m	35m	5.0	400m	35m	60m	3.0	40m	25	07□	15u#	TR	Dual Channel	FA11	PS28a□
82	OS562A060LW	GAP	4.7m	35m	5.0	400m	35m	60m	3.0	40m	25	07□	15u#	TR	Dual Channel	FA11	PS28a□
83	OS562A2																

# 45. SPECIAL DETECTORS

IN ORDER OF: (1) TYPE DETECTOR (2) OUTPUT CURR.  
(3) FWD CURR-IF & (4) TYPE No.

LINE No.	TYPE No.	TYPE OF DETECTOR	DETECTOR OUTPUT CURRENT			MAX. DETECT. SAT. VOLT		NOMIN. DIST. (in)	MAX. DIODE REV V (V)	MAX. DIODE FWD I (A)	MAX. C/E VOLT (V)	TEMP. RNG. CODE	RES. TIME (S)	TYPE OF O/P CKT	DESCRIPTION	SCHEM-ATIC	DRAWING Ø-RND. ▽-RECT. △-STRIP *CHIP
			IC (A)	IF (A)	#-VCE (V)	(V)	IF (A)										
1	CL1220	GAP	10m	20m	5.0	1.0	20m	100m	3.0	60m	40	5A	150u#	DA	IRED/NPN	FA3	PS58
2	CL1355	GAP	12m	10m	5.0	1.0	10m	250m	3.0	60m	40	5A	300u#	DA	IRED/NPN	FA33	PS1a
3	STCTOAG	GAP	14m	40m	5.0	400m	50m	60m			25	48*	10u#	TR	Switch		PS28
4	STCT1AG	GAP	14m	40m	5.0	400m	50m	190m			25	48*	10u#	TR	Switch		PS28a
5	STCT2AG	GAP	14m	40m	5.0	400m	50m	190m			25	48*	10u#	TR	Switch		PS28a
6	H21B3	GAP	25m	10m	1.5	1.0	10m	125m	6.0	60m	30	5A	45u#	DA		FA20b	PS192
7	H21B6	GAP	25m	10m	1.5	1.0	10m	125m	6.0	60m	30	5A	45u#	DA		FA20b	PS192
8	H22B3	GAP	25m	10m	1.5	1.0	10m	125m	6.0	60m	30	5A	45u#	DA		FA20b	PS193
9	H22B6	GAP	25m	10m	1.5	1.0	10m	125m	6.0	60m	30	5A	45u#	DA		FA20b	PS193
10	112-3	GAP-02	20m		5.0	400m		62m	3.0	50m	20		2.0u	TR	Opt Switch	FA23	PS105
11	126-1	GAP-03				400m		150m					100u*	TR	Edge Sensor	FA25	PS107
12	125-1	GAP-12	16m		5.0	400m		18m						TR	Mult Ch Read	FA24	PS106
13	108-2	LIMIT	50u	35m	15	500m	70m	80m	3.0	75m	30		5.0u#	TR		FA23	PS89
14	108-1	LIMIT	250u	35m	15	500m	70m	80m	3.0	75m	30		10u#	TR		FA24	PS89
15	STCT1S	LIMIT	16m	25m	5.0	400m	25m	190m					48	ST	SW/Schmitt		PS28a
16	STCT2S	LIMIT	16m	25m	5.0	400m	25m	190m					48	ST	SW/Schmitt		PS28a
17	S351	REFLEX						100m	5.0	115m	30	X7*	15u*	TR	Skanner		PS110
18	S351G	REFLEX						100m	5.0	115m	30	X7*	15u*	TR	Skanner		PS112
19	S351SR	REFLEX						70m	5.0	115m	30	X7*	15u*	TR	Skanner		PS111
20	S353	REFLEX						160m	5.0	115m	30	X7*	15u*	TR	Skanner		PS110
21	S19051	REFLEX						3.0m	5.0	115m	30	X7	1.0u#	TR	Sight Glass		PS114
22	S19081	REFLEX						3.0m	5.0	115m	30	X7	1.0u#	TR	Sight Glass		PS114
23	S19101	REFLEX						5.0	5.0	115m	30	07*	1.0u#	TR	Sight Glass		PS114
24	S19111	REFLEX						5.0	5.0	115m	30	07*	1.0u#	TR	Sight Glass		PS114
25	S19121	REFLEX						5.0	5.0	115m	30	07*	1.0u#	TR	Sight Glass		PS114
26	S19141	REFLEX						5.0	5.0	115m	30	07*	1.0u#	TR	Sight Glass		PS114
27	GP500	REFLEX	800u	50m	10			0.40	6.0	100m	45	16*	150u	TR			PS44
28	S58101	REFLEX	10u	115m	5.0	5.0	115m	6.0m			20	07*	20u#	TR		FA18	PS54
29	TIL139	REFLEX	15u	40m	5.0			150m	2.0	40m	50	4A*		TR			PS37
30	STRT850F	REFLEX	20u	50m	5.0	700m	50m	400m	2.0	75m	20	4A*	60u#	TR	W/IR Filter		PS12
31	OPB253A	REFLEX	25u	40m	5.0	1.6	50m	200m	3.0	50m	25	4A		TR		FA15a	PS47
32	TIL149	REFLEX	25u	40m	5.0				2.0	40m	30	48*		TR			PS104
33	STRT900-1	REFLEX	40u	30m	5.0			500m	2.0		10	4A*	4.0u#	TR			PS35d
34	OPB700	REFLEX	50u	40m	5.0		400m	200	2.0	40m	30	48*	10u#	TR			PS65
35	STRD70	REFLEX	50u	40m	5.0		400m	400m	3.0	600u	30	4A*	600u#	DA			PS26a
36	STRD70F	REFLEX	50u	40m	5.0		400m	400m	3.0	600u	30	4A*	600u#	DA			PS26a
37	OPB708	REFLEX	55u	40m	5.0			100m	2.0	40m	30	48*		TR	White Refl		PS3a
38	STRT850A	REFLEX	60u	50m	5.0	700m	50m	400m	2.0	75m	20	4A*	60u#	TR		FA15	PS12
39	STRT850AF	REFLEX	60u	50m	5.0	700m	50m	400m	2.0	75m	20	4A*	60u#	TR	W/IR Filter		PS12
40	SPX2498-1	REFLEX	70u	30m	5.0	2.0	50m	500m			10		6.0u#	TR			PS35e
41	S2005-3	REFLEX	75u	115m	5.0	5.0	115m	10m			30	07*	1.0u#	TR	INCAND	FA18	PS54
42	S2005-3SR	REFLEX	75u	115m	5.0	5.0	115m	10m			30	07*	1.0u#	TR	INCAND	FA18	PS54
43	FPA103	REFLEX	80u	50m	5.0	700m	50m	400m	3.0	75m	12	4A*	100u#	TR	FIL	FA29	PS12a
44	FPA106	REFLEX	80u	50m	5.0	700m	50m	400m	3.0	75m	12	4A*	100u#	TR	FIL	FA29	PS12a
45	STRT850B	REFLEX	80u	50m	5.0	700m	50m	400m	2.0	75m	20	4A*	60u#	TR		FA15	PS12
46	STRT850BF	REFLEX	80u	50m	5.0	700m	50m	400m	2.0	75m	20	4A*	60u#	TR	W/IR Filter		PS12
47	S27101	REFLEX	100u	60m	5.0			20m		60m	20	X6	50u	TR	Skanner	FA28	PS143
48	S27111	REFLEX	100u	60m	5.0			20m		60m	20	X6	50u	TR	Skanner	FA28	PS117
49	S27121	REFLEX	100u	60m	5.0			20m		60m	20	X6	50u	TR	Skanner	FA28	PS180
50	S27141	REFLEX	100u	60m	5.0			20m		60m	20	X6	50u	TR	Skanner	FA28	PS181
51	6D72	REFLEX	100u	100m	5.0	1.8	100m	984	7.0	100m	20	X6	500u#	TR	LED	FA5	PS16
52	STRT910-2	REFLEX	125u	30m	5.0			500m	2.0	50	4A*	5.0u#	TR			FA15	PS35d
53	STRT850	REFLEX	125u	30m	5.0	700m	50m	400m	2.0	75m	20	4A*	60u#	TR			PS12
54	S11101	REFLEX	150u	35m	30			180m		35m	30	06		TR	IR LED		PS178
55	OPB710	REFLEX	150u	50m	5.0			250	3.0	50m	30	07*	10u#	TR		FA20a	PS48
56	QS322-3LED	REFLEX	150u	100m	5.0	1.7	100m	100m			30	X7*	1.0u#	TR	LED	FA2	PS52b
57	RS322-3LED	REFLEX	150u	100m	5.0	1.7	100m	100m			30	X7*	1.0u#	TR	LED	FA2	PS52e
58	S322-3LED	REFLEX	150u	100m	5.0	1.7	100m	100m			30	X7*	1.0u#	TR	LED	FA2	PS52f
59	TS322-3LED	REFLEX	150u	100m	5.0	1.7	100m	100m			30	X7*	1.0u#	TR	LED	FA2	PS52d
60	US322-3LED	REFLEX	150u	100m	5.0	1.7	100m	100m			30	X7*	1.0u#	TR	LED	FA2	PS52a
61	UTS322-3LED	REFLEX	150u	100m	5.0	1.7	100m	100m			30	X7*	1.0u#	TR	LED	FA2	PS52c
62	S2413	REFLEX	150u	800m	5.0			2.05	5.0	800m	20	47	3.0u	TR	INCAND LAMP	FA18b	PS179
63	S24141	REFLEX	150u	800m	5.0			1.7	5.0	800m	20	47	3.0u	TR	INCAND LAMP	FA18b	PS179
64	S24151	REFLEX	150u	800m	5.0				5.0	800m	20	47	3.0u	TR	INCAND LAMP	FA18b	PS179
65	FPA105	REFLEX	160u	50m	5.0	700m	50m	400m	3.0	75m	12	4A*	100u#	TR	FIL	FA29	PS12a
66	FPA108	REFLEX	160u	50m	5.0	700m	50m	400m	3.0	75m	12	4A*	100u#	TR	FIL	FA29	PS12a
67	FPA104	REFLEX	180u	50m	5.0	700m	50m	400m	3.0	75m	12	4A*	100u#	TR	FIL	FA29	PS12a
68	FPA107	REFLEX	180u	50m	5.0	700m	50m	400m	3.0	75m	12	4A*	100u#	TR	FIL	FA29	PS12a
69	OPB706C	REFLEX	200u	20m	5.0			50m	3.0	3.0	50	58	10u#	TR		FA2a	PS161
70	SPX2498-2	REFLEX	200u	30m	5.0	1.6	50m	500m	7.0	50	50		8.0u#	TR			PS35e
71	OPB703	REFLEX	200u	40m	5.0			200	2.0	40m	15	06*	80u#	DA		FA8	PS65
72	SPX1404-1	REFLEX	300u	30m	5.0			200m	2.0	50m	10	4A*	6.0u#	TR			PS37
73	OPB706B	REFLEX	350u	20m	5.0			50m	3.0	3.0	50	58	10u#	TR		FA2a	PS161
74	BOT521XXX	REFLEX	400u	20m	5.0			100	5.0	50m	25	07*	20u#	TR	EOT/BOT	FA6	PS27
75	EOT522XXX	REFLEX	400u	20m	5.0			100	5.0	50m	25	07*	20u#	TR	EOT/BOT	FA9#	PS27
76	EOT521XXX	REFLEX	400u	20m	5.0			100	5.0	50m	25	07*	20u#	TR	EOT/BOT	FA6	PS27
77	EOT522XXX	REFLEX	400u	20m	5.0			100	5.0	50m	25	07*	20u#	TR	EOT/BOT	FA9#	PS27
78	MCA	REFLEX	400u	20m	5.0			100	3.0	75m	30	5A*	600u#	TR	ICEO 5.0nA	FA8	PS26
79	OPB706A	REFLEX	500u	50m	5.0			50m	3.0	3.0	30	58	10u#	TR		FA2a	PS161
80	SPX1404-2	REFLEX	600u	30m	5.0			200m	2.0	50m	50	4A*	8.0u#	TR			PS37
81	104-2	REFLEX	600u	50m	5.0	500m	50m	40m	3.0	100m	15	08*	50u#	TR		FA23	PS88
82	SPX1396-1	REFLEX	700u	30m	5.0	300m	25m	50m	6.0	50m	15	47*	35u#	TR		FA15	PS36
83	SPX1160-1	REFLEX	750u	30m	5.0			75m	2.0	50m	50	4A*	4.0u#	TR			PS34
84	OPB730	REFLEX	1.0m	50m	5.0			250m	3.0	50m	30	07*	80u#	DA		FA3	PS48
85	QS322-3	REFLEX	1.0m	115m	5.0	5.0	115m	100m			30	X7*	1.0u#	TR	INCAND	FA18	PS52b
86	RS322-3-0	REFLEX	1.0m	115m	5.0	5.0	115m	100m			30	X7*	1.0u#	TR	INCAND w/FIL	FA18	PS52b
87	US322-3IR	REFLEX	1.0m	115m	5.0	5.0	115m	100m			30	X7*	1.0u#	TR	INCAND w/FIL	FA18	PS52b
88	TS322-3																

# 45. SPECIAL DETECTORS

IN ORDER OF: (1) TYPE DETECTOR (2) OUTPUT CURR. (3) FWD CURR-IF & (4) TYPE No.

LINE No.	4 TYPE No.	1 TYPE OF DETECTOR	2 DETECTOR OUTPUT CURRENT			MAX.DETE. SAT. VOLT VCE(SAT)		NOMIN. DIST. (in)	MAX. DIODE REV V VR (V)	MAX. DIODE FWD I IF (A)	MAX. C/E VOLT VCE (V)	TEMP. RNG. CODE - + (S)	RESP TIME (S)	TYPE OF O/P CKT	DESCRIPTION	SCHEMATIC	DRAWING Ø-RND. Δ-STRIP *CHIP
			3 IF (A)	IF (A)	#-VCE (V)	(V)	IF (A)										
1	OPB707C	REFLEX	10m∅	20m	5.0 #			50m	3.0	3.0 §	15	58	100u#	DA	Darlington	FA20	PS161∅
2	SPX1160-3	REFLEX	10m	30m	5.0 #			75m	2.0	50m	15	4A*	25u#	TR			PS34∅
3	OPB707B	REFLEX	17m∅	20m	5.0 #			50m	3.0	3.0 §	15	58	100u#	DA	Darlington	FA20	PS161∅
4	S118-1/4	REFLEX	20m		5.0	5.0	115m	375m			30 Δ	X7*	3.0u#	TR	INCAND	FA2	PS56∅
5	S120-1/4	REFLEX	20m		5.0	5.0	115m	375m			30 Δ	X7*	3.0u#	TR	INCAND	FA2	PS56a∅
6	S2005-3SRLED	REFLEX	20m∅						1.7	100m	20	07*	3.0u#	TR	Skanner		PS113∅
7	S12001	REFLEX	20m		5.0 #	5.0	200m	150m			30 Δ	X7*	3.0u#	TR	LED	FA2	PS57∅
8	S56401	REFLEX	20m∅						5.0	100m	20	07*	5.0u#	TR	Lamp		PS113∅
9	S56404	REFLEX	20m∅						1.7	100m	20	07*	5.0u#	TR	LED		PS113∅
10	S2005-3LED	REFLEX	20m	100m	5.0	1.7	100m	10m			30 Δ	07*	3.0u#	TR		FA2	PS54∅
11	OPB707A	REFLEX	25m∅	20m	5.0 #			50m	3.0	3.0 §	15	58	100u#	DA	Darlington	FA20	PS161∅
12	L33007/P33001	REFLEX	200m∅						2.0	200m	30	07*	3.0u#	TR			PS117∅
13	S20001	REFLEX	250m∅						2.0	100m	20	06*	20u#	TR	Skanner		PS115∅
14	S35201	REFLEX	2.0 ∅	80u		5.0 §	115m	100m				X7*	2.0m	TR		FA18	PS99∅
15	S35202	REFLEX	2.0 ∅	80u		5.0 §	115m	100m				X7*	200u	TR		FA18	PS99∅
16	S35203	REFLEX	2.0 ∅	80u		5.0 §	115m	100m				X7*	200u	TR		FA18	PS99∅
17	S3010-3LED	REFLEX-FO	50u	100m	5.0 #			30m		100m	30	X7*	1.0u#	TR	LED w/RES	FA30	PS153∅
18	S3010-3	REFLEX-FO	50u	115m#	5.0 #	5.0 §	115m	30m			30 Δ	X7*	1.0u#	TR	INCAND	FA18	PS53∅
19	S3010-3.0	REFLEX-FO	50u	115m	5.0	5.0 §	115m	30m			30 Δ	X7*	1.0u#	TR	INC/5umF:1	FA18	PS53∅
20	S3010-3B	REFLEX-FO	50u	115m#	5.0 #	5.0 §	115m	30m			30 Δ	X7*	1.0u#	TR	INCAND	FA18	PS53a∅
21	S3010-3BIR	REFLEX-FO	50u	115m#	5.0 #	5.0 §	115m	30m			30 Δ	X7*	1.0u#	TR	INC/9umFIL	FA18	PS53a∅
22	S3010-3B0	REFLEX-FO	50u	115m#	5.0 #	5.0 §	115m	30m			30 Δ	X7*	1.0u#	TR	INC/5umFIL	FA18	PS53a∅
23	S3010-3IR	REFLEX-FO	50u	115m#	5.0 #	5.0 §	115m	30m			30 Δ	X7*	1.0u#	TR	INC/9umFIL	FA18	PS53∅
24	L56001/P56001	REFLEX-FO	150u	115m	5.0 #			200m		115m§	20	07*	3.0u#	TR	INC/TR PAIR	FA31	PS116∅

# 46. MISCELLANEOUS DEVICES

IN ORDER OF:(1) USE & (2) TYPE No.

LINE No.	TYPE No.	USE	PARAMETERS					TEMP RING. CODE	DESCRIPTION	SCHEM-ATIC	DRAWING Ø-RND. □-RECT. △-STRIP *CHIP
			ELECTRICAL		OPTICAL						
			MAX PWR DISS. (W)	VOLT (V)	CURR. (A)	Pk W/L λp (m)	INTENS. Iv (cd)				
1#	HLSN221	3		250mΔ		825n		5B*	2 Element:VR 2.0V;Intensity 280fct.		PS45□
2	PINLSC4	3		10					1 Axis:Sens 16uA/mW;001;Resp.25uA/uW;Rc300kΩ		PS94Δ
3	PINSC10	3		10					2 Axis:Sens 16uA/mW;001;Resp.25uA/uW;Rc 20kΩ		PS93□
4	PINSC25	3		10					2 Axis:Sens 8uA/mW;001;Resp.25uA/uW;Rc 20kΩ		PS93□
5	PINSC50	3		10					2 Axis:Sens 4uA/mW;001;Resp.25uA/uW;Rc 20kΩ		PS93□
6	PINSPOT2D	3		10					1 Axis:300-1100nm;Sens 4uA/uW;NEP 1pW;Rc 1MΩ		PS95□
7	91D5R11	4		5.0	4.0u□			15*	20 Seg Dual Bar Graph;LCD	♦	PS131Δ
8	91D7R11	4		12	4.0u□			26*	20 Seg Dual Bar Graph;LCD	♦	PS131Δ
9▼	AND600G	4		2.1	15m□	565n	60u	27*	10 Step Rect Green Bar Graph;LED	♦	PS188Δ
10▼	AND600R	4		2.1	15m□	700n	80u	27*	10 Step Rect Red Bar Graph;LED	♦	PS188Δ
11	BG08120K	4		250	10m		50 §	05*	120 Ele Circular Self Scan Bar Graph Display	♦	PS188Δ
12	BG12201-2	4		250	3.0m		35 §	05*	Dual 200 Ele Lin Self Scan Bar Graph Display	♦	PS75□
13	BG12203-2	4		250	4.1m		30 §	07*	2,203 Element Bar Graphs		PS100Δ
14	BG12205-2	4		250	5.0m		70 §	05*	Dual 201 ele Lin Self-Scanned Bar Graph	♦	PS130
15	BG16101-2	4		250	5.0m		60 §	05*	Dual 100 Ele Lin Self Scan Bar Graph Display	♦	PS75a□
16	BG25201002	4	24m	70	4.5m		50 §		Dual 101 Ele Bar Graph Display		PS122□
17	FNA12	4	100m	2.0 □	240m♦	665n	200u	48*	Red 12-Element Bar Display	FB54	PS15□
18#	MLA12	4	350m	1.7	20m	660n	280u	28	Red 12 Segment Bar Display	♦	PS183
19▼#	MLEV50	4	300m	2.0	50m	660n	1.4m	28	Record-Level Ind;Red and Green Cavities/5 Elemt	FB73	PS191A
20▼#	MLEV80	4	300m	2.0	50m	660n	1.4m	28	Record-Level Ind;Red and Green Cavities/8 Elemt		PSA
21▼	RRG1000	4	500m	2.0 *	250m	650n	5.0m	28	10-Element Display;Red;Appl;Water;Pos Ind	FB76	PS196A
22	MB1101	5		25		800n		26	120m inches Shifting Dist from Center	FB5	PS13□
23	MB1151	5		25		700n		25	120m inches Shifting Dist from Center	FB5	PS13□
24	MPC1001	6		25		600n		26	Res 2.0kΩ;Linearity 2.5%;Transm Ratio 80%	FB4	PS5□
25#	MPC1001%	6	50m	10		700n	600n	27	Res 3-20kΩ;Min Conv Ratio 85%;Max Lin ±2.5%	FB23	PS49□
26	MPC1051	6		25		700n	700n	25	Res 2.0kΩ;Linearity 1.5%;Transm Ratio 80%	FB4	PS5□
27#	MPC1051%	6	50m	10		700n	700n	26	Res 6-30kΩ;Min Conv Ratio 90%;Max Lin ±2.0%	FB23	PS49□
28	MPC1052	6		15		700n		26	Res 2.0kΩ;Linearity 3.0%;Transm Ratio 80%	FB4	PS5□
29	MPC1053	6		15		700n		26	Res 2.0kΩ;Linearity 2.5%;Transm Ratio 80%	FB4	PS5□
30	MPC1054	6	30m	15		700n		26	Conv Ratio 80%;Linearity ±2.5%;Ev 100lx	FB4	PS96□
31#	MPC1055	6	50m	10		700n	700n	26	Res 2-14kΩ;Min Conv Ratio 90%;Max Lin ±2.0%	FB23	PS49□
32	C30843	7	100m	500m*		1.1u	12 §	48*	Quadrant N Silicon Pin Photodiode	FB52	PS29□
33	C30844	7	200m	500m*		1.1u	3.0 §	48*	Quadrant N Silicon Pin Photodiode	FB52	PS30□
34	C30845	7	200m	500m*		1.1u	1.2 §	48*	Quadrant N Silicon Pin Photodiode	FB52	PS30□
35	C30846	7		200	10m♦	1.1u	1.1u	48*	Quadrant N Silicon Pin Photodiode	FB52	PS149
36	IPL30	7		10		1.1u		58*	4 Quadrant;Responses 75uA/mW;tr 30ns.	FB15	PS38*
37	IPL31	7		20	400p			58*	2 Diode;Responses 75uA/mW;tr 30ns.	FB16	PS39*
38	PINSPOT4D	7		10	50u				2 Axis:300-1100nm;Sens 4uA/uW;NEP 1pW;Rc 1MΩ		PS95a□
39	PINSPOT8D	7		10	5.0mΔ	920n	900m§	5C	2 Axis:350-1100nm;NEP 1.5pA/Hz1/2		PS137□
40	PINSPOT9D	7		10	1.0mΔ	920n	641m§	5C	2 Axis:350-1100nm;NEP8.6pA/Hz1/2		PS138□
41	Q300	7				20u§		25	20un-20un;Responses 600V/W;Area 1Sq mm		
42	Q301	7	1.0			20u§		1A	Responses 1.5uA/W;C200pf;tr 150ns max		PS146
43#	QD7-0	7		30	10n	900n			4 Quadrant Silicon;NEP.10pW typ at W/L 900nm	♦	PD203a□
44#	QD7-1	7		10		430n			4 Quadrant Silicon;NEP.10pW typ at W/L 900nm	♦	PD203a□
45#	QD7-2	7		60		900n			4 Quadrant Silicon;NEP.10pW typ at W/L 900nm	♦	PD203a□
46#	QD7-3	7		100		900n			4 Quadrant Silicon;NEP.10pW typ at W/L 900nm	♦	PD203a□
47#	QD7-4	7		180		1.0u			4 Quadrant Silicon;NEP.10pW typ at W/L 900nm	♦	PD203a□
48#	QD50-0	7		30	100n	900n			4 Quadrant Silicon;NEP.33pW typ at W/L 900nm	♦	PD200a□
49#	QD50-1	7		10		430n			4 Quadrant Silicon;NEP.33pW typ at W/L 900nm	♦	PD200a□
50#	QD50-2	7		60		900n			4 Quadrant Silicon;NEP.33pW typ at W/L 900nm	♦	PD200a□
51#	QD50-3	7		100		900n			4 Quadrant Silicon;NEP.33pW typ at W/L 900nm	♦	PD200a□
52#	QD50-4	7		180		1.0u			4 Quadrant Silicon;NEP.33pW typ at W/L 900nm	♦	PD200a□
53#	QD100-0	7		10	300n	900n			4 Quadrant Silicon;NEP.50pW typ at W/L 900nm	♦	PD201□
54#	QD100-1	7		10		430n			4 Quadrant Silicon;NEP.50pW typ at W/L 900nm	♦	PD201□
55#	QD100-2	7		60		900n			4 Quadrant Silicon;NEP.50pW typ at W/L 900nm	♦	PD201□
56#	QD100-3	7		100		900n			4 Quadrant Silicon;NEP.50pW typ at W/L 900nm	♦	PD201□
57#	QD100-4	7		180		1.0u			4 Quadrant Silicon;NEP.50pW typ at W/L 900nm	♦	PD201□
58#	QD320-0	7		30		900n			4 Quadrant Silicon;NEP1.0pW typ at W/L 900nm	♦	PD202a□
59#	QD320-1	7		10		430n			4 Quadrant Silicon;NEP1.0pW typ at W/L 900nm	♦	PD202a□
60#	QD320-2	7		60		900n			4 Quadrant Silicon;NEP1.0pW typ at W/L 900nm	♦	PD202a□
61#	QD320-3	7		100		900n			4 Quadrant Silicon;NEP1.0pW typ at W/L 900nm	♦	PD202a□
62#	QD320-4	7		180		1.0u			4 Quadrant Silicon;NEP1.0pW typ at W/L 900nm	♦	PD202a□
63#	QDH7K	7	5.0m			900n	80k†	07	4 Quad Det;NEP 2.0pW/Hz 1/2 at 900nm;tr 30us	♦	PS189□
64#	QDH7L	7	5.0m			1.0u	75k†	07	4 Quad Det;NEP 4.0pW/Hz 1/2 at 1064nm;tr 30us	♦	PS189□
65#	QDH100-4E	7		15 ♦	40m♦	1.0u	2.5k†	07	4 Quadrant w/4 Amps Active Area 100 sq mm	FB77	PS174□
66#	QDH100KHSB	7	5.0m			900n	1.0k†	07	4 Quad Det;NEP 4.0pW/Hz 1/2 at 900nm;tr 20ns	♦	PS190□
67#	QDH100LHSB	7	5.0m			1.0u	1.0k†	07	4 Quad Det;NEP 8.0pW/Hz 1/2 at 1064nm;tr 20ns	♦	PS190□
68	ROT20A	7		5.0		800n	500n*	58	720Ele;Clock:10V;ph4.3.0MHz;Qsat 4.5pc	FB40	PS190□
69	TIFD82	7	500m	250 ∅				6A	12100nA at 180V;Re 680mA/W at 900nm	♦	PS7□
70	FIP337	8		55	10m	904n	3.0 Δ		Laser:Pulsed tr 6ns;Rep Rate 10kHz	FB24a	PS82□
71	FIP325	8		90	10m	904n	10 Δ		Laser:Pulsed tr 14ns;Rep Rate 5.0kHz	FB24a	PS82□
72	FIP574	8		150	1.0m	904n	150 Δ		Laser:Pulsed tr 30ns;Rep Rate 30-200Hz	FB24a	PS82a□
73	MLT428	8	200m♦	5.0	100m		2.0mΔ		Dig Trans Rate 10Mb/s;tr 60ns min	FB44	
74	MLT438	8	200m♦	5.0	100m		4.0mΔ		Dig. Trans rate 30Mb/s;tr 12ns typ	FB44	
75	MLT439	8	200m♦	5.0	75m		1.5mΔ		Dig. Trans rate 60Mb/s;tr 6.0ns typ	FB44	
76	256M11	9		30	□	820n		17*	256 Diode;Aperture Width 1x10-3 Inches	FB57	PS155*
77	256M11	9		30	□	820n		17*	256 Diode;Aperture Width 1x10-3 Inches	FB57	PS155*
78	512M11	9		30	□	820n		17*	512 Diode;Aperture Width 1x10-3 Inches	FB57	PS155*
79	512M11	9		30	□	820n		17*	512 Diode;Aperture Width 1x10-3 Inches	FB57	PS155*
80	1024M11	9		30	□	820n		17*	1024 Diode;Aperture Width 1x10-3 Inches	FB57	PS156*
81	1024M11	9		30	□	820n		17*	1024 Diode;Aperture Width 1x10-3 Inches	FB57	PS156*
82	CCD110FC	9	100m†	15		750n	500n*	25	CCD;256 ele;Clock 10MHz;2ph;Dyn Range 500:1	FB36	PS41□
83	CCD121HC	9	165m†	15		750n	1.0u*	25	CCD;1728 ele;Clock 10MHz;2ph;Dyn Range 500:1	FB37	PS86a□
84	CCD131DC	9	165m†	15		750n	1.0u*	25	CCD;1024 ele;Clock 24MHz;2ph;Dyn Range 500:1	FB38	PS86□
85	CCPD256	9		12		800n	500n*	25	256 Ele;Clock:15V;ph 4;Video Sample Rate5.0MHz	FB39	
86	CCPD1024	9		70m		800n	500n*	25	1024 Ele;Clock:15V;ph4;Video Sample Rate5.0MHz	FB39	PS135□
87	CCPD1728	9		70m		800n	500n*	25	1728 Ele;Clock:15V;ph4;Video Sample Rate5.0MHz	FB39	PS136□
88	IPL3010	9		-25 □			24 ♦	17*	10 Diode;Self Scan Array;4.0MHz Typ-2.0MHz min	FB31c	PS182□
89	IPL3016	9		-25 □			24 ♦	17*	16 Diode;Self Scan Array;4.0MHz Typ-2.0MHz min	FB31d	PS182□
90	IPL3032	9		-25 □			24 ♦	17*	32 Diode;Self Scan Array;4.0MHz Typ-2.0MHz min	FB31d	PS182□
91	IPL4050	9		10 Δ				17*	50 Diode;Self-Scanned Arr;4.0MHztyp-10kHz min	FB31a	PS120Δ
92	IPL4064	9		10 Δ				17*	64 Diode;Self-Scanned Arr;4.0MHztyp-10kHz min	FB31	PS120Δ
93	IPL4100	9		10 Δ				17*	100 Diode;Self-Scanned Arr;4.0MHz typ-10kHz min	FB31a	PS120Δ
94	IPL4128	9		10 Δ				17*	128 Diode;Self-Scanned Arr;4.0MHz typ-10kHz min	FB31	PS120Δ
95	IPL4256	9		10 Δ				17*	256 Diode;Self-Scanned Arr;4.0MHz typ-10kHz min	FB31b	PS121Δ
96	IPL7050	9		-30				07*	50 Diode;Self Scanned Array;20MHz min-10kHz max	FB17	PS18d□
97	IPL7064	9		-30				07*	64 Diode;Self Scanned Array;20MHz min-10kHz max	FB17	PS18e□
98	IPL7100	9		-30				07*	100 Diode;Self Scanned Array;20MHz min-10kHz max	FB17	PS18f□
99	IPL7128	9		-30				07*	128 Diode;Self Scanned Array;20MHz min-10kHz max	FB17	PS18g□
100	IPL7256	9		-30				07*	256 Diode;Self Scanned Array;20MHz min-10kHz max	FB18	PS18h□
101#	MN512K	9	5.0m	300m*		800n		26	512 Ele;Clock:17V;5.0MHz;Qsat 5.4pc		PS133□
102#	OR064S	9				800n		28*	64 Diode;Self Scanned Array;Sen.57 pa/lx	FB33	PS127□
103#	OR128S1	9				850n		28*	128 Diode;Self Scanned Array;Sen.18 pa/lx	FB33a	PS127□
104#	OR128S	9				800n		28*	128 Diode;Self Scanned Array;Sen.160pa/lx	FB33a	PS127□
105	RL16	9	25m†	15		800n	800n*	58%	16 Ele;Clock:5.0V;ph 1.500kHz;Qsat 20pc	FB10	PS19□
106	RL64	9	125m†	15		800n	800n*	5C%	64 Photodiodes;Clock-15V;ph2;Rate 1k to 10MHz	FB12	PS20□
107	RL64EL	9	2.0m†	12		800n	800n*	5C%	64 Photodiodes;Clock-12V;ph2;Rate 2k to 10MHz	FB11	PS19a□
108	RL64P	9	150m†	15		800n	800n*	5C%	64 Ele;Clock:15V;ph 1.1.0MHz;Qsat 3.9pc	FB13	PS20□
109	RL128EC17	9	1.5m†	12		800n	800n*	5C%	128 Ele;Clock:12V;ph 2.10MHz;Qsat 3.2pc	FB8	PS18Δ
110	RL128EC	9	1.5m†	12		800n	800n*	5C%	128 Ele;Clock:12V;ph 2.10MHz;Qsat 4.0pc	FB8	PS18Δ

# 46. MISCELLANEOUS DEVICES

IN ORDER OF: (1) USE & (2) TYPE No.

LINE No.	TYPE No.	USE	PARAMETERS					TEMP RNG. CODE	DESCRIPTION	SCHEM-ATIC	DRAWING Ø-RND. ∇-RECT. Δ-STRIP *-CHIP
			ELECTRICAL		OPTICAL						
			MAX PWR DISS. (W)	VOLT (V)	CURR. (A)	Pk W/L λp (m)	INTENS. Iv (cd)				
1	RL128G	9	45m	12		800n	4.0u*	5C%	128element:clock8.5V;ph1:2.0MHz;Qsat3.2pc	FB8a	PS187
2	RL128L #1	9	4.0m	12		800n	800n*	5C%	64 Photodiodes:Clock-12V;ph2;Rate 2k to 10MHz	FB11	PS19a
3	RL128L #2	9	4.0m	12		800n	800n*	5C%	128 Photodiodes:Clock-12V;ph2;Rate 2k to 10MHz	FB11	PS19a
4	RL256EC 17	9	3.0m	12		800n	800n*	5C%	256 Ele:Clock:12V;ph 4.10MHz;Qsat 3.2pc	FB8a	PS18Δ
5	RL256C	9	3.0m	12		800n	800n*	5C%	256 Ele:Clock:12V;ph 4.10MHz;Qsat 4.0pc	FB8a	PS18Δ
6	RL256EC 17	9	1.5m	12		800n	800n*	5C%	256 Ele:Clock:12V;ph 2.10MHz;Qsat 3.2pc	FB8a	PS18aΔ
7	RL256C	9	1.5m	12		800n	800n*	5C%	256 Ele:Clock:12V;ph 2.10MHz;Qsat 4.0pc	FB8	PS18aΔ
8	RL256C	9	45m	12		800n	4.0u*	5C%	256element:clock8.5V;ph1:2.0MHz;Qsat3.2pc	FB8a	PS187
9	RL384EC 17	9	1.5m	12		800n	800n*	5C%	384 Ele:Clock:12V;ph 2.10MHz;Qsat 3.2pc	FB8	PS18bΔ
10	RL384EC	9	1.5m	12		800n	800n*	5C%	384 Ele:Clock:12V;ph 2.10MHz;Qsat 4.0pc	FB8	PS18bΔ
11	RL512B24	9	4.0m	12		800n	800n*	5C%	512 Ele:Clock:12V;ph 2.40MHz;Qsat 3.6pc	FB9a	PS18bΔ
12	RL512B	9	4.0m	12		800n	800n*	5C%	512 Ele:Clock:12V;ph 2.40MHz;Qsat 4.6pc	FB9a	PS18bΔ
13	RL512C17	9	3.0m	12		800n	800n*	5C%	512 Ele:Clock:12V;ph 4.10MHz;Qsat 3.2pc	FB8a	PS18aΔ
14	RL512C	9	3.0m	12		800n	800n*	5C%	512 Ele:Clock:12V;ph 4.10MHz;Qsat 4.0pc	FB8a	PS18aΔ
15	RL512EC 17	9	1.5m	12		800n	800n*	5C%	512 Ele:Clock:12V;ph 2.10MHz;Qsat 3.2pc	FB8	PS18cΔ
16	RL512C	9	1.5m	12		800n	800n*	5C%	512 Ele:Clock:12V;ph 2.10MHz;Qsat 4.0pc	FB8	PS18cΔ
17	RL512C	9	45m	12		800n	5.0u*	5C%	512element:clock8.5V;ph1:2.0MHz;Qsat3.2pc	FB8a	PS187
18	RL512C	9	1.0m	15	▼	700n	61n*	78*	512 Elem 2.0MHz max;Quartz Window;ld 5.0pA	FB69	PS177
19	RL512SF	9	1.0m	15	▼	700n		78*	512 Elem 2.0MHz max;FO Face Plate;ld 5.0pA	FB69	PS177
20	RL788C 17	9	3.0m	12		800n	800n*	5C%	788 Ele:Clock:12V;ph 4.10MHz;Qsat 3.2pc	FB8a	PS18bΔ
21	RL788C	9	3.0m	12		800n	800n*	5C%	788 Ele:Clock:12V;ph 4.10MHz;Qsat 4.0pc	FB8a	PS18bΔ
22	RL93F	9	4.0m	12		800n	800n*	5C%	936 Photodiodes:Clock-12V;ph2;Rate to 20MHz	FB27a	PS78a
23	RL1024B24	9	4.0m	12		800n	800n*	5C%	1024 Ele:Clock:12V;ph 2.40MHz;Qsat 3.6pc	FB9	PS18cΔ
24	RL1024B	9	4.0m	12		800n	800n*	5C%	1024 Ele:Clock:12V;ph 2.40MHz;Qsat 4.6pc	FB9	PS18cΔ
25	RL1024C 17	9	3.0m	12		800n	800n*	5C%	1024 Ele:Clock:12V;ph 4.10MHz;Qsat 3.2pc	FB8a	PS18cΔ
26	RL1024C	9	3.0m	12		800n	800n*	5C%	1024 Ele:Clock:12V;ph 4.10MHz;Qsat 4.0pc	FB8a	PS18cΔ
27	RL1024G	9	45m	12		800n	7.0u*	5C%	1024element:clock8.5V;ph1:2.0MHz;Qsat3.2pc	FB8a	PS187
28	RL1024H	9	45m	12		800n	90u*	5C%	1024element:clock8.5V;ph1:2.0MHz;Qsat3.2pc	FB8a	PS187
29	RL1024S	9	1.0m	15	▼	700n	61n*	78*	1024 Elem 2.0MHz max;Quartz Window;ld 5.0pA	FB69	PS177a
30	RL1024SF	9	1.0m	15	▼	700n		78*	1024 Elem 2.0MHz max;FO Face Plate;ld 5.0pA	FB69	PS177a
31	RL1728H	9	45m	12		800n	.90u*	5C%	1728element:clock8.5V;ph1:2.0MHz;Qsat3.2pc	FB8a	PS187
32	RL1727F	9	4.0m	12		800n	800n*	5C%	1872 Photodiodes:Clock-12V;ph2;Rate to 20MHz	FB27	PS787
33	RO64	9	2.5m	12		1.1u\$	1.6u\$	5C%	Circ 64 Ele:Clock:12V;ph 2.25MHz;Qsat 16pc	FB6	PS177
34	2D1	10		25	∇		1.45	▲	4096 Diode;Self Scan Array;3.0MHz Typ-10KHz min		
35	CCD202ADC	10	75m	15		850n	400n*	25	CCD:100x100 ele;Dyn Rge 300:1;Data 500 frame/s	FB35	PS119
36	CCD202BDC	10	75m	15		850n	400n*	25	CCD:100x100 ele;Dyn Rge 300:1;Data 500 frame/s	FB35	PS119
37	CCD211ADC	10	75m	15		850n	200n*	25	CCD:244x190 ele;Dyn Rge 300:1;Data 100 frame/s	FB34	PS118
38	CCD211BDC	10	75m	15		850n	200n*	25	CCD:244x190 ele;Dyn Rge 300:1;Data 100 frame/s	FB34	PS118
39	CCD211CDC	10	75m	15		850n	200n*	25	CCD:244x190 ele;Dyn Rge 300:1;Data 100 frame/s	FB34	PS118
40	RA32x32A	10	10m	12		1.1u\$	320n*	58%	32x32 Ele:Clock:12V;ph 4.5.0MHz;Qsat 1.6pc	FB7	PS177
41	RA50x50A	10	10m	12		1.1u\$	320n*	58%	50x50 Ele:Clock:12V;ph 4.5.0MHz;Qsat 1.6pc	FB7	PS177
42	RA100X100	10							100X100 element;2.5mil spacing		
43	SID52501AD	10		20	▲	700n		16*	CCD 512x320 TV Sensor;Low Perf;3250uA/Lm Typ	FB32	PS31Δ
44	SID52501BD	10		20	▲	700n		16*	CCD 512x320 TV Sensor;Hi Perf;3250uA/Lm Typ	FB32	PS31Δ
45	SL62818	10	75m	15	▼	850n		25*	CCD:244x190 Sensor Type A with FGA and DFGA	FB34	PS118
46	120-1	11		5.0		125m			Sensitivity 7FL min;Response Time 500ns		
47	2-412	12					35u\$		Responsivity 15V/W;Active Area 1sq mm		TO5
48	C1BF0	12						28	Responsivity 7.0v/w;Window BaF2;Oxide Block		PS101
49	C1BF3	12						67	Responsivity 7.0v/w;Window BaF2;Organic Block		PS101
50	C1CF0	12						67	Responsivity 7.0v/w;Window CaF2;Oxide Block		PS101
51	C1CF3	12						67	Responsivity 7.0v/w;Window CaF2;Organic Block		PS101
52	C1GE0	12						67	Responsivity 7.0v/w;Window Ge;Oxide Block		PS101
53	C1GE3	12						67	Responsivity 7.0v/w;Window Ge;Organic Block		PS101
54	C1I2-0	12						67	Responsivity 7.0v/w;Window Intran;Oxide Block		PS101
55	C1I2-3	12						67	Responsivity 7.0v/w;Window Intran;Organic Block		PS101
56	C1KB0	12						67	Responsivity 7.0v/w;Window kBr;Oxide Block		PS101
57	C1KB3	12						67	Responsivity 7.0v/w;Window kBr;Organic Block		PS101
58	C1KR0	12						67	Responsivity 7.0v/w;Window kRS-5;Oxide Block		PS101
59	C1KR3	12						67	Responsivity 7.0v/w;Window kRS-5;Organic Block		PS101
60	C1S00	12						67	Responsivity 7.0v/w;Window Si;Oxide Block		PS101
61	C1S03	12						67	Responsivity 7.0v/w;Window Si;Organic Block		PS101
62	L22BF0	12						67	Responsivity 20v/w;Window BaF2;Oxide Block		PS101a
63	L22BF3	12						67	Responsivity 20v/w;Window BaF2;Organic Block		PS101a
64	L22CF0	12						67	Responsivity 20v/w;Window CaF2;Oxide Block		PS101a
65	L22CF3	12						67	Responsivity 20v/w;Window CaF2;Organic Block		PS101a
66	L22GE0	12						67	Responsivity 20v/w;Window GE;Oxide Block		PS101a
67	L22GE3	12						67	Responsivity 20v/w;Window GE;Organic Block		PS101a
68	L22I2-0	12						67	Responsivity 20v/w;Window Intran;Oxide Block		PS101a
69	L22I2-3	12						67	Responsivity 20v/w;Window Intran;Organic Block		PS101a
70	L22KB0	12						67	Responsivity 20v/w;Window kBr;Oxide Block		PS101a
71	L22KB3	12						67	Responsivity 20v/w;Window kBr;Organic Block		PS101a
72	L22KR0	12						67	Responsivity 20v/w;Window kRS-5;Oxide Block		PS101a
73	L22KR3	12						67	Responsivity 20v/w;Window kRS-5;Organic Block		PS101a
74	L22S00	12						67	Responsivity 20v/w;Window Si;Oxide Block		PS101a
75	L22S03	12						67	Responsivity 20v/w;Window Si;Organic Block		PS101a
76	L66BF0	12						67	Responsivity 1.0v/w;Window BaF2;Oxide Block		PS102
77	L66BF3	12						67	Responsivity 1.0v/w;Window BaF2;Organic Block		PS102
78	L66CF0	12						67	Responsivity 1.0v/w;Window CaF2;Oxide Block		PS102
79	L66CF3	12						67	Responsivity 1.0v/w;Window CaF2;Organic Block		PS102
80	L66GE0	12						67	Responsivity 1.0v/w;Window GE;Oxide Block		PS102
81	L66GE3	12						67	Responsivity 1.0v/w;Window GE;Organic Block		PS102
82	L66I2-0	12						67	Responsivity 1.0v/w;Window Intran;Oxide Block		PS102
83	L66I2-3	12						67	Responsivity 1.0v/w;Window Intran;Org;Block		PS102
84	L66KB0	12						67	Responsivity 1.0v/w;Window kBr;Oxide Bl		PS102
85	L66KB3	12						67	Responsivity 1.0v/w;Window kBr;Organic Block		PS102
86	L66KR0	12						67	Responsivity 1.0v/w;Window kRS-5;Oxide Block		PS102
87	L66KR3	12						67	Responsivity 1.0v/w;Window kRS-5;Organic Block		PS102
88	L66S00	12						67	Responsivity 1.0v/w;Window Si;Oxide Block		PS102
89	L66S03	12						67	Responsivity 1.0v/w;Window Si;Organic Block		PS102
90	S15BF0	12						67	Responsivity 8v/w;Window BaF2;Organic Block		PS101b
91	S15BF3	12						67	Responsivity 8v/w;Window BaF2;Oxide Bl		PS101b
92	S15CF0	12						67	Responsivity 8v/w;Window CaF2;Organic Block		PS101b
93	S15CF3	12						67	Responsivity 1.0v/w;Window CaF2;Org Bl		PS101b
94	S15GE0	12						67	Responsivity 8v/w;Window Ge;Oxide Block		PS101b
95	S15GE3	12						67	Responsivity 8.0v/w;Window Ge;Org Bl		PS101b
96	S15I2-0	12						67	Responsivity 8v/w;Window Intran;Oxide Block		PS101b
97	S15I2-3	12						67	Responsivity 8.0v/w;Window Intran;2;Org Bl		PS101b
98	S15KB0	12						67	Responsivity 8v/w;Window kBr;Oxide Block		PS101b
99	S15KB3	12						67	Responsivity 8v/w;Window kBr;Organic Block		PS101b
100	S15KR0	12						67	Responsivity 8.0v/w;Window kRS-5;Oxide Bl		PS101b
101	S15KR3	12						67	Responsivity 8v/w;Window kRS-5;Organic Block		PS101b
102	S15S00	12						67	Responsivity 8v/w;Window Si;Oxide Block		PS101b
103	S15S03	12						67	Responsivity 8v/w;Window Si;Organic Block		PS101b
104	FRL4403	13	200m	5.0		650m	1.2m	07	Flashing LED;Pulse Rate 3 Times 1 sec	PS185	PS117a
105	L150	13	575m	5.0	∇	115m		27	Subminiature Incandescent Light Source	PS117a	PS117a
106	L150LED	13	170m	1.7	*	100m		27	Subminiature LED Light Source	PS117a	PS117a
107	L311	13	575m	5.0	∇	115m		27	Subminiature Incandescent Light Source	PS123	PS123
108	L321	13	575m	5.0	∇	115m		27	Subminiature Incandescent Light Source	PS124	PS124
109	L332	13	575m	5.0	∇	115m		27	Subminiature Incandescent Light Source	PS125	PS125
110	L341	13	575m	5.0	∇	115m		27	Subminiature Incandescent Light Source	PS117b	PS117b



# 46. MISCELLANEOUS DEVICES

IN ORDER OF: (1) USE & (2) TYPE No.

LINE No.	TYPE No.	USE	PARAMETERS					TEMP RNG. CODE	DESCRIPTION	SCHEM -ATIC	DRAWING Ø-RND. Δ-RECT. *STRIP Δ-CHIP
			MAX DISS. (W)	PWR (V)	CURR. (A)	PK W/L (m)	OPTICAL INTENS. (cd)				
1	2D1PDA	14	4.5 †	18 †	160m			05*	Processor Driver;25-200 Frames/Sec;Vid Out 5V	FB59	PS157
2	304	14		50	80u			5F	Imp. Converter;Vgs(off) 1.0V;Zo 5kΩ	FB48	
3	704-1549	14	275m	5.0	55m			07	BCD to 7-Seq Dcvr;IOL 30mA max;Voff 15V max		
4	DK48	14		15 †	15m			28	Trans Z 100kΩ;BW 20MHz;Noise 1.2mV	FB41	PS140
5	DV45	14		15 †	15m			28	Trans Z 400kΩ;BW 5.0MHz;Noise 2.0mV	FB41	PS140
6	FX41	14		200 †					Pk I pulse 80A Laser Load;PRF 10kHz;Trig 2.0V	FB42	
7	FX45	14		90 †					Pk I pulse 20A Laser Load;PRF 10kHz;Trig 2.0V	FB42	
8	FX47	14		90 †					Pk I pulse 15A Laser Load;PRF 15kHz;Trig 2.0V	FB42	
9	MA41	14		15 †	6.0m			28	Trans Z 90kΩ;BW 1.0MHz;Noise 120uV max	FB43	PS141
10	MA7705	14		15 †	6.0m			28	Trans Z 22kΩ;BW 12MHz;Noise 90uV max	FB43	PS141
11	MA7708	14		15 †	6.0m			28	Trans Z 7.0kΩ;BW 50MHz;Noise 80uV max	FB43	PS141
12	MA7710	14		15 †	6.0m			28	Trans Z 2.0kΩ;BW 100MHz;Noise 70uV max	FB43	PS141
13	MG7712	14	90m	18 †	6.0m			28*	Trans Z 1.0kΩ;Noise 150uV;BW 150MHz	FB43	PS141
14	MPDA	14	4.5 †	18 †	160m			07*	Processor Driver;1kHz to 2MHz;Vid Out 10V	FB60	PS158
15	PN11454.5	14	1.1	12 †	2.5 ∅			05*	Temp Contr(0.1°C max);For TO 5 Can Detector	FB68	PS175
16	PN11454-5SP	14	1.1	12 †	2.5 ∅			05*	Temp Contr(0.1°C max);For TO 5 Can Detector	FB68b	PS175a
17	PN11454-5TP	14	1.1	12 †	2.5 ∅			05*	Temp Contr(0.1°C max);For TO 5 Can Detector	FB68	PS175
18	PN11454-8	14	1.1	12 †	2.5 ∅			05*	Temp Contr(0.1°C max);For TO 8 Can Detector	FB68	PS175
19	PN11454-8SP	14	1.1	12 †	2.5 ∅			05*	Temp Contr(0.1°C max);For TO 8 Can Detector	FB68b	PS175b
20	PN11454-8TP	14	1.1	12 †	2.5 ∅			05*	Temp Contr(0.1°C max);For TO 8 Can Detector	FB68a	PS175a
21	PN11596	14		30 †				07*	IR Det Preamplifier;800V max;Gain 10 At 1.0MHz min		PS176
22	TIEF150	14	35m	8.0 †	6.0m			5C*	Trans Z;BW 100 MHz;Zin 70Ω;Zout 5Ω	FB55	PS152
23	TIEF151	14	35m	8.0 †	6.0m			5C*	Trans Z;BW 50 MHz;Zin 140Ω;Zout 10Ω	FB55	PS152
24	TIEF152	14	40m	8.0 †	7.0m			5C*	Trans Z;BW 20 MHz;Zin 500Ω;Zout 12Ω	FB55	PS152
25	C30910E	15	150m	12 †	4.0m	900n	39u †	47*	NEP 38fW/Hz 1/2;BW 50MHz;tr 9.0ns;Zo 25Ω	FB70	PS187
26	C30914E	15	150m	12 †	4.0m	900n	26u †	47*	NEP 77fW/Hz 1/2;BW 30MHz;tr 16ns;Zo 25Ω	FB70	PS187
27	C30917E	15	150m	12 †	4.0m	900n	34u †	47*	NEP 44fW/Hz 1/2;BW 50MHz;tr 9.0ns;Zo 25Ω	FB70	PS187
28	F0D100	15		90	920n		620m †	57*	NEP(90nm,10MHz,1.0Hz);29 pW/Hz 1/2;tr 1.0ns	FB56	PS142
29#	FRD1-0	15	100m †	30 †	5.0m	900n	420m †	07*	Photodiode;NEP 140fW/Hz 1/2;tr 15ns;ID 15nA	FB51	
30#	FRD1-2	15	100m †	60 †	5.0m	630n	290m †	07*	Photodiode;NEP 160fW/Hz 1/2;tr 10ns;ID 10nA	FB51	
31#	FRD1-3	15	100m †	100 †	5.0m	900n	480m †	07*	Photodiode;NEP 130fW/Hz 1/2;tr 10ns;ID 15nA	FB51	
32#	FRD1-3HSA	15	100m †	100 †	5.0m	900n	420m †	07*	Photodiode;NEP 75fW/Hz 1/2;tr 2.0ns;ID 5.0nA	FB51	
33#	FRD1-4	15	100m †	180 †	5.0m	1.0u	360m †	07*	Photodiode;NEP 180fW/Hz 1/2;tr 10ns;ID 20nA	FB51	
34#	FRD1-4HSA1	15	100m †	100 †	5.0m	1.0u	200m †	07*	Photodiode;NEP 160fW/Hz 1/2;tr 10ns;ID 10nA	FB51	
35#	FRD1-4HSA2	15	100m †	180 †	5.0m	1.0u	300m †	07*	Photodiode;NEP 130fW/Hz 1/2;tr 15ns;ID 10nA	FB51	
36#	FRI1K1	15		30 †	1.3m	650n	3.0m †	07*	Noise 1.0mVrms;BW 3dB 5.0kHz;tr 30ns	FB45	
37#	FRI1K2	15		30 †	1.3m	900n	4.0m †	07*	Noise 1.0mVrms;BW 3dB 5.0kHz;tr 30ns	FB45	
38#	FRI1K3HSA1	15		12 †	18m	650n	70k †	07*	Noise 5.0mVrms;BW 3dB 6.0MHz;tr 40ns	FB46	
39#	FRI1K3HSA2	15		12 †	18m	900n	130k †	07*	Noise 5.0mVrms;BW 3dB 6.0MHz;tr 40ns	FB46	
40#	FRI1L	15		30 †	1.3m	1.0n	2.3m †	07*	Noise 1.0mVrms;BW 3dB 5.0kHz;tr 30ns	FB45	
41#	FRI1LHSA	15		12 †	18m	1.0u	77k †	07*	Noise 5.0mVrms;BW 3dB 6.0MHz;tr 40ns	FB46	
42#	HFBR-2001	15	500m	5.0 †	100m	770n		07	Opt Range 23dB,10Mb/s NRZ;10(-9)BER W/0.8uW Inp	FB75	PS194
43	MC31	15		120 †		905n	450m †		Photo diode;Active Area .8 sq mm	FB71	TO5
44	MD25	15		240 †		830n	65 †		Avalanche Photodiode;Active Area .2 sq mm	FB71	TO18
45	MD31	15		120 †		905n	660m †		Photo diode;Active Area .8 sq mm	FB71	TO5
46	MD34	15		300 †		830n	60 †		Avalanche Photodiode;Active Area .5 sq mm	FB71	TO5
47	TIED452	15	630m	238 †	20m	900n	200k †	06*	Dig Recv Rate 50Mb/s;Avalanche;NEP 1.5p	FB63	PS8
48#	FTIR1	16	200m †	2.0 †	100m	940n	300u †	5A	Anal Freq Resp 1.0MHz;tr 700ns	FB47	
49#	FTIR2	16	500m †	5.0 †	100m	890n	1.0u †	05	Laser;tr 7.0ns	FB50	
50#	FTVR1	16	40m †	2.0 †	20m	650n	2.0u †	5A	Anal Freq Resp 5.0MHz;tr 60ns	FB47	
51#	FTVR2	16	150m †	3.5 †	40m	560n	3.0u †	5A	Anal Freq Resp 6.0MHz;tr 40ns	FB47	
52#	HFBR-1001	16	625m	5.0 †	125m	700n		07	dc to 10Mb/s NRZ;TTL Input to Opt Pulses;100M	FB74	PS194
53	ML25	16	500m	2.0 †	353m	830n			IR LED;BW DC to 200MHz;Radiated Pwr 1.0mW		
54	ML25P	16	500m	2.0 †	353m	830n			IR LED;BW DC to 200MHz;Radiated Pwr 150uW		
55	ML25P-SF3	16	500m	2.0 †	353m	830n			IR LED;BW DC to 200MHz;Radiated Pwr 50uW		
56	ML25P-TS	16	500m	2.0 †	353m	830n			IR LED For Systems MDL151,MDL154 And MDL358		
57	ML32	16	600m	1.8 †	707m	885n			IR LED;BW 8.0MHz;Radiated Pwr 1.5mW	FB67	TO5
58	ML32-TS	16	600m	1.8 †	707m	885n			IR LED For Systems MDL124 And MDL321	FB67	TO5
59	ML33	16	400m	1.7 †	353m	905n			IR LED;BW 30MHz;Radiated Pwr 2.0mW	FB67	TO5
60	ML33-TS	16	400m	1.7 †	353m	905n			IR LED For Systems MDL139 And MDL338	FB67	TO5
61	ML37	16	400m	1.7 †	7.7m	830n			IR LED;BW 35MHz;Radiated Pwr 14mW	FB67	TO5
62	MLT428-TS	16	200m †	5.0	100m		2.0m †		Trans For Systems MDL421 And MDL4211	FB44	TO5
63	MLT438-TS	16	200m †	5.0	100m		4.0m †		For Systems MDL435,MDL437,MDL438 And MDL4377	FB44	TO5
64	TIES472	16	1.6 †	5.0	325m	910n	1.0m †	06*	Dig Trans Rate 100kHz;TTL Compatible	FB1	PS8
65	AOF-1050	17				890n			Fused Silica Fiber for Use W/XA/RA,XD/RD-1000		
66	AOF-1052	17				890n			Large Core Silica Fiber Use W/XA/RA,XD/RD-1000		
67	AOF-1300	17							Single Plastic Fiber for Use W/XA/RA,XD/RD-1000		
68	HFBR-3001	17						27	LN 10M,Single Fbs,0.3NA Conn/Cable Assy		PS195
69	HFBR-3002	17						27	LN 25M,Single Fbs,0.3NA Conn/Cable Assy		PS195
70	HFBR-3003	17						27	LN 50M,Single Fbs,0.3NA Conn/Cable Assy		PS195
71	HFBR-3004	17						27	LN 75M,Single Fbs,0.3NA Conn/Cable Assy		PS195
72	HFBR-3005	17						27	LN 100M,Single Fbs,0.3NA Conn/Cable Assy		PS195
73	SPX3180	17	100u*		50m*			6A*	905 Receptacle W/LED;NA .66;F Dia 1.14mm		PS167
74	SPX3181	17	900u*		100m*			6C*	905 Receptacle W/LED;NA .24;F Dia 1.14mm		PS167
75	SPX3182	17	8.0u*		100m*			6C*	905 Receptacle W/LED;NA .14;F Dia 1.14mm		PS167
76	SPX3183	17	50u*		8.0u*			6C*	905 Receptacle W/Photodiode;NA .66;F Dia 1.14mm		PS167
77	SPX3184	17	150m*		25u*			6C*	905 Receptacle W/Photodiode;NA .24;F Dia 1.14mm		PS167
78	SPX3185	17	150m					6C*	905 Receptacle W/Photodiode		PS167
79	SPX3186	17	50m*		2.0m*			6C*	905 Receptacle W/Photodiode;NA .66;F Dia 1.14mm		PS167
80	SPX3187	17	50m*		8.0m*			67*	905 Receptacle W/Photodiode;NA .66;F Dia 1.14mm		PS167
81	SPX3190	17	100u*		50m*			6A*	905 Receptacle W/LED;NA .66;F Dia 1.14mm		PS168
82	SPX3191	17	900u*		100m*			6C*	905 Receptacle W/LED;NA .24;F Dia 1.14mm		PS168
83	SPX3192	17	8.0u*		100m*			6C*	905 Receptacle W/LED;NA .14;F Dia 1.14mm		PS168
84	SPX3193	17	50u*		8.0u*			6C*	905 Receptacle W/Photodiode;NA .66;F Dia 1.14mm		PS168
85	SPX3194	17	150m*		25u*			6C*	905 Receptacle W/Photodiode;NA .24;F Dia 1.14mm		PS168
86	SPX3195	17	150m					6C*	905 Receptacle w/Photodiode		PS168
87	SPX3196	17	50m	5.0	2.0m*			6C*	905 Receptacle W/Photodiode;NA .66;F Dia 1.14mm		PS168
88	SPX3197	17	50m*	5.0	8.0m*			67*	905 Receptacle W/Photodiode;NA .66;F Dia 1.14mm		PS168
89	TXEF402M001	17				790n	350 #	27	NA 0.53;Fbs 1;Transmittance 0.5;Ln 1.0 Meter		PS186
90	TXEF402M003	17				790n	350 #	27	NA 0.53;Fbs 1;Transmittance 0.4;Ln 3.0 Meter		PS186
91	TXEF402M006	17				790n	350 #	27	NA 0.53;Fbs 1;Transmittance 0.3;Ln 6.0 Meter		PS186
92	TXEF402M010	17				790n	350 #	27	NA 0.53;Fbs 1;Transmittance 0.2;Ln 10 Meter		PS186
93	TXEF402M020	17				790n	350 #	27	NA 0.53;Fbs 1;Transmittance 0.07;Ln 20 Meter		PS186
94	TXEF402M030	17				790n	350 #	27	NA 0.53;Fbs 1;Transmittance 0.03;Ln 30 Meter		PS186
95	TXEF402M040	17				790n	350 #	27	NA 0.53;Fbs 1;Transmittance 0.012;Ln 40 Meter		PS186
96	TXEF402M050	17				790n	350 #	27	NA 0.53;Fbs 1;		

# 46. MISCELLANEOUS DEVICES

IN ORDER OF: (1) USE & (2) TYPE No.

LINE No.	2 TYPE No.	1 USE	PARAMETERS					TEMP RING. CODE	DESCRIPTION	SCHEM -ATIC	DRAWING Ø-RND. ▣-RECT. △-STRIP *-CHIP
			ELECTRICAL		OPTICAL						
			MAX PWR DISS. (W)	VOLT (V)	CURR. (A)	Pk W/L λp (m)	INTENS. Iv (cd)				
1♦	MDL259	18	3.8	%	%	%			Anal Sys;500kHz-200MHz;MDL258 Pwr;250V,10uA		
2▼	MDL421	18	1.0 †	%	%	%			XTR 100ma,5V;REC 40ma,12V;10ma,-12V;2.0Mb/s;TTL	FB64	PS170▣
3	MDL421SMA-RS	18	750m	24 \$	50m\$▣	905n	36k♦		Photodiode Dig Rcvr,2.0Mb/s;TTL;Noise 100uV▣	FB65a	PS171a▣
4	MDL421SMA-TS	18	500m	5.0	100m	905n	2.0uΔ		IR LED Dig Trans. 2.0Mb/s;TTL Compatible	FB65	PS171▣
5▼	MDL422	18	1.0 †	%	%	%			XTR 100ma,5V;REC 40ma,12V;10ma,12V;4.0Mb/s;TTL	FB64	PS170▣
6	MDL422SMA-RS	18	700m	24 \$	50m\$▣	905n	18k♦		Photodiode Dig Rcvr,4.0Mb/s;TTL;Noise 100uV▣	FB65a	PS171a▣
7	MDL422SMA-TS	18	500m	5.0	100m	905n	4.0uΔ		IR LED Dig Trans,4.0Mb/s;TTL Compatible	FB65	PS171▣
8	MDL2255-TV	18		117 \$				05	CCTV FO Sys;BW 20Hz-6.0MHz;Noise 2.0mV		PS173▣
9	MDL2265-TV	18		117 \$				05	CCTV FO Sys;BW 6.0Hz-20MHz;Noise 2.0mV		PS173▣
10♦ #	OML40D	18	3.3	%	%	900n	50uΔ	25	Simplex Sys;2.0km;30Mb/s;5V,300mA;12V,150mA	FB61	PS159
11#	OML50A	18	2.8 †	20 ▣	300m▣	900n		25*	Fibre Opt Link;Analog/BWO,1-50MHz/S;Simplex		
12▼	SPX2672	18	750m	%	%	%		07*	Transm Sys;Trans DC 5V,1A;Rec 5V,0.5A		PS165
13▼	SPX2673	18	120	%	%	%		07*	Transm Sys;Trans 50-400Hz,120V,5A;Rec 120V,5A		PS165
14▼	SPX2674-1	18	61	%	%	%		07*	Transm Sys;Trans DC5V,2A;Rec 50-400Hz,120V,5A		PS165a
15▼	SPX2674-2	18	61	%	%	%		07*	Transm Sys;Trans DC5V,2A;Rec 50-400Hz,120V,5A		PS165b
16▼	XA/RA-1000	18		18	250m	890n		05	Analog Sys to 1.0km;DC-3.5MHz;Vi 1.0-10Vrms		
17▼	XD/RD-1000	18		15	200m	890n		05	Dig Sys to 1.0km;1.0Mb/s max;TTL,MOS;Rz,NRZ		

# 47. TYPES WITH U.S. MILITARY SPECIFICATIONS

IN TYPE NUMBER  
SEQUENCE

TYPE No.	MFRS	MIL-S-19500/
1N5765	†HPA	467 ∅ AMEND 2
1N6092	†HPA	519 AMEND 2 EL
1N6093	†HPA	520 AMEND 2 EL
1N6094	†HPA	521 AMEND 2 EL
4N22	ΔTII	∅ 486A ∅ AMEND 1
4N22A	ΔOPI	∅ USAF 486A ∅ AMEND 1
4N23	ΔTII	∅ USAF 486A ∅ AMEND 1
4N23A	ΔOPI	∅ USAF 486A ∅ AMEND 1
4N24	ΔTII	∅ USAF 486A ∅ AMEND 1
4N24A	ΔOPI	∅ USAF 486A

## MILITARY DOCUMENTS

DEPARTMENT OF DEFENSE, INDEX of Specifications and Standards, dated 1 July 1976, Supplement dated 1 November 1976.

## DEVICE MANUFACTURERS

Qualifications on Test Reference Letter.

MIL-S-19500F Military Specification, General Specification for Semiconductor Devices, dated 15 December 1977.

MIL-STD-701K Military Standard, List of Standard Semiconductor Devices, dated 26 May 1976.

QPL-19500-71 Qualified Products List of Products Qualified Under Military Specification MIL-S-19500, dated 10 October 1978.

## DRAWING/LEAD CODE DESIGNATIONS

DEVICE CLASS	SECTION	DEVICE TYPE	LEAD CODE GROUPING	DRAWING PREFIX LETTERS	
				Schematic	Outline
Emitters	2	Light Emitting Diode	A to Z		PD
	3	Infrared Emitting Diode	A to Z		PD
	4	Arrays: LED and Infrared Emitting Diode			PA
Sensors	10	Photodiode	A to Z		PD
	11	Phototransistor	AA to CZ		PT
	12	Photodarlington	DA to FZ		PT
	13	Photothyristor	KA to NZ		PT
	14	Photocircuit (IC)		BE	PH
	15	Arrays: Photodiode, Phototransistor		BF	PA
	16	Photoconductive Cell			PC
	17	Photovoltaic Cell	A to Z		PV
	18	Photovoltaic Array		BJ	PV
Photocouplers	25	Photocell (LDR, Voltaic) Output		CA	PH
	26	Phototransistor Output		CB	PH
	27	Photodarlington Output		CC	PH
	28	Photothyristor Output		CD	PH
	29	Photocircuit (IC) Output		CE	PH
Displays	35	LED		EA	PY
	36	Liquid Crystal		EB	PY
	37	Other: Gas Discharge, Incandescent		EC	PY
Special Devices	45	Detectors		FA	PS
	46	Miscellaneous Devices		FB	PS

# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

## D.A.T.A. LEAD CODE IDENTIFICATION GUIDE

### LEAD CODE EXPANDER

- ☑ - Terminal 1 connected to Case
- § - Terminal 2 connected to Case
- φ - Terminal 3 connected to Case
- \$ - Terminal 4 connected to Case
- ◆ - See Outline for terminal designation

LEAD CODE	LEAD CONFIGURATION			
	1	2	3	4
A	A	K		
B	K	A		
C		K	A	
D	K2	K1	A1/A2	
E	K	NC	A	
F	A	NC	K	
G	K	R	A	
H	A	K	R	
J		A	K	
K	K	A	NC	
M	A	A	K	
N	A1	A2	K1/K2	
S	A		K	CASE
T	K	A	R	
U	(-)	NC	(+)	
V	A		K	
W	A	R	K	
X	A	CASE	K	
Y	K		A	
Z	A	K	CASE	
AA	C	E		
AB	E	C		
AC	E	C	B	
AD	E	B	C	
AE	B	E	C	
AF	B	C	E	
AG	C	E	B	
AH	C	B	E	
AJ	E		C	
AK	E	C		
AM	C		E	
AN	NC	K	A	

LEAD CODE	LEAD CONFIGURATION			
	1	2	3	4
DA	C1/C2	E2		
DB	E2	C1/C2		
DC	B1	E2	C1/C2	
DD	B1	C1/C2	E2	
DE	C1/C2	B1	E2	
DF	C1/C2	E2	B1	
DG	E2	B1	C1/C2	
DH	E2	C1/C2	B1	
EJ	B1	C1/C2	E1/B2	E2
EK	B1	C1/C2	E2	E1/B2
EM	C	G	A	
EN	E2/B3	E3	C1/C2/C3	
EQ	C	B	E1	E2
ER	C1	C2	E2	
ES	C1/C2		E2	
GA	S	D		
GB	D	S		
GC	D	G	S	
GD	D	S	G	
GE	G	D	S	
GF	G	S	D	
GG	S	D	G	
GH	S	G	D	
GJ	S	D	G	CASE
KA	A	K		
KB	K	A		
KC	A	K	G	
KD	A	G	K	
KE	K	GP	A	GN
KF	G	A	K	
KG	K	G	A	
KH	K	GP	A	GN
KJ	K	GP	GN	A
KK	D	S	CASE	

ABBREV.	TERM
A, A1, A2	Anode
B, B1, B2	Base
C, C1, C2	Collector
D	Drain
E, E1, E2	Emitter
G	Gate
GN	N-Gate (Anode Gate)
GP	P-Gate (Cathode Gate)
K, K1, K2	Cathode

ABBREV.	TERM
NC	No Connection
R	Guard Ring
S	Source
(+)	Positive Source Terminal
(-)	Negative Source Terminal

NOTE: For multi-element devices, numerical subscripts designate corresponding element terminals.



# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

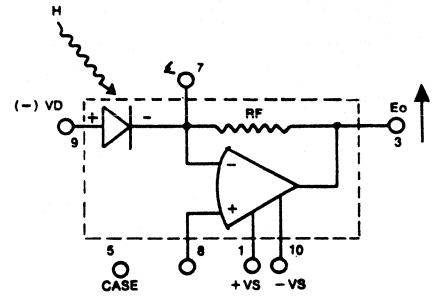
## NOTES

These schematic drawings are intended as a guide for the user. They should not be used for constructive purpose without first checking with the appropriate manufacturer.

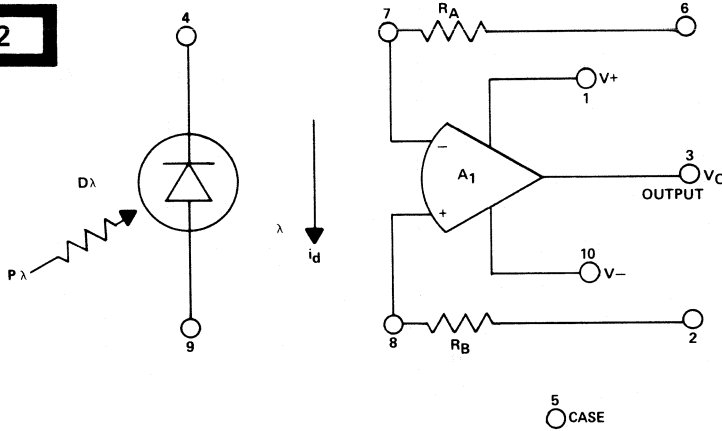
These drawings are referenced in the Technical Sections of this D.A.T.A.BOOK in accordance with information supplied by the manufacturers.

All drawings have circular symmetry unless otherwise indicated.

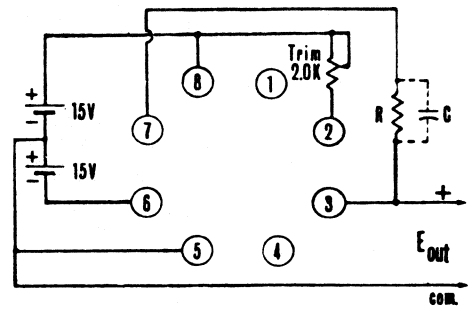
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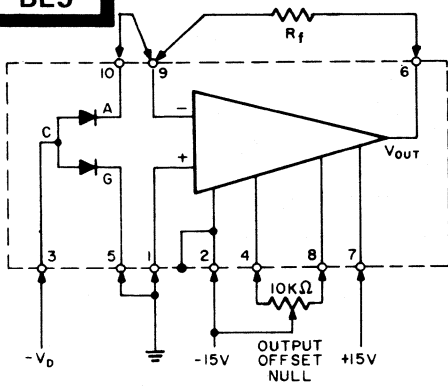
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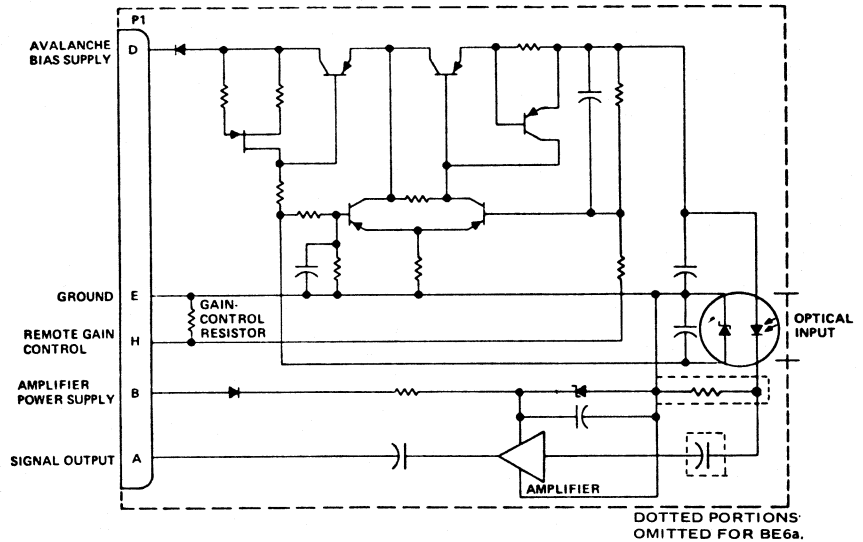
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**BE5**

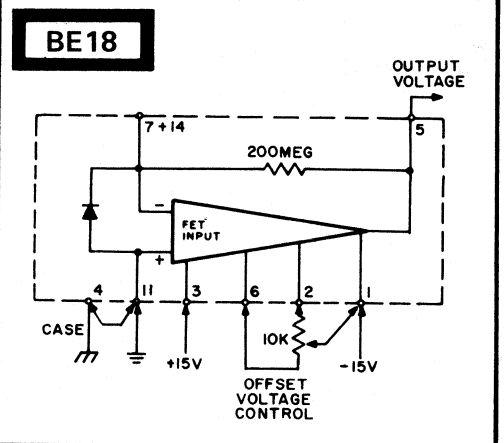
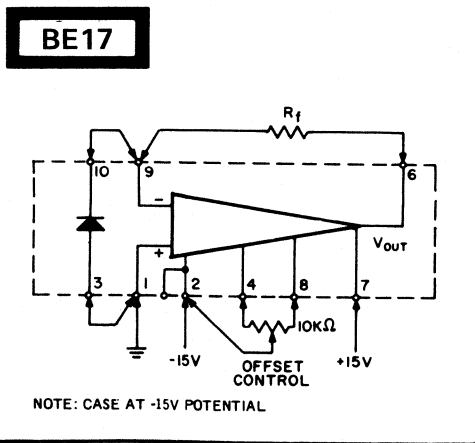
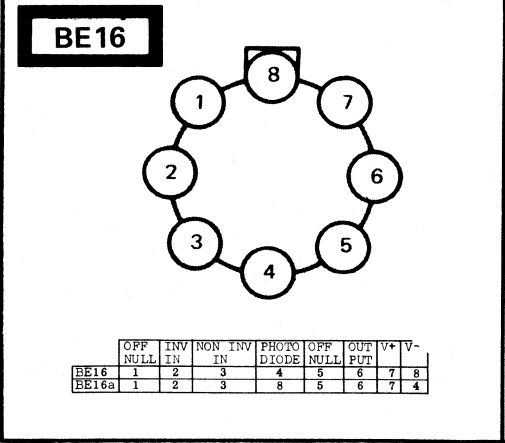
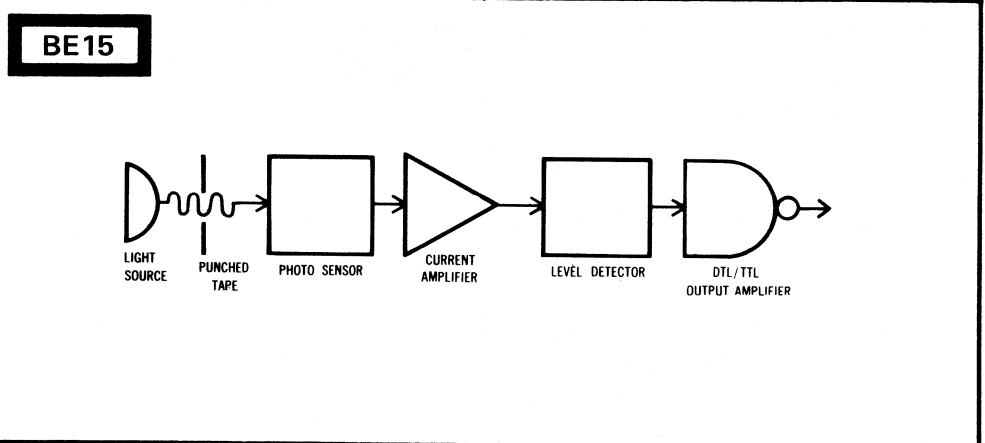
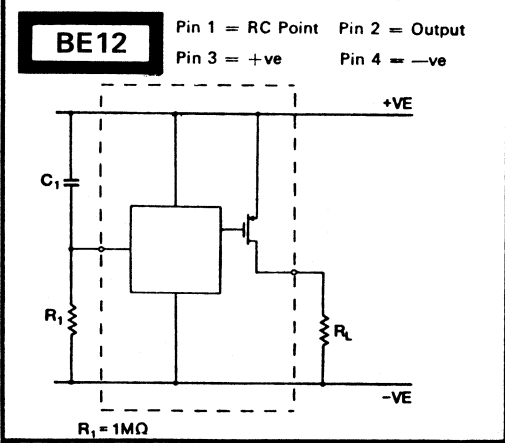
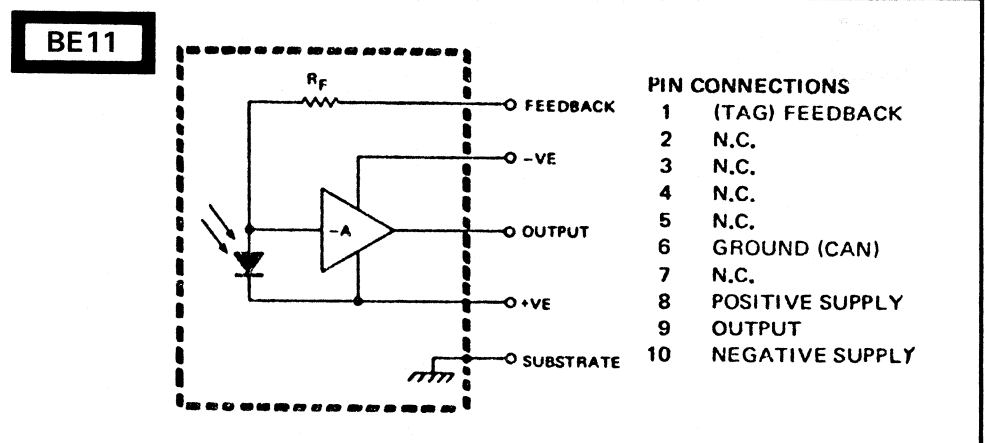
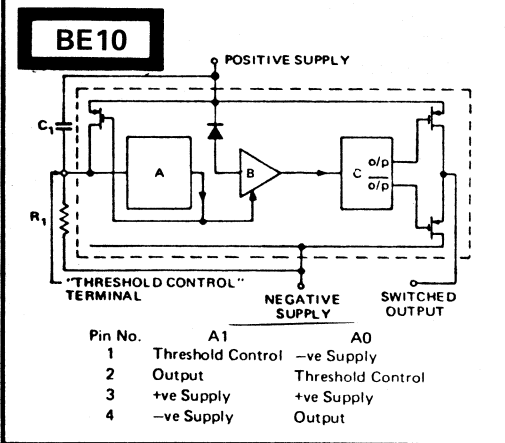
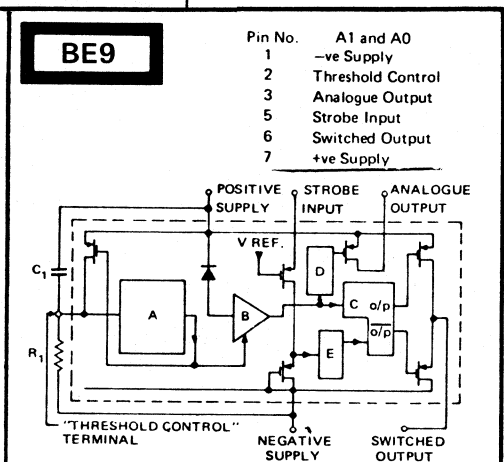
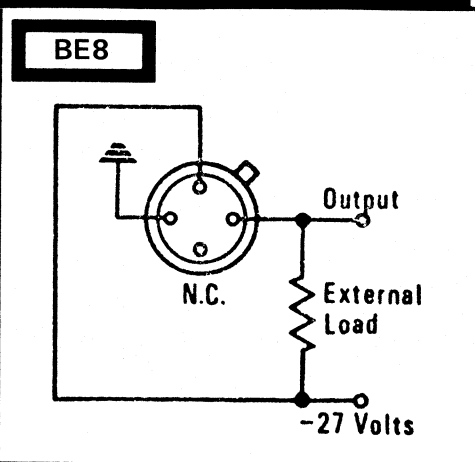
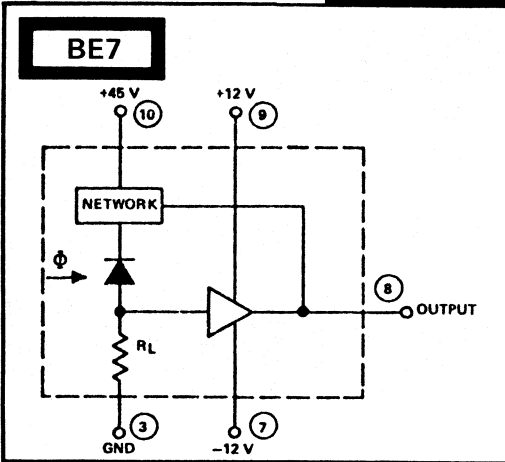


**BE6**



# 48. SCHEMATIC DRAWINGS

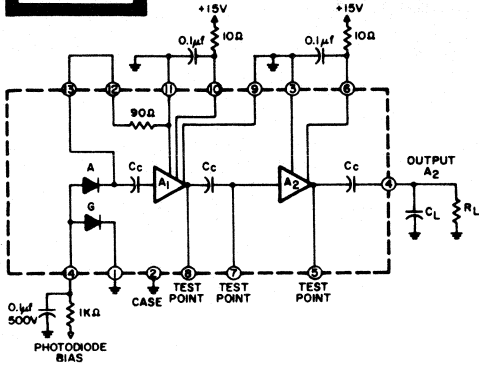
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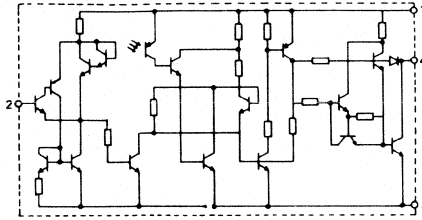
# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER SEQUENCE

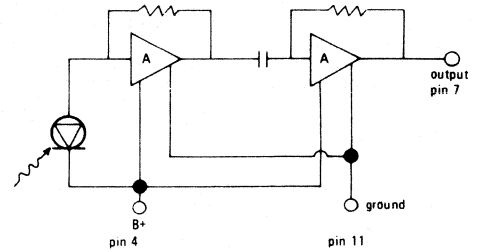
**BE19**



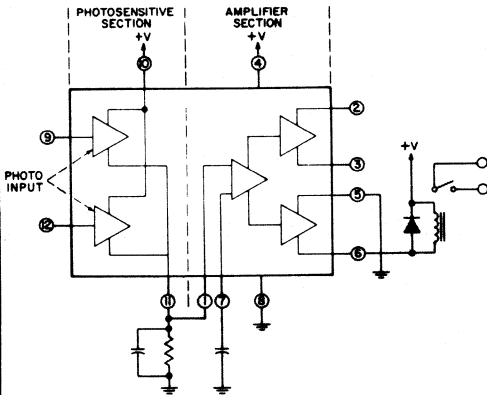
**BE20**



**BE22**

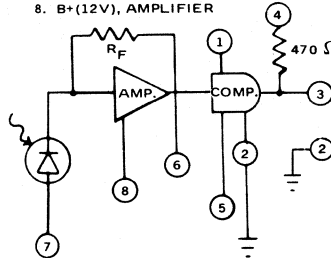


**BE25**

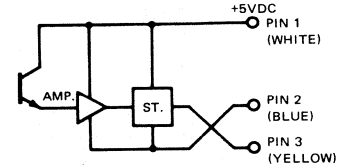


**BE28**

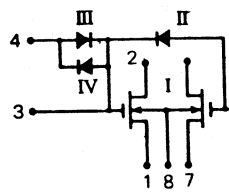
- PIN CONNECTIONS**
1. V+1 (+12V) COMPARATOR
  2. GND
  3. COMPARATOR OUTPUT
  4. V+3 (+5V)
  5. V- (-12V), COMPARATOR
  6. AMPLIFIER OUTPUT
  7. B- (-12V), AMPLIFIER
  8. B+ (12V), AMPLIFIER



**BE29**



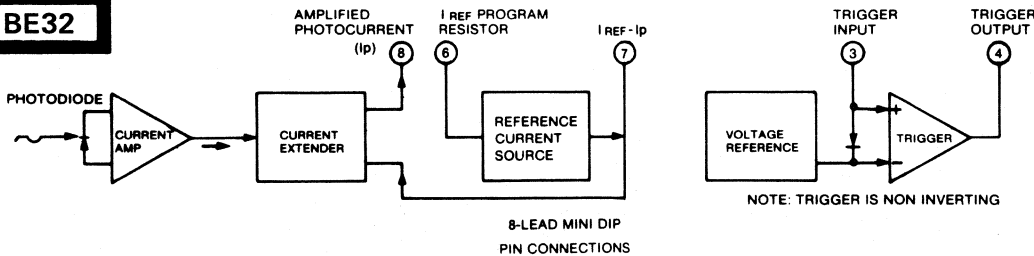
**BE30**



- 1.7. MOS FET source
- 2.6. MOS FET drain
3. MOS FET gate, SBC cathode, Log diode cathode, By-pass diode anode
4. Log diode anode, By-pass diode cathode
5. MOS FET gate, SBC anode

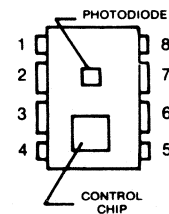
- I N channel dual MOS FET
- II Blue sensitive photodiode (SBC)
- III Log diode
- IV By-pass diode

**BE32**



- 1 +VCC
- 2 N/C
- 3 TRIGGER INPUT
- 4 TRIGGER OUTPUT
- 5 COMMON SUBSTRATE
- 6 I REF PROGRAM RESISTOR
- 7 (I REF-PHOTOCURRENT) SOURCE
- 8 PHOTOCURRENT SOURCE

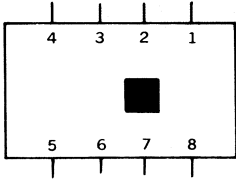
**TOP VIEW**



# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

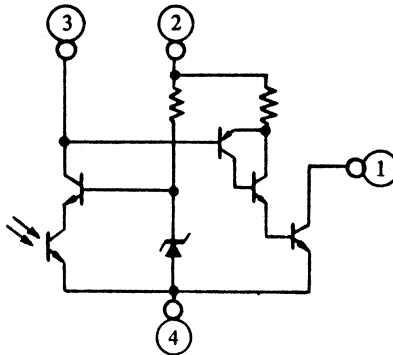
**BE33**



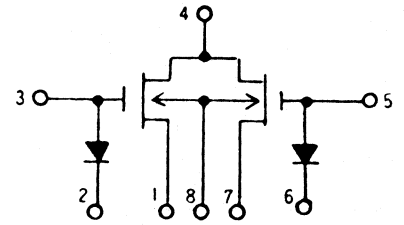
- 1 V<sub>CC</sub>
- 2 BATTERY TEST INDICATOR
- 3 "FLASH REQUIRED" INDICATOR
- 4 SHUTTER HOLDING COIL
- 5 COMMON NEGATIVE
- 6 MODE SWITCH (CONNECT TO GROUND)
- 7 EXPOSURE SWITCH/TIMING CAPACITOR
- 8 EXTENDED EXPOSURE (OPEN FOR EXPOSURES GREATER THAN 1/15)

**BE34**

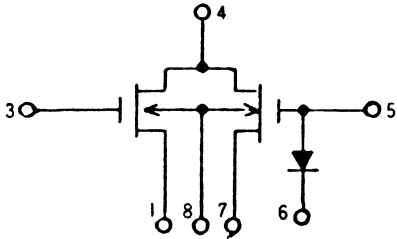
- ① Output
- ② V<sub>CC</sub>
- ③ Control
- ④ GND (Case)



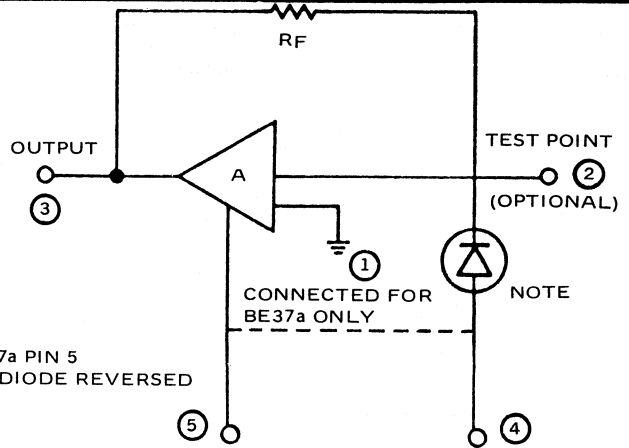
**BE35**



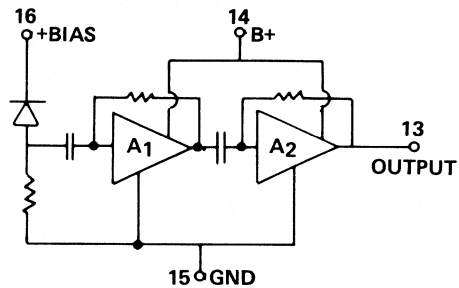
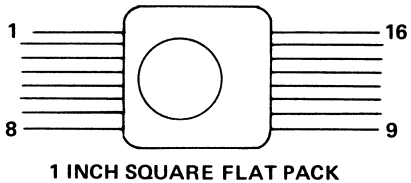
**BE36**



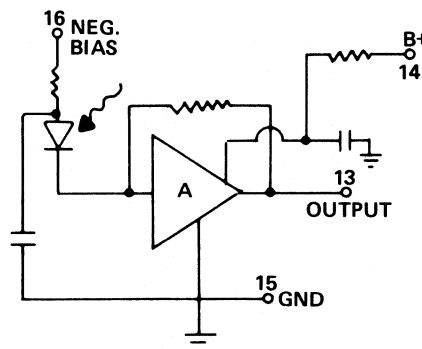
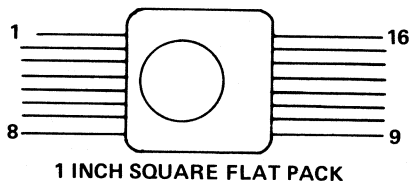
**BE37**



**BE38**



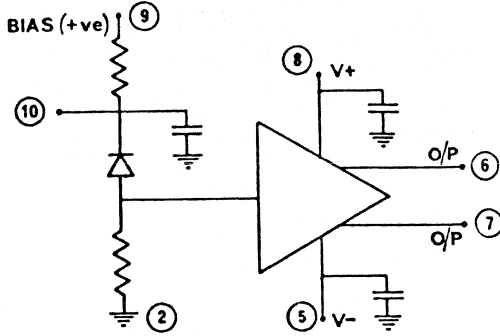
**BE39**



# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

**BE40**

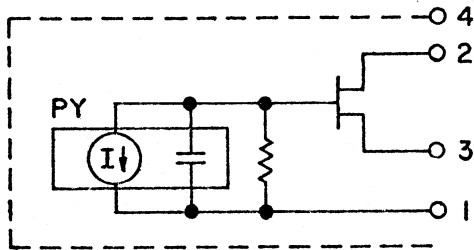


**CONNECTIONS:**

Pin 1	N. C.
2	Earth
3	N. C.
4	Can (isolated)
5	V <sup>-</sup>
6	Output A
7	Output B
8	V <sup>+</sup>
9	Diode Bias Volts
10	Diode Decouple

**BE41**

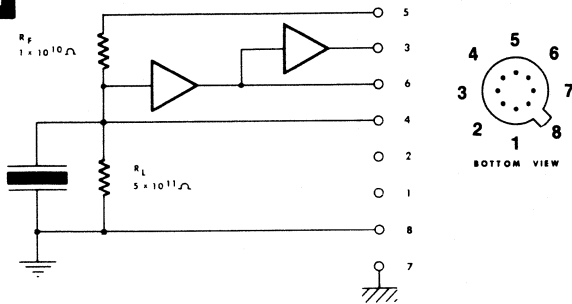
**DETECTOR  
EQUIVALENT CIRCUIT**



**LEAD IDENTIFICATION**

- 1 COMMON (Gate Bias)
- 2 +V (Drain)
- 3 OUTPUT (Source)
- 4 CASE

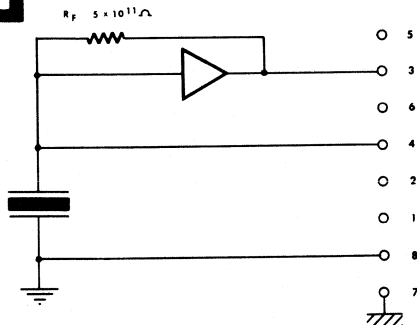
**BE42**



**PIN CONNECTIONS**

Pin	Detector only	Detector + Voltage Mode Amplifier	Detector + Current Mode Amplifier
1	N/C	to pin 2	-15 VDC =
2	N/C	+ 15 VDC =	+ 15 VDC =
3	N/C	N/C	Output
4	Output	N/C	N/C
5	N/C	N/C	to pin 3
6	N/C	Output	N/C
7	Case	Case	Case
8	GND	GND	GND

**BE43**



**PIN CONNECTIONS:**

1	-15 VDC =
2	+15 VDC =
3	Output
4	N/C
5	N/C
6	N/C
7	Case
8	GND

Pin designations can be changed according to customer requirements.





# 48. SCHEMATIC DRAWINGS

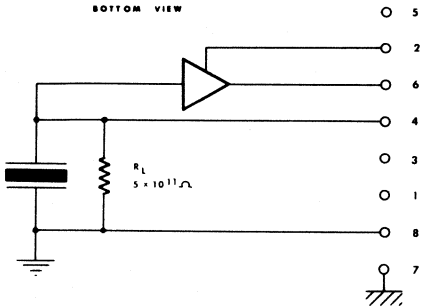
IN DRAWING NUMBER SEQUENCE

**BE44**

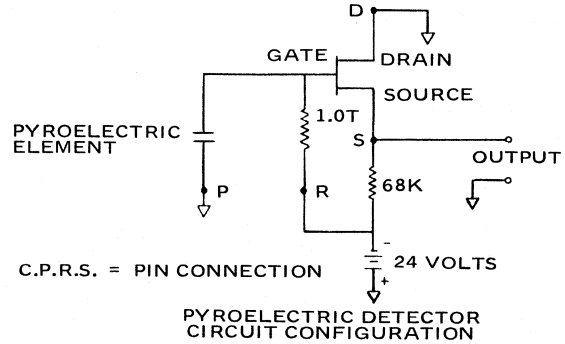
**PIN CONNECTIONS:**

1	N/C
2	+ 15 VDC =
3	N/C
4	N/C
5	N/C
6	Output
7	Case
8	GND

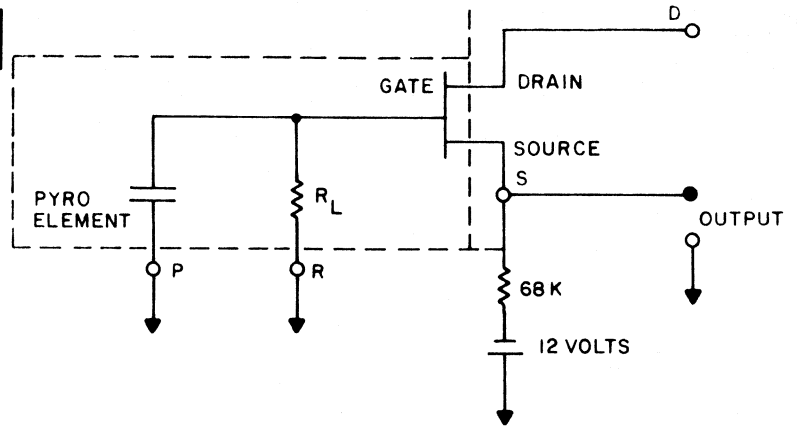
Pin designations can be changed according to customer requirements.



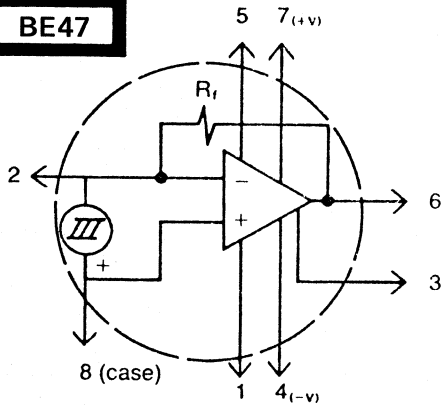
**BE45**



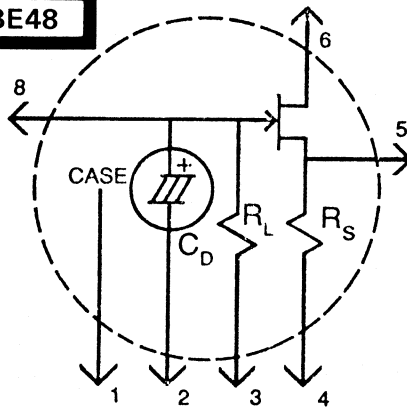
**BE46**



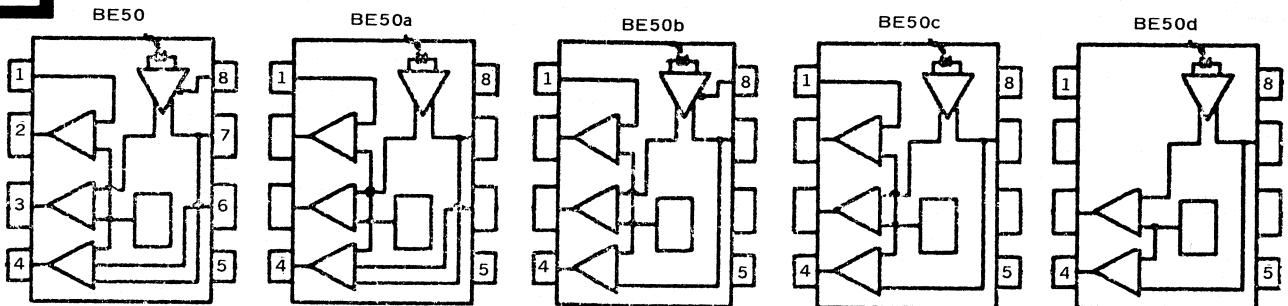
**BE47**



**BE48**



**BE50**

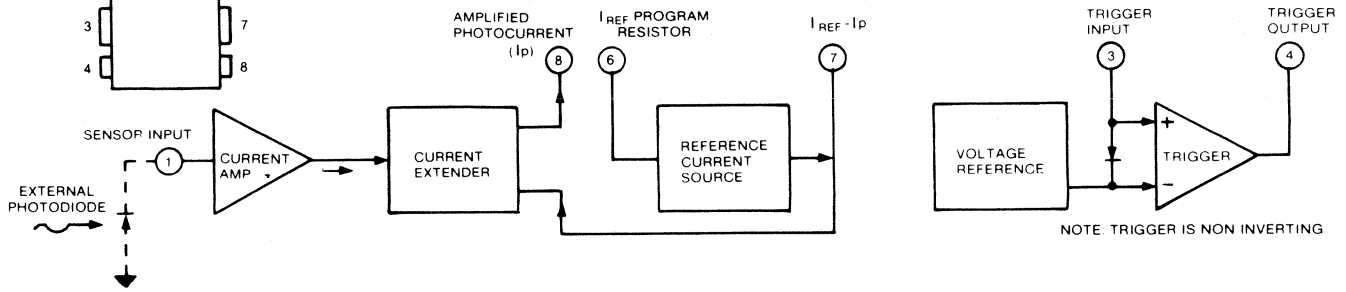


# 48. SCHEMATIC DRAWINGS

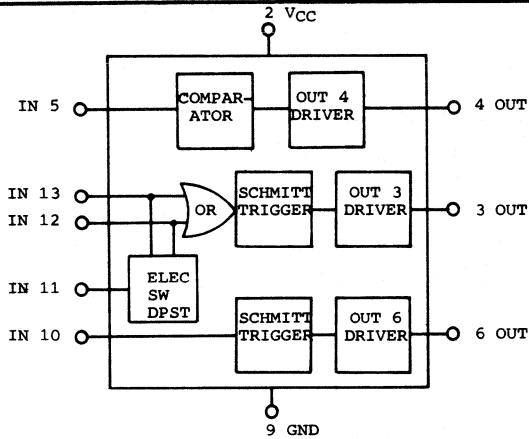
IN DRAWING NUMBER  
SEQUENCE

**BE51**

TOP VIEW

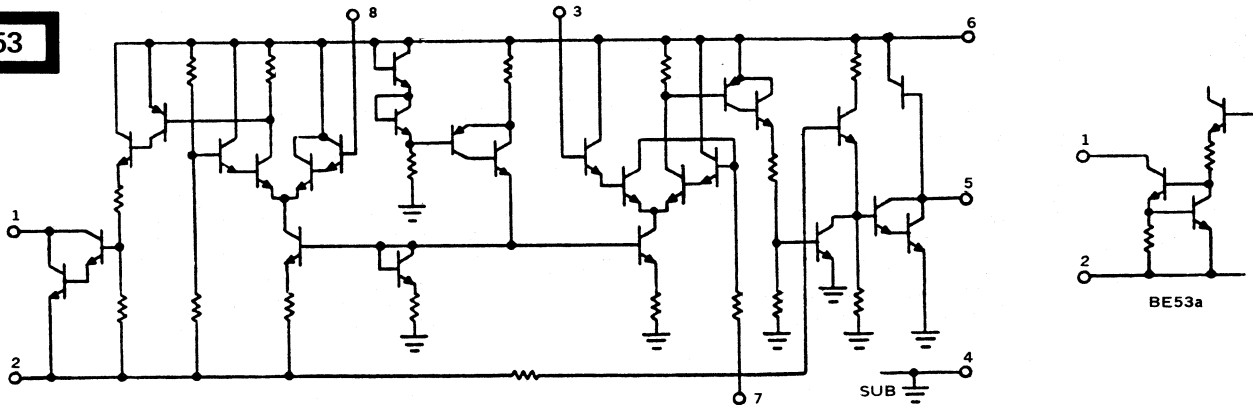


**BE52**

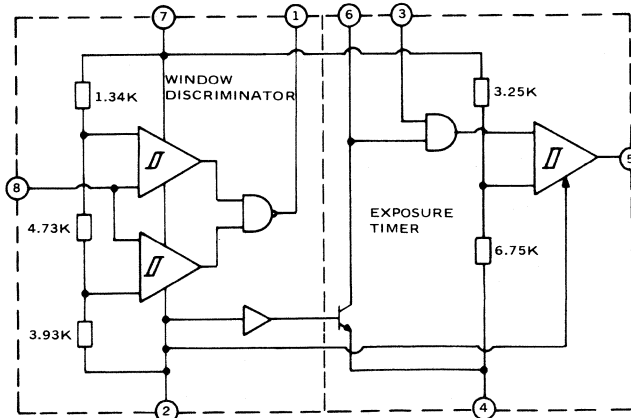


- 1. N.C.
- 2. Vcc
- 3. Timer Out
- 4. Battery Check Out
- 5. Battery Check Vcc
- 6. Low Light Out
- 7. N.C.
- 8. N.C.
- 9. GND
- 10. Low Light In
- 11. Starting Switch
- 12. Timer In
- 13. Timer In
- 14. N.C.

**BE53**



**BE54**



- PIN ASSIGNMENTS
- 1 DISCRIMINATOR OUTPUT
  - 2 DISCRIMINATOR ENABLE
  - 3 FREE INPUT - TIMER TRIGGER
  - 4 COMMON NEGATIVE
  - 5 SHUTTER COIL OUTPUT
  - 6 GATED INPUT - TIMER TRIGGER
  - 7 Vcc
  - 8 DISCRIMINATOR INPUT

# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

## BE57

BE57

### Pin Connections

- 1: Signal Output
- 2: No Connection, Do Not Use
- 3:  $-V_{CC}$  Negative Bias for Amplifier
- 4: Positive Bias for Photodiode
- 5: No Connection, Do Not Use
- 6: Case
- 7: No Connection, Do Not Use
- 8: Anode } Temperature Sensing Diode, Note 1
- 9: Cathode }
- 10: Ground
- 11: No Connection, Do Not Use
- 12:  $+V_{CC}$  Positive Bias for Amplifier

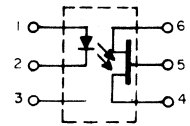
**Note 1:** This diode is not a part of the amplifier; only pins 8 and 9 of the module are connected to it. The diode can be used to monitor the temperature of the photodiode if desired.

BE57a

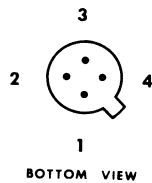
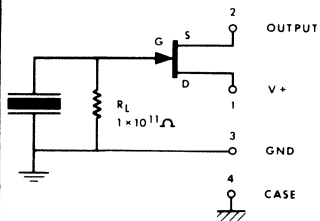
### Pin Connections

- 1: Signal Output
- 2: No Connection, Do Not Use
- 3:  $-V_{CC}$  Negative Bias for Amplifier
- 4: Positive Bias for Photodiode
- 5: No Connection, Do Not Use
- 6: Case
- 7: No Connection, Do Not Use
- 8: No Connection, Do Not Use
- 9: No Connection, Do Not Use
- 10: Ground
- 11: No Connection, Do Not Use
- 12:  $+V_{CC}$  Positive Bias for Amplifier

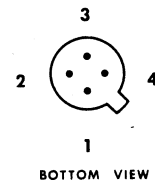
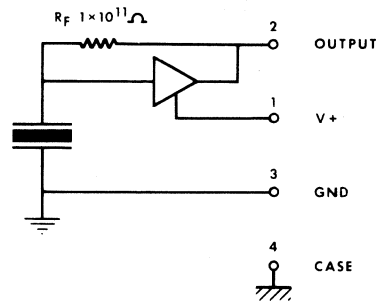
## BE58



## BE59



## BE60



## BE61

BE61

### PIN ASSIGNMENTS

PIN	FUNCTION
1	VCC
2	
3	Low light, battery test indicator
4	Shutter magnet
5	Common negative
6	Aperture control
7	Sync switch; Timing capacitor
8	Exposure range switch

BE61a

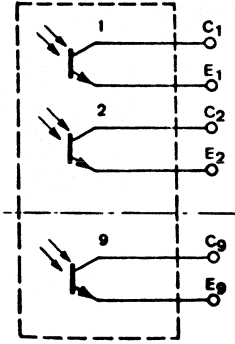
### PIN ASSIGNMENTS

PIN	FUNCTION
1	Low Level Common
2	$+V_{CC}$
3	Low Light Indicator (Battery Test)
4	Shutter Magnet
5	$-V_{CC}$
6	Sync Switch; Timing Capacitor
7	Exposure Range Switch
8	Low Level Common

# 48. SCHEMATIC DRAWINGS

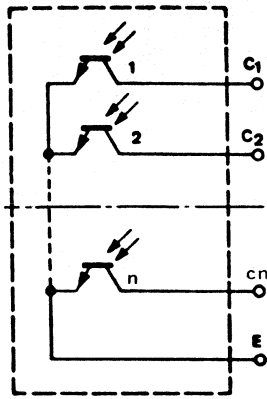
IN DRAWING NUMBER  
SEQUENCE

**BF1**

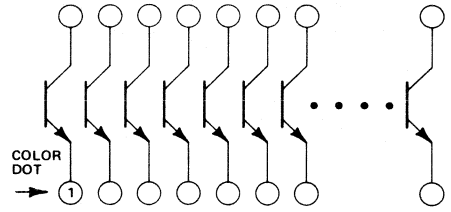


**BF2**

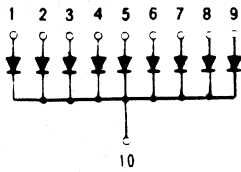
	n	Cn
BF2	8	C8
BF2a	10	C10



**BF3**

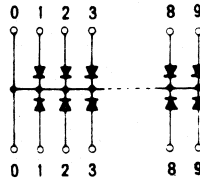


**BF4**

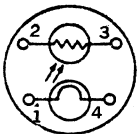


1 9 Anode  
10 Cathode

**BF5**

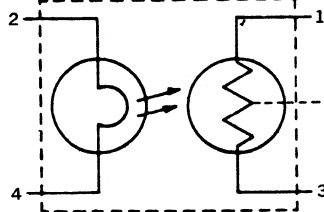


**CA1**



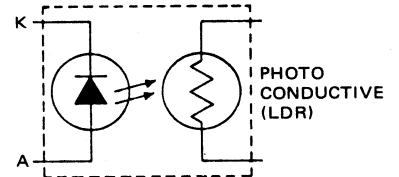
**CA2**

DOTTED LEAD  
FOR CA2a ONLY.



1-3 PHOTOCELL  
2-4 LIGHT SOURCE

**CA3**

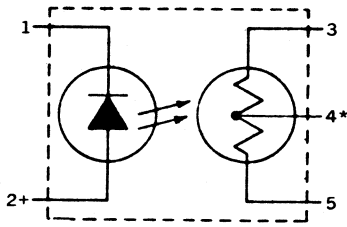


	A	K	PHOTO CONDUCTIVE (LDR)	
CA3	4	2	3	1
CA3a	3	4	1	2
CA3b	1	2	5	6

# 48. SCHEMATIC DRAWINGS

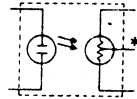
IN DRAWING NUMBER  
SEQUENCE

**CA4**



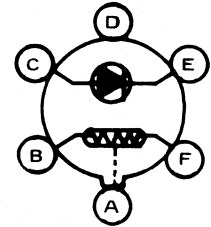
\* - LEAD OMITTED ON CA4a.

**CA5**



\* - LEAD FOR CA5a ONLY.

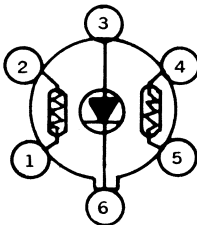
**CA6**



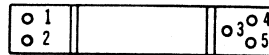
DOTTED LINE FOR CA6a ONLY.

	A	B	C	D	E	F
CA6	1	2	-	3	4	
CA6a	1	2	3	4	5	

**CA7**



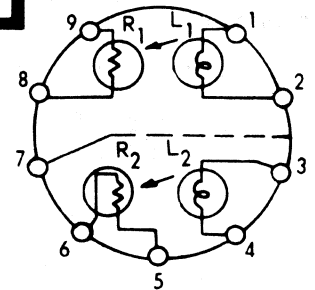
**CA10**



Bottom View

Pins 1, 2. Control Circuit (Light Source)  
Pin 3. Shield (Ground)  
Pins 4, 5. Signal Circuit (Photosensitive Resistor)

**CA11**



L<sub>1</sub> L<sub>2</sub> Control - lights  
R<sub>1</sub> R<sub>2</sub> Photoconductors

**CA12**

TERMINAL CONNECTIONS.  
CONTROL CIRCUIT

PINS #1 & #2 - ENERGY EMITTER  
IDENTIFIED - YELLOW DOT.

SIGNAL CIRCUIT

PINS #3 & #4 PHOTO RESISTOR #1  
PINS #5 & #6 PHOTO RESISTOR #2

BOTTOM VIEW

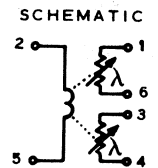


**CA13**

TERMINAL CONNECTIONS  
CRYSTAL CAN - 6-PIN HEADER

PIN #1 - PC #1      PIN #4 - PC #2  
PIN #2 - PC #2      PIN #5 - LAMP CONTROL  
PIN #3 - PC #1      PIN #6 - LAMP CONTROL

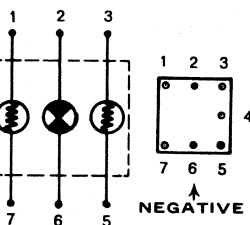
**CA14**



TERMINAL CONNECTIONS

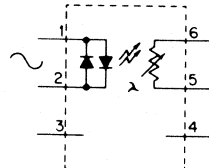
PINS #2 & #5 - CONTROL CIRCUIT (ENERGY EMITTER)  
PINS #1 & #6 - SIGNAL CIRCUIT (PHOTORESISTOR #1)  
PINS #3 & #4 - SIGNAL CIRCUIT (PHOTORESISTOR #2)

**CA15**



1-7: 1 PHOTORESISTOR  
2-6: SOURCE LUMINANCE  
3-5: 2 PHOTORESISTOR (FACULTATIVE)

**CA16**

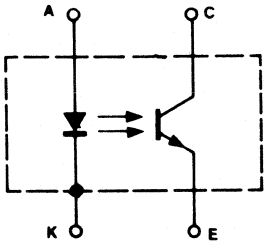




# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER SEQUENCE

**CB1**

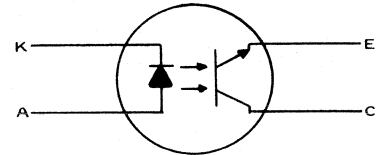


**CB2**



	C	B	E	A	K	REMARKS
CB2	3	2	1	5	7	
CB2a	5	6	4	1	2	
CB2b	3	2	1	5	7	Collector Isolated

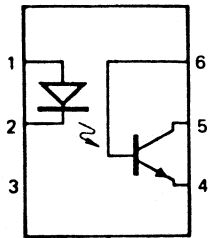
**CB3**



	A	K	C	E
CB3	4	1	3	2
CB3a	1	2	4	3
CB3b	4	2	3	1
CB3c	2	3	4	1

**CB4**

(TOP VIEW)



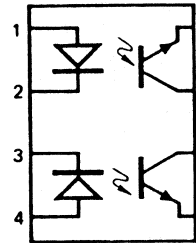
CB4	
PIN NO.	FUNCTION
1	ANODE
2	CATHODE
3	NC
4	EMITTER
5	COLLECTOR
6	BASE

LED CHIP ON PIN 2  
PT CHIP ON PIN 5

CB4a	
PIN NO.	FUNCTION
6	NC

**CB5**

(TOP VIEW)

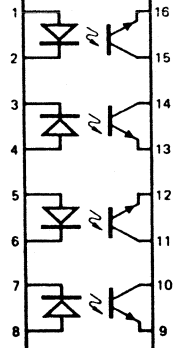


PIN NO.	FUNCTION
1	ANODE
2	CATHODE
3	CATHODE
4	ANODE
5	EMITTER
6	COLLECTOR
7	COLLECTOR
8	EMITTER

LED CHIPS ON PINS 2 AND 3  
PT CHIPS ON PINS 6 AND 7

**CB6**

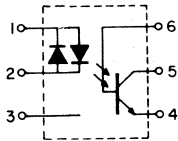
(TOP VIEW)



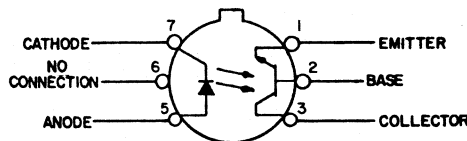
PIN NO.	FUNCTION
1	ANODE
2	CATHODE
3	CATHODE
4	ANODE
5	ANODE
6	CATHODE
7	CATHODE
8	ANODE
9	EMITTER
10	COLLECTOR
11	COLLECTOR
12	EMITTER
13	EMITTER
14	COLLECTOR
15	COLLECTOR
16	EMITTER

LED CHIPS ON PINS 2, 3, 6, 7  
PT CHIPS ON PINS 10, 11, 14, 15

**CB12**

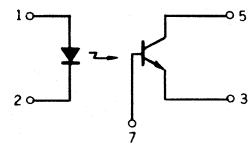


**CB13**



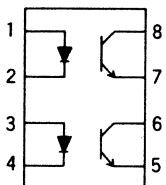
CB13—COLLECTOR CONNECTED INTERNALLY TO CASE  
CB13a—COLLECTOR ISOLATED FROM CASE

**CB14**



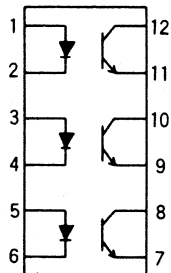
1. Anode (Case)
2. Cathode
3. Emitter
5. Collector
7. Base

**CB16**

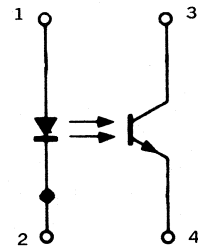


1. 3. Anode
2. 4. Cathode
5. 7. Emitter
6. 8. Collector

**CB17**



**CB18**



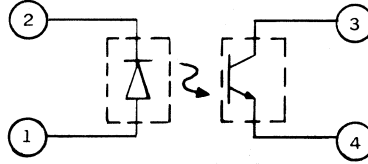
# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

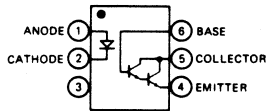
**CB19**

PIN DESIGNATION	
1.	A.C.
2.	INPUT
3.	NC
4.	EMITTER
5.	COLLECTOR
6.	BASE

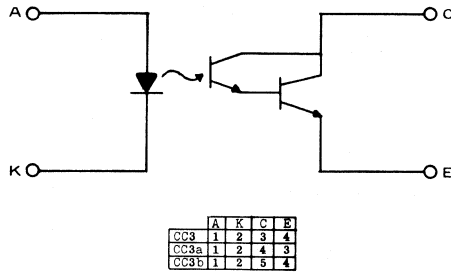
**CB20**



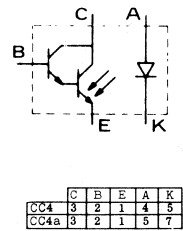
**CC1**



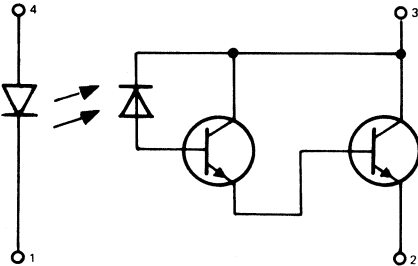
**CC3**



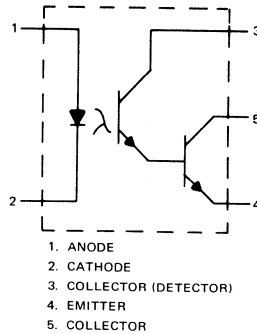
**CC4**



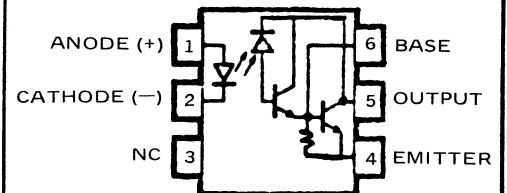
**CC5**



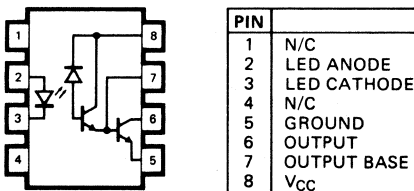
**CC6**



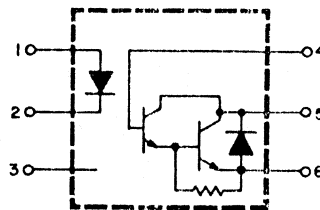
**CC7**



**CC8**



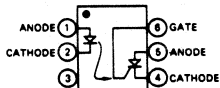
**CC9**



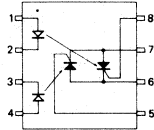
# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER SEQUENCE

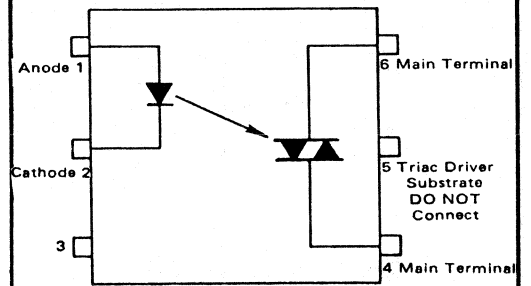
**CD1**



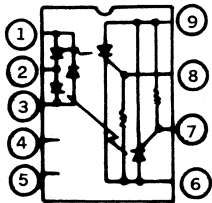
**CD2**



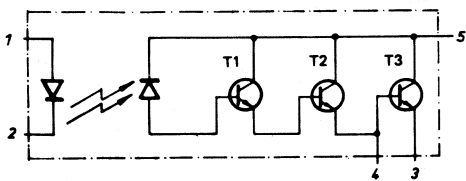
**CD3**



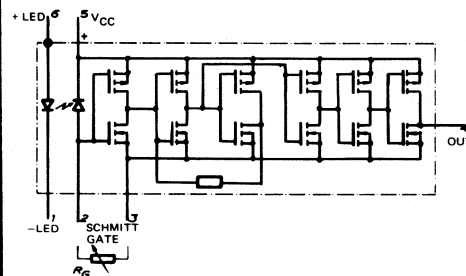
**CD4**



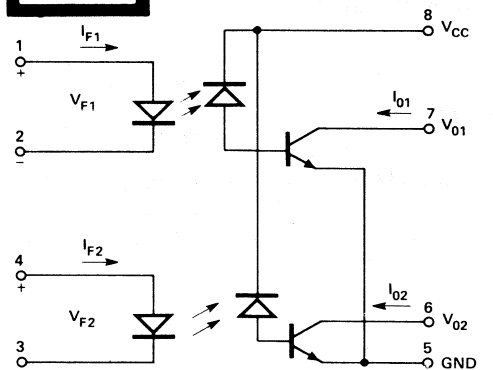
**CE1**



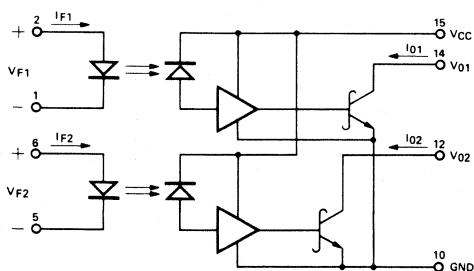
**CE2**



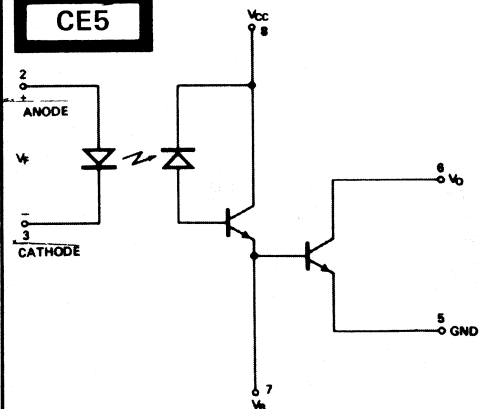
**CE3**



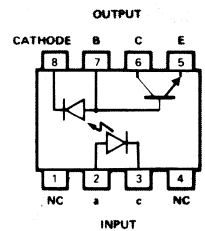
**CE4**



**CE5**



**CE6**

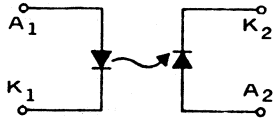


PIN NUMBERS							
1	2	3	4	5	6	7	8
CE6	NC	A	C	NC	E	C	B
CE6a	NC	ANODE	CATHODE	NC	IGND	OUTF	BASE

# 48. SCHEMATIC DRAWINGS

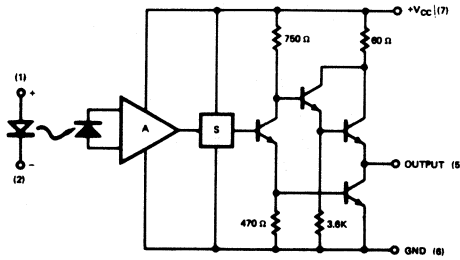
IN DRAWING NUMBER SEQUENCE

**CE9**



	A1	K1	K2	A2	REMARKS
CE9	1	2	5	4	
CE9a	1	2	5	4	MATCHED PAIR
CE9b	1	2	3	4	

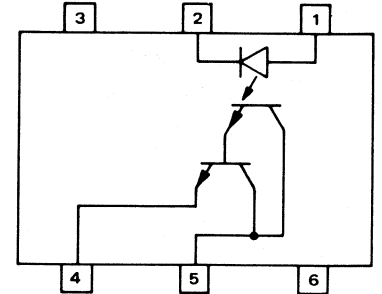
**CE10**



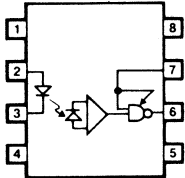
A = Differential amp, comparator  
S = Schmitt trigger, threshold hysteresis

**CE12**

PIN 1. ANODE  
2. CATHODE  
3. N.C.  
4. EMITTER  
5. COLLECTOR  
6. N.C.

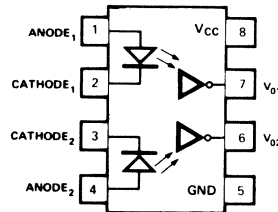


**CE14**

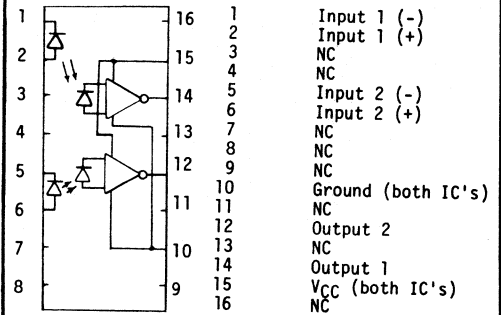


PIN NO.  
1 NC  
2 ANODE  
3 CATHODE  
4 NC  
5 GROUND  
6 V<sub>O</sub>  
7 GATE  
8 V<sub>CC</sub>

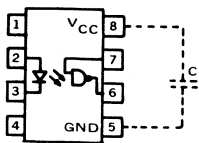
**CE15**



**CE16**

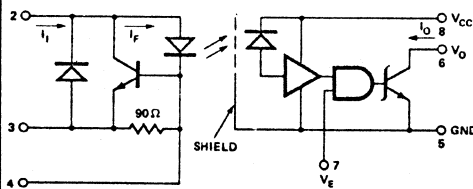


**CE17**

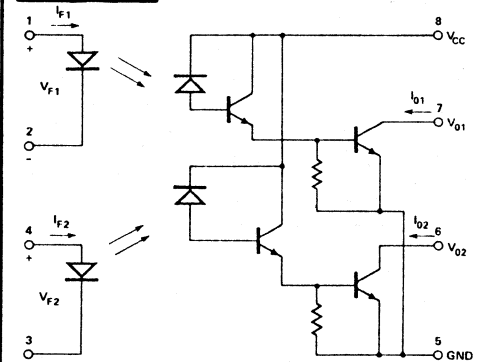


Terminal Function  
1 NC  
2 Anode (+)  
3 Cathode (-)  
4 NC  
5 Ground  
6 Output  
7 Enable  
8 V<sub>CC</sub>  
All leads insulated from case.

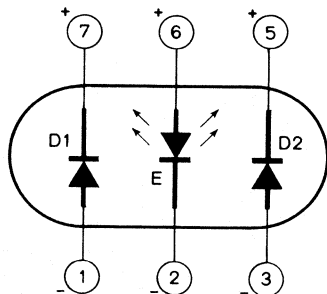
**CE18**



**CE19**

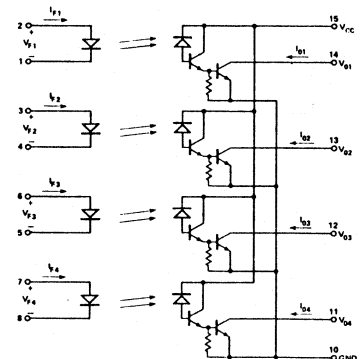


**CE20**



D1, D2: Photodiodes  
E: IR emitter

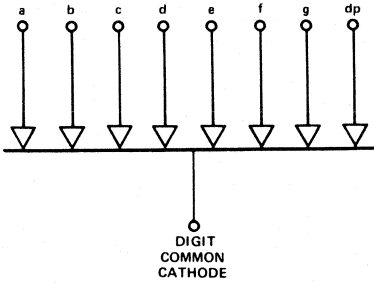
**CE21**



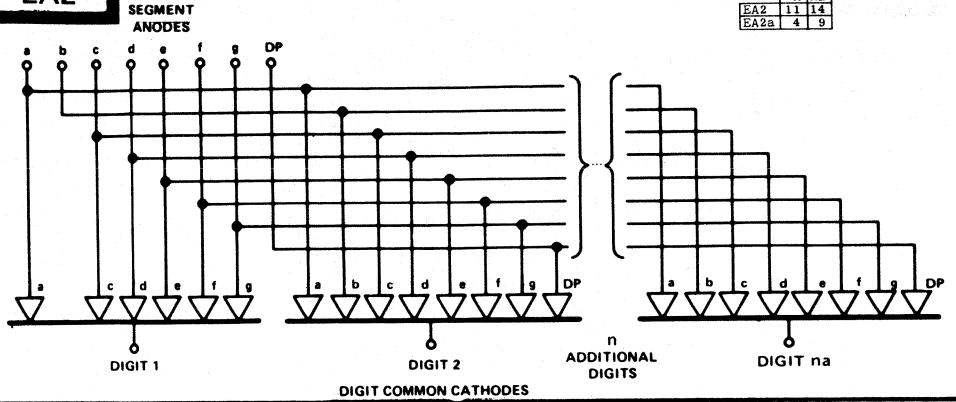
# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

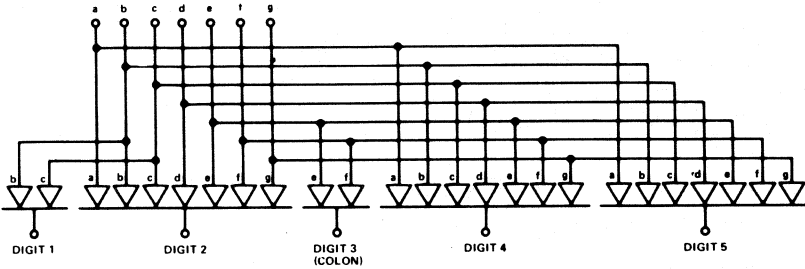
**EA1**



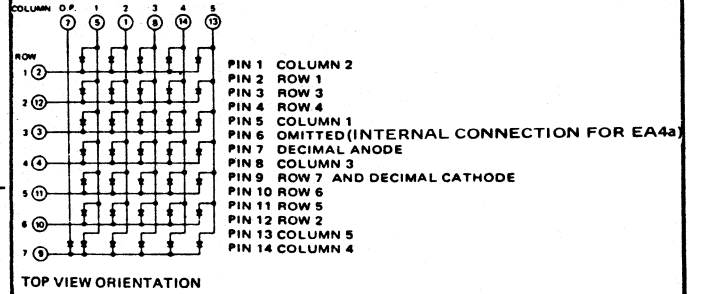
**EA2**



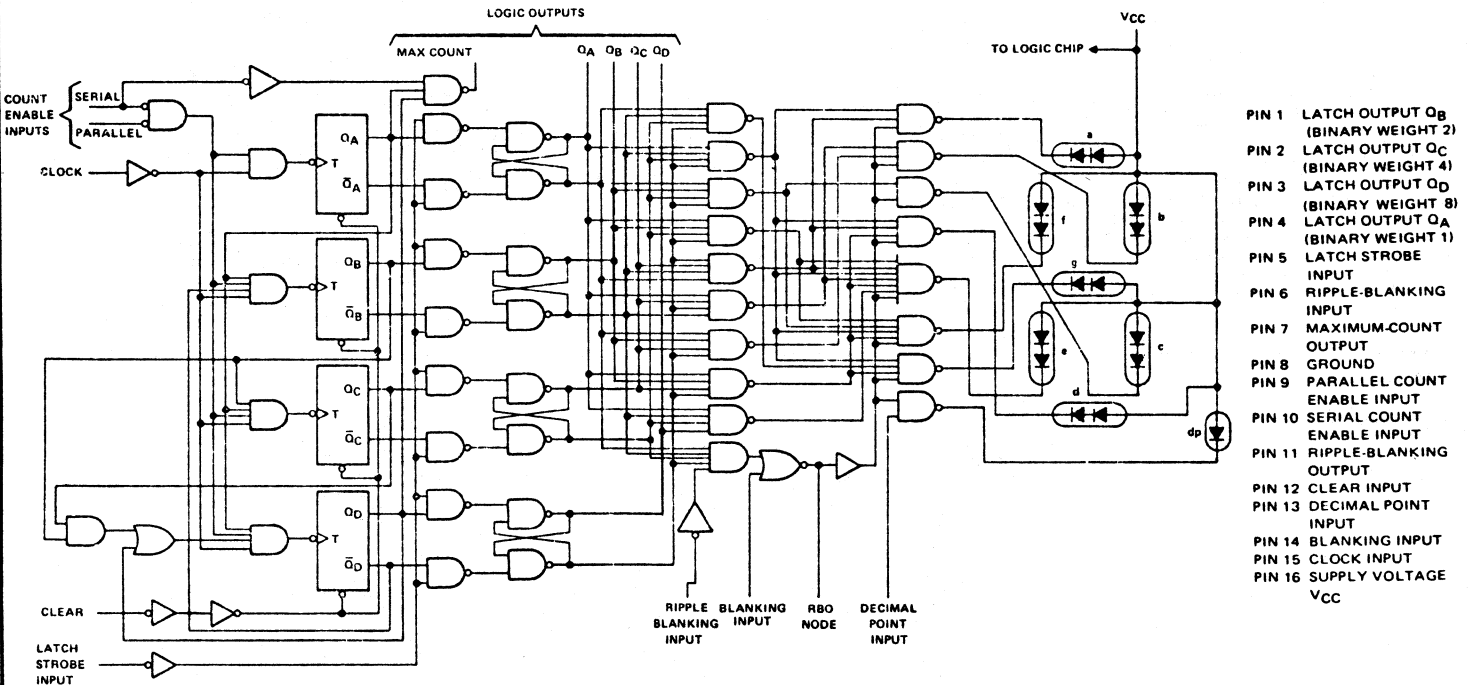
**EA3**



**EA4**



**EA5**

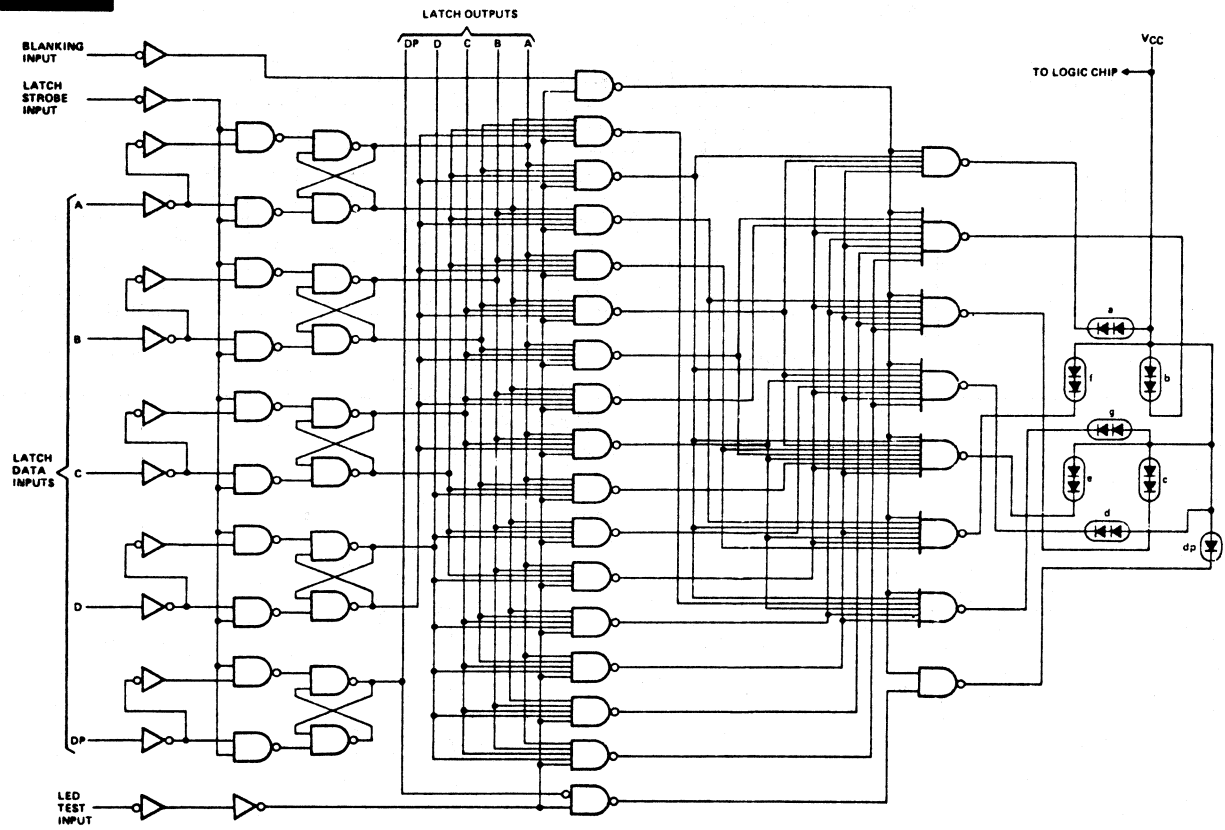




# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER SEQUENCE

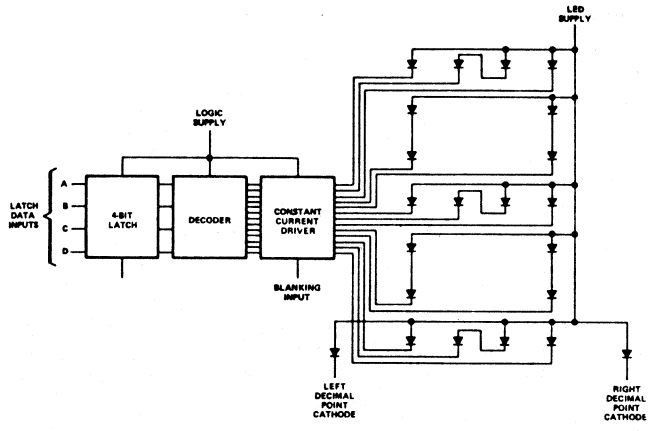
## EA6



- PIN 1 LATCH OUTPUT  $Q_B$  (BINARY WEIGHT 2)
- PIN 2 LATCH OUTPUT  $Q_C$  (BINARY WEIGHT 4)
- PIN 3 LATCH OUTPUT  $Q_D$  (BINARY WEIGHT 8)
- PIN 4 LATCH OUTPUT  $Q_A$  (BINARY WEIGHT 1)
- PIN 5 LATCH STROBE INPUT C (BINARY WEIGHT 4)
- PIN 6 LATCH DATA INPUT D (BINARY WEIGHT 8)
- PIN 8 GROUND
- PIN 9 NO INTERNAL CONNECTION
- PIN 10 LATCH DATA INPUT B (BINARY WEIGHT 2)
- PIN 11 BLANKING INPUT
- PIN 12 LATCH DATA INPUT D (BINARY WEIGHT 8)
- PIN 13 LED TEST
- PIN 14 LATCH OUTPUT DP (BINARY WEIGHT 1)
- PIN 15 LATCH DATA INPUT A (BINARY WEIGHT 1)
- PIN 16 SUPPLY VOLTAGE,  $V_{CC}$

## EA7

- PIN 1 LED SUPPLY VOLTAGE
- PIN 2 LATCH DATA INPUT B
- PIN 3 LATCH DATA INPUT A
- PIN 4 LEFT DECIMAL POINT CATHODE
- PIN 5 LATCH STROBE INPUT (NO INTERNAL CONNECTION FOR EA7a)
- PIN 6 OMITTED (LATCH STROBE INPUT FOR EA7a)
- PIN 7 COMMON GROUND
- PIN 8 BLANKING INPUT
- PIN 9 OMITTED (NO INTERNAL CONNECTION FOR EA7a)
- PIN 10 RIGHT DECIMAL POINT CATHODE
- PIN 11 OMITTED (NO INTERNAL CONNECTION FOR EA7a)
- PIN 12 LATCH DATA INPUT D
- PIN 13 LATCH DATA INPUT C
- PIN 14 LOGIC SUPPLY VOLTAGE,  $V_{CC}$



## EA8

- EA8**
- PIN 1-CATHODE A
  - PIN 2-CATHODE F
  - PIN 3-ANODE: DIGIT & DECIMAL
  - PIN 4-OMITTED
  - PIN 5-OMITTED
  - PIN 6-CATHODE LEFT DECIMAL
  - PIN 7-CATHODE E
  - PIN 8-CATHODE D
  - PIN 9-CATHODE RIGHT DECIMAL
  - PIN 10-CATHODE C
  - PIN 11-CATHODE G
  - PIN 12-OMITTED
  - PIN 13-CATHODE B
  - PIN 14-ANODE: DIGIT & DECIMAL
- PIN 3 IS INTERNALLY CONNECTED TO PIN 14

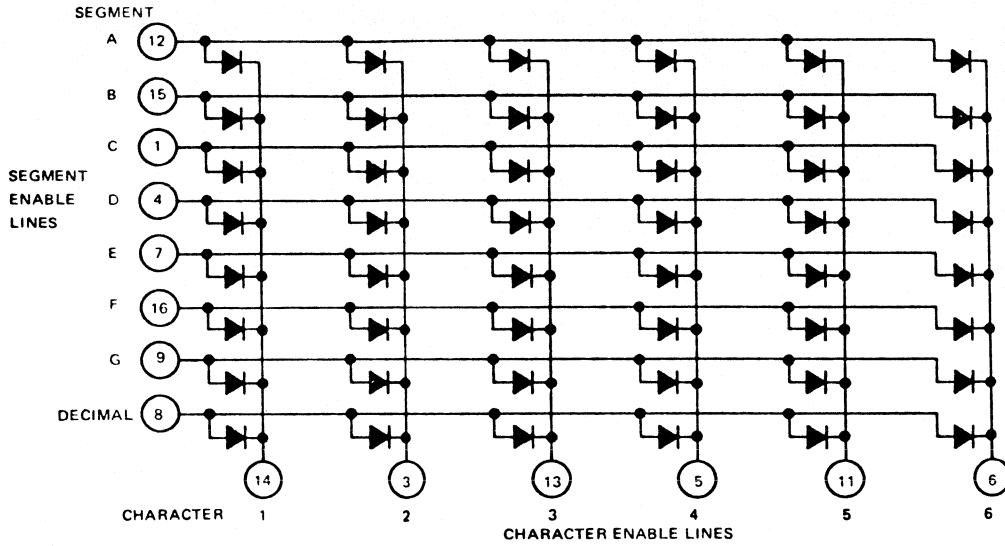
- EA8a**
- PIN 1-OMITTED
  - PIN 2-CATHODE: DIGIT & DECIMAL
  - PIN 3-ANODE F
  - PIN 4-ANODE G
  - PIN 5-ANODE E
  - PIN 6-ANODE D
  - PIN 7-OMITTED
  - PIN 8-OMITTED
  - PIN 9-CATHODE: DIGIT & DECIMAL
  - PIN 10-ANODE DECIMAL
  - PIN 11-ANODE C
  - PIN 12-ANODE B
  - PIN 13-ANODE A
  - PIN 14-OMITTED
- PIN 2 IS INTERNALLY CONNECTED TO PIN 9

- EA8b**
- PIN 1-ANODE H, ANODE G
  - PIN 2-OMITTED
  - PIN 3-OMITTED
  - PIN 4-CATHODE H, ANODE J
  - PIN 5-OMITTED
  - PIN 6-OMITTED
  - PIN 7-CATHODE J
  - PIN 8-CATHODE G
  - PIN 9-CATHODE DECIMAL
  - PIN 10-CATHODE C
  - PIN 11-CATHODE B, ANODE C
  - PIN 12-OMITTED
  - PIN 13-OMITTED
  - PIN 14-ANODE B, ANODE DECIMAL

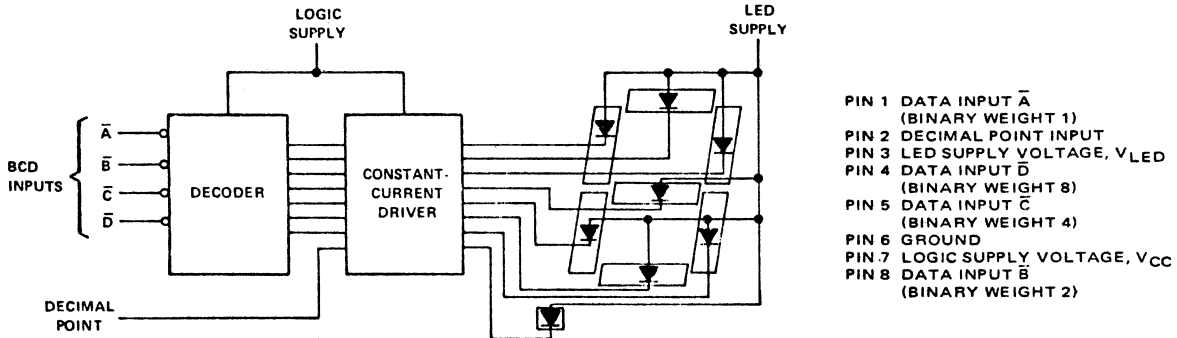
# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

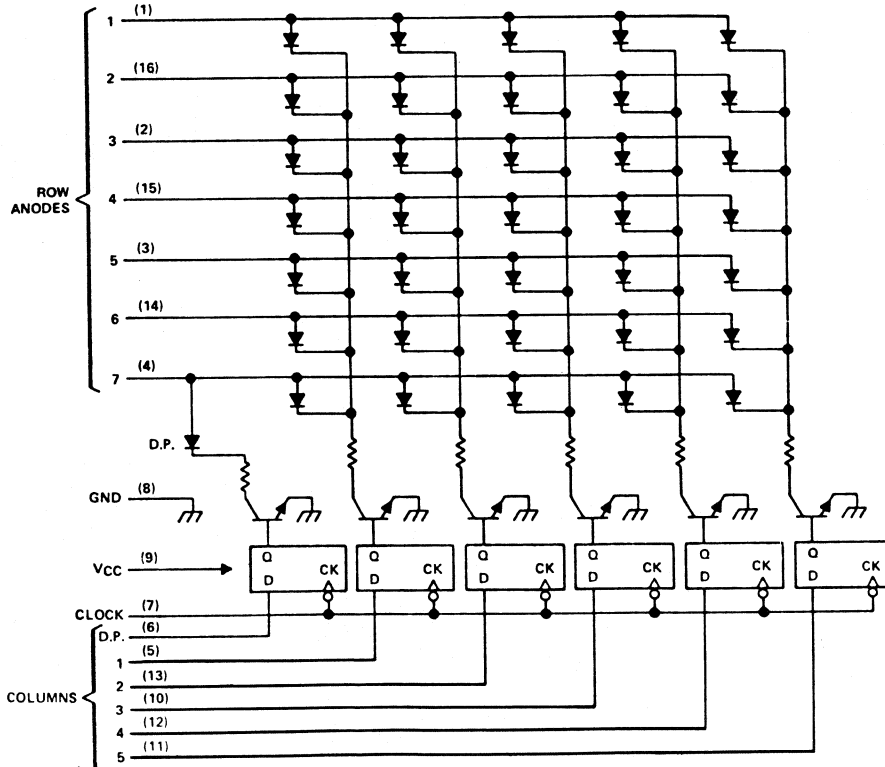
EA9



EA12

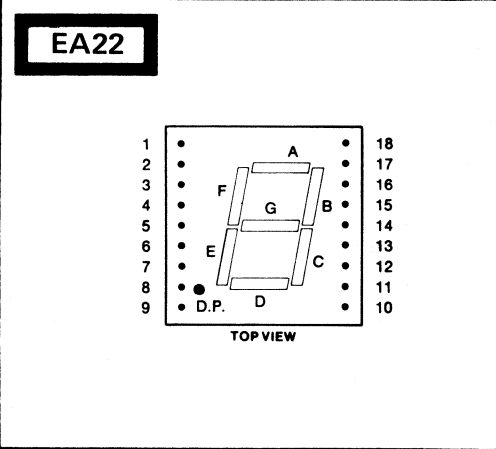
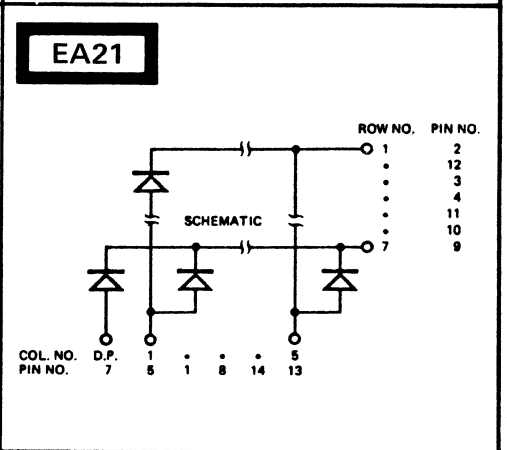
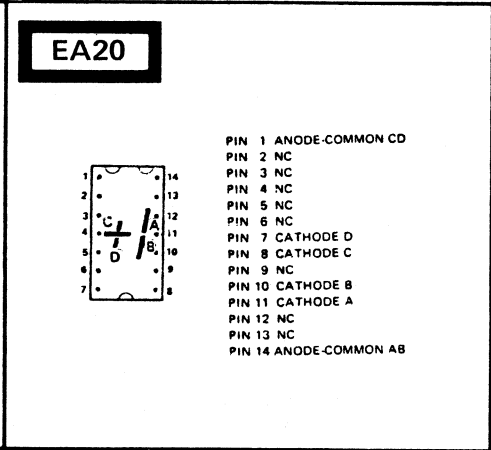
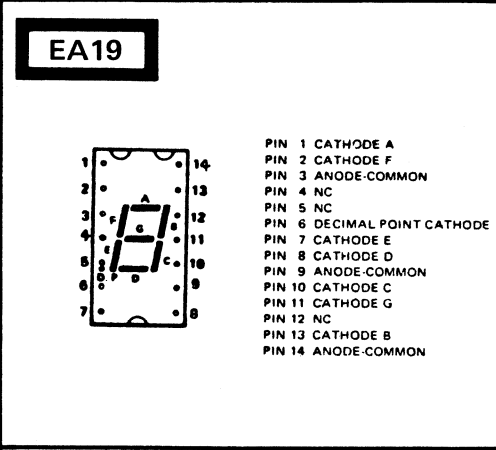
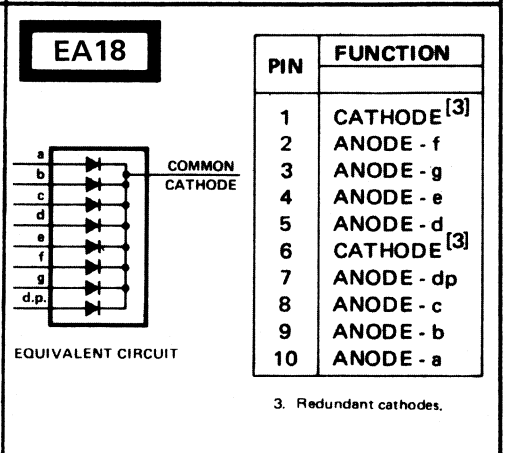
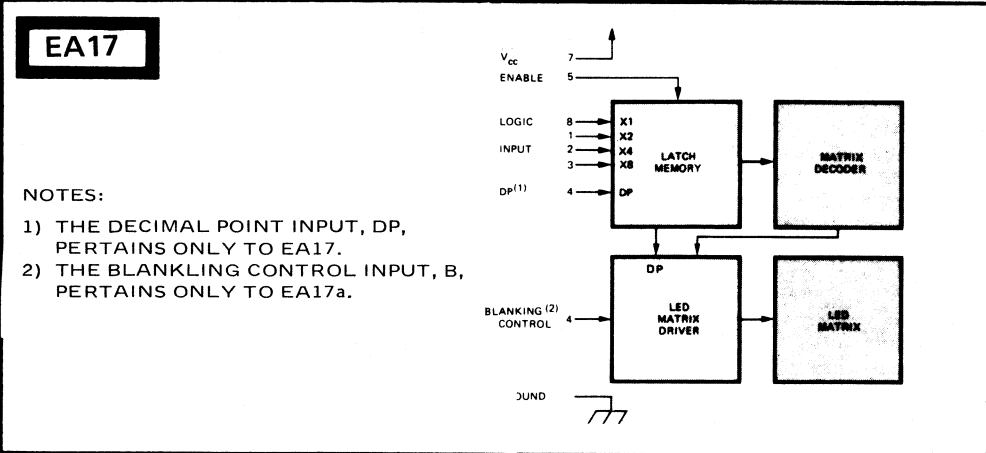
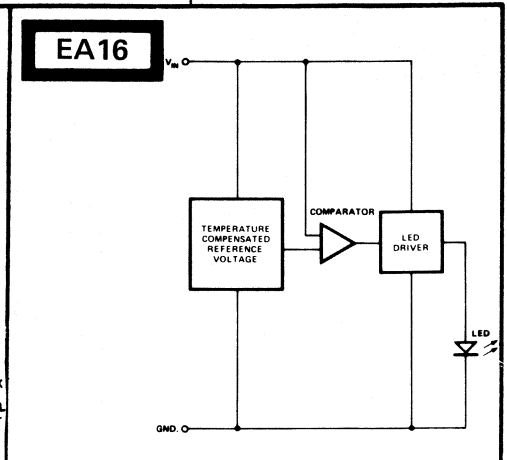
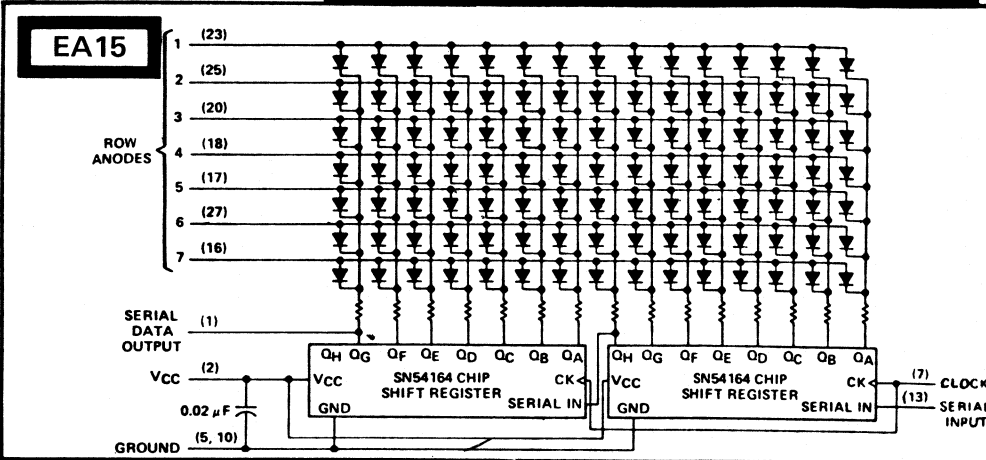


EA13



# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER SEQUENCE



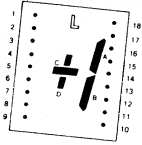
PIN	EA22	EA22a
1	OMITTED	NC
2	CATHODE A	ANODE A
3	CATHODE F	ANODE F
4	ANODE	COMMON CATHODE
5	CATHODE E	ANODE E
6	ANODE	COMMON CATHODE
7	DECIMAL POINT CATHODE	D.P. ANODE
8	NC	NC
9	OMITTED	NC
10	OMITTED	NC
11	CATHODE D	ANODE D
12	ANODE	COMMON CATHODE
13	CATHODE C	ANODE C
14	CATHODE G	ANODE G
15	CATHODE B	ANODE B
16	NC	NC
17	ANODE	COMMON CATHODE
18	OMITTED	NC

PIN	EA22b	EA22c
1	NO PIN	NO PIN
2	CATHODE A	ANODE A
3	CATHODE F	ANODE F
4	COMMON ANODE	COMMON CATHODE
5	CATHODE E	ANODE E
6	NO PIN	NO PIN
7	CATHODE D.P.	ANODE D.P.
8	NO PIN	NO PIN
9	NO PIN	NO PIN
10	NO PIN	NO PIN
11	CATHODE D	ANODE D
12	COMMON ANODE	COMMON CATHODE
13	CATHODE G	ANODE G
14	CATHODE C	ANODE C
15	CATHODE B	ANODE B
16	NO PIN	NO PIN
17	COMMON ANODE	COMMON CATHODE
18	NO PIN	NO PIN

# 48. SCHEMATIC DRAWINGS

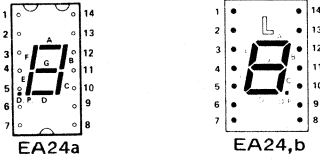
IN DRAWING NUMBER SEQUENCE

## EA23



PIN	EA23	EA23a
1	NC	NC
2	Cathode D	Anode D
3	NC	NC
4	NC	NC
5	NC	NC
6	NC	NC
7	NC	NC
8	Common Anode C,D	Common Cathode C,D
9	NC	NC
10	NC	NC
11	Cathode B	Anode B
12	NC	NC
13	NC	NC
14	Common Anode A,B	Common Cathode A,B
15	NC	NC
16	Cathode A	
17	Cathode C	Anode C
18	NC	NC

## EA24



PIN	EA24,b	EA24a	EA24c
1	CATHODE A	ANODE F	ANODE F
2	CATHODE F	ANODE G	ANODE G
3	COM. ANODE	NC	ANODE E
4	NC	COM. CATHODE	DP CATHODE
5	NC	NC	NC
6	DECIMAL PT. CATHODE	ANODE E	DP ANODE
7	CATHODE E	ANODE D	ANODE D
8	CATHODE D	ANODE C	ANODE D
9	COM. ANODE	NC	NC
10	CATHODE C	NC	NC
11	CATHODE G	NC	NC
12	NC	COM. CATHODE	COM. CATHODE EXCEPT DECIMAL
13	CATHODE B	ANODE B	ANODE B
14	COM. ANODE	ANODE A	ANODE A

Jumper Pins 3, 9, and 14 on Circuit Board for Common Anode.

Jumper Pins 4 and 12 on Circuit Board for Common Cathode.

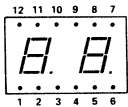
## EA25



PIN	
1	Anode-Common CD
2	NC
3	NC
4	NC
5	NC
6	NC
7	Cathode D
8	Cathode C
9	NC
10	Cathode B
11	Cathode A
12	NC
13	NC
14	Anode-Common AB

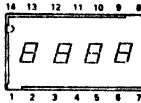
Jumper Pins 1 and 14 on Circuit Board for Common Anode.

## EA26



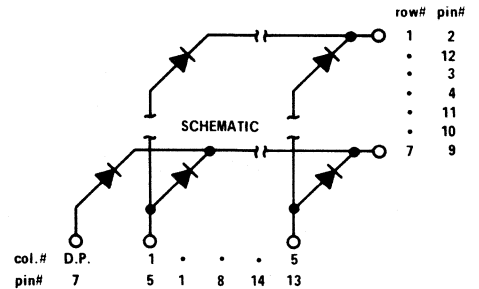
PIN	
1	NC
2	Anode E
3	Anode D
4	NC
5	Anode C
6	D.P. Anode
7	Cathode Digit #2
8	Anode B
9	Anode G
10	Anode A
11	Anode F
12	Cathode Digit #1

## EA28

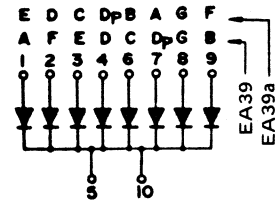


1	NC
2	Anode E
3	Anode D
4	Anode C
5	D.P. Anode
6	Anode G
7	Cathode 4
8	NC
9	Anode B
10	Cathode 3
11	Anode F
12	Cathode 2
13	Anode A
14	Cathode 1

## EA36



## EA39

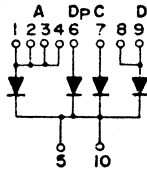


EA39b is inverse connection of EA39 diode polarity  
EA39c is inverse connection of EA39a diode polarity

# 48. SCHEMATIC DRAWINGS

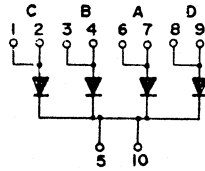
IN DRAWING NUMBER  
SEQUENCE

**EA40**



EA40a is inverse connection of EA40 diode polarity

**EA41**



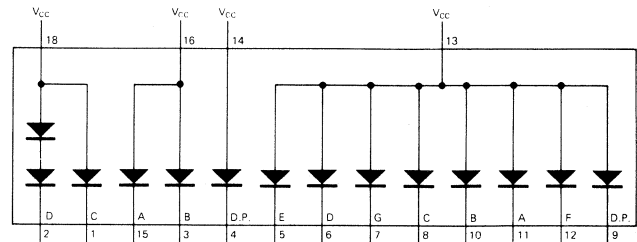
EA41a is inverse connection of EA41 diode polarity

**EA45**

PIN	FUNCTION
1	CATHODE C (NO. 1)
2	CATHODE D (NO. 1)
3	CATHODE B (NO. 1)
4	D. P. CATHODE (NO. 1)
5	CATHODE E (NO. 2)
6	CATHODE D (NO. 2)
7	CATHODE G (NO. 2)
8	CATHODE C (NO. 2)
9	D. P. CATHODE (NO. 2)
10	CATHODE B (NO. 2)
11	CATHODE A (NO. 2)
12	CATHODE F (NO. 2)
13	ANODE DIGIT (NO. 2)
14	ANODE D. P. (NO. 1)
15	CATHODE A (NO. 1)
16	ANODE NO. 1 A AND B
17	N. C.
18	ANODE NO. 1 C AND D

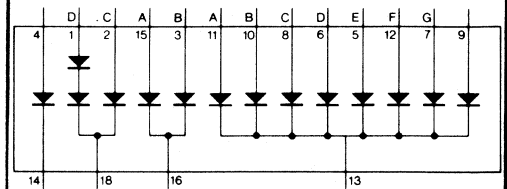
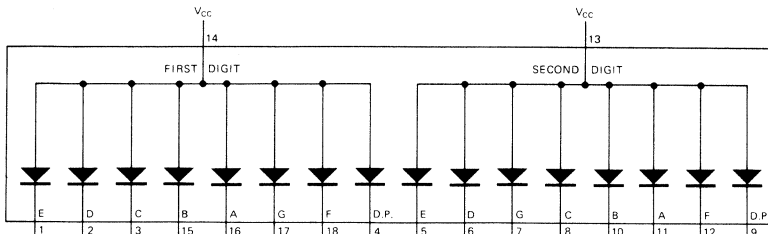
**EA46**

PIN	FUNCTION
1	E CATHODE (NO. 1)
2	D CATHODE (NO. 1)
3	C CATHODE (NO. 1)
4	D. P. CATHODE (NO. 1)
5	E CATHODE (NO. 2)
6	D CATHODE (NO. 2)
7	G CATHODE (NO. 2)
8	C CATHODE (NO. 2)
9	D. P. CATHODE (NO. 2)
10	B CATHODE (NO. 2)
11	A CATHODE (NO. 2)
12	F CATHODE (NO. 2)
13	NO. 2 ANODE
14	NO. 1 ANODE
15	B CATHODE (NO. 1)
16	A CATHODE (NO. 1)
17	G CATHODE (NO. 1)
18	F CATHODE (NO. 1)

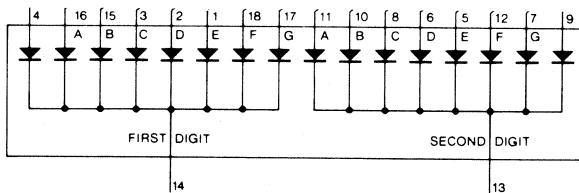


**EA47**

PIN	FUNCTION
1	ANODE D #1
2	ANODE C #1
3	ANODE B #1
4	D.P. ANODE #1
5	ANODE E #2
6	ANODE D #2
7	ANODE G #2
8	ANODE C #2
9	D.P. ANODE #2
10	ANODE B #2
11	ANODE A #2
12	ANODE F #2
13	COMMON CATHODE #2
14	D.P. CATHODE #2
15	ANODE A #1
16	COMMON CATHODE A&B #1
17	N.C.
18	COMMON CATHODE C&D #1



**EA48**



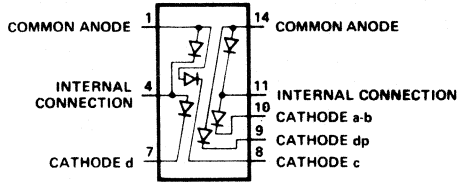
PIN	FUNCTION
1	E ANODE NO. 1
2	D ANODE NO. 1
3	C ANODE NO. 1
4	D.P. ANODE NO. 1
5	E ANODE NO. 2
6	D ANODE NO. 2
7	G ANODE NO. 2
8	C ANODE NO. 2
9	D.P. ANODE NO. 2
10	B ANODE NO. 2
11	A ANODE NO. 2
12	F ANODE NO. 2
13	COMMON CATHODE NO. 2
14	COMMON CATHODE NO. 1
15	B ANODE NO. 1
16	A ANODE NO. 1
17	G ANODE NO. 1
18	F ANODE NO. 1



# 48. SCHEMATIC DRAWINGS

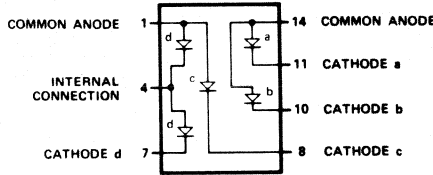
IN DRAWING NUMBER SEQUENCE

**EA50**



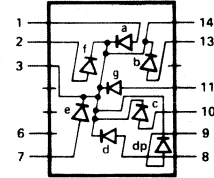
PIN NO.	FUNCTION
1	Anode c, d
2	No Pin
3	No Pin
4	Internal Connection
5	No Pin
6	No Pin
7	Cathode d
8	Cathode c
9	Cathode dp
10	Cathode a-b
11	Internal Connection
12	No Pin
13	No Pin
14	Anode a-b, dp

**EA51**



PIN NO.	FUNCTION
1	Anode c, d
2	No Pin
3	No Pin
4	Internal Connection
5	No Pin
6	No Pin
7	Cathode d
8	Cathode c
9	No Pin
10	Cathode b
11	Cathode a
12	No Pin
13	No Pin
14	Anode a, b

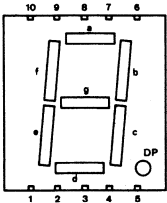
**EA52**



PIN	FUNCTION
1	ANODE - a
2	ANODE - f
3	CATHODE
4	NO PIN
5	NO PIN
6	NO CONN.
7	ANODE - e
8	ANODE - d
9	ANODE - dp
10	ANODE - c
11	ANODE - g
12	NO PIN
13	ANODE - b
14	CATHODE

**EA53**

Pin connections:



Pin	EA53	EA53a
1	Segment e	Segment e
2	Segment d	Segment d
3	Anode	Kathode
4	Segment c	Segment c
5	DP	DP
6	Segment b	Segment b
7	Segment a	Segment a
8	Anode	Kathode
9	Segment f	Segment f
10	Segment g	Segment g

**EA54**

Pin	3" NUMERICS			6" NUMERICS	
	Common Anode Left Decimal	Common Anode Right Decimal	Common Cathode Left Decimal	Common Anode Left Decimal	Common Cathode Left Decimal
1	Cathode A	Cathode A	Anode F	Cathode A	Anode A
2	Cathode F	Cathode F	Anode G	Cathode F	Anode F
3	Common Anode	Common Anode	No Pin	Common Anode	Common Cathode
4	No Pin	No Pin	Common Cathode	Cathode E	Anode E
5	No Pin	No Pin	No Pin	No Pin	No Pin
6	Cathode DP	NC	Anode E	Cathode DP	Anode DP
7	Cathode E	Cathode E	Anode D	No Pin	No Pin
8	Cathode D	Cathode D	Anode C	Cathode D	Anode D
9	NC	Anode DP	Common Anode	Common Anode	Common Cathode
10	Cathode C	Cathode C	No Pin	Cathode C	Anode C
11	Cathode G	Cathode G	No Pin	Cathode G	Anode G
12	No Pin	No Pin	Common Cathode	Cathode B	Anode B
13	Cathode B	Cathode B	Anode B	No Pin	No Pin
14	Common Anode	Common Anode	Anode A	Common Anode	Common Cathode

EA54

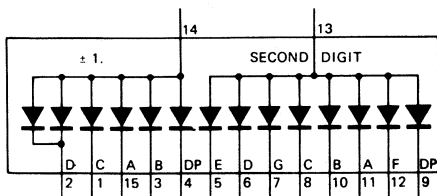
EA54a

EA54b

EA54c

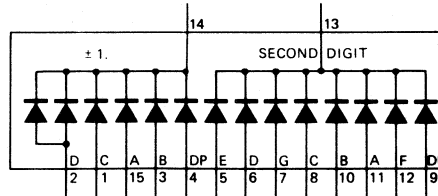
EA54d

**EA55**



PIN	FUNCTION
1	C cathode (No. 1)
2	D cathode (No. 1)
3	B cathode (No. 1)
4	DP cathode (No. 1)
5	E cathode (No. 2)
6	D cathode (No. 2)
7	G cathode (No. 2)
8	C cathode (No. 2)
9	DP cathode (No. 2)
10	B cathode (No. 2)
11	A cathode (No. 2)
12	F cathode (No. 2)
13	Digit No. 2 anode
14	Digit No. 1 anode
15	A cathode (No. 1)
16	No connection
17	No connection
18	No connection

**EA56**



PIN	FUNCTION
1	C anode (No. 1)
2	D anode (No. 1)
3	B anode (No. 1)
4	DP anode (No. 1)
5	E anode (No. 2)
6	D anode (No. 2)
7	G anode (No. 2)
8	C anode (No. 2)
9	DP anode (No. 2)
10	B anode (No. 2)
11	A anode (No. 2)
12	F anode (No. 2)
13	Digit No. 2 cathode
14	Digit No. 1 cathode
15	A anode (No. 1)
16	No connection
17	No connection
18	No connection

# 48. SCHEMATIC DRAWINGS

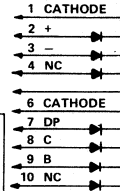
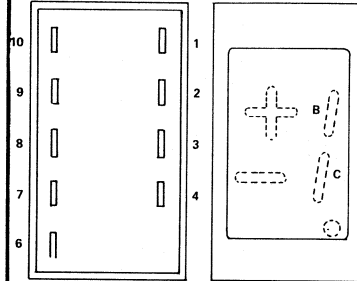
IN DRAWING NUMBER  
SEQUENCE

## EA58

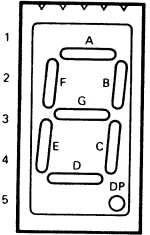
TAB	FUNCTION
1	NO INTERNAL CONNECTION
2	DIGIT 1 CATHODE†
3	SEGMENT C ANODES
4	DIGIT 2 CATHODE
5	DECIMAL POINT ANODES
6	DIGIT 3 CATHODE
7	SEGMENT A ANODES
8	DIGIT 4 CATHODE
EA58	9 SEGMENT E ANODES
10	DIGIT 5 CATHODE
11	SEGMENT D ANODES
12	DIGIT 6 CATHODE
13	SEGMENT G ANODES
14	DIGIT 7 CATHODE
15	SEGMENT B ANODES
16	DIGIT 8 CATHODE
17	SEGMENT F ANODES
18	DIGIT 9 CATHODE

EA58a - NO EXTERNAL CONNECTION TO TAB 2.  
EA58b - NO EXTERNAL CONNECTION TO TAB 2, 4, OR 18.

## EA62

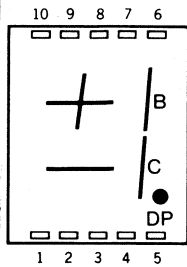


## EA63



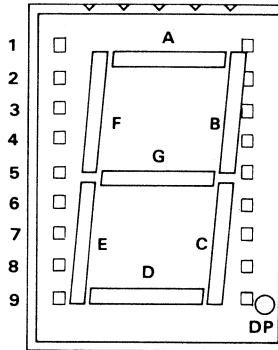
Pin	EA63	EA63a
1	Common Cathode	Common Anode
2	Segment F	Segment F
3	Segment G	Segment G
4	Segment E	Segment E
5	Segment D	Segment D
6	Common Cathode	Common Anode
7	Decimal	Decimal Point
8	Segment C	Segment C
9	Segment B	Segment B
10	Segment A	Segment A

## EA64



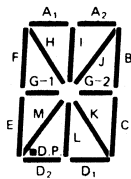
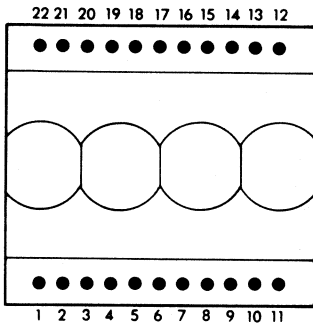
PIN	EA64	EA64a
1	Minus	Minus
2	Cathode ±	Anode ±
3	Segment C	Segment C
4	Cathode 1/D.P.	Anode 1/D.P.
5	D.P.	D.P.
6	Segment B	Segment B
7	Cathode 1/D.P.	Anode 1/D.P.
8	Cathode ±	Anode ±
9	Plus	Plus
10	N.C.	N.C.

## EA65



PIN	EA65	EA65a
1	Omitted	Omitted
2	Segment A	Segment A
3	Segment F	Segment F
4	Common Cath.	Common Anode
5	Segment E	Segment E
6	Common Cath.	Common Anode
7	N.C.	N.C.
8	Omitted	Omitted
9	Omitted	Omitted
10	Decimal Point	Decimal Point
11	Segment D	Segment D
12	Common Cath.	Common Anode
13	Segment C	Segment C
14	Segment G	Segment G
15	Segment B	Segment B
16	Omitted	Omitted
17	Common Cath.	Common Anode
18	Omitted	Omitted

## EA66



PIN	FUNCTION
1	G <sub>1</sub> Anode
2	Decimal Point Anode
3	Common Cathode Digit 1
4	D <sub>2</sub> Anode
5	L Anode
6	Common Cathode Digit 3
7	E Anode
8	M Anode
9	K Anode
10	Common Cathode Digit 4
11	D <sub>1</sub> Anode
12	J Anode
13	NC
14	G <sub>2</sub> Anode
15	A <sub>2</sub> Anode
16	I Anode
17	Common Cathode Digit 2
18	B Anode
19	A <sub>1</sub> Anode
20	C Anode
21	H Anode
22	F Anode

## EA67

PIN	EA 67	FUNCTION
1	A CATHODE	DIGIT 1
2	D <sub>1</sub> CATHODE	DIGIT 1
3	C CATHODE	DIGIT 1
4	D <sub>2</sub> CATHODE	DIGIT 1
5	B CATHODE	DIGIT 1
6	COMMON ANODE	DIGIT 1
7	DECIMAL POINT CATHODE	DIGIT 1
8	COMMON ANODE	DIGIT 2
9	DECIMAL POINT CATHODE	DIGIT 2
10	A CATHODE	
11	F CATHODE	
12	E CATHODE	
13	D CATHODE	
14	COMMON ANODE	DIGIT 3
15	DECIMAL POINT CATHODE	DIGIT 3
16	C CATHODE	
17	G CATHODE	
18	B CATHODE	
19	COMMON ANODE	DIGIT 4
20	DECIMAL POINT CATHODE	DIGIT 4

PIN	EA 67a	FUNCTION
1	COMMON ANODE	DIGIT 1
2	DECIMAL POINT CATHODE	DIGIT 1
3	COMMON ANODE	DIGIT 2
4	DECIMAL POINT CATHODE	DIGIT 2
5	A CATHODE	
6	F CATHODE	
7	E CATHODE	
8	D CATHODE	
9	COMMON ANODE	DIGIT 3
10	DECIMAL POINT CATHODE	DIGIT 3
11	C CATHODE	
12	G CATHODE	
13	B CATHODE	
14	COMMON ANODE	DIGIT 4
15	DECIMAL POINT CATHODE	DIGIT 4

# 48. SCHEMATIC DRAWINGS

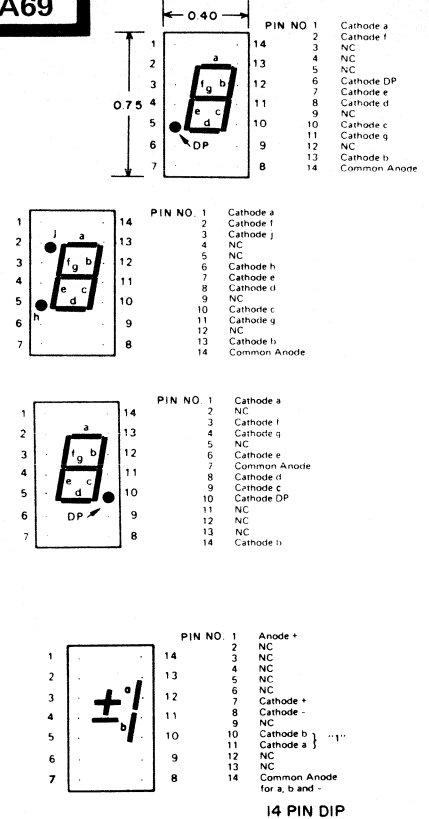
IN DRAWING NUMBER SEQUENCE

## EA68

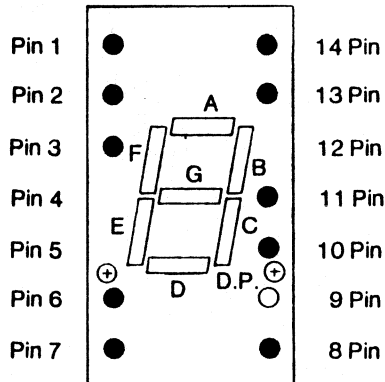
PIN	EA68 FUNCTION	PIN	EA68a FUNCTION	PIN	EA68b FUNCTION
1	INDICATOR ANODE	1	ALARM INDICATOR ANODE	1	DIGIT COMMON CATHODE
2	F ANODE DIGIT 1	2	PM INDICATOR ANODE	2	F ANODE DIGIT 1
3	E ANODE DIGIT 1	3	AM INDICATOR ANODE	3	E ANODE DIGIT 1
4	D ANODE DIGIT 1	4	COMMON CATHODE DIGIT 1 AND INDICATORS	4	D ANODE DIGIT 1
5	COMMON CATHODE DIGIT 1 AND INDICATOR	5	A ANODE	5	C ANODE DIGIT 1
6	G ANODE DIGIT 1	6	F ANODE	6	G ANODE DIGIT 1
7	C ANODE DIGIT 1	7	B ANODE	7	B ANODE DIGIT 1
8	A ANODE DIGIT 1	8	G ANODE	8	A ANODE DIGIT 1
9	B ANODE DIGIT 1	9	COMMON CATHODE DIGIT 2 AND COLONS	9	F ANODE DIGIT 2
10	F ANODE DIGIT 2	10	COLON 1 ANODE	10	G ANODE DIGIT 2
11	E ANODE DIGIT 2	11	COLON 2 ANODE	11	E ANODE DIGIT 2
12	D ANODE DIGIT 2	12	D ANODE	12	D ANODE DIGIT 2
13	COMMON CATHODE DIGIT 2	13	C ANODE	13	C ANODE DIGIT 2
14	C ANODE DIGIT 2	14	E ANODE	14	B ANODE DIGIT 2
15	G ANODE DIGIT 2	15	COMMON CATHODE DIGIT 3	15	A ANODE DIGIT 2
16	A ANODE DIGIT 2	16	COMMON CATHODE DIGIT 4 AND INDICATOR	16	COLON ANODE
17	B ANODE DIGIT 2	17	INDICATOR ANODE (OPTIONAL)	17	COLON ANODE
18	COLON ANODE			18	F ANODE DIGIT 3
19	COLON CATHODE			19	G ANODE DIGIT 3
20	F ANODE DIGIT 3			20	E ANODE DIGIT 3
21	E ANODE DIGIT 3			21	D ANODE DIGIT 3
22	D ANODE DIGIT 3			22	C ANODE DIGIT 3
23	COMMON CATHODE DIGIT 3			23	B ANODE DIGIT 3
24	G ANODE DIGIT 3			24	A ANODE DIGIT 3
25	C ANODE DIGIT 3			25	F ANODE DIGIT 4
26	A ANODE DIGIT 3			26	G ANODE DIGIT 4
27	B ANODE DIGIT 3			27	E ANODE DIGIT 4
28	F ANODE DIGIT 4			28	D ANODE DIGIT 4
29	E ANODE DIGIT 4			29	C ANODE DIGIT 4
30	D ANODE DIGIT 4			30	B ANODE DIGIT 4
31	NOT CONNECTED			31	A ANODE DIGIT 4
32	COMMON CATHODE DIGIT 4 AND INDICATOR			32	INDICATOR ANODE LEFT SIDE
33	G ANODE DIGIT 4			33	INDICATOR CATHODE LEFT SIDE
34	C ANODE DIGIT 4			34	INDICATOR ANODE LEFT SIDE
35	INDICATOR ANODE			35	INDICATOR ANODE LEFT SIDE
36	A ANODE DIGIT 4			36	INDICATOR CATHODE RIGHT SIDE
37	B ANODE DIGIT 4			37	INDICATOR ANODE RIGHT SIDE
				38	INDICATOR ANODE RIGHT SIDE
				39	INDICATOR ANODE RIGHT SIDE

## EA69

CHARACTER HEIGHT 0.33 in.

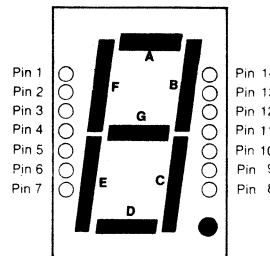


## EA72



PIN	FUNCTION
1	Cathode A
2	Cathode F
3	Common Anode
4	No Pin
5	No Pin
6	Cathode DP
7	Cathode E
8	Cathode D
9	NC
10	Cathode C
11	Cathode G
13	Cathode B
14	Common Anode

## EA75



PIN ASSIGNMENTS			
Pin No.	FUNCTION	Pin No.	FUNCTION
1	Cathode A	14	Anode
2	Cathode F	13	Cathode B
3	Anode	12	Omitted
4	Omitted	11	Cathode G
5	Omitted	10	Cathode C
6	Anode	9	Cathode DP
7	Cathode E	8	Cathode D

EA75—PINS 3, 6 & 14 ARE INTERNALLY CONNECTED.

PIN ASSIGNMENTS			
Pin No.	FUNCTION	Pin No.	FUNCTION
1	Anode A	14	Cathode
2	Anode F	13	Anode B
3	Cathode	12	Omitted
4	Omitted	11	Anode G
5	Omitted	10	Anode C
6	Cathode	9	Anode DP
7	Anode E	8	Anode D

EA75a—PINS 3, 6 & 14 ARE INTERNALLY CONNECTED.

EA75b—PINS 3 & 4 ARE INTERNALLY CONNECTED.

EA75c—PINS 3 & 4 ARE INTERNALLY CONNECTED.

# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER SEQUENCE

## EA76

### COMMON ANODE

Pin No.	Function	Pin No.	Function
1	Omitted	14	Anode
2	Cathode (H,J)	13	Cathode B
3	Omitted	12	Omitted
4	Cathode G	11	Omitted
5	Anode	10	Cathode C
6	Omitted	9	Cathode DP
7	Omitted	8	Omitted

SEGMENTS H AND J ARE INTERNALLY CONNECTED IN SERIES. PINS 5 AND 14 ARE INTERNALLY COMMONED

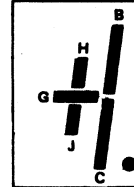
EA76

### COMMON CATHODE

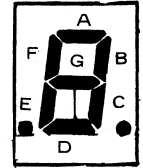
Pin No.	Function	Pin No.	Function
1	Omitted	14	Cathode
2	Anode (H,J)	13	Anode B
3	Omitted	12	Omitted
4	Anode G	11	Omitted
5	Cathode	10	Anode C
6	Omitted	9	Anode DP
7	Omitted	8	Omitted

SEGMENTS H AND J ARE INTERNALLY CONNECTED IN SERIES. PINS 5 AND 14 ARE INTERNALLY COMMONED

EA76a



EA76  
EA76a



EA76b  
EA76c

### COMMON ANODE

Pin No.	Function	Pin No.	Function
1	Cathode A	14	Anode
2	Cathode F	13	Omitted
3	Anode	12	Cathode B
4	Cathode E	11	Cathode B
5	Anode	10	Cathode C
6	Cathode D.P.	9	Anode
7	Omitted	8	Cathode D

PINS 3, 5, 9 & 14 INTERNALLY COMMONED

EA76b

### COMMON CATHODE

Pin No.	Function	Pin No.	Function
1	Anode A	14	Cathode
2	Anode F	13	Omitted
3	Cathode	12	Anode B
4	Anode E	11	Anode G
5	Cathode	10	Anode C
6	Anode D.P.	9	Cathode
7	Omitted	8	Anode D

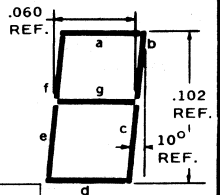
PINS 3, 5, 9 & 14 INTERNALLY COMMONED

EA76c

## EA79

PIN NUMBERS								
	1	2	3	4	5	6	7	8
EA79	Inp2	Inp4	Inp8	DECIMAL POINT	LATCH ENABLE	GND	VCC	Inp1
EA79a	Inp2	Inp4	Inp8	BLANKING CONTROL	LATCH ENABLE	GND	VCC	Inp1

## EA80



PIN No.	EA80 FUNCTION	PIN No.	EA80a FUNCTION
1	N.C.	1	DIG.1 CATHODE
2	SEG. C ANODE	2	SEG. C ANODE
3	DIG.2 CATHODE	3	DIG.2 CATHODE
4	D.P. ANODE	4	D.P. ANODE
5	DIG.3 CATHODE	5	DIG.3 CATHODE
6	SEG. a ANODE	6	SEG. a ANODE
7	DIG.4 CATHODE	7	DIG.4 CATHODE
8	SEG. c ANODE	8	SEG. c ANODE
9	DIG.5 CATHODE	9	DIG.5 CATHODE
10	SEG. d ANODE	10	SEG. d ANODE
11	DIG.6 CATHODE	11	DIG.6 CATHODE
12	SEG. e ANODE	12	SEG. e ANODE
13	DIG.7 CATHODE	13	DIG.7 CATHODE
14	SEG. b ANODE	14	SEG. b ANODE
15	DIG.8 CATHODE	15	DIG.8 CATHODE
16	SEG. f ANODE	16	SEG. f ANODE
17	DIG.9 CATHODE	17	DIG.9 CATHODE

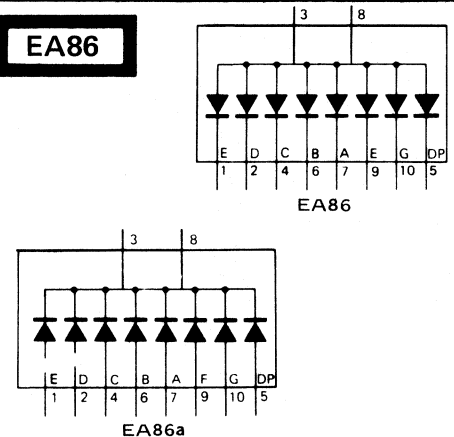
## EA84

EA84 PIN CONNECTIONS	EA84a PIN CONNECTIONS
1 DIGIT 1 C ANODE	1 DIGIT 1 C CATHODE
2 DIGIT 1 E ANODE	2 DIGIT 1 E CATHODE
3 DIGIT 1 D ANODE	3 DIGIT 1 D CATHODE
4 DIGIT COMMON CATHODE	4 DIGIT COMMON ANODE
5 DIGIT 2 COMMON CATHODE	5 DIGIT 2 COMMON ANODE
6 DIGIT 2 D ANODE	6 DIGIT 2 D CATHODE
7 DIGIT 2 E ANODE	7 DIGIT 2 E CATHODE
8 DIGIT 2 C ANODE	8 DIGIT 2 C CATHODE
9 DIGIT 2 G ANODE	9 DIGIT 2 G CATHODE
10 DIGIT 2 A ANODE	10 DIGIT 2 A CATHODE
11 DIGIT 2 F ANODE	11 DIGIT 2 F CATHODE
12 DIGIT 2 B ANODE	12 DIGIT 2 B CATHODE
13 DIGIT 1 B ANODE	13 DIGIT 1 B CATHODE
14 DIGIT 1 F ANODE	14 DIGIT 1 F CATHODE
15 DIGIT 1 A ANODE	15 DIGIT 1 A CATHODE
16 DIGIT 1 G ANODE	16 DIGIT 1 G CATHODE

## EA85

- |                   |               |
|-------------------|---------------|
| 1. Anode (common) | 10. Anode     |
| 2. Cathode A      | 11. No pin    |
| 3. Cathode F      | 12. Cathode H |
| 4. Anode          | 13. Cathode D |
| 5. No pin         | 14. Cathode C |
| 6. No pin         | 15. Cathode G |
| 7. No pin         | 16. No pin    |
| 8. Cathode E      | 17. Cathode B |
| 9. Anode          | 18. Anode     |

## EA86



EA86a

# 48. SCHEMATIC DRAWINGS

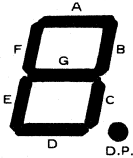
IN DRAWING NUMBER  
SEQUENCE

## EA88

- EA88  
PIN CONNECTIONS
- 1 CATHODE E
  - 2 CATHODE D
  - 3 CATHODE C
  - 4 COMMON ANODE
  - 5 CATHODE D.P.
  - 6 CATHODE B
  - 7 CATHODE G
  - 8 CATHODE A
  - 9 COMMON ANODE
  - 10 CATHODE F

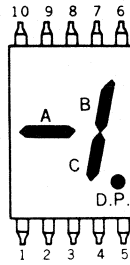
EA88a  
PIN CONNECTIONS

- 1 ANODE E
- 2 ANODE D
- 3 ANODE C
- 4 COMMON CATHODE
- 5 ANODE D.P.
- 6 ANODE B
- 7 ANODE G
- 8 ANODE A
- 9 COMMON CATHODE
- 10 ANODE F



## EA89

### PIN CONFIGURATION



- | PIN | FUNCTION     |
|-----|--------------|
| 1.  | N.C.         |
| 2.  | N.C.         |
| 3.  | Cathode C    |
| 4.  | Common Anode |
| 5.  | Cathode D.P. |
| 6.  | Cathode B    |
| 7.  | N.C.         |
| 8.  | N.C.         |
| 9.  | Common Anode |
| 10. | Cathode A    |

## EA90

### PIN CONNECTION (Top View)

- |                 |                 |
|-----------------|-----------------|
| 1. NC           | 6. NC           |
| 2. Cathode D    | 7. Cathode B    |
| 3. Cathode C    | 8. Cathode A    |
| 4. Common Anode | 9. Common Anode |
| 5. NC           | 10. NC          |

## EA91

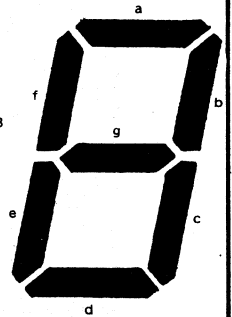
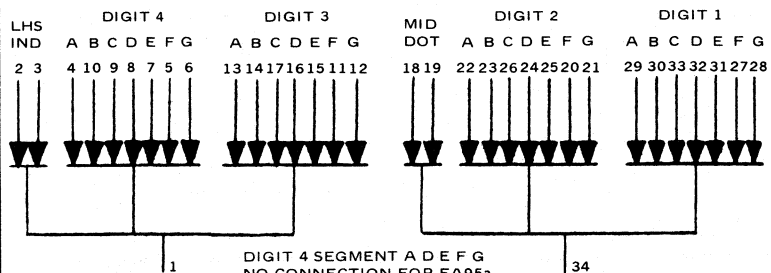
ALL VERSIONS		PINS NOT CONNECTED (NC)					
PIN CONNECTIONS		EA91	EA91a	EA91b	EA91c	EA91d	EA91e
PIN NO.	CONNECTION						
1	AM, PM 10's HOUR AND UNIT HOUR COMMON						
2	PM			NC			NC
3	AM			NC			NC
4	10's HOUR A		NC			NC	
5	" F		NC			NC	
6	" G		NC			NC	
7	" E		NC			NC	
8	" D		NC			NC	
9	" C						
10	" B						
11	UNIT HOUR F						
12	" G						
13	" A						
14	" B						
15	" E						
16	" D						
17	" C						
18	UPPER COLON						
19	LOWER COLON						
20	10's MIN. F						
21	" G						
22	" A						
23	" B						
24	" D						
25	" E						
26	" C						
27	UNIT MIN. F						
28	" G						
29	" A						
30	" B						
31	" E						
32	" D						
33	" C						
34	COLONS, 10's MIN. AND UNIT MIN.		COMMON ANODE			COMMON CATHODE	

## EA92

PIN CONNECTIONS	
PIN NO.	CONNECTION
1	AM/PM ANODE
2	AM/PM, 10's HOUR AND UNIT HOUR COMMON CATHODE
3	NC
4	NC
5	10's HOUR A ANODE
6	" F "
7	" G "
8	" E "
9	" D "
10	" C "
11	" B "
12	UNIT HOUR F "
13	" G "
14	" A "
15	" B "
16	" E "
17	" D "
18	NC
19	UNIT HOUR C ANODE
20	UPPER COLON "
21	LOWER COLON "
22	10's MIN F "
23	" G "
24	" A "
25	" B "
26	" D "
27	" F "
28	" C "
29	UNIT MIN F "
30	" G "
31	" A "
32	" B "
33	" E "
34	" D "
35	" C "
36	COLONS, 10's MIN, UNIT MIN, AND ALARM/SLEEP COMMON CATHODE
37	ALARM/SLEEP ANODE

EA92: COMMON ANODE CONNECTIONS  
EA92a: COMMON CATHODE CONNECTIONS

## EA95



REVERSE DIODE  
POLARITY FOR EA95b





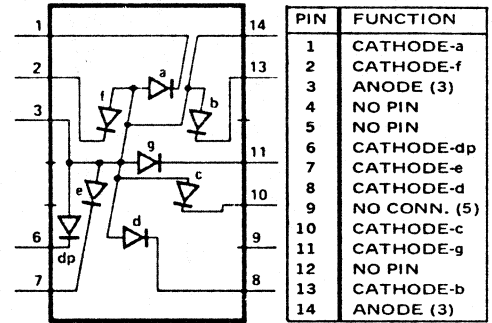
# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER SEQUENCE

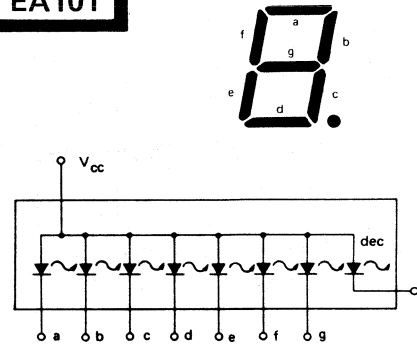
**EA99**

Pin No.	EA99 Function	EA99a Function
1	Anode Segment b	Cathode Digit 1
2	Anode Segment g	Cathode Digit 2
3	Anode Segment e	Cathode Digit 3
4	Cathode Digit 1	Cathode Digit 4
5	Cathode Digit 2	Anode Segment dp
6	Cathode Digit 3	Cathode Digit 5
7	Cathode Digit 4	Anode Segment c
8	Cathode Digit 5	Cathode Digit 6
9	Cathode Digit 6	Anode Segment e
10	Cathode Digit 7	Cathode Digit 7
11	Anode Segment dp	Anode Segment a
12	Anode Segment d	Cathode Digit 8
13	Anode Segment c	Anode Segment g
14	Anode Segment a	Cathode Digit 9
15	Anode Segment f	Anode Segment d
16		Cathode Digit 10
17		Anode Segment f
18		Cathode Digit 11
19		Anode Segment b
20		Cathode Digit 12
21		Cathode Digit 13
22		Cathode Digit 14
23		Cathode Digit 15

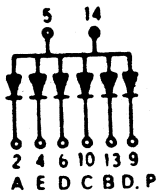
**EA100**



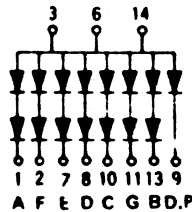
**EA101**



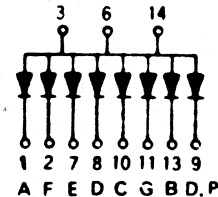
**EA102**



**EA103**

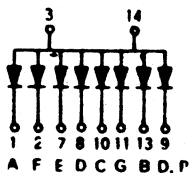


**EA104**

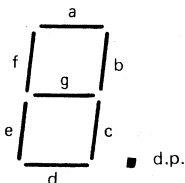


EA104a - REVERSE DIODE DIRECTION.

**EA105**



**EA106**



Pin	Connection
1	Anode e
2	Anode d.p.
3	Cathode Digit 1
4	- -
5	Cathode Digit 2
6	Cathode Digit 3
7	- -
8	Cathode Digit 4
9	Anode c
10	Anode d
11	Anode a
12	Anode f
13	Cathode Digit 4
14	- -
15	Cathode Digit 3
16	Cathode Digit 2
17	- -
18	Cathode Digit 1
19	Anode g
20	Anode b

PIN NO.	ELECTRICAL CONNECTION
1	Digit 1 Cathode
2	Digit 2 Cathode
3	Segment E Anode
4	Segment C Anode
5	Segment D Anode
6	Segment DP Anode
7	Digit 3 Cathode
8	Segment G Anode
9	Segment F Anode
10	Segment B Anode
11	Segment A Anode

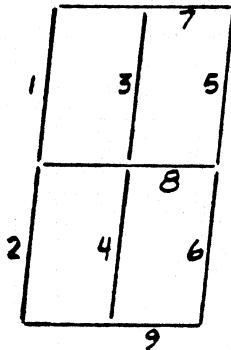
EA106a

EA106

# 48. SCHEMATIC DRAWINGS

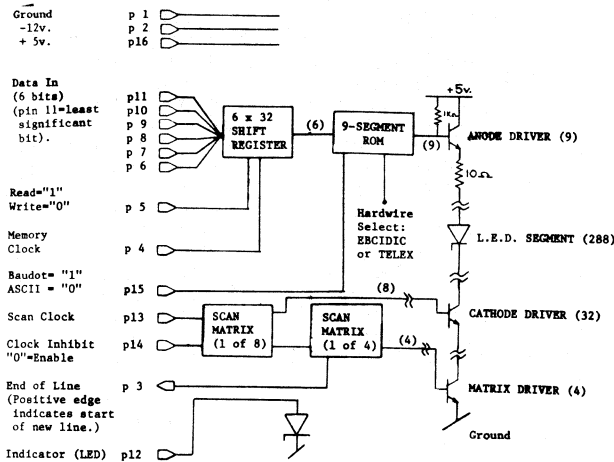
IN DRAWING NUMBER SEQUENCE

**EA107**

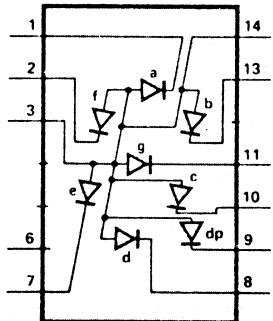


Pin 1	Cathode:	Character A
2	Anode:	Segment 2
3	"	" 8
4	"	" 9
5	"	" 6
6	"	" 4
7	Cathode:	Character C
8	Anode:	Segment 5
9	"	" 7
10	Cathode:	Character B
11	Anode:	Segment 1
12	"	" 3

**EA108**

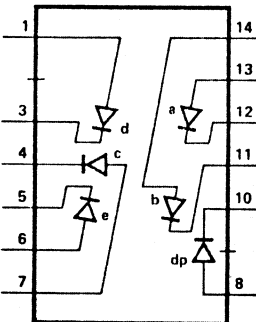


**EA109**



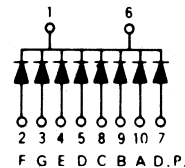
PIN	FUNCTION
1	CATHODE-a
2	CATHODE-f
3	ANODE (3)
4	NO PIN
5	NO PIN
6	NO CONN.(5)
7	CATHODE-e
8	CATHODE-d
9	CATHODE-dp
10	CATHODE-c
11	CATHODE-g
12	NO PIN
13	CATHODE-b
14	ANODE (3)

**EA110**

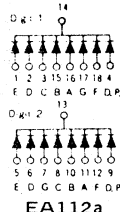
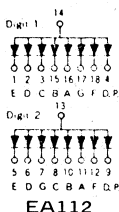


PIN	FUNCTION
1	ANODE-d
2	NO PIN
3	CATHODE-d
4	CATHODE-c
5	CATHODE-e
6	ANODE-e
7	ANODE-c
8	ANODE-dp
9	NO PIN
10	CATHODE-dp
11	CATHODE-b
12	CATHODE-a
13	ANODE-a
14	ANODE-b

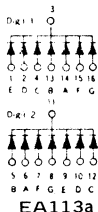
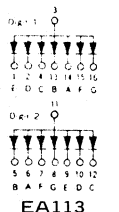
**EA111**



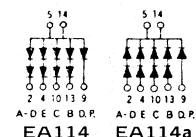
**EA112**



**EA113**



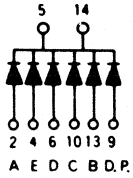
**EA114**



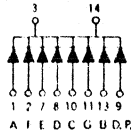
# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

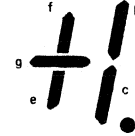
**EA115**



**EA116**



**EA117**



PIN 1 - CATHODE e  
PIN 2 - NO CONNECTION  
PIN 3 - CATHODE c  
PIN 4 - CATHODE Decimal  
PIN 5 - COMMON ANODE  
PIN 6 - CATHODE b  
PIN 7 - NO CONNECTION  
PIN 8 - CATHODE g  
PIN 9 - CATHODE f  
PIN 10 - COMMON ANODE

**EA118**

PIN NO.	ELECTRICAL CONNECTION
1	Digit 1 Anode H
2	Digit 1 Cathode H
3	Digit 1 Anode J
4	Digit 1 Cathode J
5	Digit 1 Cathode G
6	Digit 1 Anode G
7	Digit 1 Anode D.P.
8	Digit 1 Cathode D.P.
9	Digit 1 Cathode C
10	Digit 1 Anode C
11	Digit 1 Cathode B
12	Digit 1 Anode B
13	Digit 2 Anode
14	Digit 3 Anode
15	Cathode G
16	Cathode F
17	Cathode E
18	Cathode D
19	Digit 4 Anode
20	Digit 5 Anode
21	Cathode D.P.
22	Cathode C
23	Cathode B
24	Cathode A

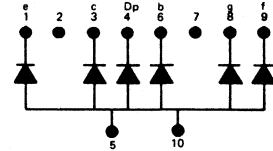
EA118

PIN NO.	ELECTRICAL CONNECTION
1	Anode G
2	Anode F
3	Anode E
4	Anode D
5	Anode A
6	Anode C
7	Anode B
8	NC
9	Anode D.P.
10	Light Sensor
11	Light Sensor
12	Cathode 1
13	Cathode 2
14	Cathode 4
15	Cathode 5
16	Cathode 3

EA118a

PIN NO.	ELECTRICAL CONNECTION
1	Cathode G
2	Cathode F
3	Cathode E
4	Cathode D
5	Cathode A
6	Cathode C
7	Cathode B
8	NC
9	Cathode D.P.
10	Light Sensor
11	Light Sensor
12	Anode 1
13	Anode 2
14	Anode 4
15	Anode 5
16	Anode 3

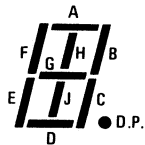
EA118b



# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

**EA119**



PIN NUMBER	EA119	EA119a	EA119b	EA119c	EA119d
1	Cathode J Digit 1	Anode G Digit 1	Cathode G Digit 1	Anode G	Cathode E
2	Cathode C Digit 1	Anode E Digit 1	Cathode E Digit 1	Anode E	Common Anode Digit 1
3	Cathode D.P. Digit 1	Anode D Digit 1	Cathode D Digit 1	NC	NC
4	Cathode G Digit 2	Anode C Digit 1	Cathode C Digit 1	Common Cathode Digit 1	Cathode C
5	Cathode E Digit 2	Anode G Digit 2	Cathode G Digit 2	Anode D	Common Anode Digit 2
6	Cathode D Digit 2	Anode E Digit 2	Cathode E Digit 2	Common Cathode Digit 2	Cathode D
7	Cathode C Digit 2	Anode D Digit 2	Cathode D Digit 2	Anode DP	Cathode DP
8	Cathode D.P. Digit 2	Anode C Digit 2	Cathode C Digit 2	Anode C	Cathode G
9	Cathode B Digit 2	Common Cathode Digits 1 and 2	Common Anode Digits 1 and 2	Anode B	Cathode B
10	NC	Anode B Digit 2	Cathode B Digit 2	NC	NC
11	Cathode A Digit 2	Anode A Digit 2	Cathode A Digit 2	NC	NC
12	Cathode F Digit 2	Anode F Digit 2	Cathode F Digit 2	NC	NC
13	Cathode B Digit 1	Anode B Digit 1	Cathode B Digit 1	Anode A	Cathode A
14	Common Anode Digits 1 and 2	Anode A Digit 1	Cathode A Digit 1	NC	NC
15	Cathode H Digit 1	Anode F Digit 1	Cathode F Digit 1	Anode F	Cathode F
16	Cathode G Digit 1	NC	NC	NC	NC

**EA120**

PIN NUMBER	EA120	EA120a	EA120b	EA120c	EA120d
1	NC	Anode G	Cathode G	Anode E Digit 1	Cathode E Digit 1
2	Cathode J Digit 1	Common Cathode Digit 1	Common Anode Digit 1	NC	NC
3	NC	Anode E	Cathode E	Anode D Digit 1	Cathode D Digit 1
4	Cathode C Digit 1	NC	NC	Anode DP Digit 1	Cathode C Digit 1
5	Cathode D.P. Digit 1	NC	NC	Anode C Digit 1	Cathode D.P. Digit 1
6	Cathode G Digit 2	NC	NC	Anode G Digit 2	Cathode G Digit 2
7	Cathode E Digit 2	Anode D	Cathode D	Anode E Digit 2	Cathode E Digit 2
8	Cathode D Digit 2	Anode D.P.	Cathode D.P.	Anode D Digit 2	Cathode D Digit 2
9	Cathode C Digit 2	Anode C	Cathode C	Anode D.P. Digit 2	Cathode C Digit 2
10	Cathode D.P. Digit 2	Common Cathode Digit 2	Common Anode Digit 2	Anode C Digit 2	Cathode D.P. Digit 2
11	Common Anode Digits 1 and 2	Anode B	Cathode B	Common Cathode Digits 1 and 2	Common Anode Digit 1 and 2
12	Cathode B Digit 2	NC	NC	Anode B Digit 2	Cathode B Digit 2
13	Cathode A Digit 2	NC	NC	Anode A Digit 2	Cathode A Digit 2
14	Cathode F Digit 2	NC	NC	Anode F Digit 2	Cathode F Digit 2
15	Cathode B Digit 1	NC	NC	Anode B Digit 1	Cathode B Digit 1
16	NC	NC	NC	Anode A Digit 1	Cathode A Digit 1
17	Cathode H Digit 1	Anode A	Cathode A	NC	NC
18	NC	Anode F	Cathode F	Anode F Digit 1	Cathode F Digit 1
19	NC	NC	NC	NC	NC
20	Cathode G Digit 1	NC	NC	Anode G Digit 1	Cathode G Digit 1



# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

## EA121

PIN NUMBER	EA121	EA121a	EA121b	EA121c	EA121d
1	NC	Anode G	Cathode G	Anode E Digit 1	Cathode E Digit 1
2	Cathode J Digit 1	Common Cathode Digit 1	Common Anode Digit 1	NC	NC
3	NC	Anode E	Cathode E	Anode D Digit 1	Cathode D Digit 1
4	Cathode C Digit 1	NC	NC	Anode C Digit 1	Cathode C Digit 1
5	Common Anode Digit 1	NC	NC	Common Cathode Digit 1	Common Anode Digit 1
6	Cathode D.P. Digit 1	NC	NC	Anode D.P. Digit 1	Cathode D.P. Digit 1
7	NC	NC	NC	NC	NC
8	Cathode E Digit 2	NC	NC	Anode E Digit 2	Cathode E Digit 2
9	Cathode D Digit 2	Anode D	Cathode D	Anode D Digit 2	Cathode D Digit 2
10	Cathode C Digit 2	Common Cathode Digit 2	Common Anode Digit 2	Anode C Digit 2	Cathode C Digit 2
11	Common Anode Digit 2	Anode D.P.	Cathode D.P.	Common Cathode Digit 2	Common Anode Digit 2
12	Cathode D.P. Digit 2	Anode C	Cathode C	Anode D.P. Digit 2	Cathode D.P. Digit 2
13	Cathode B Digit 2	Anode B	Cathode B	Anode B Digit 2	Cathode B Digit 2
14	Cathode A Digit 2	NC	NC	Anode A Digit 2	Cathode A Digit 2
15	Cathode F Digit 2	NC	NC	Anode F Digit 2	Cathode F Digit 2
16	Cathode G Digit 2	NC	NC	Anode G Digit 2	Cathode G Digit 2
17	NC	NC	NC	NC	NC
18	Cathode G Digit 1	Anode A	Cathode A	Anode G Digit 1	Cathode G Digit 1
19	Cathode B Digit 1	NC	NC	Anode B Digit 1	Cathode B Digit 1
20	NC	NC	NC	Anode A Digit 1	Cathode A Digit 1
21	Cathode H Digit 1	NC	NC	NC	NC
22	NC	NC	NC	Anode F Digit 1	Cathode F Digit 1
23	NC	Anode F	Cathode F	NC	NC
24	NC	NC	NC	NC	NC

## EA122

PIN NUMBER	EA122	EA122a	EA122b
1	NC	NC	NC
2	Cathode E	Anode E	Cathode E
3	Common Anode Digit 1	Common Cathode Digit 1	Common Anode Digit 1
4	Cathode J Digit 1	NC	NC
5	Cathode H Digit 1	NC	NC
6	Common Anode Digit 2	Common Cathode Digit 2	Common Anode Digit 2
7	Cathode D	Anode D	Cathode D
8	Cathode G	Anode G	Cathode G
9	NC	NC	NC
10	Common Anode Digit 3	Common Cathode Digit 3	Common Anode Digit 3
11	Cathode B	Anode B	Cathode B
12	Cathode A	Anode A	Cathode A
13	Cathode F	Anode F	Cathode F
14	Common Anode Digit 4	Common Cathode Digit 4	Common Anode Digit 4
15	Cathode D.P.	Anode D.P.	Cathode D.P.
16	Cathode C	Anode C	Cathode C

## EA123

PIN NUMBER	EA123	EA123a	EA123b
1	Cathode A	Anode A	Cathode A
2	NC	NC	NC
3	Cathode D	Anode D	Cathode D
4	Common Anode Digit 1	Common Cathode Digit 1	Common Anode Digit 1
5	Cathode J Digit 1	NC	NC
6	Cathode H Digit 1	NC	NC
7	Common Anode Digit 2	Common Cathode Digit 2	Common Anode Digit 2
8	Cathode C	Anode C	Cathode C
9	NC	NC	NC
10	Common Anode Digit 3	Common Cathode Digit 3	Common Anode Digit 3
11	Cathode B	Anode B	Cathode B
12	Cathode F	Anode F	Cathode F
13	Cathode E	Anode E	Cathode E
14	Common Anode Digit 4	Common Cathode Digit 4	Common Anode Digit 4
15	Cathode D.P.	Anode D.P.	Cathode D.P.
16	Cathode G	Anode G	Cathode G

# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

## EA124

PIN NUMBER	EA124	EA124a	EA124b
1	NC	NC	NC
2	Cathode H Digit 1	NC	NC
3	Cathode J Digit 1	NC	NC
4	Common Anode Digit 1	Common Cathode Digit 1	Common Anode Digit 1
5	Cathode F	Anode F	Cathode F
6	Common Anode Digit 2	Common Cathode Digit 2	Common Anode Digit 2
7	Cathode C	Anode C	Cathode C
8	Cathode D.P.	Anode D.P.	Cathode D.P.
9	Cathode G	Anode G	Cathode G
10	Cathode E	Anode E	Cathode E
11	Common Anode Digit 3	Common Cathode Digit 3	Common Anode Digit 3
12	Cathode B	Anode B	Cathode B
13	Cathode A	Anode A	Cathode A
14	Common Anode Digit 4	Common Cathode Digit 4	Common Anode Digit 4
15	Cathode D	Anode D	Cathode D

## EA125

EA125		EA125a	
PIN	FUNCTION	PIN	FUNCTION
1	CATHODE C (NO. 1)	1	E CATHODE (NO. 1)
2	CATHODE D (NO. 1)	2	D CATHODE (NO. 1)
3	CATHODE B (NO. 1)	3	C CATHODE (NO. 1)
4	D. P. CATHODE (NO. 1)	4	D. P. CATHODE (NO. 1)
5	CATHODE E (NO. 2)	5	E CATHODE (NO. 2)
6	CATHODE D (NO. 2)	6	D CATHODE (NO. 2)
7	CATHODE G (NO. 2)	7	G CATHODE (NO. 2)
8	CATHODE C (NO. 2)	8	C CATHODE (NO. 2)
9	D. P. CATHODE (NO. 2)	9	D. P. CATHODE (NO. 2)
10	CATHODE B (NO. 2)	10	B CATHODE (NO. 2)
11	CATHODE A (NO. 2)	11	A CATHODE (NO. 2)
12	CATHODE F (NO. 2)	12	F CATHODE (NO. 2)
13	ANODE DIGIT (NO. 2)	13	NO. 2 ANODE
14	ANODE D. P. (NO. 1)	14	NO. 1 ANODE
15	CATHODE A (NO. 1)	15	B CATHODE (NO. 1)
16	ANODE NO. 1 A AND B	16	A CATHODE (NO. 1)
17	N. C.	17	G CATHODE (NO. 1)
18	ANODE NO. 1 C AND D	18	F CATHODE (NO. 1)

### EA125b

PIN	FUNCTION
1	ANODE D #1
2	ANODE C #1
3	ANODE B #1
4	D.P. ANODE #1
5	ANODE E #2
6	ANODE D #2
7	ANODE G #2
8	ANODE C #2
9	D.P. ANODE #2
10	ANODE B #2
11	ANODE A #2
12	ANODE F #2
13	COMMON CATHODE #2
14	D.P. CATHODE #1
15	ANODE A #1
16	COMMON CATHODE A&B #1
17	N.C.
18	COMMON CATHODE C&D #1

## EA126

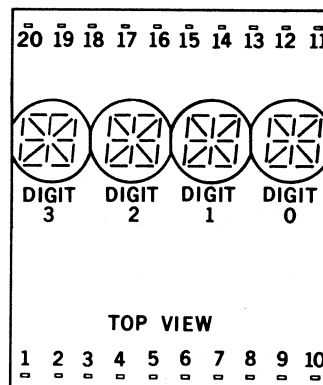
Pin	Function	Pin	Function
1	Anode 1 (Left)	8	Anode 4
2	Anode 2	9	D Cathode
3	Anode 3	10	C Cathode
4	A Cathode	11	E Cathode
5	F Cathode	12	D.P. Cathode
6	B Cathode	13	Anode 5
7	G Cathode	14	Anode 6 (Right)

### EA125c

PIN	FUNCTION
1	E ANODE NO. 1
2	D ANODE NO. 1
3	C ANODE NO. 1
4	D.P. ANODE NO. 1
5	E ANODE NO. 2
6	D ANODE NO. 2
7	G ANODE NO. 2
8	C ANODE NO. 2
9	D.P. ANODE NO. 2
10	B ANODE NO. 2
11	A ANODE NO. 2
12	F ANODE NO. 2
13	COMMON CATHODE NO. 2
14	COMMON CATHODE NO. 1
15	B ANODE NO. 1
16	A ANODE NO. 1
17	G ANODE NO. 1
18	F ANODE NO. 1

## EA127

Pin	Function	Pin	Function
1.	D5 Data Input	11.	A1 Digit Select
2.	D4 Data Input	12.	Unused
3.	D0 Data Input	13.	Unused
4.	D1 Data Input	14.	Unused
5.	D2 Data Input	15.	Unused
6.	D3 Data Input	16.	Unused
7.	CE Chip Enable	17.	Unused
8.	W Write	18.	V+
9.	CU Cursor Input	19.	V-
10.	A0 Digit Select	20.	D6 Data Input



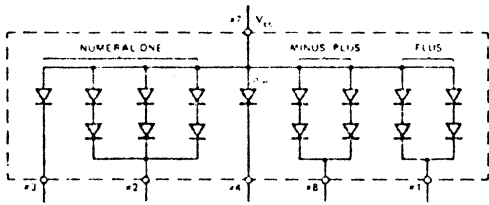
### EA125d

PIN	FUNCTION
1	Canode (No. 1)
2	D anode (No. 1)
3	B anode (No. 1)
4	DP anode (No. 1)
5	E anode (No. 2)
6	D anode (No. 2)
7	G anode (No. 2)
8	C anode (No. 2)
9	DP anode (No. 2)
10	B anode (No. 2)
11	A anode (No. 2)
12	F anode (No. 2)
13	Digit No. 2 cathode
14	Digit No. 1 cathode
15	A anode (No. 1)
16	No connection
17	No connection
18	No connection

# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER SEQUENCE

## EA128



PIN	FUNCTION
1	Plus
2	Numeral One
3	Numeral One
4	DP
5	Open
6	Open
7	V <sub>CC</sub>
8	Minus Plus

## EA129

PIN NO.	FUNCTION	PIN NO.	FUNCTION
1	Cathode A	8	Cathode D
2	Cathode F	9	Cathode R.D.P.
3	Anode Digit & D.P.	10	Cathode C
4	Omitted	11	Cathode G
5	Omitted	12	Omitted
6	Cathode L.D.P.	13	Cathode B
7	Cathode E	14	Anode Digit & D.P.

EA129

PIN NO.	FUNCTION	PIN NO.	FUNCTION
1	Anode H & G	8	Cathode G
2	Omitted	9	Cathode D.P.
3	Omitted	10	Cathode C
4	Cathode H, Anode J	11	Cathode B, Anode C
5	Omitted	12	Omitted
6	Omitted	13	Omitted
7	Cathode J	14	Anode B & D.P.

EA129b

PIN NO.	FUNCTION	PIN NO.	FUNCTION
1	Omitted	8	Omitted
2	Cathode*	9	Cathode*
3	Anode F	10	Anode D.P.
4	Anode G	11	Anode C
5	Anode E	12	Anode B
6	Anode D	13	Anode A
7	Omitted	14	Omitted

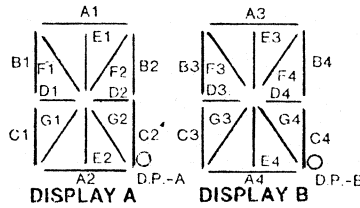
\*Pins 2 & 9 are internally connected

EA129a

## EA130

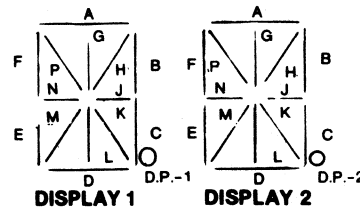
PIN NO.	FUNCTION
1	Anode D
2	NO CONNECTION
3	Anode G
4	Anode C
5	Cathode 2 Includes D.P.-A
6	Anode D.P. - Display A
7	NO CONNECTION
8	Cathode 3
9	Anode D.P. - Display B
10	Cathode 4 Includes D.P.-B
11	NO CONNECTION
12	Anode A
13	NO CONNECTION
14	Anode B
15	Cathode 1
16	NO CONNECTION
17	Anode E
18	Anode F

EA130



PIN NO.	FUNCTION
1	Anode E
2	Anode M
3	No Connection
4	Anode L
5	Anode K
6	Anode J
7	Anode D
8	Anode D.P.
9	Anode C
10	Anode B
11	Cathode-Display 2
12	Anode A
13	Anode N
14	Anode H
15	Anode G
16	Cathode-Display 1
17	Anode P
18	Anode F

EA130a



## EA132

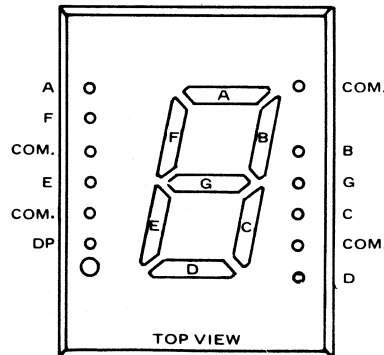
PIN	EA 132	EA132a
1	CATHODE C1	ANODE C1
2	CATHODE E1	ANODE E1
3	CATHODE D1	ANODE D1
4	ANODE 1	CATHODE 1
5	ANODE 2	CATHODE 2
6	CATHODE D2	ANODE D2
7	CATHODE E2	ANODE E2
8	CATHODE C2	ANODE C2
9	CATHODE G2	ANODE G2
10	CATHODE A2	ANODE A2
11	CATHODE F2	ANODE F2
12	CATHODE B2	ANODE B2
13	CATHODE B1	ANODE B1
14	CATHODE F1	ANODE F1
15	CATHODE A1	ANODE A1
16	CATHODE G1	ANODE G1

## EA133

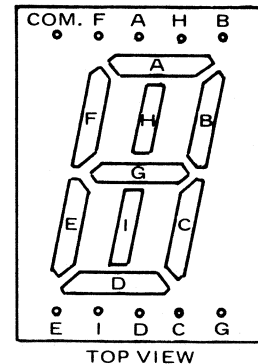
EA133 RED SURFACE  
EA133a BLACK SURFACE

PIN	FUNCTION
1	CATHODE
2	ANODE f
3	NC
4	ANODE h
5	NC
6	ANODE i
7	NC
8	ANODE e
9	CATHODE
10	CATHODE
11	ANODE d
12	NC
13	ANODE c
14	ANODE g
15	ANODE b
16	NC
17	ANODE a
18	CATHODE

## EA135



## EA136

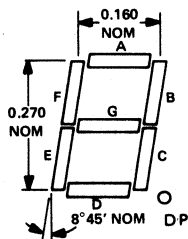


# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER SEQUENCE

**EA138**

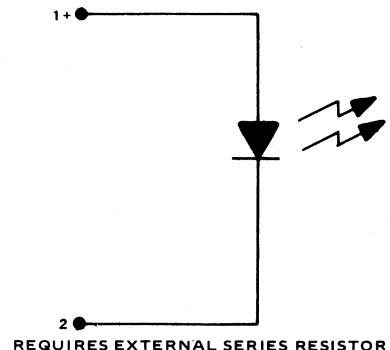
CHARACTER FONT



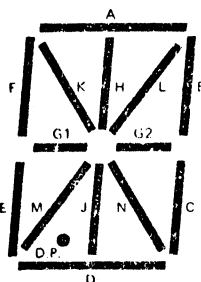
TAB	FUNCTION
1	DIGIT 1 CATHODES
2	DIGIT 4 CATHODES
3	DIGIT 3 CATHODES
4	DIGIT 2 CATHODES
5	DIGIT 5 CATHODES
6	DIGIT 6 CATHODES
7	DIGIT 7 CATHODES
8	DIGIT 8 CATHODES
9	DIGIT 9 CATHODES
10	DIGIT 10 CATHODES

TAB	FUNCTION
11	DIGIT 11 CATHODES
12	SEGMENT A ANODES
13	SEGMENT B ANODES
14	SEGMENT C ANODES
15	SEGMENT D ANODES
16	DECIMAL POINT ANODES
17	SEGMENT G ANODES
18	SEGMENT F ANODES
19	SEGMENT E ANODES
20	DIGIT 12 CATHODES

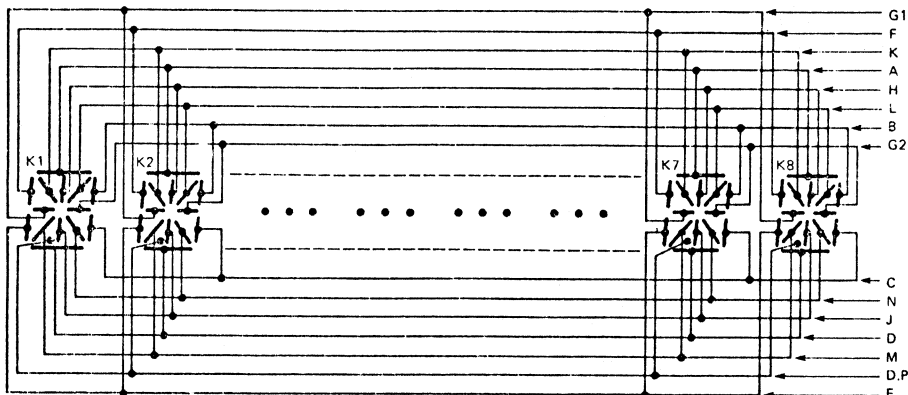
**EA139**



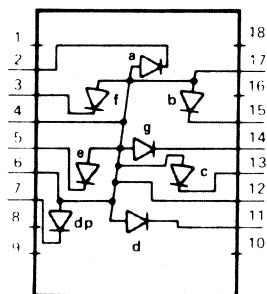
**EA141**



PIN NO.	REFERENCE DESIGNATOR	DESCRIPTION
1	K1	CATHODE
2	K2	CATHODE
3	K3	CATHODE
4	(D)	ANODE
5	K4	CATHODE
6	K5	CATHODE
7	(J)	ANODE
8	K6	CATHODE
9	(DP)	ANODE
10	K7	CATHODE
11	(M)	ANODE
12	K8	CATHODE
13		NO PIN
14	(N)	ANODE
15	(C)	ANODE
16	(E)	ANODE
17	(G2)	ANODE
18	(G1)	ANODE
19	(B)	ANODE
20	(L)	ANODE
21	(F)	ANODE
22	(K)	ANODE
23	(H)	ANODE
24	(A)	ANODE

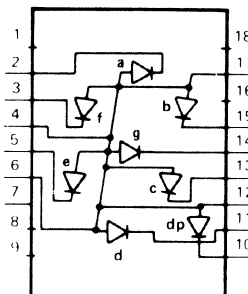


**EA142**



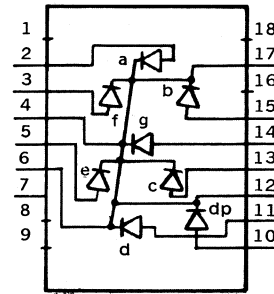
PIN	FUNCTION
1	NO PIN
2	CATHODE a
3	CATHODE f
4	ANODE *
5	CATHODE e
6	ANODE *
7	CATHODE dp
8	NO PIN
9	NO PIN
10	NO PIN
11	CATHODE d
12	ANODE *
13	CATHODE c
14	CATHODE g
15	CATHODE b
16	NO PIN
17	ANODE *
18	NO PIN
*	REDUNDANT ANODES

**EA143**



PIN	FUNCTION
1	NO PIN
2	CATHODE a
3	CATHODE f
4	ANODE *
5	CATHODE e
6	ANODE *
7	NO CONN.
8	NO PIN
9	NO PIN
10	CATHODE dp
11	CATHODE d
12	ANODE *
13	CATHODE c
14	CATHODE g
15	CATHODE b
16	NO PIN
17	ANODE *
18	NO PIN
*	REDUNDANT ANODES

**EA144**



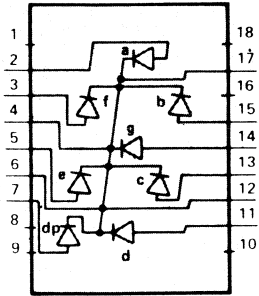
\* REDUNDANT CATHODES

PIN	FUNCTION
1	NO PIN
2	ANODE a
3	ANODE f
4	CATHODE*
5	ANODE e
6	CATHODE*
7	NO CONN.
8	NO PIN
9	NO PIN
10	ANODE dp
11	ANODE d
12	CATHODE*
13	ANODE c
14	ANODE g
15	ANODE b
16	NO PIN
17	CATHODE*
18	NO PIN

# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER SEQUENCE

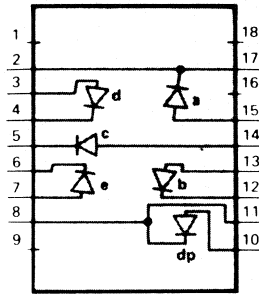
**EA145**



\* REDUNDANT CATHODES

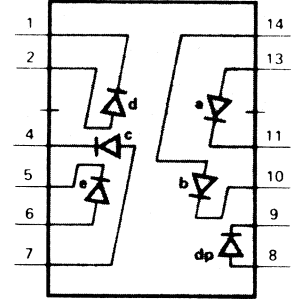
PIN	FUNCTION
1	NO PIN
2	ANODE a
3	ANODE f
4	CATHODE*
5	ANODE e
6	CATHODE*
7	ANODE dp
8	NO PIN
9	NO PIN
10	NO PIN
11	ANODE d
12	CATHODE*
13	ANODE c
14	ANODE g
15	ANODE b
16	NO PIN
17	CATHODE*
18	NO PIN

**EA146**



PIN	FUNCTION
1	NO PIN
2	CATHODE a
3	ANODE d
4	CATHODE d
5	CATHODE c
6	CATHODE e
7	ANODE e
8	CATHODE dp
9	NO PIN
10	ANODE dp
11	CATHODE dp
12	CATHODE b
13	ANODE b
14	ANODE c
15	ANODE a
16	NO PIN
17	CATHODE a
18	NO PIN

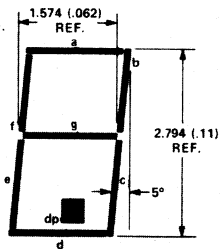
**EA147**



PIN	FUNCTION
1	CATHODE d
2	ANODE d
3	NO PIN
4	CATHODE c
5	CATHODE e
6	ANODE e
7	ANODE c
8	ANODE dp
9	CATHODE dp
10	CATHODE b
11	CATHODE a
12	NO PIN
13	ANODE a
14	ANODE b

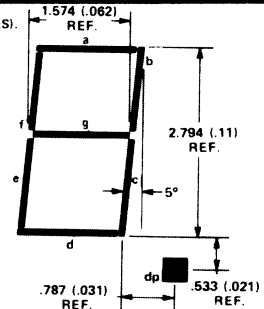
**EA149**

DIMENSIONS IN MILLIMETERS AND (INCHES).



EA149  
EA149a  
EA149b  
EA149c

DIMENSIONS IN MILLIMETERS AND (INCHES).



EA149d  
EA149e  
EA149f  
EA149g

Center Decimal Point Configuration.

Right Decimal Point Configuration

PIN NO.	EA149,d FUNCTION	EA149a,e FUNCTION	EA149b,f FUNCTION	EA149c,g FUNCTION
1	SEE NOTE 1.	CATHODE 1	CATHODE 1	CATHODE 1
2	ANODE e	ANODE e	ANODE e	ANODE e
3	ANODE c	ANODE c	ANODE c	ANODE c
4	CATHODE 3	CATHODE 3	CATHODE 3	CATHODE 3
5	ANODE dp	ANODE dp	ANODE dp	ANODE dp
6	CATHODE 4	SEE NOTE 1.	CATHODE 4	ANODE d
7	ANODE g	ANODE g	ANODE g	CATHODE 5
8	ANODE d	ANODE d	ANODE d	ANODE g
9	ANODE f	ANODE f	ANODE f	CATHODE 4
10	CATHODE 2	CATHODE 2	CATHODE 2	ANODE f
11	ANODE b	ANODE b	ANODE b	(See Note 1)
12	ANODE a	ANODE a	ANODE a	ANODE b
13	-	-	-	CATHODE 2
14	-	-	-	ANODE a

NOTE 1: LEAVE PIN UNCONNECTED

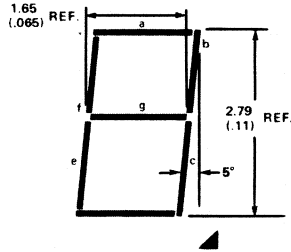


# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER SEQUENCE

## EA150

EA150  
EA150a

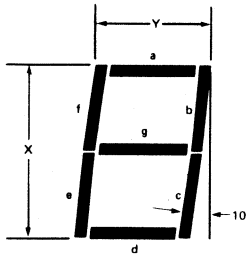


DIMENSIONS IN MILLIMETERS AND (INCHES).

PIN NUMBER	EA150 FUNCTION	EA150a FUNCTION
1	SEE NOTE 1.	CATHODE 1
2	ANODE e	ANODE e
3	ANODE d	ANODE d
4	CATHODE 2	CATHODE 2
5	ANODE c	ANODE c
6	ANODE dp	ANODE dp
7	CATHODE 3	CATHODE 3
8	ANODE b	ANODE b
9	ANODE g	ANODE g
10	ANODE a	ANODE a
11	ANODE f	ANODE f
12	SEE NOTE 1.	SEE NOTE 1.

NOTE 1: LEAVE PIN UNCONNECTED.

## EA151



	X	Y
EA151	2.54 (.100)	1.42 (.056)
EA151a	2.54 (.100)	1.40 (.056)
EA151b	2.54 (.100)	1.42 (.056)
EA151c	2.92 (.115)	1.40 (.056)
EA151d	2.84 (.112)	1.40 (.056)

NOTES 1. ALL DIMENSIONS IN MILLIMETRES AND (INCHES)  
2. TOLERANCES ON ALL DIMENSIONS ARE .038 (.015) UNLESS OTHERWISE SPECIFIED

Pin No.	EA151 EA151a EA151d Function	EA151b Function	EA151c Function
1	Cathode-Digit 1	Anode-Segment a	Cathode-Digit 1
2	Cathode-Digit 2	Anode-Segment f	Cathode-Digit 2
3	Cathode-Digit 3	Anode-Segment b	Cathode-Digit 3
4	Anode-Segment c	Anode-Segment c	Cathode-Digit 4
5	Cathode-Digit 4	Anode-Segment d	Cathode-Digit 5
6	Anode-DP	Anode-Segment DP	Anode-Segment e
7	Cathode-Digit 5	Anode-Segment e	Cathode-Digit 6
8	Anode-Segment a	Anode-Segment g	Anode-Segment d
9	Cathode-Digit 6	Cathode-Digit 3	Cathode-Digit 7
10	Anode-Segment e	Cathode-Digit 2	Anode-Segment a
11	Cathode-Digit 7	Cathode-Digit 4	Cathode-Digit 8
12	Anode-Segment d	Cathode-Digit 1	Anode-Segment DP
13	Cathode-Digit 8	Cathode-Digit 5	Cathode-Digit 9
14	Anode-Segment g	Cathode-Digit 12	Anode-Segment c
15	Cathode-Digit 9	Cathode-Digit 6	Cathode-Digit 10
16	Anode-Segment b	Cathode-Digit 11	Anode-Segment g
17	Cathode-Digit 10	Cathode-Digit 7	Cathode-Digit 11
18	Anode-Segment f	Cathode-Digit 10	Anode-Segment b
19	Cathode-Digit 11	Cathode-Digit 9	Cathode-Digit 12
20	Cathode-Digit 12	Cathode-Digit 8	Anode-Segment f
21	Cathode-Digit 13		Cathode-Digit 13
22	Cathode-Digit 14		Cathode-Digit 14
23			Cathode-Digit 15
24			Cathode-Digit 16

## EA152

EA152				EA152a				EA152b			
Pin	Function	Pin	Function	Pin	Function	Pin	Function	Pin	Function	Pin	Function
1	Anode G	12	Anode B	1	N/C	15	Anode C	1	N/C	19	5e
2	1c	13	3d	2	1c	16	4c	2	1c	20	5c
3	1d	14	3b	3	1e	17	4a	3	1e	21	5a
4	Anode F	15	Anode A	4	Anode G	18	Anode B	4	Anode F	22	Anode D
5	Anode E	16	2e	5	2b	19	3e	5	2b	23	4e
6	2b	17	2c	6	2d	20	3b	6	2d	24	4c
7	2d	18	2a	7	Anode D	21	3a	7	2e	25	N/C
8	Anode C	19	Anode D	8	Anode E	22	2e	8	Anode E	26	Anode C
9	3a	20	1e	9	3c	23	2c	9	3c	27	3d
10	3c	21	1b	10	3d	24	2a	10	3e	28	3b
11	3e	22	1a	11	Anode F	25	Anode A	11	Anode G	29	3a
				12	4b	26	1d	12	4a	30	Anode B
				13	4d	27	1b	13	4b	31	2c
				14	4e	28	1a	14	4d	32	2a
								15	N/C	33	Anode A
								16	5b	34	1d
								17	5d	35	1b
								18	N/C	36	1a

# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER SEQUENCE

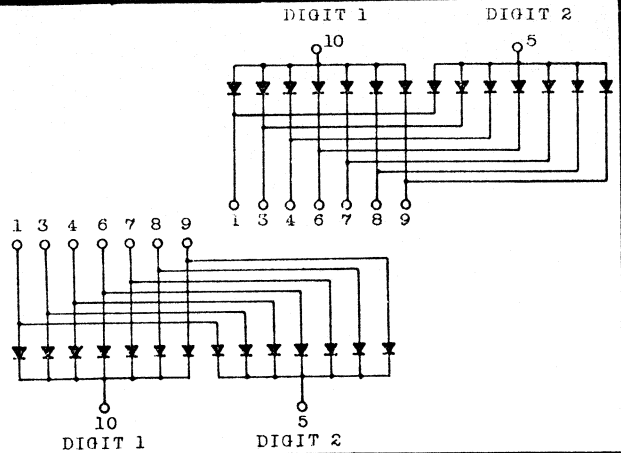
## EA160

EA160

PIN No.	Symbol	Function
1	G	ANODE
2	NO PIN	
3	A	ANODE
4	F	ANODE
5	DIGIT 2	COMMON CATHODE
6	D	ANODE
7	E	ANODE
8	C	ANODE
9	B	ANODE
10	DIGIT 1	COMMON CATHODE

EA160a

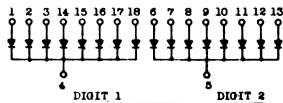
PIN No.	Symbol	Function
1	G	CATHODE
2	NO PIN	
3	A	CATHODE
4	F	CATHODE
5	DIGIT 2	COMMON ANODE
6	D	CATHODE
7	E	CATHODE
8	C	CATHODE
9	B	CATHODE
10	DIGIT 1	COMMON ANODE



## EA161

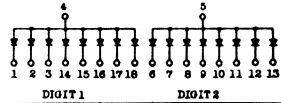
EA161

PIN No.	Function
1	DIGIT 1 C ANODE
2	DIGIT 1 E ANODE
3	DIGIT 1 D ANODE
4	DIGIT 1 COMMON CATHODE
5	DIGIT 2 COMMON CATHODE
6	DIGIT 2 D ANODE
7	DIGIT 2 E ANODE
8	DIGIT 2 C ANODE
9	DIGIT 2 Dp ANODE
10	DIGIT 2 G ANODE
11	DIGIT 2 A ANODE
12	DIGIT 2 F ANODE
13	DIGIT 2 B ANODE
14	DIGIT 1 B ANODE
15	DIGIT 1 F ANODE
16	DIGIT 1 A ANODE
17	DIGIT 1 G ANODE
18	DIGIT 1 Dp ANODE



EA161a

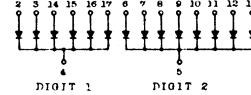
PIN No.	Function
1	DIGIT 1 C CATHODE
2	DIGIT 1 E CATHODE
3	DIGIT 1 D CATHODE
4	DIGIT 1 COMMON ANODE
5	DIGIT 2 COMMON ANODE
6	DIGIT 2 D CATHODE
7	DIGIT 2 E CATHODE
8	DIGIT 2 C CATHODE
9	DIGIT 2 Dp CATHODE
10	DIGIT 2 G CATHODE
11	DIGIT 2 A CATHODE
12	DIGIT 2 F CATHODE
13	DIGIT 2 B CATHODE
14	DIGIT 1 B CATHODE
15	DIGIT 1 F CATHODE
16	DIGIT 1 A CATHODE
17	DIGIT 1 G CATHODE
18	DIGIT 1 Dp CATHODE



EA161b

EA161b

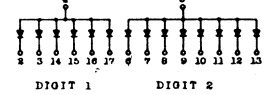
PIN No.	Function
1	NC
2	DIGIT 1 Dp ANODE
3	DIGIT 1 B ANODE
4	DIGIT 1 COMMON CATHODE
5	DIGIT 2 COMMON CATHODE
6	DIGIT 2 D ANODE
7	DIGIT 2 E ANODE
8	DIGIT 2 C ANODE
9	DIGIT 2 Dp ANODE
10	DIGIT 2 G ANODE
11	DIGIT 2 A ANODE
12	DIGIT 2 F ANODE
13	DIGIT 2 B ANODE
14	DIGIT 1 A ANODE
15	DIGIT 1 D <sub>L</sub> ANODE
16	DIGIT 1 C ANODE
17	DIGIT 1 D <sub>U</sub> ANODE
18	NC



EA161c

EA161c

PIN No.	Function
1	NC
2	DIGIT 1 Dp CATHODE
3	DIGIT 1 B CATHODE
4	DIGIT 1 COMMON ANODE
5	DIGIT 2 COMMON ANODE
6	DIGIT 2 D CATHODE
7	DIGIT 2 E CATHODE
8	DIGIT 2 C CATHODE
9	DIGIT 2 Dp CATHODE
10	DIGIT 2 G CATHODE
11	DIGIT 2 A CATHODE
12	DIGIT 2 F CATHODE
13	DIGIT 2 B CATHODE
14	DIGIT 1 A CATHODE
15	DIGIT 1 D <sub>L</sub> CATHODE
16	DIGIT 1 C CATHODE
17	DIGIT 1 D <sub>U</sub> CATHODE
18	NC



## EA163

EA163

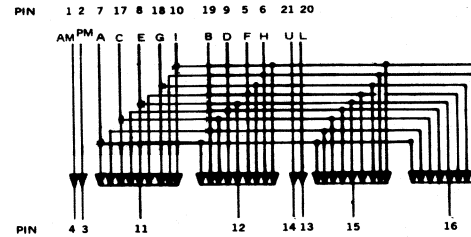
PIN	FUNCTION	PIN	FUNCTION
1	Input 1	5	Input 4
2	V <sub>OP</sub>	6	Ground
3	V <sub>LED</sub>	7	V <sub>CC</sub>
4	Input 8	8	Input 2

EA163a

PIN	FUNCTION	PIN	FUNCTION
1	NC	5	NC
2	NC	6	Ground
3	Plus	7	Minus/Plus
4	NC	8	NC

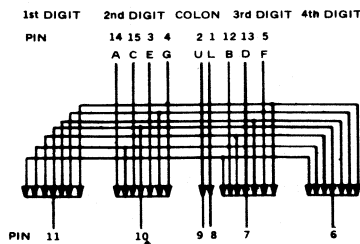
## EA164

MSG. CTR. 1st DIGIT 2nd DIGIT COLON 3rd DIGIT 4th DIGIT



PIN NO	ELECTRICAL CONNECTIONS
1	AM ANODE (UP MSG. CTR.)
2	PM ANODE (LOWER MSG. CTR.)
3	PM CATHODE
4	AM CATHODE
5	F ANODE
6	H ANODE
7	A ANODE
8	E ANODE
9	D ANODE
10	I ANODE
11	1st DIGIT CATHODE
12	2nd DIGIT CATHODE
13	LOWER COLON CATHODE
14	UP COLON CATHODE
15	3rd DIGIT CATHODE
16	4th DIGIT CATHODE
17	C ANODE
18	S ANODE
19	B ANODE
20	LOWER COLON ANODE
21	UP COLON ANODE

## EA165



PIN	ASSIGNMENT	PIN	ASSIGNMENT
1	COLON ANODE-LOWER	9	COLON CATHODE-UPPER
2	COLON ANODE-UPPER	10	DIGIT DRIVE 2
3	E CATHODE	11	DIGIT DRIVE 1
4	G CATHODE	12	B CATHODE
5	F CATHODE	13	D CATHODE
6	DIGIT DRIVE 4	14	A CATHODE
7	DIGIT DRIVE 3	15	C CATHODE
8	COLON CATHODE-LOWER		

# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

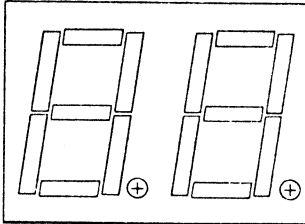
## EA166

**EA166**  
 PIN 1 CATHODE E  
 PIN 2 CATHODE D  
 PIN 3 ANODE: DIGIT &  
 DECIMAL  
 PIN 4 CATHODE C  
 PIN 5 CATHODE DECIMAL  
 PIN 6 CATHODE B  
 PIN 7 CATHODE A  
 PIN 8 ANODE: DIGIT &  
 DECIMAL  
 PIN 9 CATHODE F  
 PIN 10 CATHODE G

**EA166a**  
 PIN 1 ANODE E  
 PIN 2 ANODE D  
 PIN 3 CATHODE: DIGIT &  
 DECIMAL  
 PIN 4 ANODE C  
 PIN 5 ANODE DECIMAL  
 PIN 6 ANODE B  
 PIN 7 ANODE A  
 PIN 8 CATHODE: DIGIT &  
 DECIMAL  
 PIN 9 ANODE F  
 PIN 10 ANODE G

**EA166b**  
 PIN 1 CATHODE MINUS SIGN  
 PIN 2 NO INTERNAL  
 CONNECTION  
 PIN 3 ANODE: PLUS/MINUS  
 ONE & DECIMAL  
 PIN 4 CATHODE C  
 PIN 5 CATHODE DECIMAL  
 PIN 6 CATHODE B  
 PIN 7 NO INTERNAL  
 CONNECTION  
 PIN 8 ANODE: PLUS/MINUS  
 ONE & DECIMAL  
 PIN 9 CATHODE PLUS SIGN  
 PIN 10 NO INTERNAL  
 CONNECTION

## EA169



**EA169**  
 PIN ASSIGNMENT  
 1 E Cath. Digit 1  
 2 D Cath. Digit 1  
 3 C Cath. Digit 1  
 4 DP Cath. Digit 1  
 5 E Cath. Digit 2  
 6 D Cath. Digit 2  
 7 G Cath. Digit 2  
 8 C Cath. Digit 2  
 9 DP Cath. Digit 2  
 10 B Cath. Digit 2  
 11 A Cath. Digit 2  
 12 F Cath. Digit 2  
 13 Digit 2 Anode  
 14 Digit 1 Anode  
 15 B Cath. Digit 1  
 16 A Cath. Digit 1  
 17 G Cath. Digit 1  
 18 F Cath. Digit 1

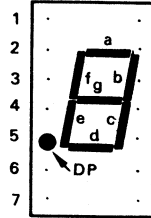
**EA169a**  
 PIN ASSIGNMENT  
 1 C Cath. Digit 1  
 2 D Cath. Digit 1  
 3 B Cath. Digit 1  
 4 DP Cath. Digit 1  
 5 E Cath. Digit 2  
 6 D Cath. Digit 2  
 7 G Cath. Digit 2  
 8 C Cath. Digit 2  
 9 DP Cath. Digit 2  
 10 B Cath. Digit 2  
 11 A Cath. Digit 2  
 12 F Cath. Digit 2  
 13 Digit 2 Anode  
 14 Digit 1 Anode  
 15 A Cath. Digit 1  
 16 No Connection  
 17 No Connection  
 18 No Connection

## EA170

Contact	FUNCTION	
	EA170	EA170a
1	+5 V Logic Supply	NC
2	Decimal Point	Decimal Point
3	BDC Input A	Segment D
4	BCD Input B	Segment F
5	BCD Input C	Segment G
6	BCD Input D	Segment C
7	Ground	Segment E
8	Blanking Input/Ripple Blanking Output	Segment A
9	Ripple Blanking Input	Segment B
10	+15 V LED Supply	+15 LED Supply
PAD	Lamp Test	NC

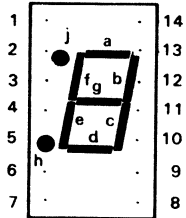
## EA172

**EA172**  
 PIN NO.  
 1 Cathode a  
 2 Cathode f  
 3 NC  
 4 NC  
 5 NC  
 6 Cathode DP  
 7 Cathode e  
 8 Cathode d  
 9 NC  
 10 Cathode c  
 11 Cathode g  
 12 NC  
 13 Cathode b  
 14 Common Anode



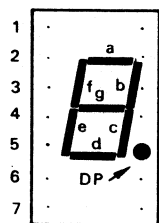
## EA173

**EA173**  
 PIN NO.  
 1 Cathode a  
 2 Cathode f  
 3 Cathode j  
 4 NC  
 5 NC  
 6 Cathode h  
 7 Cathode e  
 8 Cathode d  
 9 NC  
 10 Cathode c  
 11 Cathode g  
 12 NC  
 13 Cathode b  
 14 Common Anode



## EA174

**EA174**  
 PIN NO.  
 1 Cathode a  
 2 NC  
 3 Cathode f  
 4 Cathode g  
 5 NC  
 6 Cathode e  
 7 Common Anode  
 8 Cathode d  
 9 Cathode c  
 10 NC  
 11 NC  
 12 NC  
 13 Cathode DP  
 14 Cathode b



# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

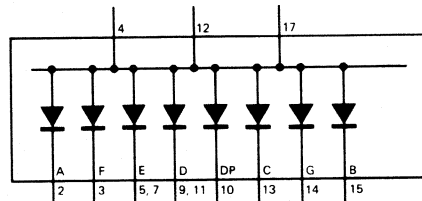
## EA175

PIN NO.	ELECTRICAL CONNECTIONS				
	EA175	EA175a	EA175b	EA175c	EA175d
1	Cathode A	Cathode A	Anode C, D	Anode F	Anode C, D
2	Cathode F	Cathode F	No pin	Anode G	No Pin
3	Common anode	Common anode	Anode C, D	No pin	Anode C, D
4	No pin	No pin	No pin	Common cathode	No Pin
5	No pin	No pin	No pin	No pin	No Pin
6	N.C.	Cathode D.P.	No pin	Anode E	NC
7	Cathode E	Cathode E	Cathode D	Anode D	Cathode D
8	Cathode D	Cathode D	Cathode C	Anode C	Cathode C
9	Cathode D.P.	N.C.	N.C.	Anode D.P.	Cathode DP
10	Cathode C	Cathode C	Cathode B	No pin	Cathode B
11	Cathode G	Cathode G	Cathode A	No pin	Cathode A
12	No pin	No pin	No pin	Common cathode	No Pin
13	Cathode B	Cathode B	No pin	Anode B	No Pin
14	Common anode	Common anode	Anode A, B	Anode A	Anode A, B, & DP

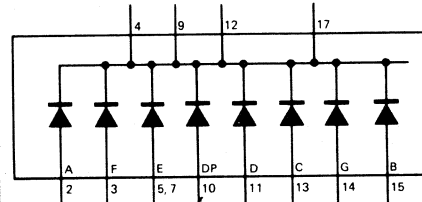
## EA176

PIN NO.	EA176	EA176a
1	Cathode a	Anode a
2	Cathode f	Anode f
3	Common Anode	common Cathode
4	-	-
5	-	-
6	-	-
7	Cathode e	Anode e
8	Cathode d	Anode d
9	Cathode dp	Anode dp
10	Cathode c	Anode c
11	Cathode g	Anode g
12	-	-
13	Cathod b	Anode b
14	Common Anode	Common Cathode

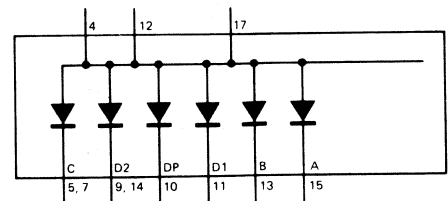
## EA177



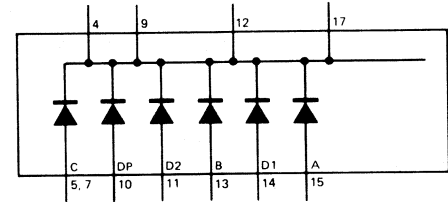
EA177



EA177b

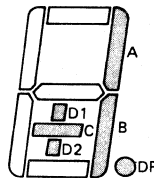


EA177a

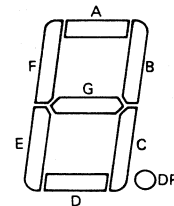


EA177c

EA177 AND EA177b



EA177a AND EA177c

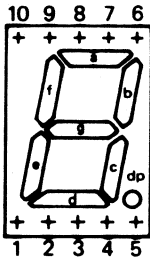


PIN #	EA177	EA177a	EA177b	EA177c
1	No Connection	No Connection	No Connection	No Connection
2	A Cathode	No Connection	A Anode	No Connection
3	F Cathode	No Connection	F Anode	No Connection
4	Common Anode	Common Anode	Common Cathode	Common Cathode
5	E Cathode	C Cathode	E Anode	C Anode
6	-	-	-	-
7	E Cathode	C Cathode	E Anode	C Anode
8	-	-	-	-
9	D Cathode	D2 Cathode	Common Cathode	Common Cathode
10	DP Cathode	DP Anode	DP Anode	DP Anode
11	D Cathode	D1 Cathode	D Anode	D2 Anode
12	Common Anode	Common Anode	Common Cathode	Common Cathode
13	C Cathode	B Cathode	C Anode	B Anode
14	G Cathode	D2 Cathode	G Anode	D1 Anode
15	B Cathode	A Cathode	B Anode	A Anode
16	-	-	-	-
17	Common Anode	Common Anode	Common Cathode	Common Cathode
18	-	-	-	-

# 48. SCHEMATIC DRAWINGS

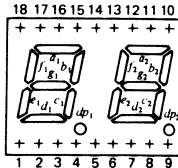
IN DRAWING NUMBER SEQUENCE

**EA178**



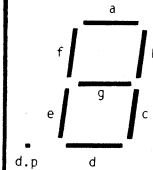
PIN NO.	EA178	EA178a
1	Cathode e	Anode e
2	Cathode d	Anode d
3	Common Anode	Common Cathode
4	Cathode c	Anode c
5	Cathode dp	Anode dp
6	Cathode b	Anode b
7	Cathode a	Anode a
8	Common Anode	Common Cathode
9	Cathode f	Anode f
10	Cathode g	Anode g

**EA179**



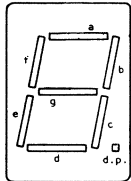
PIN NO.	EA179	EA179a
1	Cathode e	Anode e
2	Cathode d	Anode d
3	Cathode c	Anode c
4	Cathode dp	Anode dp
5	Cathode e	Anode e
6	Cathode d	Anode d
7	Cathode g	Anode g
8	Cathode c	Anode c
9	Cathode dp	Anode dp
10	Cathode b	Anode b
11	Cathode a	Anode a
12	Cathode f	Anode f
13	Common Anode	Common Cathode
14	Common Anode	Common Cathode
15	Cathode b	Anode b
16	Cathode g	Anode g
17	Cathode f	Anode f
18	Cathode f	Anode f

**EA180**



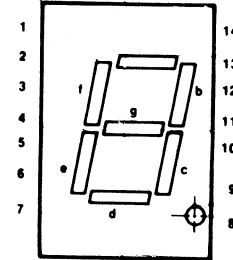
Pin	Connection
1	Anode e
2	Anode d.p.
3	Cathode Digit 1
4	N/C
5	Cathode Digit 2
6	Cathode Digit 3
7	N/C
8	Cathode Digit 4
9	Anode c & 1/2 digit lower bar
10	Anode d & 1/2 vertical bar
11	Anode a
12	Anode f
13	Cathode Digit 4
14	Cathode 1/2 digit
15	Cathode Digit 3
16	Cathode Digit 2
17	Cathode 1/2
18	Cathode Digit 1
19	Anode g & 1/2 horizontal bar
20	Anode b & 1/2 digit upper bar

**EA181**



PIN	CONNECTIONS
1	Cathode a
2	Cathode f
3	Common anode
4	Cathode d.p.
5	No connection
6	No connection
7	Cathode e
8	Cathode d
9	Common anode
10	Cathode c
11	Cathode g
12	No connection
13	Cathode b
14	Common anode

**EA182**



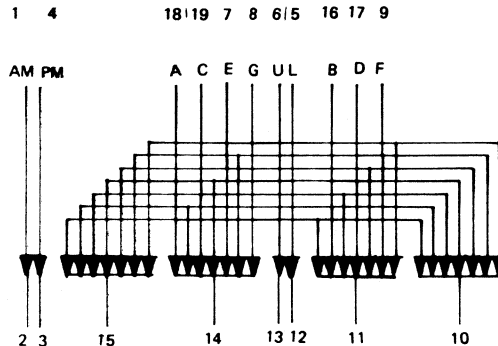
PIN	FUNCTION	PIN	FUNCTION	PIN	FUNCTION	PIN	FUNCTION
1	Anode a	4	N.C.	7	Anode e	11	Anode g
2	Anode f	5	N.C.	8	Anode d	12	N.C.
3	Cathode	6	N.C.	9	Anode d p	13	Anode b
				10	Anode c	14	Cathode

**EA183**

PIN	ASSIGNMENT
1	AM ANODE
2	AM CATHODE
3	PM CATHODE
4	PM ANODE
5	COLON ANODE-LOWER
6	COLON ANODE-UPPER
7	E ANODE
8	G ANODE
9	F ANODE
10	4th DIGIT CATHODE

PIN	ASSIGNMENT
11	3rd DIGIT CATHODE
12	COLON CATHODE-LOWER
13	COLON CATHODE-UPPER
14	2nd DIGIT CATHODE
15	1st DIGIT CATHODE
16	B ANODE
17	D ANODE
18	A ANODE
19	C ANODE

1st DIGIT 2nd DIGIT COLON 3rd DIGIT 4th DIGIT



**EA185**

Pin	Function
1	Cathode D1
2	Anode E
3	Anode D
4	Cathode D2
5	Anode C
6	Anode DP
7	Cathode D3
8	Anode B
9	Anode G
10	Anode A
11	Anode F
12	No Pin

**EA186**

Pin	Function
1	Anode 1
2	DP Cathode 1
3	A Cathode
4	F Cathode
5	B Cathode
6	D Cathode
7	C Cathode
8	E Cathode
9	G Cathode
10	Anode 2
11	DP Cathode 2

**EA187**

EA187		EA187a	
Pin	Function	Pin	Function
1	Cathode 1	1	Anode 1
2	DP Anode 1	2	DP Cathode 1
3	A Anode	3	A Cathode
4	F Anode	4	F Cathode
5	B Anode	5	B Cathode
6	D Anode	6	D Cathode
7	Cathode 2	7	Anode 2
8	DP Anode 2	8	DP Cathode 2
9	C Anode	9	C Cathode
10	E Anode	10	E Cathode
11	G Anode	11	G Cathode
12	Cathode 3	12	Anode 3
13	DP Anode 3	13	DP Cathode 3

**EA188**

Pin	Function
1	Anode 1
2	DP Cathode 1
3	A Cathode
4	F Cathode
5	B Cathode
6	D Cathode
7	Anode 2
8	DP Cathode 2
9	Anode 3
10	DP Cathode 3
11	C Cathode
12	E Cathode
13	G Cathode
14	Anode 4
15	DP Cathode 4



# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

## EA189

Pin	Function	Pin	Function
1	F Anode	9	Digit 4 Cathode
2	H Anode	10	Not Used
3	D Anode	11	A Anode
4	E Anode	12	G Anode
5	D.P. Anode	13	B Anode
6	Digit 1 Cathode	14	C Anode
7	Digit 2 Cathode	15	J Anode
8	Digit 3 Cathode		

## EA190

TAB	FUNCTION
1	PM INDICATOR CATHODE
2	PM INDICATOR ANODE
3	D-SEGMENT ANODES
4	C-SEGMENT ANODES
5	B-SEGMENT ANODES
6	A-SEGMENT ANODES
7	E-SEGMENT ANODES
8	F-SEGMENT ANODES
9	G-SEGMENT ANODES
10	DIGIT 1 & ALARM INDICATOR CATHODES
11	DIGIT 2 CATHODES
12	COLON SEGMENT H ANODE
13	COLON SEGMENT J ANODE
14	COLON SEGMENT N & DIGIT 4 CATHODE
15	ALARM INDICATOR ANODE
16	COLON SEGMENT J & DIGIT 3 CATHODE

## EA191

PIN	FUNCTION	PIN	FUNCTION
1	COMMON ANODE	25	CATHODE DIGIT 1 SEG C
2	CATHODE AM/PM INDICATOR	26	CATHODE DIGIT 1 SEG G
3	CATHODE DIGIT 4 SEG B	27	CATHODE DIGIT 1 SEG B
4	CATHODE DIGIT 4 SEG C	28	CATHODE DIGIT 1 SEG A
5	CATHODE DIGIT 3 SEG A		
6	CATHODE DIGIT 3 SEG F		
7	CATHODE DIGIT 3 SEG G		
8	CATHODE DIGIT 3 SEG E		
9	CATHODE DIGIT 3 SEG D		
10	CATHODE DIGIT 3 SEG C		
11	CATHODE DIGIT 3 SEG B		
12	CATHODE ALARM INDICATOR		
13	CATHODE COLON 1		
14	CATHODE COLON 2		

## EA192

Pin	Function	Pin	Function
1	Cathode 1 (left)	8	Cathode 4
2	Cathode 2	9	D Anode
3	Cathode 3	10	C Anode
4	A Anode	11	E Anode
5	F Anode	12	D.P. Anode
6	B Anode	13	Cathode 5
7	G Anode	14	Cathode 6 (right)

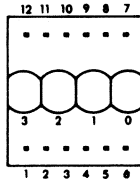
## EA193

EA193		EA193a		EA193b	
Pin	Function	Pin	Function	Pin	Function
1	Cathode -a	1	Cathode -a	1	Anode -a
2	Cathode -f	2	Cathode -f	2	Anode -f
3	Anode	3	Anode	3	Cathode
4	No Pin	4	No Pin	4	No Pin
5	No Pin	5	No Pin	5	No Pin
6	Cathode -d.p.	6	No Conn.	6	No Conn.
7	Cathode -e	7	Cathode -e	7	Anode -e
8	Cathode -d	8	Cathode -d	8	Anode -d
9	No Conn.	9	Cathode -d.p.	9	Anode -d.p.
10	Cathode -c	10	Cathode -c	10	Anode -c
11	Cathode -g	11	Cathode -g	11	Anode -g
12	No Pin	12	No Pin	12	No Pin
13	Cathode -b	13	Cathode -b	13	Anode -b
14	Anode	14	Anode	14	Cathode

## EA194

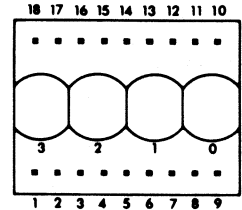
Pin	Function	Pin	Function
1	Cathode -d	8	Anode -d.p.
2	Anode -d	9	Cathode -d.p.
3	No Pin	10	Cathode -b
4	Cathode -c	11	Cathode -a
5	Cathode -e	12	No Pin
6	Anode -e	13	Anode -a
7	Anode -c	14	Anode -b

## EA195



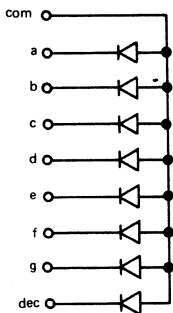
Pin	Function	Pin	Function
1	Gnd	7	D5 Data Input
2	D0 Data Input	8	D4 Data Input
3	D1 Data Input	9	WR Write
4	D2 Data Input	10	A1 Digit Select
5	D3 Data Input	11	A0 Digit Select
6	D6 Data Input	12	VCC

## EA196

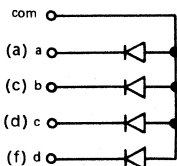


Pin	Function	Pin	Function
1	CE2 Chip Enable	10	Gnd
2	CE3 Chip Enable	11	D0 Data Input
3	CLR Clear	12	D1 Data Input
4	CUE Cursor Enable	13	D2 Data Input
5	CU Cursor Select	14	D3 Data Input
6	WR Write	15	D6 Data Input
7	A1 Digit Select	16	D5 Data Input
8	A0 Digit Select	17	D4 Data Input
9	VCC	18	CE1 Chip Enable

## EA197

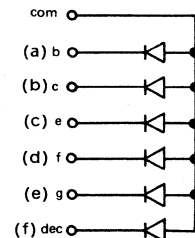


## EA198



EA198a IN PARENTHESES

## EA199

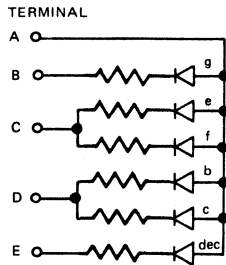


EA199a IN PARENTHESES

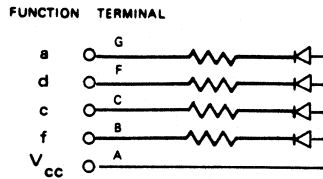
# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER SEQUENCE

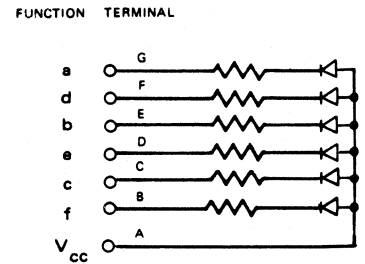
**EA200**



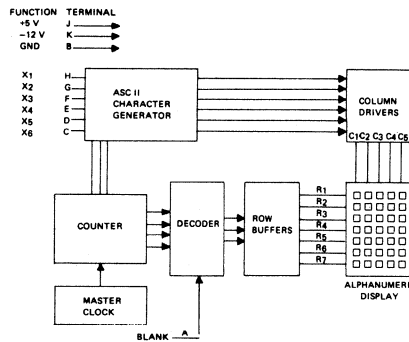
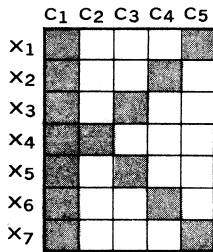
**EA201**



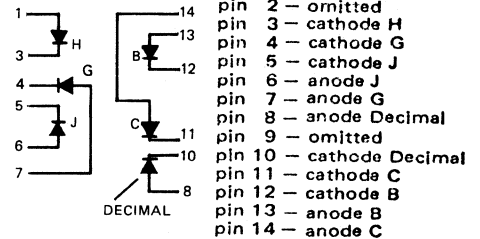
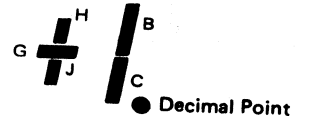
**EA202**



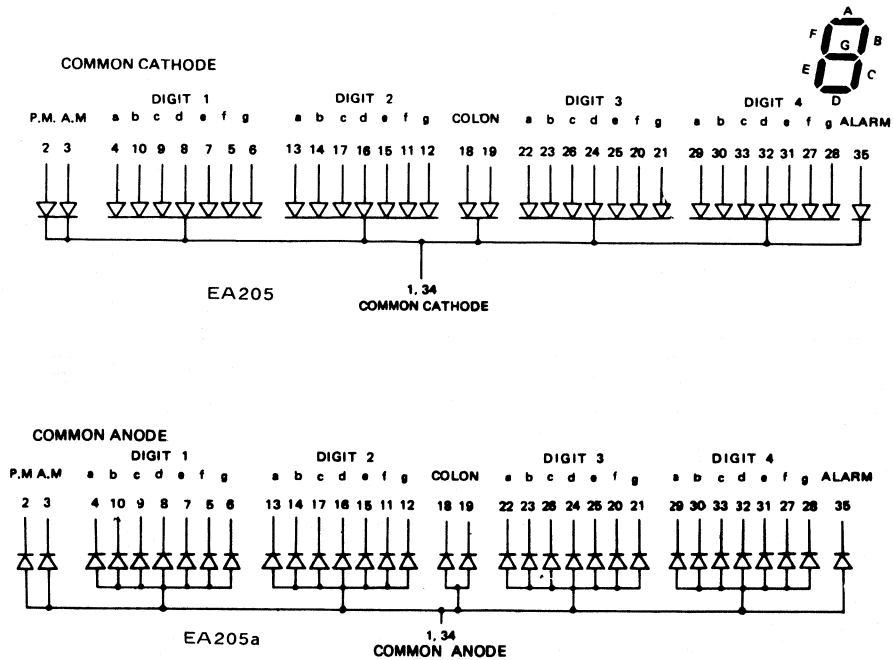
**EA203**



**EA204**



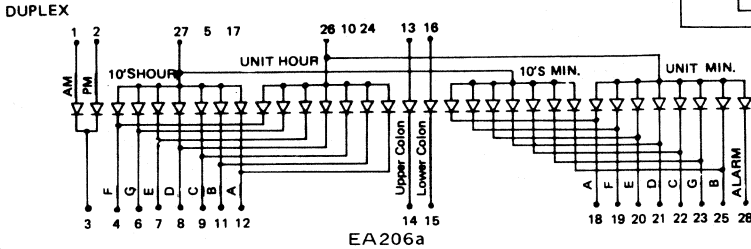
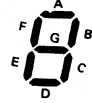
**EA205**



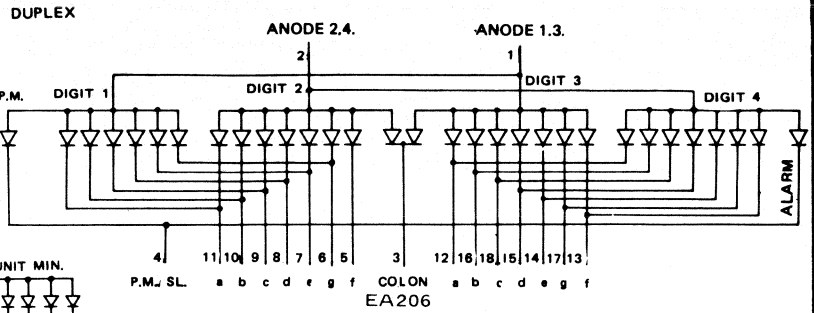
# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER SEQUENCE

**EA206**

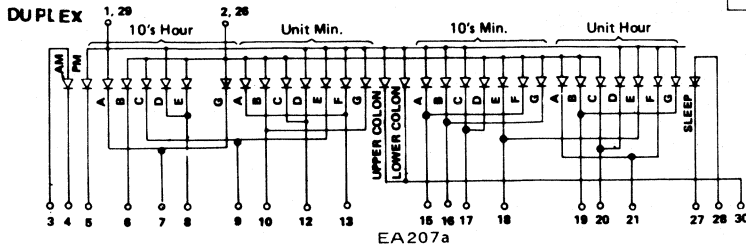
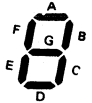


EA206a

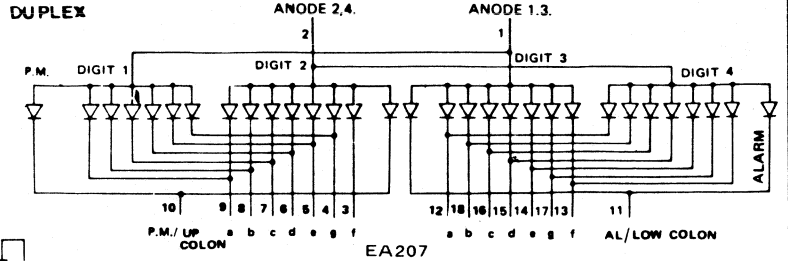


EA206

**EA207**

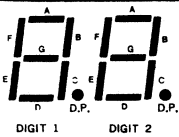


EA207a

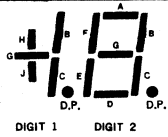


EA207

**EA208**



DIGIT 1 DIGIT 2



DIGIT 1 DIGIT 2

EA208/EA208b

Pin No.	Electrical Connection
1	Common Anode Digit 1 & 2
2	Cathode E Digit 1
3	D 1
4	C 1
5	D.P. 1
6	E 2
7	D 2
8	C 2
9	Cathode D.P. Digit 2
10	Common Anode Digits 1 & 2
11	Cathode B Digit 2
12	A 2
13	F 2
14	G 2
15	B 1
16	A 1
17	F 1
18	Cathode G Digit 1

EA208a/EA208c

Pin No.	Electrical Connection
1	Common Anode Digit 1 & 2
2	Cathode J Digit 1
3	N.C.
4	Cathode C Digit 1
5	D.P. 1
6	E 2
7	D 2
8	C 2
9	Cathode D.P. Digit 2
10	Common Anode Digits 1 & 2
11	Cathode B Digit 2
12	A 2
13	F 2
14	G 2
15	Cathode B Digit 1
16	N.C.
17	Cathode H Digit 1
18	Cathode G Digit 1

\* ANODE/CATHODE CONNECTIONS/INTERCHANGED: EA208b  
 \*\* ANODE/CATHODE CONNECTIONS/INTERCHANGED: EA208c

**EA212**

EA212 COMMON ANODE

PIN NO.	FUNCTION
1	Common Anode, Digits 1 + 2
2	Cathode J, Digit 1
3	No Connection
4	Cathode C, Digit 1
5	Cathode D.P., Digit 1
6	Cathode E, Digit 2
7	Cathode D, Digit 2
8	Cathode C, Digit 2
9	Cathode D.P., Digit 2
10	Common Anode, Digits 1 + 2
11	Cathode B, Digit 2
12	Cathode A, Digit 2
13	Cathode F, Digit 2
14	Cathode G, Digit 2
15	Cathode B, Digit 1
16	No Connection
17	Cathode H, Digit 1
18	Cathode G, Digit 1

EA212a

COMMON CATHODE

PIN NO.	FUNCTION
1	Common Cathode, Digits 1-2
2	Anode E, Digit 1
3	Anode D, Digit 1
4	Anode C, Digit 1
5	Anode D.P., Digit 1
6	Anode E, Digit 2
7	Anode D, Digit 2
8	Anode C, Digit 2
9	Anode D.P., Digit 2
10	Common Cathode, Digit 1 - 2
11	Anode B, Digit 2
12	Anode A, Digit 2
13	Anode F, Digit 2
14	Anode G, Digit 2
15	Anode B, Digit 1
16	Anode A, Digit 1
17	Anode F, Digit 1
18	Anode G, Digit 1

EA212b

COMMON ANODE

PIN NO.	FUNCTION
1	Common Anode, Digits 1 + 2
2	Cathode E, Digit 1
3	Cathode D, Digit 1
4	Cathode C, Digit 1
5	Cathode D.P., Digit 1
6	Cathode E, Digit 2
7	Cathode D, Digit 2
8	Cathode C, Digit 2
9	Cathode D.P., Digit 2
10	Common Anode, Digits 1 + 2
11	Cathode B, Digit 2
12	Cathode A, Digit 2
13	Cathode F, Digit 2
14	Cathode G, Digit 2
15	Cathode B, Digit 1
16	Cathode A, Digit 1
17	Cathode F, Digit 1
18	Cathode G, Digit 1

EA212c

COMMON CATHODE

PIN NO.	FUNCTION
1	Common Cathode, Digits 1 + 2
2	Anode J, Digit 1
3	No Connection
4	Anode C, Digit 1
5	Anode D.P., Digit 1
6	Anode E, Digit 2
7	Anode D, Digit 2
8	Anode C, Digit 2
9	Anode D.P., Digit 2
10	Common Cathode, Digit 1 - 2
11	Anode B, Digit 2
12	Anode A, Digit 2
13	Anode F, Digit 2
14	Anode G, Digit 2
15	Anode B, Digit 1
16	No Connection
17	Anode H, Digit 1
18	Anode G, Digit 1

# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER SEQUENCE

## EA213

PIN NO.	FUNCTION	PIN NO.	FUNCTION
1	Cathode A	14	Anode
2	Cathode F	13	Cathode B
3	Anode	12	Omitted
4	Omitted	11	Cathode G
5	Omitted	10	Cathode C
6	Anode	9	Cathode D.P.
7	Cathode E	8	Cathode D

Pins, 3, 6 & 14 Internally connected

EA213

PIN NO.	FUNCTION	PIN NO.	FUNCTION
1	Cathode H, J	14	Cathode G
2	Omitted	13	Cathode B
3	Omitted	12	Omitted
4	Omitted	11	Anode B, C
5	Omitted	10	Omitted
6	Omitted	9	Omitted
7	Anode G, H, J	8	Cathode C

EA213a

PIN NO.	FUNCTION	PIN NO.	FUNCTION
1	Anode H, J	14	Anode G
2	Omitted	13	Anode B
3	Omitted	12	Omitted
4	Omitted	11	Cathode B, C
5	Omitted	10	Omitted
6	Omitted	9	Omitted
7	Cathode G, H, J	8	Anode C

EA 213b

PIN NO.	FUNCTION	PIN NO.	FUNCTION
1	Cathode H, J	14	Cathode G
2	Omitted	13	Cathode B
3	Omitted	12	Omitted
4	Omitted	11	Common Anode B, C
5	Omitted	10	Omitted
6	Omitted	9	Cathode R.H.D.P.
7	Anode G, H, J	8	Cathode C

EA213c

PIN NO.	FUNCTION
1	Anode H, J
2	Omitted
3	Omitted
4	Omitted
5	Omitted
6	Omitted
7	Cathode G, H, J

EA213d

PIN NO.	FUNCTION
14	Anode G
13	Anode B
12	Omitted
11	Common Cathode B, C
10	Omitted
9	Anode R.H.D.P.
8	Anode C

PIN NO.	FUNCTION	PIN NO.	FUNCTION
1	Anode H, J	14	Anode G
2	Omitted	13	Anode A
3	Omitted	12	Omitted
4	Omitted	11	Cathode B, C
5	Omitted	10	Omitted
6	Omitted	9	Omitted
7	Cathode G, H, J	8	Anode C

EA213e

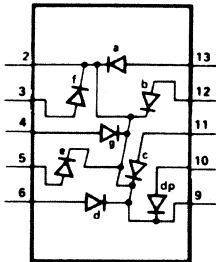
PIN NO.	FUNCTION	PIN NO.	FUNCTION
1	Omitted	14	Omitted
2	Cathode H, J	12	Cathode B
3	Omitted	10	Omitted
4	Cathode G	11	Omitted
5	Anode	10	Cathode C
6	Cathode H, J	9	Cathode R.H.D.P.
7	Omitted	8	Omitted

EA213f

PIN NO.	FUNCTION	PIN NO.	FUNCTION
1	Omitted	14	Omitted
2	Anode H, J	13	Anode B
3	Omitted	12	Omitted
4	Anode G	11	Omitted
5	Cathode	10	Anode C
6	Anode H, J	9	Anode R.H.D.P.
7	Omitted	8	Omitted

EA213g

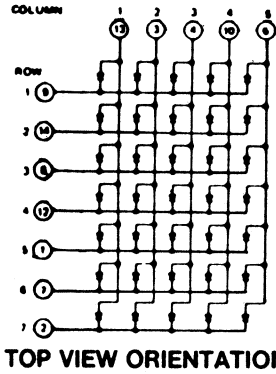
## EA215



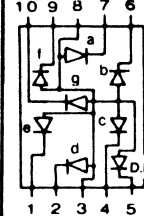
NO PIN  
CATHODE (6)  
ANODE-f  
ANODE-g  
ANODE-e  
ANODE-d  
NO PIN  
NO PIN  
CATHODE (6)  
ANODE-dp  
ANODE-c  
ANODE-b  
ANODE-a  
NO PIN

## EA216

PIN 1 ROW 5  
PIN 2 ROW 7  
PIN 3 COLUMN 2  
PIN 4 COLUMN 3  
PIN 5 COLUMN 4  
PIN 6 COLUMN 5  
PIN 7 ROW 6  
PIN 8 ROW 3  
PIN 9 ROW 1  
PIN 10 COLUMN 4  
PIN 11 COLUMN 3  
PIN 12 ROW 4  
PIN 13 COLUMN 1  
PIN 14 ROW 2



## EA218



EA218

FUNCTION  
Cathode E  
Cathode D  
Anode \*  
Cathode C  
Cathode D.P.  
Cathode B  
Cathode A  
Anode \*  
Cathode F  
Cathode G

\*Pins 3 & 8 are internally connected

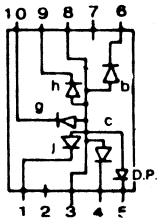
## EA219

PIN NO.
1
2
3
4
5
6
7
8
9
10

EA219

FUNCTION  
Cathode J  
No internal conn.  
Anode \*  
Cathode C  
Cathode D.P.  
Cathode B  
No internal conn.  
Anode \*  
Cathode H  
Cathode G

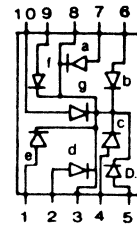
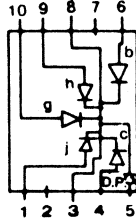
\*Pins 3 & 8 are internally connected



EA219a

FUNCTION  
Anode J  
No internal conn.  
Cathode \*  
Anode C  
Anode D.P.  
Anode B  
No internal conn.  
Cathode \*  
Anode H  
Anode G

\*Pins 3 & 8 are internally connected

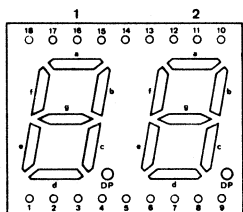


EA218a

FUNCTION  
Anode E  
Anode D  
Cathode \*  
Anode C  
Anode D.P.  
Anode B  
Anode A  
Cathode \*  
Anode F  
Anode G

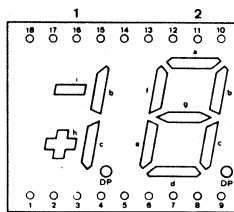
\*Pins 3 & 8 are internally connected

## EA220



Pin	Segment	Digit
1	i	1
2	h	1
3	c	1
4	DP	2
5	d	2
6	e	2
7	g	2
8	c	2
9	DP	2
10	b	2
11	f	2
12	f	2
13	Anode/Kathode	2
14	Anode/Kathode	1
15	b	1

EA220



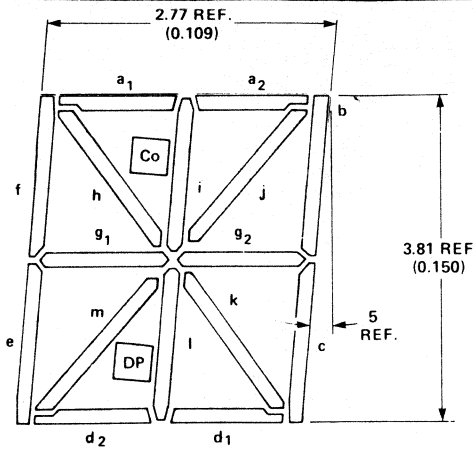
Pin	Segment	Digit
1	e	1
2	d	1
3	c	1
4	DP	1
5	e	2
6	d	2
7	g	2
8	c	2
9	DP	2
10	b	2
11	f	2
12	f	2
13	Anode/Kathode	2
14	Anode/Kathode	1
15	b	1
16	a	1
17	g	1
18	f	1

EA220a

# 48. SCHEMATIC DRAWINGS

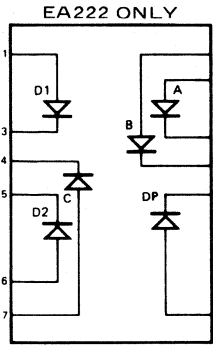
IN DRAWING NUMBER  
SEQUENCE

**EA221**



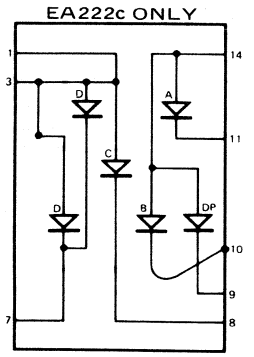
Pin No.	Function			
	EA221		EA221a	
1	Anode	Segment g	Anode	Segment g
2	Anode	Segment DP	Anode	Segment DP
3	Cathode	Digit 1	Cathode	Digit 1
4	Anode	Segment d <sub>2</sub>	Anode	Segment d <sub>2</sub>
5	Anode	Segment l	Anode	Segment l
6	Cathode	Digit 3	Cathode	Digit 3
7	Anode	Segment e	Anode	Segment e
8	Anode	Segment m	Anode	Segment m
9	Anode	Segment k	Anode	Segment k
10	Cathode	Digit 4	Cathode	Digit 4
11	Anode	Segment d <sub>1</sub>	Anode	Segment d <sub>1</sub>
12	Anode	Segment j	Cathode	Digit 6
13	Anode	Segment Co	Cathode	Digit 8
14	Anode	Segment a <sub>2</sub>	Cathode	Digit 7
15	Anode	Segment a <sub>1</sub>	Cathode	Digit 5
16	Anode	Segment i	Anode	Segment j
17	Cathode	Digit 2	Anode	Segment Co
18	Anode	Segment b	Anode	Segment g <sub>2</sub>
19	Anode	Segment a	Anode	Segment a <sub>2</sub>
20	Anode	Segment c	Anode	Segment i
21	Anode	Segment h	Cathode	Digit 2
22	Anode	Segment f	Anode	Segment b
23			Anode	Segment a <sub>1</sub>
24			Anode	Segment c
25			Anode	Segment h
26			Anode	Segment f

**EA222**



**PIN CONNECTIONS**

PIN NO.	ELECTRICAL CONNECTIONS			
	EA222	EA222a	EA222b	EA222c
1	Anode D1	Cathode A	Anode F	Anode C, D
2	No Pin	Cathode F	Anode G	No Pin
3	Cathode D1	Common Anode	No Pin	Anode C, D
4	Cathode C	No Pin	Common Cathode	No Pin
5	Cathode D2	No Pin	No Pin	No Pin
6	Anode D2	NC	Anode E	NC
7	Anode C	Cathode E	Anode D	Cathode D
8	Anode DP	Cathode D	Anode C	Cathode C
9	No Pin	Cathode DP	Anode DP	Cathode DP
10	Cathode DP	Cathode C	No Pin	Cathode B
11	Cathode B	Cathode G	NC	Cathode A
12	Cathode A	No Pin	Common Cathode	No Pin
13	Anode A	Cathode B	Anode B	No Pin
14	Anode B	Common Anode	Anode A	Anode A, B, & DP

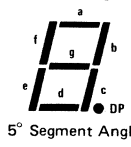


**EA223**

PIN	CONNECTION
1	No Connection
2	Segment c Anode
3	Digit 1 Cathode
4	Segment DP Anode
5	Digit 2 Cathode
6	Segment a Anode
7	Digit 3 Cathode
8	Segment e Anode
9	Digit 4 Cathode
10	Segment d Anode
11	Digit 5 Cathode
12	Segment g Anode
13	Digit 6 Cathode
14	Segment b Anode
15	Digit 7 Cathode
16	Segment f Anode
17	Digit 8 Cathode

PIN	CONNECTION
1	No Connection
2	Segment c Anode
3	No Connection
4	Segment DP Anode
5	No Connection
6	Segment a Anode
7	Digit 1 Cathode
8	Segment e Anode
9	Digit 2 Cathode
10	Segment d Anode
11	Digit 3 Cathode
12	Segment g Anode
13	Digit 4 Cathode
14	Segment b Anode
15	No Connection
16	Segment f Anode
17	No Connection

**Segment Designation**



# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

## EA224

EA224

PIN NO.	ELECTRICAL CONNECTION
1	Digit No. 1 Segment G Anode
2	Digit No. 1 Segment G Cathode
3	Digit No. 1 Segment H Anode*
4	Digit No. 1 Segment J Cathode*
5	Digit No. 1 Segment DP Anode
6	Digit No. 2 Segment DP Anode
7	Digit No. 3 Segment DP Anode
8	Digit No. 4 Segment DP Anode
9	Segment D Anode
10	Segment C Anode
11	Segment B Anode
12	Segment A Anode
13	Segment E Anode
14	Segment F Anode
15	Segment G Anode
16	Digit No. 1 Cathode
17	Digit No. 2 Cathode
18	NC
19	Digit No. 3 Cathode
20	Digit No. 4 Cathode

\*Segments H and J internally connected in series



EA224a

PIN NO.	ELECTRICAL CONNECTION
1	Digit 1 Cathode
2	Digit 2 Cathode
3	Digit 3 Cathode
4	Segment C Anode
5	Digit 4 Cathode
6	Segment DP Anode
7	Digit 5 Cathode
8	Segment A Anode
9	Digit 6 Cathode
10	Segment E Anode
11	Digit 7 Cathode
12	Segment D Anode
13	Digit 8 Cathode
14	Segment G Anode
15	Digit 9 Cathode
16	Segment B Anode
17	Digit 10 Cathode
18	Segment F Anode
19	Digit 11 Cathode
20	Digit 12 Cathode

EA224b

PIN NO.	ELECTRICAL CONNECTION
1	Digit 1 Cathode
2	Digit 2 Cathode
3	Digit 3 Cathode
4	Segment A Anode
5	Segment F Anode
6	Segment B Anode
7	Segment G Anode
8	Digit 4 Cathode
9	Segment D Anode
10	Segment C Anode
11	Segment E Anode
12	Segment D.P. Anode
13	Digit 5 Cathode
14	Digit 6 Cathode

EA224d

PIN NO.	ELECTRICAL CONNECTION
1	Digit No. 1 Segment G Anode
2	Digit No. 1 Segment G Cathode
3	Digit No. 1 Segment H Anode*
4	Digit No. 1 Segment J Cathode*
5	Digit No. 2 Segment DP Anode
6	Digit No. 3 Segment DP Anode
7	Digit No. 4 Segment DP Anode
8	Digit No. 5 Segment DP Anode
9	Segment D Anode
10	Segment C Anode
11	Segment B Anode
12	Segment A Anode
13	Segment E Anode
14	Segment F Anode
15	Segment G Anode
16	Digit No. 2 Cathode
17	Digit No. 3 Cathode
18	NC
19	Digit No. 4 Cathode
20	Digit No. 5 Cathode

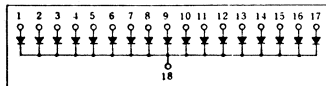
\*Segments H and J internally connected in series

EA224c

PIN NO.	ELECTRICAL CONNECTION
1	Anode G
2	Anode F (Digit 1 Only, H)
3	Anode E (Digit 1 Only, J)
4	Anode D
5	Anode A
6	Anode C
7	Anode B
8	NC
9	Anode DP
10	NC
11	NC
12	Cathode 1
13	Cathode 2
14	Cathode 4
15	Cathode 5
16	Cathode 3

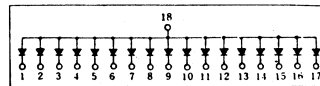
## EA225

Pin No.	Segment
1.	B/Anode
2.	A/Anode
3.	M/Anode
4.	K/Anode
5.	H/Anode
6.	G/Anode
7.	T/Anode
8.	F/Anode
9.	E/Anode
10.	Dp/Anode
11.	S/Anode
12.	R/Anode
13.	D/Anode
14.	U/Anode
15.	P/Anode
16.	C/Anode
17.	N/Anode
18.	C/Cathode



EA225

Pin No.	Segment
1.	B/Cathode
2.	A/Cathode
3.	M/Cathode
4.	K/Cathode
5.	H/Cathode
6.	G/Cathode
7.	T/Cathode
8.	F/Cathode
9.	E/Cathode
10.	Dp/Cathode
11.	S/Cathode
12.	R/Cathode
13.	D/Cathode
14.	U/Cathode
15.	P/Cathode
16.	C/Cathode
17.	N/Cathode
18.	C/Anode

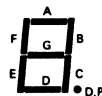


EA225a

## EA226

PIN CONNECTIONS	Function	ANODE OR CATHODE
1	NC	No Connection
2	Digit 1	Cathode
3	Segment C	Anode
4	Digit 2	Cathode
5	D.P.	Anode
6	Digit 3	Cathode
7	Segment A	Anode
8	Digit 4	Cathode
9	Segment E	Anode
10	Digit 5	Cathode
11	Segment D	Anode
12	Digit 6	Cathode
13	Segment G	Anode
14	Digit 7	Cathode
15	Segment B	Anode
16	Digit 8	Cathode
17	Segment F	Anode
18	Digit 9	Cathode

### Segment Designation



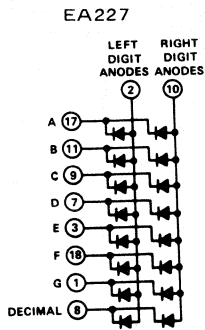
ALL DIGITS ON 0.20  
5.08 CENTER



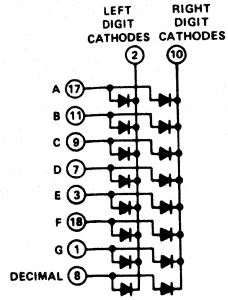
# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER SEQUENCE

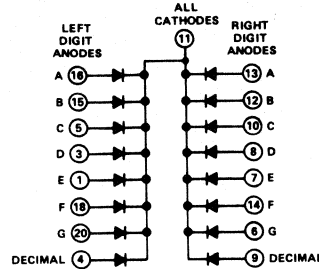
## EA227



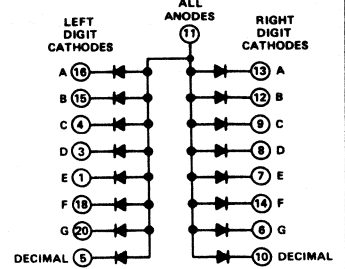
## EA227a



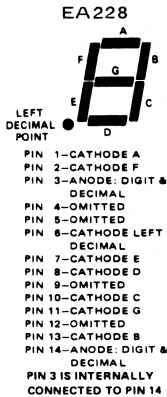
## EA227b



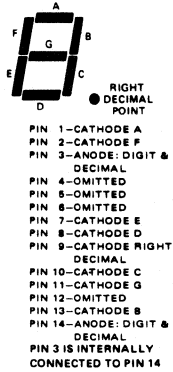
## EA227c



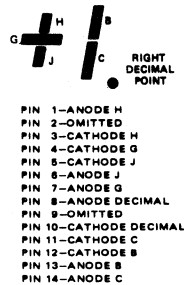
## EA228



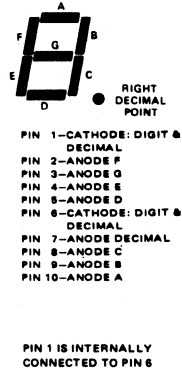
## EA228a



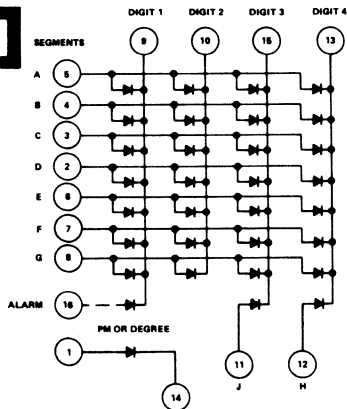
## EA228b



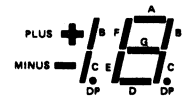
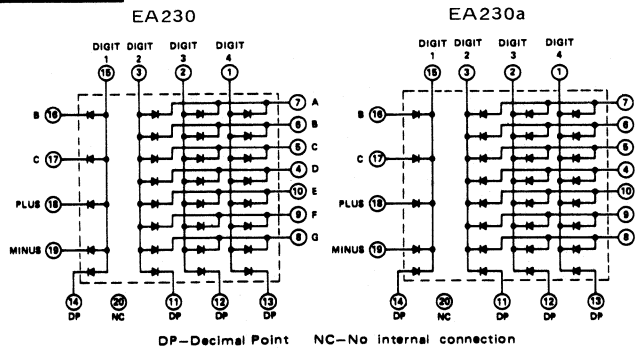
## EA228c



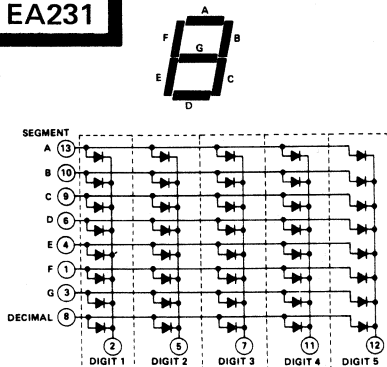
## EA229



## EA230



## EA231

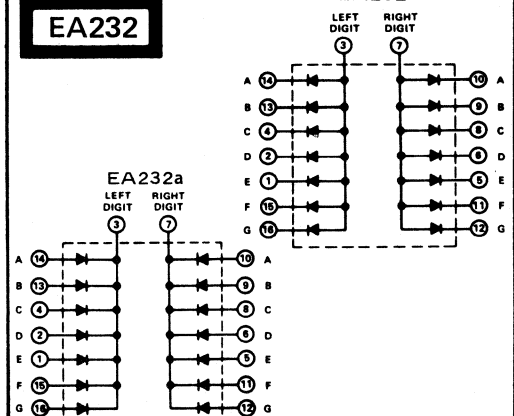


FAD CONNECTIONS

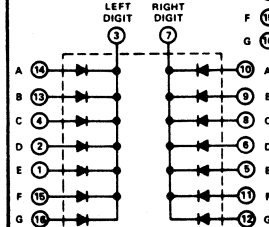
TAB FUNCTION	TAB FUNCTION
1. SEGMENT F ANODE	8. DECIMAL ANODE
2. DIGIT 1 CATHODE	9. SEGMENT C ANODE
3. SEGMENT G ANODE	10. SEGMENT B ANODE
4. SEGMENT E ANODE	11. DIGIT 4 CATHODE
5. DIGIT 2 CATHODE	12. DIGIT 5 CATHODE
6. SEGMENT D ANODE	13. SEGMENT A ANODE
7. DIGIT 3 CATHODE	

NOTE: DECIMAL INPUT NOT INCLUDED FOR EA231a

## EA232



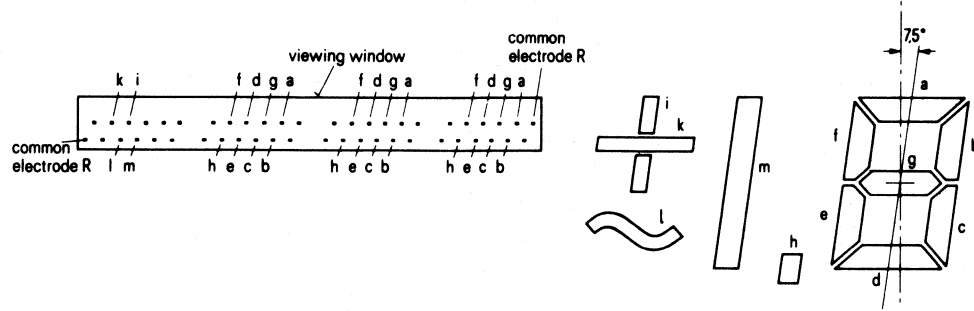
## EA232a



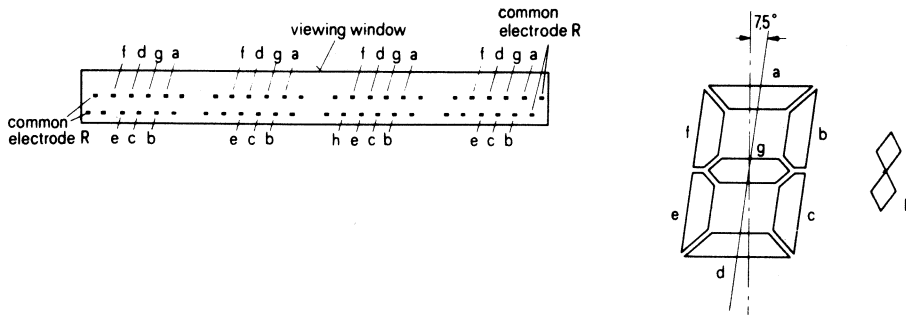
# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER SEQUENCE

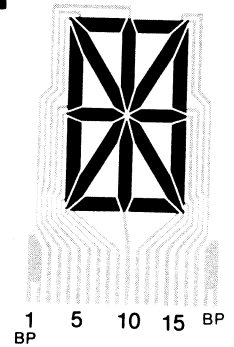
**EB5**



**EB9**



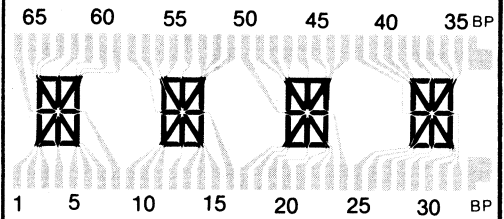
**EB13**



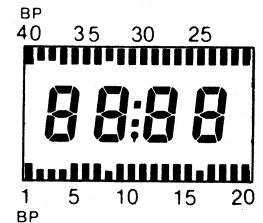
**EB12**

	EB12	EB12a	EB12b	EB12c	EB12d	EB12e	EB12f	EB12g	EB12h	EB12j
1	A1	A1	A1	B1	B1	B1	B1	B1	B1	B1
2	B1	B1	B1	C1	C1	C1	C1	C1	C1	C1
3	C1	C1	C1	D1	D1	D1	D1	D1	D1	D1
4	D1	D1	D1	E1	E1	E1	E1	E1	E1	E1
5	E1	E1	E1	DP	DP	DP	DP	DP	DP	DP
6	G1	G1	G1	C2	C2	C2	C2	C2	C2	C2
7	F1	F1	F1	D2	D2	D2	D2	D2	D2	D2
8	A2	A2	A2	E2	E2	E2	E2	E2	E2	E2
9	B2	B2	B2	DP	DP	DP	DP	DP	DP	DP
10	C2	C2	C2	C3	C3	C3	C3	C3	C3	C3
11	D2	D2	D2	D3	D3	D3	D3	D3	D3	D3
12	E2	E2	E2	E3	E3	E3	E3	E3	E3	E3
13	G2	G2	G2	DP	DP	DP	DP	DP	DP	DP
14	F2	F2	F2		C4	C4		D4	C4	
15	L	L	L		D4	D4		E4	D4	
16	A3	A3	A3		E4	E4		C5	E4	
17	B3	B3	B3	C4			DP	K	D5	
18	C3	C3	C3	ADG	K		K	PM	E5	
19	D3	D3	D3	E4	Y		Y		O5	
20	E3	E3	E3	BP	BP	BP	BP	BP	BP	BP
21	G3	G3	G3	A1	A1	A1	A1	A1	A1	A1
22	F3	F3	F3	F1	F1	F1	F1	F1	F1	F1
23	C4	K	C4	G1	G1	G1	G1	G1	G1	G1
24	E4		E4	B2	B2	B2	B2	B2	B2	B2
25	ADG	PM	ADG	A2	A2	A2	A2	A2	A2	A2
26	B4	AM	B1	P2	P2	P2	P2	P2	P2	P2
27	BP	BP	BP	G2	G2	G2	G2	G2	G2	G2
28			L	L	L	L	L	B3	L	
29			B3	B3	B3	B3	B3	A3	B3	
30			A3	A3	A3	A3	A3	F3	A3	
31			F3	F3	F3	F3	F3	G3	F3	
32			G3	G3	G3	G3	G3	L	G3	
33							L2	B4		
34						B4	B4	A4	B4	
35						A4	A4	P4	A4	
36						P4	P4	G4	P4	
37						G4	G4	L	G4	
38				Z	Z	Z	Z	B5	Z	
39				B4	X	X	AM	A5	B5	
40								F5		

**EB14**



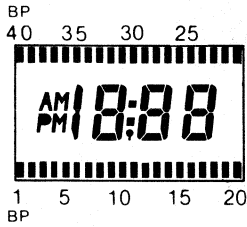
**EB15**



# 48. SCHEMATIC DRAWINGS

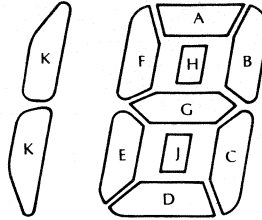
IN DRAWING NUMBER  
SEQUENCE

**EB16**



**EB17**

Segment Designation



Pad Assignments

SEGMENT	PAD FOR DIGIT NO.			SEGMENT	PAD
	1	2	3		
A	22	18	14	K(1)	2
B	21	17	13	Common	1
C	5	9	12	Colon	6
D	4	8	11		
E	3	7	10		
F	23	19	15		
G	24	20	16		

EB17

Pad Assignments

SEGMENT	PAD FOR DIGIT NO.						SEGMENT	PAD
	0	1	2	3	4	5		
A	2	41	9	34	29	26	Common	23
B	44	40	37	33	28	25	Colon	7
C	3	6	10	13	17	21	Alarm (*)	24
D	2	5	9	12	16	19		
E	1	4	8	11	14	18		
F	45	42	38	35	31	27		
G	46	43	39	36	32	22		
H					30			
J					15	20		

EB17a

Pad Assignments

SEGMENT	PAD FOR DIGIT NO.				SEGMENT	PAD
	0	1	2	3		
A	34	30	24	20	Common	1
B	33	29	23	19	Colon	12
C	6	10	15	18	A (AM)	28
D	5	9	14	17	P (PM)*	27
E	3	7	13	16	Date*	11
F	36	31	25	21	Dash	11
G	2	32	26	22	D (Date)†	
H	35					
J	4	8				

EB17b

\*713 Only  
†712 Only

Pad Assignments

SEGMENT	PAD FOR DIGIT NO.				SEGMENT	PAD
	1	2	3	4		
A	34	29	24	20	Colons	27
B	33	28	23	19	Common	1 & 18
C	4	8	12	16	DP 1	5
D	3	7	11	15	DP 2	9
E	2	6	10	14	DP 3	13
F	35	30	25	21		
G	36	31	26	24		

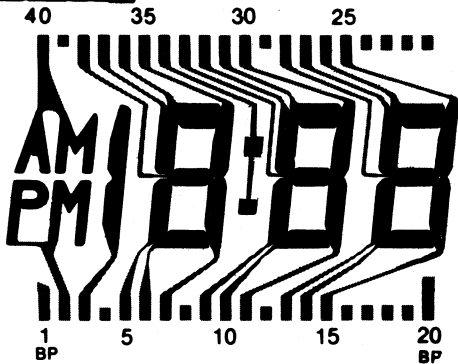
EB17c

Pad Assignments

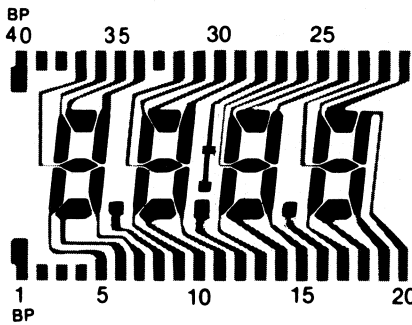
SEGMENT	PAD FOR DIGIT NO.			SEGMENT	PAD
	1	2	3		
A	29	24	20	Colons	27
B	28	23	19	Common	1 & 18
C	8	12	16	DP 1	5
D	7	11	15	DP 2	9
E	6	10	14	DP 3	13
F	30	25	21	1 ←	35
G	31	26	24	2 ←	2
K(1)	4			Minus =	3
				Plus ±	36

EB17d

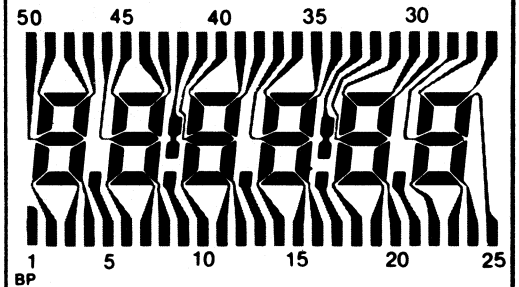
**EB18**



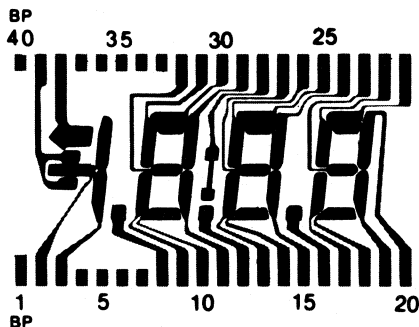
**EB19**



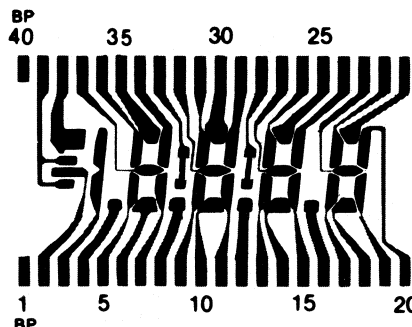
**EB20**



**EB21**



**EB22**



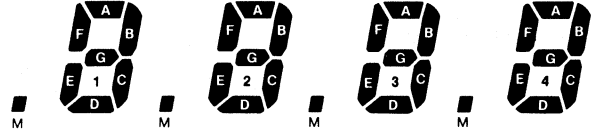
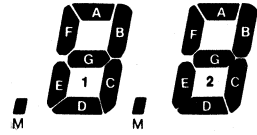
# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER SEQUENCE

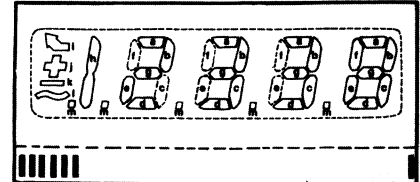
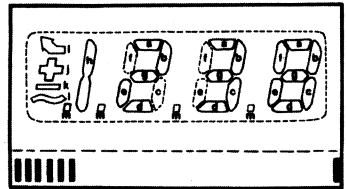
**EB23**

## TERMINAL PAD IDENTIFICATION

DIGIT	SEGMENT	TERMINAL PAD IDENTIFICATION								
		EB23	EB23a	EB23b	EB23c	EB23d	EB23e	EB23f	EB23g	
1	BP	1,2	1,2	1,2	1,2	1,2	1,2	1,2	1,2	
	M	4	4	3	4	3	3	3	4	
	F	5	5	5	5	4	4	4	5	
	G	6	6	6	6	5	5	5	6	
	E	7	7	7	7	6	6	6	7	
	D	8	8	8	8	7	7	7	8	
	C	10	11	12	13	9	10	11	13	
	B	11	12	13	14	10	11	12	14	
	A	12	13	14	15	11	12	13	15	
	2	M	13	14	15	16	13	13	14	16
F		14	15	17	17	14	14	15	17	
G		15	16	18	18	15	15	16	18	
E		16	17	19	19	16	16	17	19	
D		17	18	20	20	17	17	18	20	
C		20	20	24	25	18	20	22	25	
B		21	21	25	26	19	21	23	26	
A		22	22	26	27	20	22	24	27	
3		M					21	23	25	28
		F					22	24	26	29
	G					23	25	27	30	
	E					24	26	28	31	
	D					25	27	29	32	
	C					26	30	33	37	
	B					27	31	34	38	
	A					28	32	35	39	
	4	M					30	33	36	40
		F					31	34	37	41
G						32	35	38	42	
E						33	36	39	43	
D						34	37	40	44	
C						36	40	44	49	
B						37	41	45	50	
A						38	42	46	51	
BP		24,25	24,25	29,30	29,30	39,40	44,45	49,50	54,55	



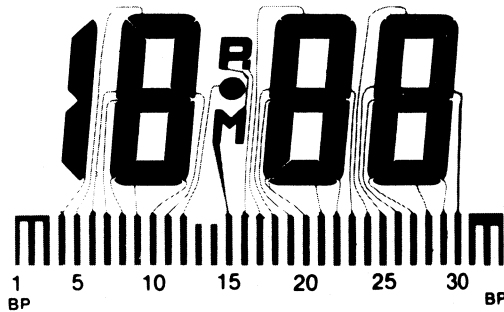
**EB24**



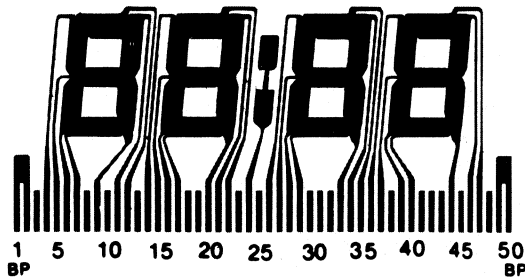
## TERMINAL PAD IDENTIFICATION

DIGIT	SEGMENT	TERMINAL PAD IDENTIFICATION						
		EB24	EB24a	EB24b	EB24c	EB24d	EB24e	
1	BP	1/2	1/2	1/2	1/2	1/2	1/2	
	i	3	3	4	3	3	4	
	j	4	4	5	4	4	5	
	k	5	5	6	5	5	6	
	l	6	6	7	6	6	7	
	m	9	9	9	9	8	9	
	h	10	10	12	10	9	12	
	n	11	12	15	11	11	15	
	f	12	13	17	12	14	16	
	g	13	14	18	13	15	17	
2	e	14	15	19	14	16	18	
	d	15	16	20	15	17	19	
	c	17	20	25	17	19	23	
	b	18	21	26	18	20	24	
	a	19	22	27	19	21	25	
	3	m	20	24	29	20	23	27
		f	21	25	31	21	25	28
		g	22	26	32	22	26	29
		e	23	27	33	23	27	30
		d	24	28	34	24	28	31
c		26	32	39	26	30	34	
b		27	33	40	27	31	35	
a		28	34	41	28	32	36	
4		m	29	36	43	29	34	38
		f	30	37	45	30	36	40
	g	31	38	46	31	37	41	
	e	32	39	47	32	38	42	
	d	33	40	48	33	39	43	
	c	35	44	54	35	42	46	
	b	36	45	56	36	43	47	
	a	37	46	57	37	44	48	
	5	m				38	46	50
		f				39	48	52
g					40	49	53	
e					41	50	54	
d					42	51	55	
c					44	55	59	
a					45	56	61	
BP	39/40	49/50	59/60	49/50	59/60	64/65		

**EB25**



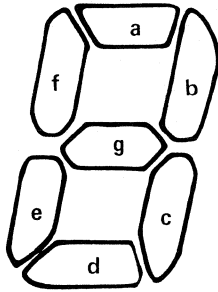
**EB26**



# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER SEQUENCE

**EB27**



PIN CONNECTIONS

Pin No.	Segment	Pin No.	Segment
1	Backplane	26	Third Digit, Segment g
2	Backplane	27	Third Digit, Segment e
3	Arrow	28	Third Digit, Segment d
4	Plus Bars	29	NC
5	Minus	30	NC
6	About	31	NC
7	NC	32	Third Digit, Segment c
8	NC	33	Third Digit, Segment b
9	Leading Decimal Point 2	34	Third Digit, Segment a
10	Leading Digit 1	35	NC
11	NC	36	Fourth Decimal Point
12	Second Decimal Point	37	Fourth Digit, Segment f
13	Second Digit, Segment f	38	Fourth Digit, Segment g
14	Second Digit, Segment g	39	Fourth Digit, Segment e
15	Second Digit, Segment e	40	Fourth Digit, Segment d
16	Second Digit, Segment d	41	NC
17	NC	42	NC
18	NC	43	NC
19	NC	44	Fourth Digit, Segment c
20	Second Digit, Segment c	45	Fourth Digit, Segment b
21	Second Digit, Segment b	46	Fourth Digit, Segment a
22	Second Digit, Segment a	47	NC
23	NC	48	NC
24	Third Decimal Point	49	Backplane
25	Third Digit, Segment f	50	Backplane

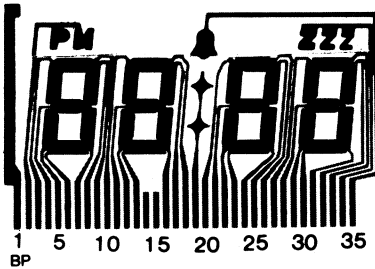
**EB28**

Pad	Digit Segment	Pad	Digit Segment	Pad	Digit Segment	Pad	Digit Segment
1	NC	11	F2	21	F3	31	D4
2	COM	12	G2	22	G3	32	C4
3	PM	13	E2	23	E3	33	B4
4	F1	14	D2	24	D3	34	A4
5	G1	15	NC	25	C3	35	FLAG
6	E1	16	NC	26	B3	36	BELL
7	D1	17	C2	27	A3		
8	C1	18	B2	28	F4		
9	B1	19	A2	29	G4		
10	A1	20	COL	30	E4		

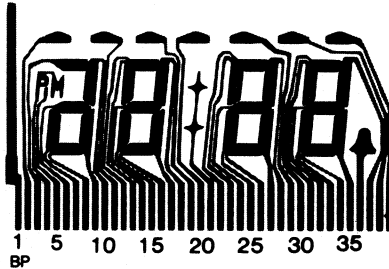
**EB29**

Pad	Digit Segment	Pad	Digit Segment	Pad	Digit Segment	Pad	Digit Segment
1	COM	11	C2	21	A4	31	F2
2	NC	12	DP2	22	F4	32	G2
3	NC	13	E3	23	G4	33	NC
4	NC	14	D3	24	B3	34	B1
5	E1	15	C3	25	A3	35	A1
6	D1	16	DP3	26	F3	36	F1
7	C1	17	E4	27	G3	37	G1
8	DP1	18	D4	28	COL	38	NC
9	E2	19	C4	29	B2	39	NC
10	D2	20	B4	30	A2	40	COM

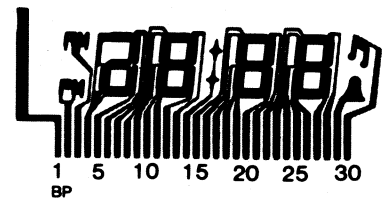
**EB30**



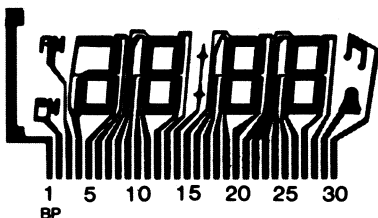
**EB31**



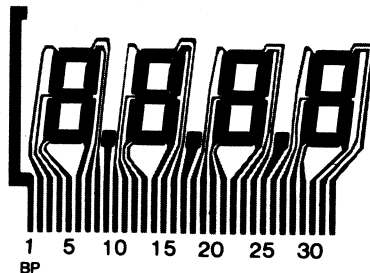
**EB32**



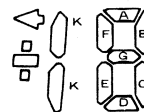
**EB33**



**EB34**



**EB35**



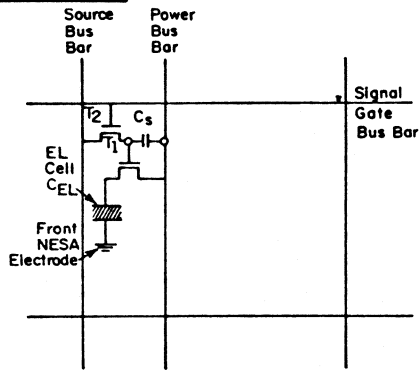
SEGMENT	DIGIT			SEGMENT	PIN
	1	2	3		
A	28	23	19	COMMON	1
B	27	22	18	COMMON	36
C	9	13	17	:	35
D	8	12	16	-	2
E	7	11	15	-	35
F	29	24	20	DP 1	6
G	30	25	21	DP 2	10
				DP 3	14
				COLON	26
				K	3

SEGMENT	DIGIT				SEGMENT	PIN
	1	2	3	4		
A	32	28	23	19	COMMON	1
B	31	27	22	18	COMMON	35
C	5	9	13	17	DP 1	6
D	4	8	12	16	DP 2	10
E	3	7	11	15	DP 3	14
F	33	29	24	20	COLON	26
G	34	30	25	21		

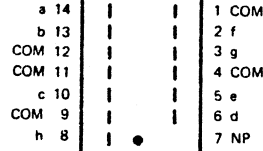
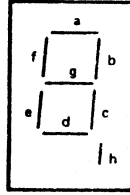
# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

**EC2**

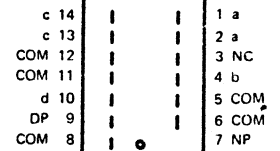
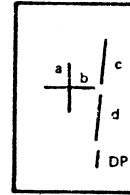


**EC4**



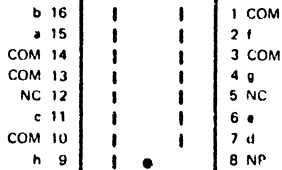
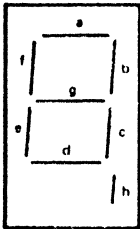
NOTE: ALL COMMON PINS MUST BE INTERCONNECTED.

**EC5**



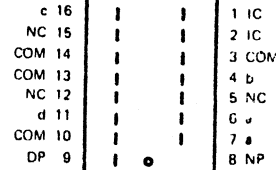
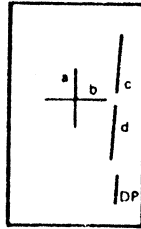
NOTE: ALL COMMON PINS MUST BE INTERCONNECTED.

**EC6**



NOTE: ALL COMMON PINS MUST BE INTERCONNECTED.

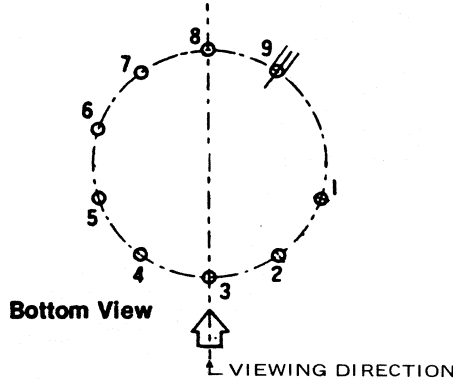
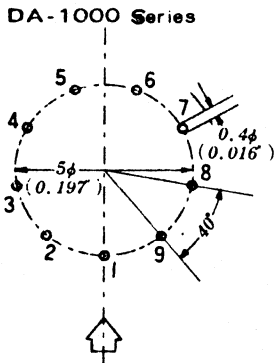
**EC7**



NOTE: ALL COMMON PINS MUST BE INTERCONNECTED.

**EC8**

## BASE DIAGRAM, LEAD & PIN CIRCLE DIMENSIONS & DESIGNATION



Series No.	DA-1300 DA-1600	DA-2300	DA-2900
A	7.1 (0.281)	5.9 (0.230)	11.887 (0.468)
B	0.4 (0.016)	0.5 (0.020)	1.0 (0.040)

Dimensions in Millimeters and (Inches)

## SEGMENT ASSIGNMENT

Display	Pin No. Type No.	1	2	3	4	5	6	7	8	9
	DA-1000	G	D	B	C	A	F	E	NC	COM
	DA-1300									
	DA-1600									
	DA-2300	NC	COM	E	D	C	G	A	B	F
	DA-1010	G	D	B	C	A	F	E	H	COM
	DA-1310									
	DA-1610									
	DA-2310	H	COM	E	D	C	G	A	B	F
	DA-2910									
	DA-1020	A	NC	C	D	B	NC	NC	NC	COM
	DA-1320									
	DA-1620	NC	COM	NC	NC	NC	D	B	C	A
DA-2320										
DA-2920										

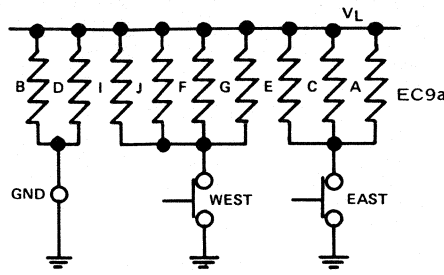
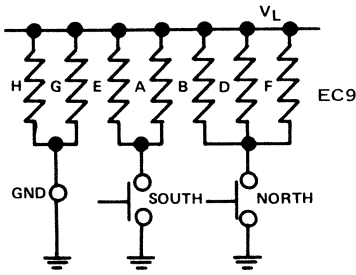
	1	2	3	4	5	6	7	8	9
EC 8	NC	COM	E	D	C	G	A	B	F
EC 8a	H	COM	E	D	C	G	A	B	F
EC 8b	NC	COM	NC	NC	NC	D	B	C	A



# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER SEQUENCE

## EC9



## EC10

PIN CONNECTIONS		PIN CONNECTIONS	
1	NUMERAL 1	8	NUMERAL 7
2	NUMERAL 2	9	NUMERAL 8
3	NUMERAL 3	10	ANODE
4	NUMERAL 4	11	NUMERAL 9
5	NUMERAL 5	12	NUMERAL 0
6	NUMERAL 6	13	RT DEC PT
7	ANODE	14	LFT DEC PT

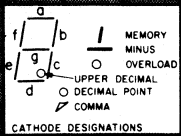
## EC11

Pin Connection Table

Pin No.	EC11	EC11a	EC11b	EC11c	EC11d	EC11e	EC11f	EC11g	EC11h	EC11i	EC11j	EC11k	EC11m	EC11n	EC11p
1	a	a	a	a	a	a	a	a	a	a	a	a	a	NC	NC
2	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	a	e
3	b	b	b	f	b	b	f	b	b	b	f	b	b	A1	A1
4	A2	A2	A2	NC	A2	A2	A2	A2	A2	NC	NC	NC	NC	f	b
5	*g	*g	c	Mm	c	c	Mm	c	c	c	c	Mm	c	A2	A2
6	A3	A3	A3	A2	NC	A3	A3	A3	M	A2	A2	A2	A2	Mm	c
7	c	c	NC	M	NC	NC	M	Udp	M	dp	M	dp	NC	NC	NC
8	A4	A4	A4	A4	A3	A4	A4	A4	NC	A3	A3	A3	A3	M	Udp
9	dp	dp	dp	dp	dp	dp	O	Ldp	d	C	O	C	A3	A3	A3
10	A5	A5	A5	A5	A4	A5	A5	A5	A3	NC	NC	NC	NC	O	Ldp
11	NC	NC	NC	C	C	C	C	C	dp	NC	NC	NC	NC	A4	A4
12	A6	A6	A6	A6	A5	A6	A6	A6	A4	NC	A4	A4	A4	c	C
13	d	NC	d	NC	NC	NC	dp	NC	NC	NC	dp	NC	NC	NC	NC
14	A7	A7	A7	A7	NC	NC	A7	A7	A5	A5	A5	A5	A5	dp	NC
15	e	d	e	NC	NC	NC	C	NC	NC	NC	C	NC	NC	A5	A5
16	A8	A8	A8	A8	A6	A7	A8	A8	A6	NC	NC	NC	NC	C	NC
17	**g	e	g	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	A6	A6
18	A9	A9	A9	A9	A7	A8	A9	A9	A7	NC	A6	A6	NC	NC	A6
19	f	***g	f	d	d	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
20		A10		A10	A8	A9	A10	A10	A8	A7	NC	A7	NC	NC	NC
21		f		e	e	d	NC	NC	NC	d	NC	d	NC	A7	A7
22				A11	NC	A10	A11	A11	A9	NC	NC	NC	NC	NC	NC
23				g	g	g	NC	NC	NC	e	NC	NC	NC	A8	A8
24				A12	A9	A11	A12	A12	A10	A8	A8	A8	A8	NC	NC
25				f	f	f	g	NC	NC	g	g	NC	NC	NC	NC
26							A13	A13	A11	A9	A9	A9	A9	A9	A9
27							b	d	e	f	b	d	A9	A9	A9
28													NC	NC	NC
29													e	A10	A10
30													A10	NC	NC
31													g	NC	NC
32													A11	d	NC
33													f	A11	A11
34															NC
35															A12
36															g
37															NC
38															b
39															NC
40															NC
41															A14
42															d
43															NC
44															e
45															A15
46															g
47															A16
48															f
49															NC

**LEGEND**  
 C Comma  
 Udp Upper decimal pt.  
 Ldp Lower decimal pt.  
 O Overload  
 M Minus  
 Mm Memory  
 MT Mantissa  
 A Anode  
 NC No Connection  
 dp Decimal Point

\* Digits 1-2  
 \*\* Digits 3-9  
 \*\*\* Digits 3-10



## EC12

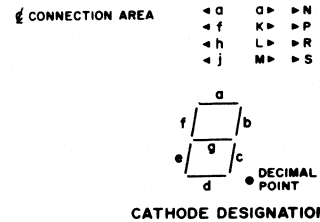


Table 1. PIN CONNECTIONS

PAD	DESIG.	PAD	DESIG.	PAD	DESIG.
1	A1	13	A4	25	NC
2	S	14	c	26	A10
3	R	15	A5	27	e
4	P	16	dp	28	A11
5	N	17	A6	29	f
6	A2	18	d	30	A12
7	M	19	A7	31	h
8	L	20	dp	32	A13
9	K	21	A8	33	j
10	A3	22	NC	34	a
11	b	23	A9	35	A14
12	g	24	NC		

**LEGEND**  
 A Anode  
 dp Decimal Point  
 NC No Connection

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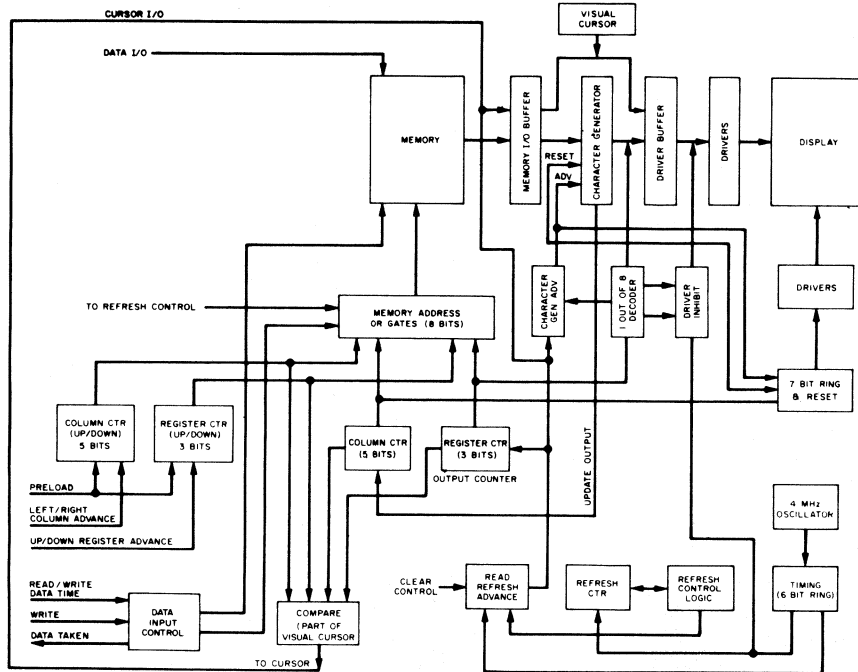
# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER SEQUENCE

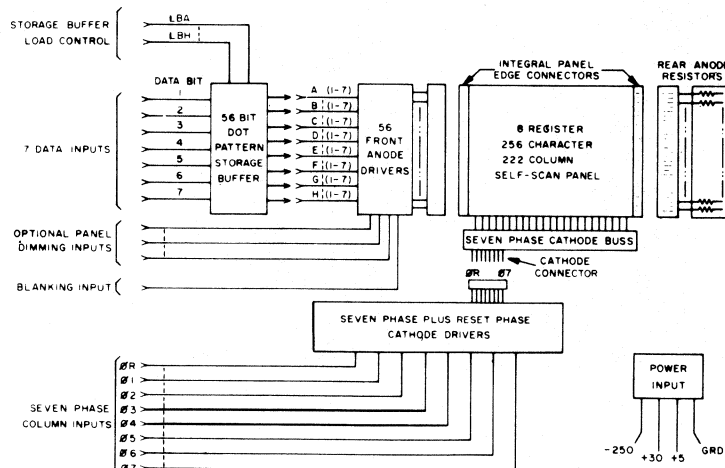
## EC15

Terminal Connection	EC15	EC15a	EC15b	EC15c	EC15d	EC15e	EC15f	EC15g	EC15h	EC15j	EC15k	EC15m	Terminal Connection
1	Binary 16	Binary 32	Binary 32	Binary 32	Binary 16	Binary 32	Binary 32	Binary 32	+250v @ 60 ma	+250v @ 60 ma	Data Present	Data Present	1
2	Binary 4	Binary 8	Binary 8	Binary 8	Binary 4	Binary 8	Binary 8	Binary 8	Not Used	Not Used	+5v	+5v	2
3	Binary 1	Binary 2	Binary 2	Binary 2	Binary 1	Binary 2	Binary 2	Binary 2	Binary 8	Binary 8	Back Space	Back Space	3
4	No.1 Aux. Data	-12v @ -150ma	-12v @ -150ma	-12v @ -150ma	No. 1 Aux. Data	-12v @ -150ma	-12v @ -150ma	-12v @ -150ma	Binary 1	Binary 1	Binary 2	Binary 2	4
5	No.3 Aux. Data	Clear	Clear	Clear	No. 3 Aux. Data	Clear	Clear	Clear	Binary 16	Binary 16	Binary 16	Binary 16	5
6	No. 5 Aux. Data	Not Used	Not Used	Binary 64	No. 5 Aux. Data	Not Used	Not Used	Binary 64	Clear	Clear	Binary 4	Binary 4	6
7	No. 6 Aux. Data	Write Cycle	Write Cycle	Write Cycle	No. 6 Aux. Data	Write Cycle	Write Cycle	Write Cycle	Not Used	Not Used	Binary 32	Binary 32	7
8	Not Used	Blank Disable	Blank Disable	Blank Disable	Not Used	Blank Disable	Blank Disable	Blank Disable	+5v	+5v	Binary 8	Binary 8	8
9	Count Control	Not Used	Not Used	Not Used	Count Control	Not Used	Not Used	Not Used	Not Used	Not Used	Binary 1	Binary 1	9
10	Blank Disable	+250v @ 30ma	+250v @ 30ma	+250v @ 30ma	Blank Disable	+250v @ 30ma	+250v @ 30ma	+250v @ 30ma	Write Cycle	Write Cycle	Blank Disable	Blank Disable	10
11	Not Used	No Pin Termination for This Model				Not Used	No Pin Termination for This Model		No Pin Termination for This Model				11
12	+250v @ 30ma	No Pin Termination for This Model				+250v @ 30ma	No Pin Termination for This Model		No Pin Termination for This Model				12
A	Binary 32	Binary 16	Binary 16	Binary 16	Binary 32	Binary 16	Binary 16	Binary 16	Binary 4	Binary 4	+250v @ 60 ma	+250v @ 60 ma	A
B	Binary 8	Binary 4	Binary 4	Binary 4	Binary 8	Binary 4	Binary 4	Binary 4	Ground	Ground	Data Taken	Data Taken	B
C	Binary 2	Binary 1	Binary 1	Binary 1	Binary 2	Binary 1	Binary 1	Binary 1	Binary 2	Binary 2	Clear	Clear	C
D	-12v @ 50ma	Data Present	Data Present	Data Present	-12v @ 50ma	Data Present	Data Present	Data Present	Not Used	Binary 64	Not Used	Binary 64	D
E	No. 2 Aux. Data	Not Used	Back Space	Back Space	No. 2 Aux. Data	Not Used	Back Space	Back Space	Not Used	Not Used	Write Cycle	Write Cycle	E
F	No. 4 Aux. Data	Data Taken	Data Taken	Data Taken	No. 4 Aux. Data	Data Taken	Data Taken	Data Taken	Binary 32	Binary 32	Not Used	Not Used	F
H	No. 7 Aux. Data	Not Used	Not Used	Not Used	No. 7 Aux. Data	Not Used	Not Used	Not Used	Data Present	Data Present	Ground	Ground	H
J	Count Update	+5v @ 850ma	+5v @ 900ma	+5v @ 900ma	Count Update	+5v @ 850ma	+5v @ 900ma	+5v @ 900ma	Data Taken	Data Taken	Ground	Ground	J
K	Clock	Not Used	Not Used	Not Used	Clock	Not Used	Not Used	Not Used	Blank Disable	Blank Disable	-12v	-12v	K
L	+5v @ 180ma	Ground	Ground	Ground	+5v @ 180ma	Ground	Ground	Ground	-12v	-12v	Not Used	Not Used	L
M	Reset	No Pin Terminations for This Model				Reset	No Pin Termination for This Model		No Pin Termination for This Model				M
N	Ground	No Pin Termination for This Model				Ground	No Pin Termination for This Model		No Pin Termination for This Model				N

## EC17



## EC18



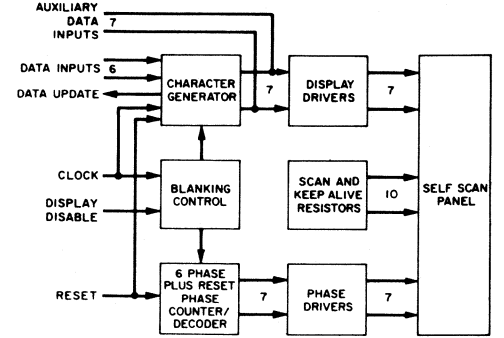


# 48. SCHEMATIC DRAWINGS

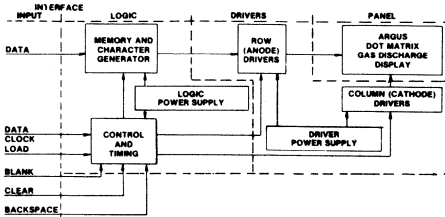
IN DRAWING NUMBER SEQUENCE

## EC21

EC21			EC21a		
1	Display Disable In	14	Aux. Data 6 In	1	Not Used
2	Data Update Out	15	Binary 2 In	2	Not Used
3	Clock In	16	Aux. Data 7 In	3	Clock In
4	Not Used	17	Binary 4 In	4	Not Used
5	Not Used	18	Aux. Data 5 In	5	Not Used
6	Negative 250V	19	Binary 8 In	6	Negative 250V
7	Reset In	20	Aux. Data 3 In	7	Reset In
8	Not Used	21	Not Used	8	Not Used
9	Ground	22	Aux. Data 1 In	9	Ground
10	Aux. Data 2 In	23	Binary 16 In	10	Aux. Data 2 In
11	Not Used (Leave Open)	24	-12V	11	Not Used (Leave Open)
12	Aux. Data 4 In	25	Binary 32 In	12	Aux. Data 4 In
13	Binary 1 In	26	+5V	13	Not Used
				14	Aux. Data 6 In
				15	Not Used
				16	Aux. Data 7 In
				17	Not Used
				18	Aux. Data 5 In
				19	Not Used
				20	Aux. Data 3 In
				21	Not Used
				22	Aux. Data 1 In
				23	Not Used
				24	Not Used
				25	Not Used
				26	+5V



## EC22

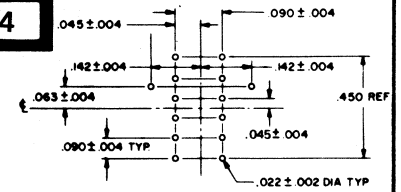


## EC23

Pin No.	Segment
1	F
2	A
3	Common
4	G
5	D
6	E
7	C
8	F

EC23a		EC23b	
1	A	1	F
2	G	2	Common
3	D	3	D
4	B	4	E
5	Common	5	C
6	C	6	G
7	F	7	A
8	E	8	B

## EC24



PIN NO.	ELEMENTS	PIN NO.	ELEMENTS
1	K (-)	8	IC
2	IC	9	IC
3	IC	10	IC
4	IC	11	IC
5	IC	12	IC
6	K (+)	13	DEC PT
7	ANODE	14	IC

\* Lead cut at base of tube.

## EC25

### PAD CONNECTIONS

PAD NO.	CONNECTION	PAD NO.	CONNECTION
1	a	21	d
2	f	22	Anode 5
3	h	23	Decimal Point
4	i	24	No Conn.
5	g	25	No Conn.
6	Anode 1	26	No Conn.
7	b	27	Anode 6
8	M	28	SKA
9	J	29	N
10	Anode 2	30	Anode 7
11	c	31	K
12	SKA	32	L
13	Decimal Point	33	Anode 8
14	Anode 3	34	Annun. 4
15	d	35	Annun. 3
16	SKA	36	Annun. 2
17	Decimal Point	37	Anode 9
18	Anode 4	38	D.C. K.A.
19	d	39	Annun. 1
20	e		

## EC26

### PIN CONNECTIONS

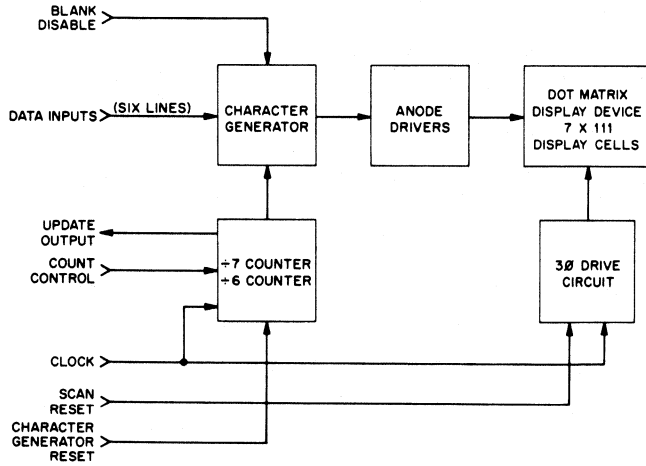
PAD NO.	CONNECTION	PAD NO.	CONNECTION	PAD NO.	CONNECTION	PAD NO.	CONNECTION
1	SKA (Top)	23	NC	45	NC	67	NC
2	a	24	NC	46	NC	68	NC
3	h	25	Anode 5	47	Anode 9	69	Anode 13
4	b	26	NC	48	NC	70	NC
5	Anode 1	27	Anode 5	49	Anode 9	71	Anode 13
6	i	28	NC	50	NC	72	NC
7	Anode 1	29	NC	51	NC	73	NC
8	g	30	NC	52	NC	74	NC
9	f	31	Anode 6	53	Anode 10	75	Anode 14
10	j	32	NC	54	NC	76	NC
11	Anode 2	33	Anode 6	55	Anode 10	77	Anode 14
12	c	34	NC	56	NC	78	NC
13	Anode 2	35	NC	57	Anode 11	79	Anode 15
14	SKA (Bottom)	36	NC	58	NC	80	Comma
15	Anode 3	37	Anode 7	59	NC	81	Anode 15
16	Decimal Point	38	NC	60	NC	82	n
17	Anode 3	39	Anode 7	61	Anode 11	83	i
18	d	40	NC	62	NC	84	è
19	Anode 4	41	Anode 8	63	Anode 12	85	Anode 16
20	Decimal Point	42	NC	64	NC	86	k
21	Anode 4	43	Anode 8	65	Anode 12	87	Anode 16
22	SKA (Bottom)	44	NC	66	NC	88	m
						89	Keep Alive



# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER SEQUENCE

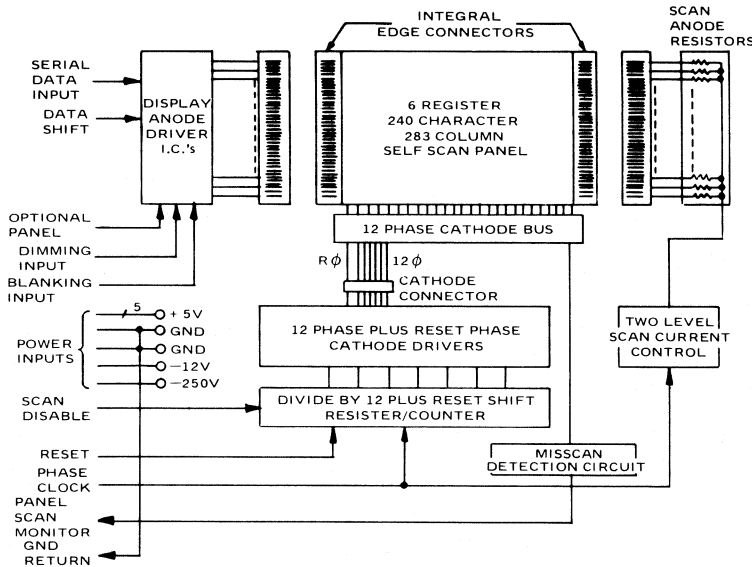
**EC30**



TERMINAL CONNECTIONS

PIN	DESIGNATION	PIN	DESIGNATION
1	Not Used	A	Not Used
2	Not Used	B	Not Used
3	Not Used	C	Not Used
4	Clock Reset	D	Data Update
5	Not Used	E	Binary 32
6	Not Used	F	Binary 16
7	-12V	H	Binary 8
8	Count Control	J	Binary 4
9	Blank Disable	K	Binary 1
10	Reset	L	Binary 2
11	Clock	M	+5V
12	+250V	N	GND

**EC31**



PIN CONNECTIONS

PIN	DESIGNATION
1	-250V
2	Spare
3	Spare
4	No Connection
5	Reset
6	Blanking
7	No Connection
8	No Connection
9	No Connection
10	+5V
11	+5V
12	+5V
13	+5V
14	Phase Clock
15	+5V
16	Scan Disable
17	No Connection
18	Data Shift Clock
19	No Connection
20	Panel Scan Monitor
21	-12V
22	Ground
23	Ground Common
24	Ground Return
25	Serial Data Input
26	Spare



# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER SEQUENCE

## EC32

PIN	DESIGNATION	PIN	DESIGNATION
1	Not Used	A	Not Used
2	Not Used	B	Not Used
3	Not Used	C	Not Used
4	No. 1 Aux. Data	D	-12V
5	No. 3 Aux. Data	E	No. 2 Aux. Data
6	No. 5 Aux. Data	F	No. 4 Aux. Data
7	No. 6 Aux. Data	H	No. 7 Aux. Data
8	Not Used	J	Not Used
9	Not Used	K	Clock
10	Not Used	L	+5V
11	Not Used	M	Reset
12	+250V	N	Ground

KEYWAY LOCATED BETWEEN PINS 7 AND 8

## EC33

Pin	Connection	Pin	Connection
1	Binary 32	A	Binary 16
2	Binary 8	B	Binary 4
3	Binary 2	C	Binary 1
4	-12V	D	Data Present
5	Clear	E	Back Space
6	Binary 64	F	Data Taken
7	Write Cycle	H	Not Used
8	Blank Disable	J	+5V
9	Not Used	K	Not Used
10	+250V	L	Ground

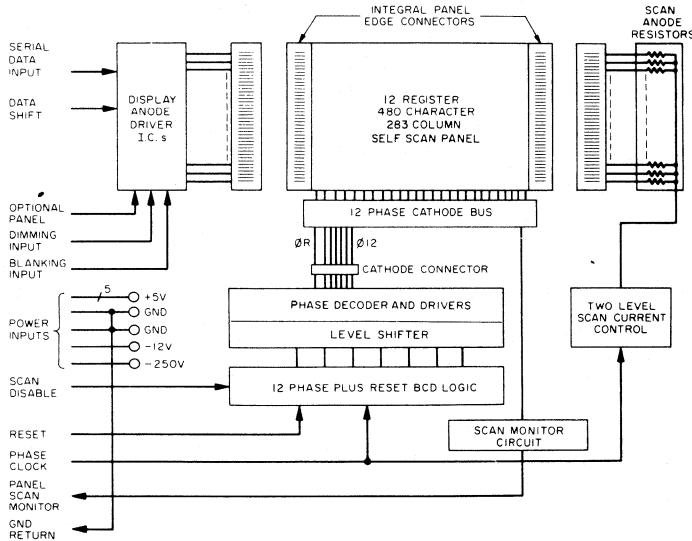
PIN CONNECTIONS

## EC34

PIN	DESIGNATION	PIN	DESIGNATION
1	Not Used	A	Not Used
2	Not Used	B	Not Used
3	Not Used	C	Not Used
4	No. 1 Aux. Data	D	Not Used
5	No. 3 Aux. Data	E	No. 2 Aux. Data
6	No. 5 Aux. Data	F	No. 4 Aux. Data
7	No. 6 Aux. Data	H	No. 7 Aux. Data
8	Not Used	J	Not Used
9	Not Used	K	Clock
10	Not Used	L	+5V
11	Not Used	M	Reset
12	+250V	N	Ground

KEYWAY LOCATED BETWEEN PINS 7 AND 8

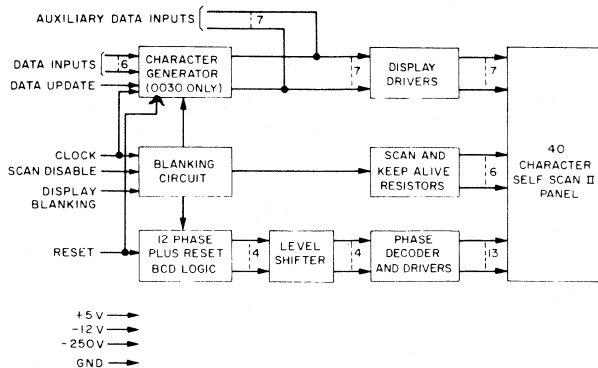
## EC35



## EC36

PIN	DESIGNATION
1	Not Used
2	Data Input 4 (Binary 8)
3	Data Input 5 (Binary 16)
4	Data Input 3 (Binary 4)
5	Data Input 6 (Binary 32)
6	Data Input 1 (Binary 1)
7	V <sub>GG</sub> (-12V)
8	Data Input 2 (Binary 2)
9	Clock Input
10	Auxiliary Data 1
11	Scan Disable
12	Auxiliary Data 6
13	Data Update
14	Auxiliary Data 5
15	Reset Input
16	Auxiliary Data 4
17	Not Used
18	Auxiliary Data 3
19	Display Blanking
20	Auxiliary Data 2
21	Ground
22	Auxiliary Data 1
23	V <sub>CC</sub> (+5 V)
24	Pin removed to provide keying
25	Not Used
26	V <sub>B</sub> (-250V) (Interim)

PIN	DESIGNATION
1	Not Used
2	Not Used
3	Not Used
4	Not Used
5	Not Used
6	Not Used
7	Not Used
8	Not Used
9	Clock Input
10	Auxiliary Data 1
11	Scan Disable
12	Auxiliary Data 6
13	Not Used
14	Auxiliary Data 5
15	Reset Input
16	Auxiliary Data 4
17	Not Used
18	Auxiliary Data 3
19	Not Used
20	Auxiliary Data 2
21	Ground
22	Auxiliary Data 1
23	V <sub>CC</sub> (+5 V)
24	Pin removed to provide keying
25	Not Used
26	V <sub>B</sub> (-250V) (Interim)



# 48. SCHEMATIC DRAWINGS

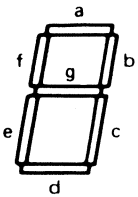
IN DRAWING NUMBER SEQUENCE

## EC37

### PIN INTERCONNECTION DESIGNATIONS

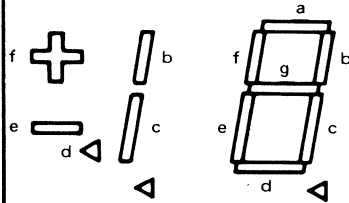
CONTACT NO.	FUNCTION	CONTACT NO.	FUNCTION
2	Anode-Keep Alive	29	3b
4	Cathode-Keep Alive	30	3c
5	1b	31	3d
6	1c	33	Anode 3
7	1d	35	3e
9	Anode 1	36	3g
11	1e	37	3f
12	1g	38	3a
13	1f	39	4b
14	1a	40	4c
15	2b	41	4d
16	2c	43	Anode 4 and AM
17	2d	45	4e
19	Anode 2	46	4g
21	2e	47	4f
22	2g	48	4a
23	2f	50	Cathode-PM
24	2a	51	Cathode-AM
26	Anode-Colon	53	Anode-PM
28	Cathode-Colons		

## EC38



Segment	Pin Number
a	1
b	2
c	3
d	4
e	5
f	6
g	7
decimal	8
anode	9
keep alive cathode	10
A,P	11
M	12
colon (top)	13
colon (bottom)	14

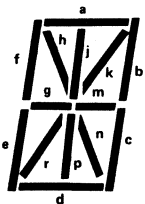
## EC39



Segment/Symbol	Pin Number
a*	1
b/b	2
c/c	3
d/decimal	4
e/minus sign	5
f/plus sign	6
g*	7
decimal	8
anode	9

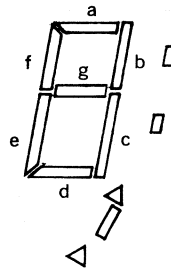
\*Not used in half digit

## EC40



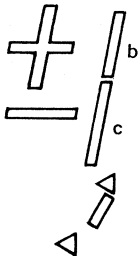
Pin	Segment	Pin	Segment
1	a	10	k
2	b	11	m
3	c	12	n
4	d	13	p
5	e	14	r
6	f	15	Dec. Point
7	g	16	Keep Alive
8	h	17	Anode
9	j		

## EC41



Segment/Symbol	Pin Number(s)
a	1a, 1b*
b	2a, 2b*
c	3a, 3b*
d	4a, 4b*
e	5a, 5b*
f	6a, 6b*
g	7a, 7b*
8	8
decimal	8 and 15
comma	13 and 14
colon	9a and 9b*
anode	10
Keep-alive cathode	10

## EC42



Segment/Symbol	Pin Number(s)
b	2a, 2b*
c	3a, 3b*
decimal	8
comma	8 and 15
anode	9a and 9b*
Keep-alive cathode	10
+ plus	1a, 7a, 11
- minus	12

\*Two pins are provided for "b" and "c" segments and for the anode. It is recommended that these pin pairs be electrically connected to ensure optimum performance. Pins should not be bent or cut off.

\*Two pins are provided for each of the seven digit segments and for the anode. It is recommended that these pin pairs be electrically connected to ensure optimum performance. Pins should not be bent or cut off.

# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

**EC43**

Term No.	Segment Function Characters 1 - 8	Term No.	Segment Function Characters 9 - 16
1	Anode/Keep Alive (Left)	28	Comma
2	Keep Alive (Left)	29	Anode/Char. 9
3	Anode/Char. 1	30	n
4	n	31	m
5	h	32	Anode/Char. 10
6	Anode/Char. 2	33	a
7	m	34	k
8	Decimal	35	f
9	Anode/Char. 3	36	Anode/Char. 11
10	k	37	j
11	d	38	e
12	Anode/Char. 4	39	Anode/Char. 12
13	a	40	d
14	j	41	h
15	e	42	Anode/Char. 13
16	Anode/Char. 5	43	b
17	g	44	c
18	f	45	g
19	Anode/Char. 6	46	Anode/Char. 14
20	c	47	Decimal
21	r	48	r
22	Anode/Char. 7	49	Anode/Char. 15
23	b	50	p
24	p	51	Anode/Char. 16
25	Anode/Char. 8	52	Keep Alive (Right)
26	Comma	53	Anode/Keep Alive (Right)
27	Not Used		

**EC44**

D14	10
D13	20
D12	30
D11	40
D10	50
D9	60
D8	70

ELECTRICAL SIGNAL	EC44	EC44a	EC44b	EC44c
Digit A BCD Input - 1	A4	A4	A2	A2
Digit A BCD Input - 2	A8	A8	A8	A8
Digit A BCD Input - 4	A9	A9	A10	A10
Digit A BCD Input - 8	A11	A11	A1	A1
Cp (store)	A5	A5	A9	A9
BI/RBO	A1	A1	A12	A12
RBI	A10	A10	A13	A13
Decimal Point - Digit A	A13	A13	A4	A4
Digit B BCD Input - 1		B3	B4	B4
Digit B BCD Input - 2		B4	B8	B8
Digit B BCD Input - 4		B9	B9	B9
Digit B BCD Input - 8		B11	B11	B11
Cp (store)	A2	A2	B5	B5
BI/RBO		B10	B1	B1
RBI		B1	B10	B10
Decimal Point - Digit B	B5	B5	B13	B13
Digit C BCD Input - 1			C3	
Digit C BCD Input - 2			C4	
Digit C BCD Input - 4			C9	
Digit C BCD Input - 8			C11	
Cp (store)			B2	B2
BI/RBO			C10	
RBI			C1	
Decimal Point - Digit C			C5	C5
+180 ±10 Vdc	B13	B13	C13	C13
+5 ±5% Vdc (1)	B2	B2	C2, A3	C2, A3
Ground (1)	B12	B12	A14, C12	A14, C12
Keep-Alive Cathode (2)	A14	A14	A5 or B14	A5 or B14
Digit "1"	B4			C4
Plus "+"	B3			C3
Minus "-"	B1			C1

# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

**EC45**

D14	10
D13	20
D12	30
D11	40
D10	50
D9	60
D8	70

ELECTRICAL SIGNAL	EC45	EC45a i	EC45b	EC45c
Digit A Input A (Cp)	A12	A12	A11	A11
Digit A Reset R <sub>2(1)</sub>	A6	A6	A6	A6
Digit A Reset R <sub>3(2)</sub>	A7	A7	A7	A7
Digit A Reset R <sub>4(3)</sub>	A2	A2	A1	A1
Digit A Reset R <sub>5(4)</sub>	A3	A3	A2	A2
D Output	A8	A8	A8	A8
Cp (store)	A5	A5	A10	A10
BI/RBO	A1	A1	A12	A12
RBI	A11	A11	A13	A13
Decimal Point (Digit A)	A13	A13	A4	A4
Digit B Input A (Cp)	B9	B9	B12	B12
Digit B Reset R <sub>6(1)</sub>	B14	B14	B6	B6
Digit B Reset R <sub>7(2)</sub>	B3	B3	B7	B7
Digit B Reset R <sub>8(3)</sub>	B6	B6	B2	B2
Digit B Reset R <sub>9(4)</sub>	B7	B7	B3	B3
D Output		B8	B8	B8
Cp (store)	B11	B11	B5	B5
BI/RBO		B10	B1	B1
RBI		B1	B11	B11
Decimal Point (Digit B)	B5	B5	B13	B13
Digit C Input A (Cp)			C9	C9
Digit C Reset R <sub>10(1)</sub>			C14	C14
Digit C Reset R <sub>11(2)</sub>			C3	C3
Digit C Reset R <sub>12(3)</sub>			C6	C6
Digit C Reset R <sub>13(4)</sub>			C7	C7
D Output			C8	
Cp (store)			C11	C11
BI/RBO			C10	
RBI			C1	
Decimal Point (Digit C)			C5	C5
+180 +10 VDC	B13	B13	C13	C13
+5 ±5% VDC (1)	B2	B2	A3, C2	A3, C2
Ground (1)	B12	B12	A14, C12	A14, C12
Keep-Alive Cathode (2)	A14	A14	A5 or B14	A5 or B14
Plus "+"	B8			C8
Minus "-"	B1			C1

**EC47**

PIN	OUT
1	A4
2	Ka
3	Kf
4	AKa
5	Kb
6	Kg
7	A3
8	KKa
9	Ke
10	Kc
11	Kd
12	A2
13	Kh
14	KB
15	KT
16	A1

**EC48**

PIN	OUT
0	NC
1	A4
2	a
3	f
4	A3
5	b
6	g
7	e
8	c
9	d
10	nc
11	A2
12	bc
13	tc
14	A1
15	Ka
16	KAA

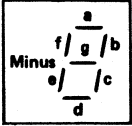
# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER SEQUENCE

## EC49

Legend  
A = ANODE  
dp = decimal point  
ka = keep alive

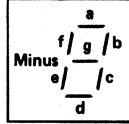
PIN	FUNCTION
1	dp1
2	NC
3	NC
4	NC
5	NC
6	NC
7	NC
8	NC
9	NC
10	dp2
11	A1
12	c
13	b
14	a
15	f
16	g
17	e
18	d
19	ka
20	kaA



## EC50

Legend  
A = ANODE  
dp = decimal point  
ka = keep alive

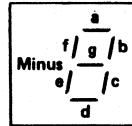
PIN	FUNCTION	PIN	FUNCTION
1	ka	16	NC
2	kaA	17	c
3	dp1	18	b
4	NC	19	a
5	NC	20	f
6	A1	21	g
7	NC	22	e
8	NC	23	d
9	dp2	24	c
10	NC	25	b
11	NC	26	a
12	A2	27	f
13	NC	28	g
14	NC	29	e
15	dp3	30	d



## EC51

Legend  
A = ANODE  
dp = decimal point  
ka = keep alive

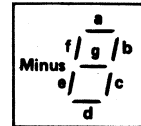
PIN	FUNCTION	PIN	FUNCTION
1	Ka	22	c
2	kaA	23	b
3	dp1	24	a
4	NC	25	f
5	NC	26	g
6	A1	27	e
7	NC	28	d
8	NC	29	c
9	dp2	30	b
10	NC	31	a
11	NC	32	f
12	A2	33	g
13	NC	34	e
14	NC	35	d
15	dp3	36	c
16	NC	37	b
17	NC	38	a
18	A3	39	f
19	NC	40	g
20	NC	41	e
21	dp4	42	d



## EC52

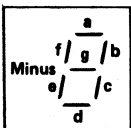
Legend  
A = ANODE  
dp = decimal point  
ka = keep alive

PIN	FUNCTION	PIN	FUNCTION
1	ka Anode	26	dp
2		27	NC
3	ka	28	c
4	NC	29	NC
5	A1	30	b
6	NC	31	NC
7	NC	32	NC
8	NC	33	NC
9	NC	34	NC
10	NC	35	NC
11	A2	36	NC
12	NC	37	NC
13	NC	38	NC
14	NC	39	NC
15	NC	40	a
16	NC	41	NC
17	A3	42	f
18	NC	43	NC
19	NC	44	g
20	NC	45	NC
21	NC	46	minus
22	NC	47	e
23	A4	48	d
24	NC	49	NC
25	NC	50	NC



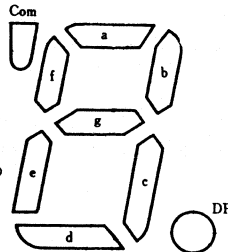
## EC53

Legend  
A = ANODE  
dp = decimal point  
ka = keep alive



PIN	FUNCTION	PIN	FUNCTION	PIN	FUNCTION
1	ka Anode	22	NC	43	NC
2		23	A4	44	NC
3	ka	24	NC	45	NC
4	NC	25	NC	46	NC
5	A1	26	NC	47	NC
6	NC	27	NC	48	NC
7	NC	28	NC	49	NC
8	NC	29	A5	50	NC
9	NC	30	NC	51	NC
10	NC	31	NC	52	a
11	A2	32	dp	53	NC
12	NC	33	NC	54	f
13	NC	34	c	55	NC
14	NC	35	NC	56	g
15	NC	36	b	57	NC
16	NC	37	NC	58	Minus
17	A3	38	NC	59	e
18	NC	39	NC	60	d
19	NC	40	NC	61	NC
20	NC	41	NC	62	NC
21	NC	42	NC		

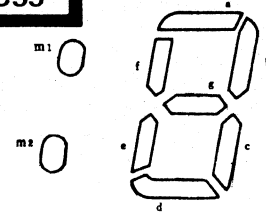
## EC54



EC54a AND b HAVE NO "COM" CONNECTION

PIN NO.	EC54	EC54a	EC54b
1	F	F	F
2	13G	12G	P(f)
3	P(com)	11G	12G
4	12G	P(f)	P(g)
5	P(f)	10G	11G
6	11G	P(g)	P(e)
7	P(g)	9G	10G
8	10G	P(e)	9G
9	P(e)	8G	P(d)
10	9G	P(d)	8G
11	P(d)	7G	7G
12	8G	6G	6G
13	7G	P(DP)	5G
14	6G	5G	P(DP)
15	P(DP)	P(c)	4G
16	5G	4G	3G
17	P(c)	P(d)	P(c)
18	4G	3G	2G
19	P(b)	P(a)	P(b)
20	3G	2G	1G
21	P(a)	1G	P(a)
22	2G	F	F
23	1G		
24	F		

## EC55

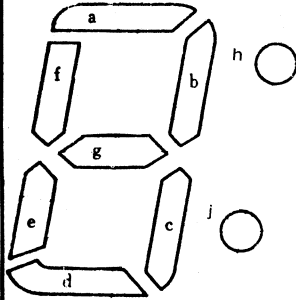


PIN NO.	
1	F(-)
2	P(m2)
3	P(e2)
4	P(d2)
5	P(c2)
6	G
7	P(g1)
8	P(e1)
9	P(d1)
10	P(c1)
11	F(+)
12	NC
13	P(b1)
14	P(a1)
15	P(f1)
16	P(b2)
17	G
18	P(a2)
19	P(f2)
20	P(g2)
21	P(m1)
22	NC

# 48. SCHEMATIC DRAWINGS

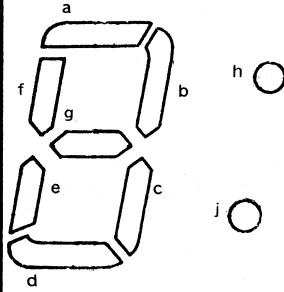
IN DRAWING NUMBER  
SEQUENCE

**EC56**



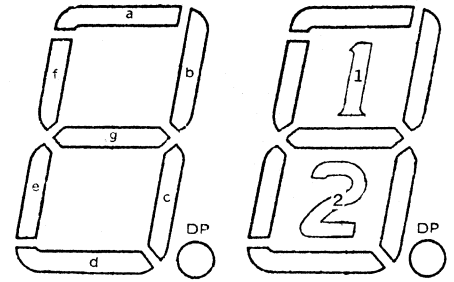
PIN NO.	
1	F(-)
2	G
3	P(e4)
4	P(d4,a4)
5	P(e4)
6	P(e3)
7	P(d3)
8	P(d3)
9	P(c3)
10	P(g2)
11	F
12	P(c2)
13	P(e1)
14	P(e1)
15	P(d1)
16	P(c1)
17	G
18	F(+)
19	NP
20	G
21	P(b1)
22	P(a1)
23	P(f1)
24	P(b2)
25	P(a2,d2)
26	P(f2)
27	P(hJ)
28	G
29	P(b3)
30	P(b3)
31	P(f3)
32	P(b4)
33	P(f4)
34	P(g4)
35	G
36	NP

**EC57**



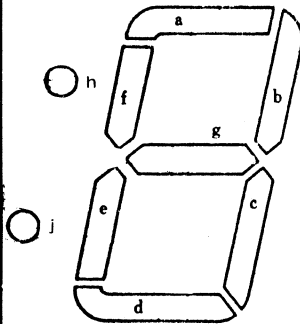
PIN NO.	
1	F(-)
2	P(g)
3	P(f)
4	4G
5	P(e)
6	P(d)
7	3G
8	P(c)
9	Gc
10	P(b)
11	2G
12	P(a)
13	P(i)
14	1G
15	P(h)
16	F(+)

**EC58**



PIN NO.	
1	F
2	F
3	9G
4	P(g)
5	8G
6	P(f)
7	P(e)
8	7G
9	P(d)
10	6G
11	5G
12	4G
13	P(1,2)
14	P(DP)
15	3G
16	P(c)
17	P(b)
18	2G
19	P(a)
20	1G
21	F

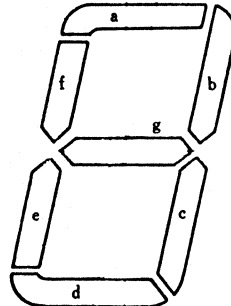
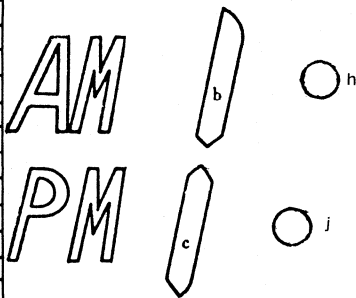
**EC59**



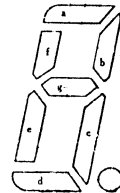
PIN NO.	
1	F
2	P(h)
3	P(j)
4	p(g4)
5	G
6	P(f4)
7	P(e4)
8	P(a4,d4)
9	P(b4j)
10	P(c4)
11	P(f3)
12	P(g3)
13	P(a3)
14	P(b3)
15	P(d3)
16	P(c3)
17	P(e3)
18	G
19	P(f2)
20	P(g2)
21	P(a2,d2)
22	P(b2)
23	P(e2)
24	P(c2)
25	P(f1)
26	P(g1)
27	P(a1)
28	P(b1)
29	P(e1)
30	G
31	P(c1)
32	P(d1)
33	F

**EC60**

PIN NO.	
1	F
2	P(h)
3	P(j)
4	P(PM)
5	G
6	P(AM)
7	NC
8	NC
9	P(AM)
10	P(b4,c4)
11	P(f3)
12	P(g3)
13	P(p3)
14	P(b3)
15	P(d3)
16	P(c3)
17	P(e3)
18	G
19	P(f2)
20	P(g2)
21	P(a2,d2)
22	P(b2)
23	P(e2)
24	P(c2)
25	p(f1)
26	P(g1)
27	P(a1)
28	P(b1)
29	P(e1)
30	G
31	P(c1)
32	P(d1)
33	F



**EC61**



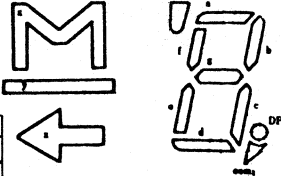
PIN NO.	EC61	EC61a	EC61b
1	F	F	F
2	P(DP)	P(d)	9G
3	8G	8G	P(f)
4	P(c)	P(e)	8G
5	7G	7G	P(g)
6	P(g)	P(g)	7G
7	6G	6G	P(e)
8	P(b)	P(f)	6G
9	5G	5G	P(d)
10	4G	4G	5G
11	P(a)	P(a)	P(DP)
12	3G	3G	4G
13	P(f)	P(b)	P(c)
14	2G	2(G)	3G
15	P(e)	P(c)	P(b)
16	1G	1G	2G
17	P(d)	P(DP)	P(a)
18	F	F	1G
19			F



# 48. SCHEMATIC DRAWINGS

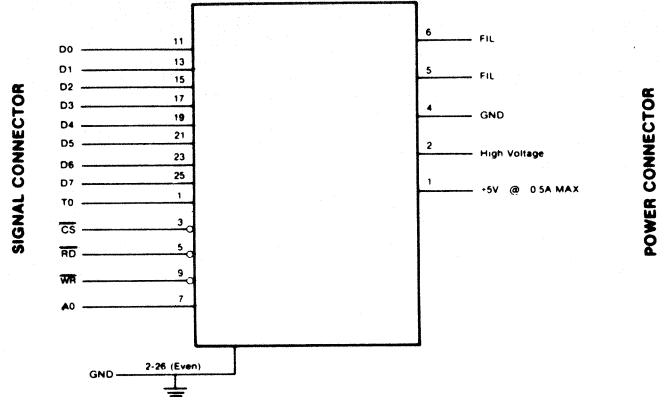
IN DRAWING NUMBER  
SEQUENCE

## EC62



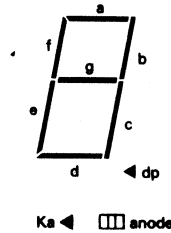
PIN NO.	
1	F
2	13G
3	P(x)
4	12G
5	P(y)
6	11G
7	P(z)
8	P(com 1)
9	10G
10	9G
11	P(f)
12	P(e)
13	8G
14	P(d)
15	7G
16	6G
17	P(com 2)
18	P(DP)
19	5G
20	4G
21	P(c)
22	P(g)
23	3G
24	P(b)
25	2G
26	P(a)
27	1G
28	F

## EC63



## EC64

### Segment Designations



SEGMENT/SYMBOL	PIN NUMBER
a	1
b	2
c	3
d/decimal	4
e	5
f	6
g	7
decimal	8
anode	9
keep alive	10

## EC65

Table of Connector/Segment Interconnections

TERM NO.	SEGMENT FUNCTION CHARACTERS 5-45	CURRENT RATIO	TERM NO.	SEGMENT FUNCTION CHARACTERS 50-87	CURRENT RATIO
5	D.P. Digit 1	0.29	50	D.P. Digit 3	0.29
6	a Digit 1	1.04	51	a Digit 3	1.04
7	b Digit 1	1.00	52	b Digit 3	1.00
8	c Digit 1	1.23	53	c Digit 3	1.23
9	d Digit 1	1.05	54	d Digit 3	1.05
13	Anode Digit 1	----	58	Anode Digit 3	----
14	Anode Digit 1	----	59	Anode Digit 3	----
18	e Digit 1	1.15	63	e Digit 3	1.15
19	g Digit 1	1.04	64	g Digit 3	1.04
20	f Digit 1	0.94	65	f Digit 3	0.94
23	Right Keep Alive Anode	----	68	Left Keep Alive Anode	----
24	Right Keep Alive	0.03	69	Left Keep Alive	0.03
27	D.P. Digit 2	0.29	71	Plus (top vert.)	0.48
28	a Digit 2	1.04	73	D.P. Digit 4	0.29
29	b Digit 2	1.00	74	a Digit 4	1.04
30	c Digit 2	1.23	75	b Digit 4	1.00
31	d Digit 2	1.05	76	c Digit 4	1.23
35	Anode Digit 2	----	77	d Digit 4	1.05
36	Anode Digit 2	----	80	Anode Digit 4	----
40	e Digit 2	1.15	81	Anode Digit 4	----
41	g Digit 2	1.04	84	Plus (bot. vert.)	0.48
42	f Digit 2	0.94	85	e Digit 4	1.15
44	Anode Colon	----	86	g Digit 4	1.04
45	Colon	0.69	87	f Digit 4	0.94

## EC66

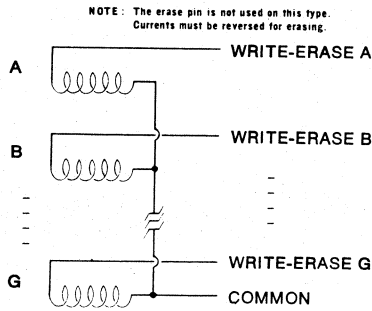
Connector/Segment Interconnections

Terminal No.	Segment/Function	Terminal No.	Segment/Function
1	a	21	
2	Anode 1	22	
3	b	23	
4	Anode 1	24	Anode 4
5	c	25	
6	K.A. Anode (right)	26	Anode 4
7	K.A. Cathode (right)	27	
8	Anode 2	28	
9		29	
10	Dec. Pt.	30	Anode 5
11		31	K.A. Cathode (left)
12	Anode 2	32	Anode 5
13	Comma	33	d
14	Anode 3	34	K.A. Anode (left)
15			
16	Anode 3	35	e
17		36	Anode 6
18		37	g
19		38	Anode 6
20		39	f

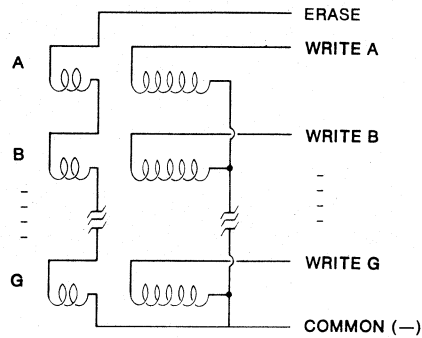
# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER SEQUENCE

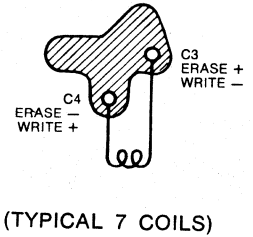
**EC67**



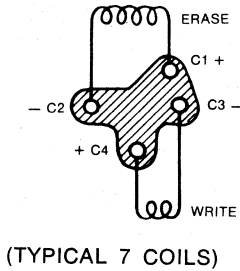
**EC68**



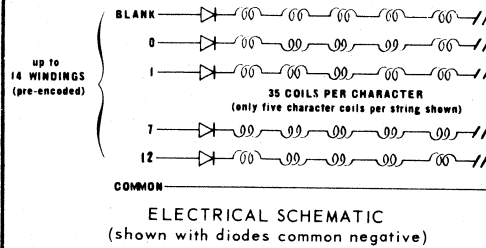
**EC69**



**EC70**



**EC71**

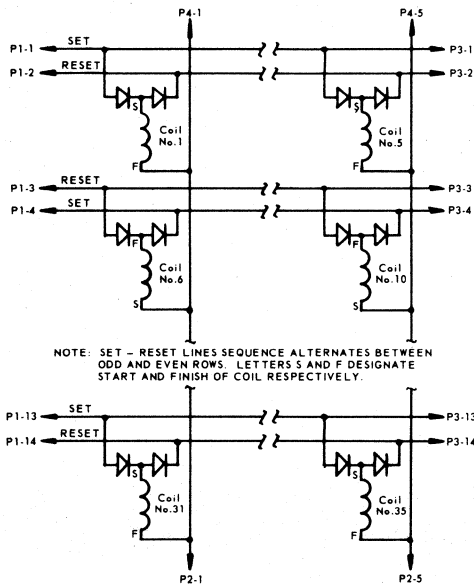


### COIL CONFIGURATIONS

TYPE	DCP	DCN	NDP	NDN
	COMMON	COMMON	COMMON	COMMON
COIL ELECTRICAL DIAGRAM				
	SIGNAL	SIGNAL		
COIL ASSEMBLY TYPE	WITH DIODES COMMON POSITIVE	WITH DIODES COMMON NEGATIVE	WITHOUT DIODES COMMON POSITIVE	WITHOUT DIODES COMMON NEGATIVE

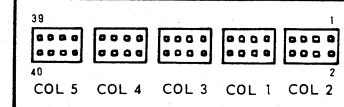
**EC72**

### COIL CONFIGURATION TYPE SC



NOT USED	34	33
ROW 3 RESET (-)	32	31
ROW 3 SET (+)	30	29
ROW 2 SET (-)	28	27
ROW 2 RESET (+)	26	25
ROW 1 RESET (-)	24	23
NOT USED	22	21
ROW 1 SET (+)	20	19
ROW 4 RESET (+)	18	17
ROW 4 SET (-)	16	15
ROW 5 SET (+)	14	13
ROW 5 RESET (-)	12	11
ROW 6 RESET (+)	10	9
ROW 6 SET (-)	8	7
ROW 7 SET (+)	6	5
NOT USED	4	3
ROW 7 RESET (-)	2	1

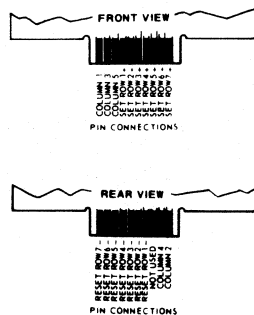
ROW CONNECTOR



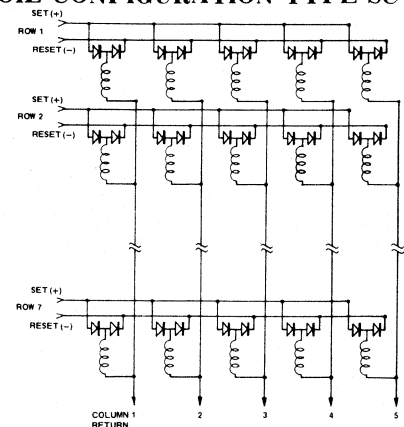
### COLUMN CONNECTOR

FACING DISPLAY SIDE OF MODULE  
COLUMN 1 IS ON EXTREME LEFT  
COLUMN 5 IS ON EXTREME RIGHT

**EC73**



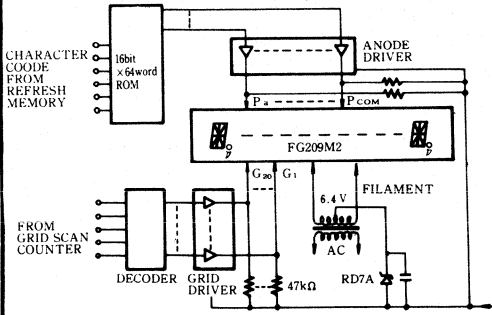
### COIL CONFIGURATION TYPE SC



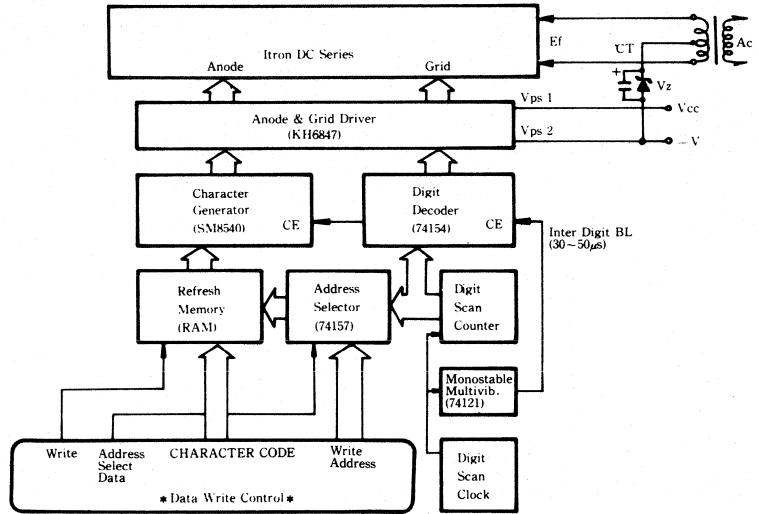
# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER SEQUENCE

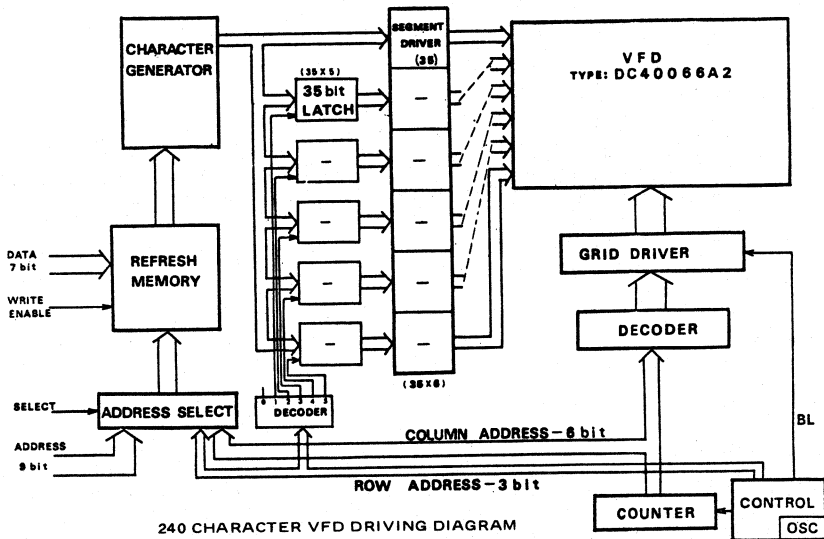
**EC74**



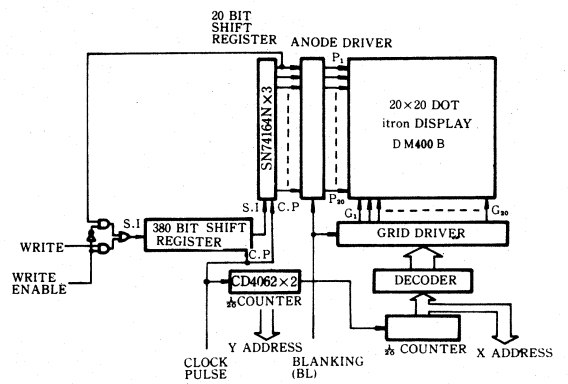
**EC75**



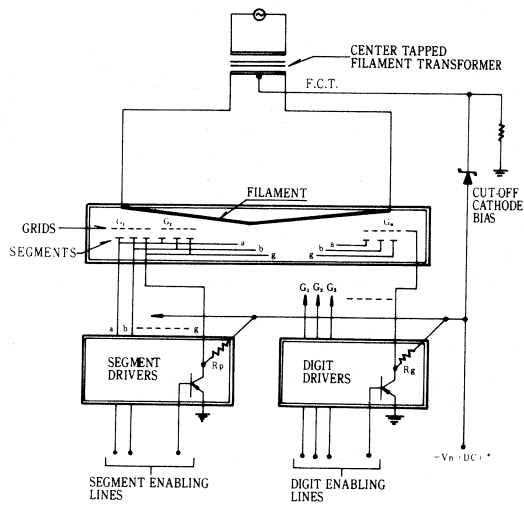
**EC76**



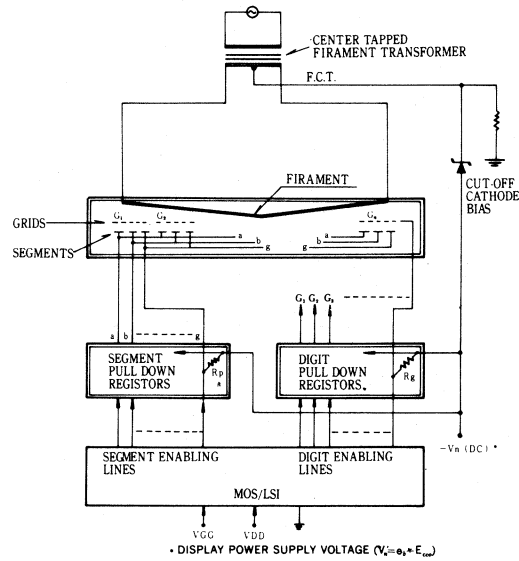
**EC77**



**EC78**

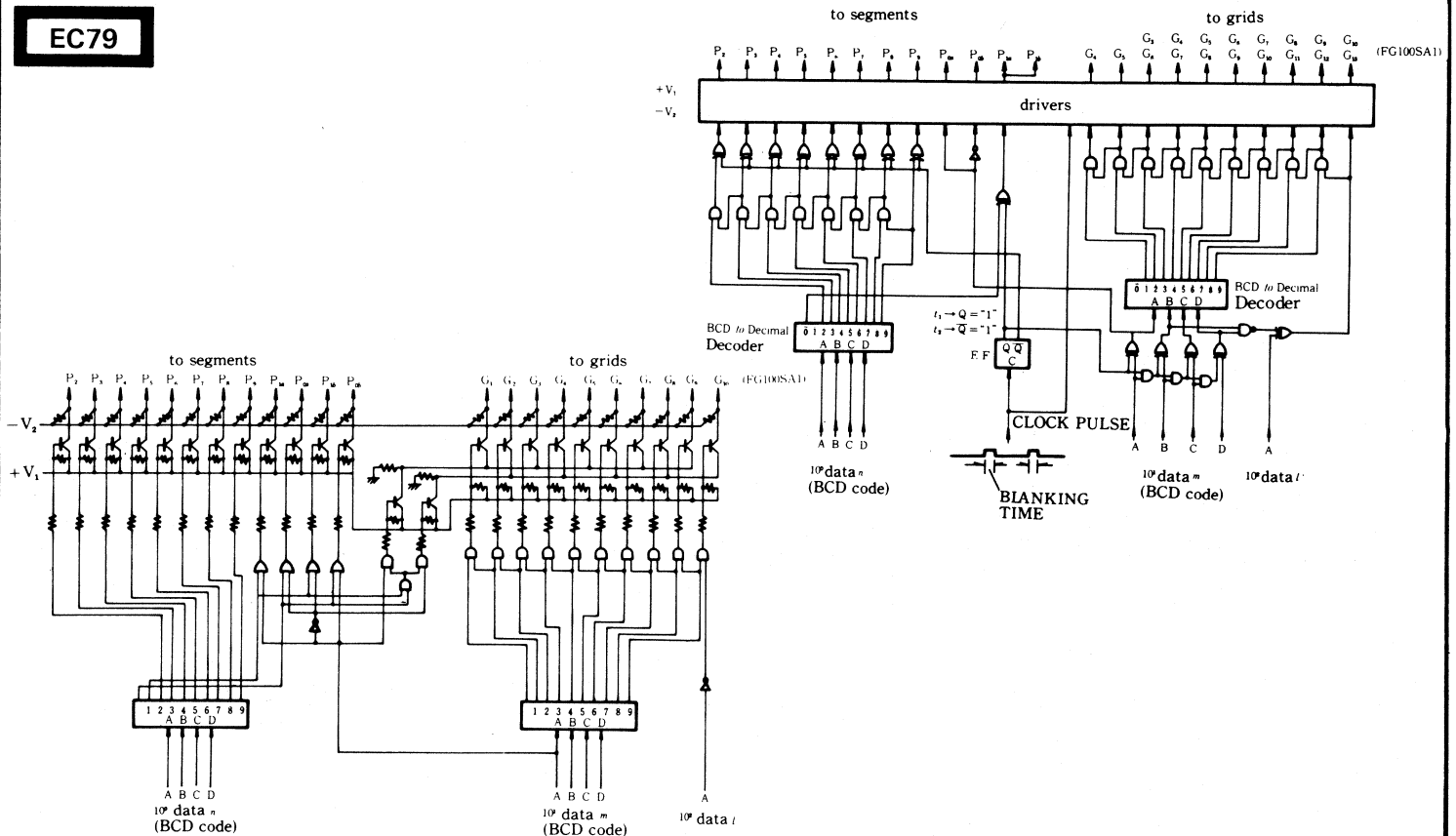


Transistor Drive Interface Circuit.



Direct Drive Interface Circuit.

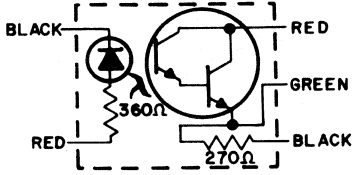
**EC79**



# 48. SCHEMATIC DRAWINGS

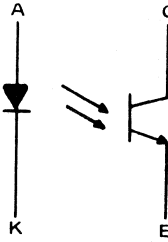
IN DRAWING NUMBER  
SEQUENCE

**FA1**

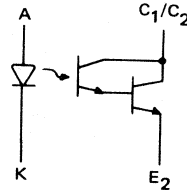


**FA2**

	A	K	C	E
FA2	1	2	4	3
FA2a	3	4	1	2
FA2b	Red	Black	Blue	Yellow
FA2c	Red	Black	White	Green

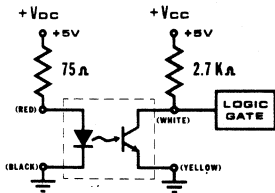


**FA3**

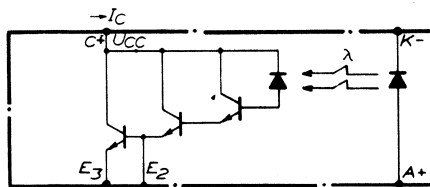


	A	K	C1/C2	E2
FA3	1	2	4	3
FA3a	2	1	4	3
FA3b	RED	Black	Blue	Yellow

**FA4**

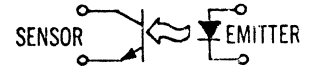


**FA5**

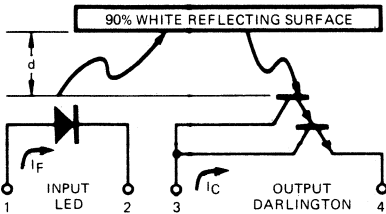


	PIN			
	A	B	C	D
FA5	1	4	2	3
FA5a	White	Green	Red	Black

**FA6**

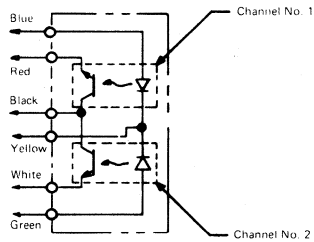


**FA8**

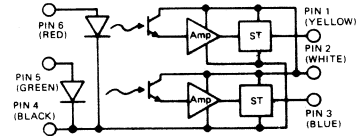


	A	B	C	D
FA8	1	2	3	4
FA8a	Red	Black	White	Green

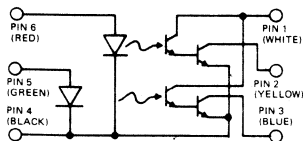
**FA9**



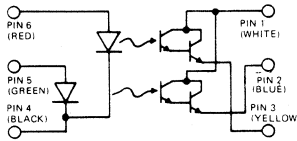
**FA10**



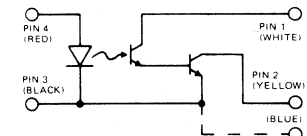
**FA11**



**FA12**



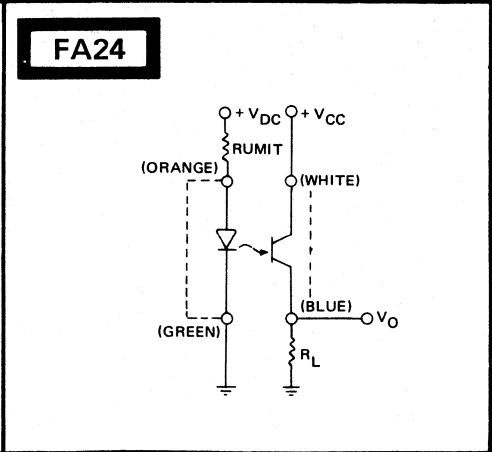
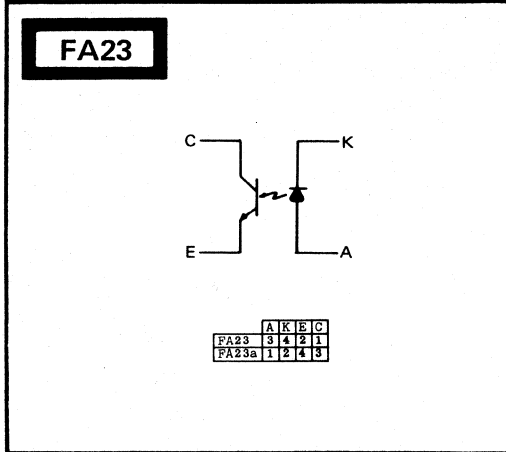
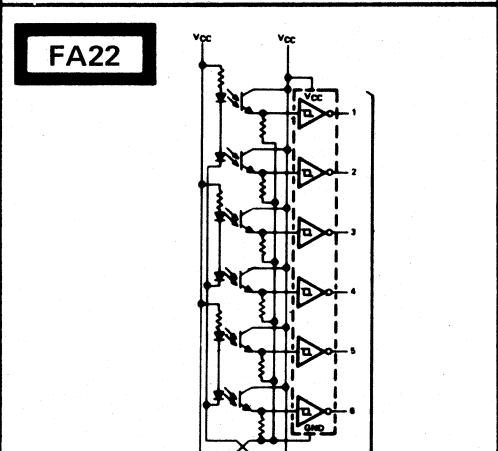
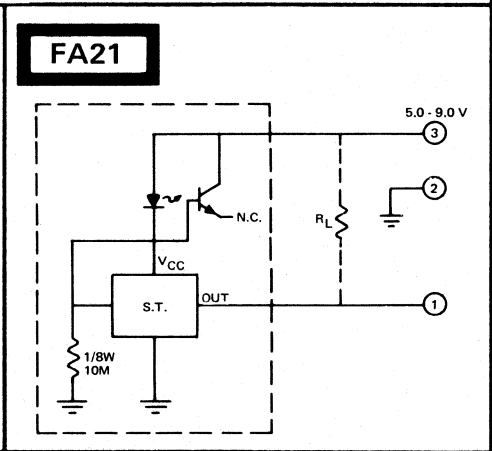
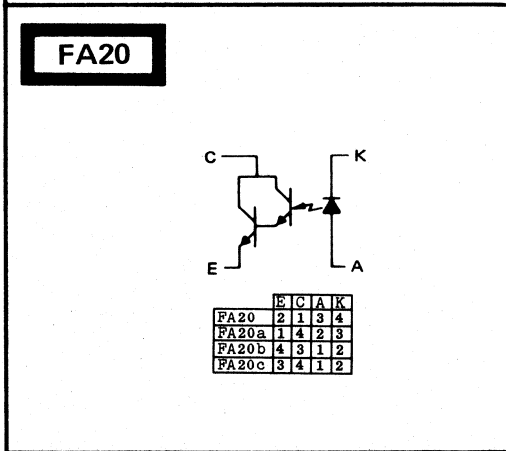
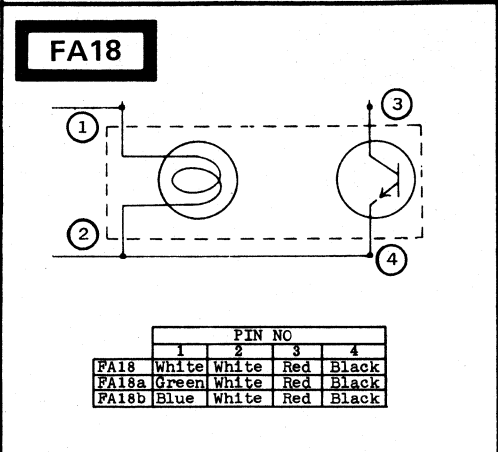
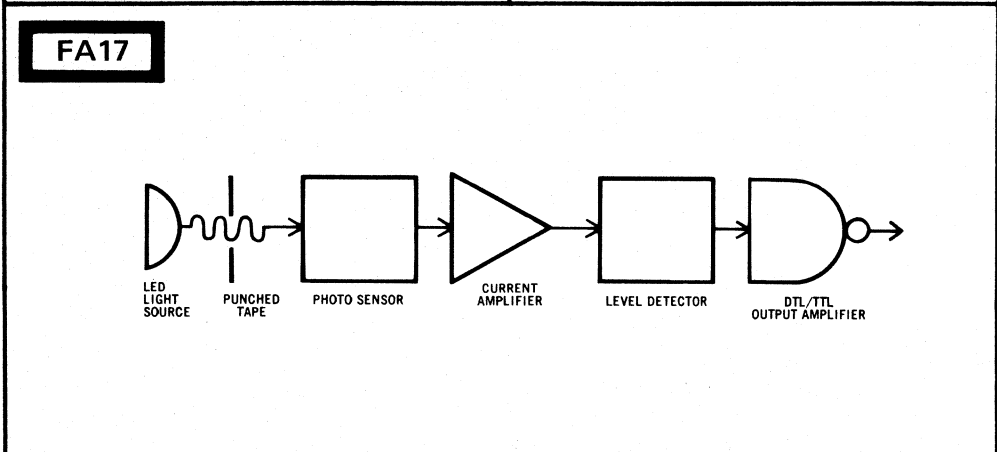
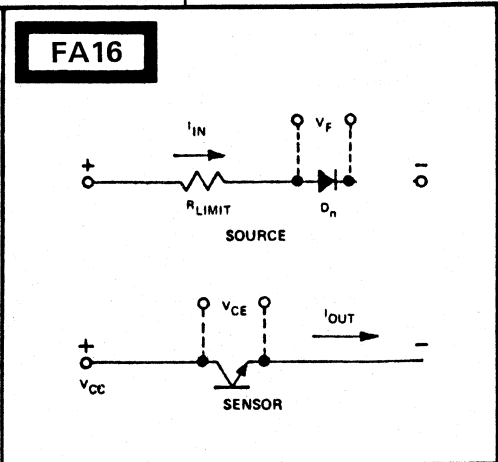
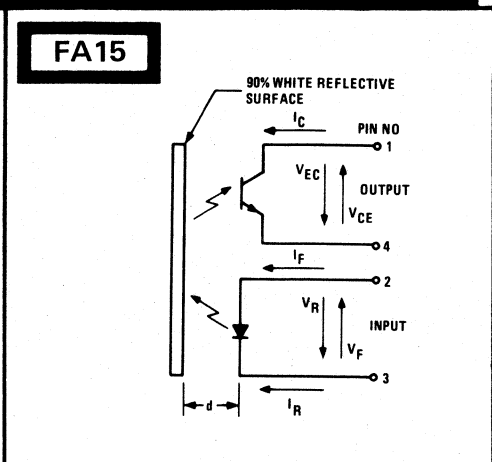
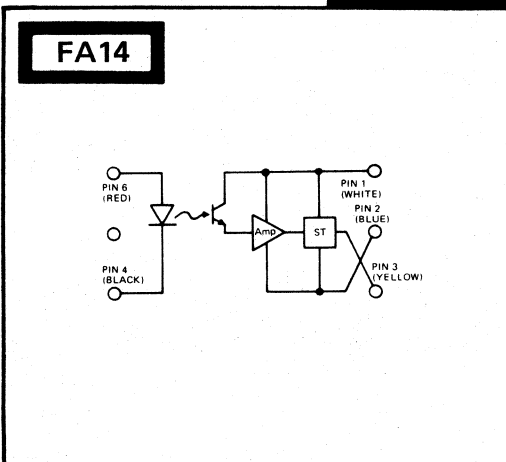
**FA13**



FA13a - HAS 5 LEAD WIRES WITH THE GROUNDS ISOLATED.

# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER SEQUENCE





# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

**FA25**

**ELECTRICAL CONNECTIONS**

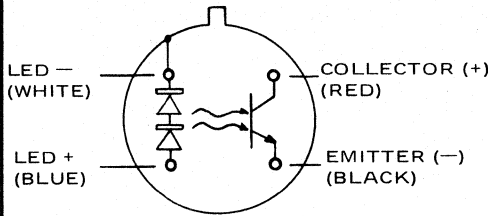
**Connection**

**Wire Color Code**

- LED (+5 VDC)
- LED (Gnd)
- Sensor (+5 VDC)
- Sensor (Gnd)
- Channel 1 output
- Channel 2 output
- Channel 3 output

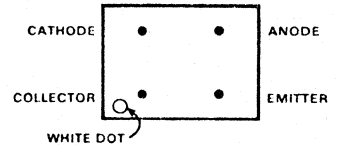
- White/Orange
- White/Green
- Red/Gray
- Black
- Brown
- Red
- Orange

**FA28**



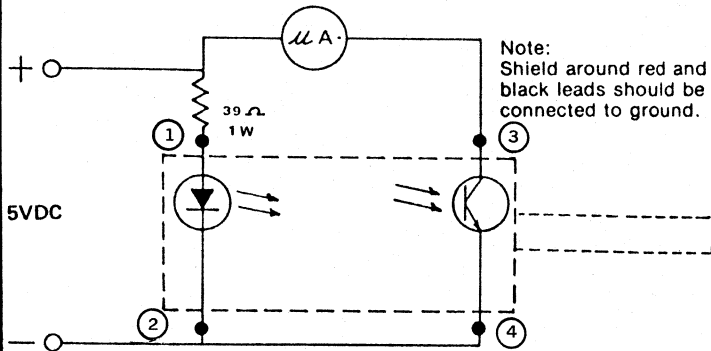
**FA29**

(TOP VIEW)

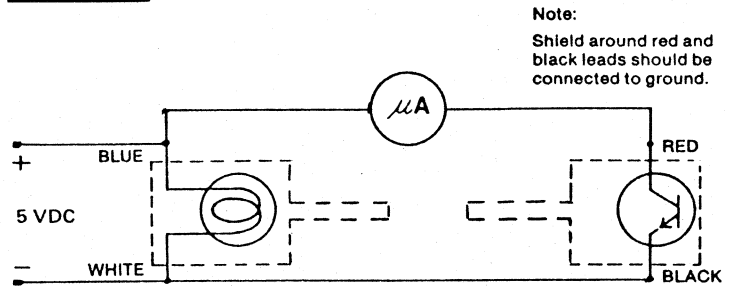


**FA30**

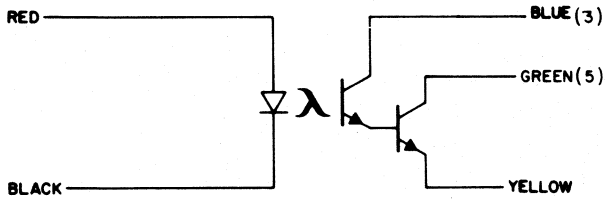
	PIN NO			
	1	2	3	4
FA30	Blue	White	Red	Black
FA30a	Green	White	Red	Black



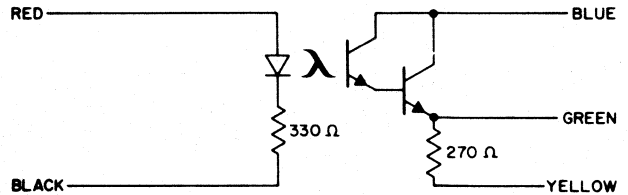
**FA31**



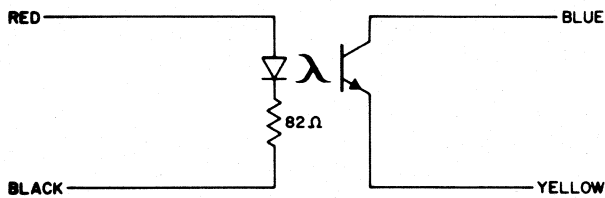
**FA32**



**FA33**



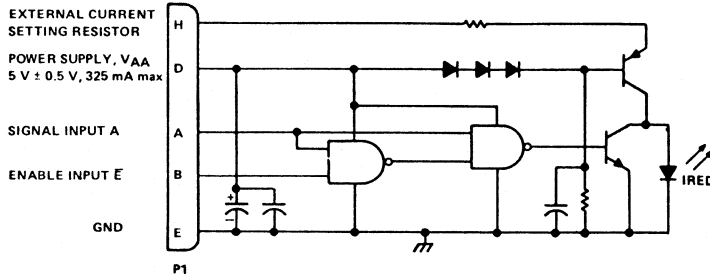
**FA34**



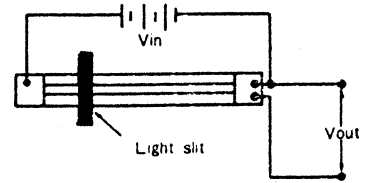
# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

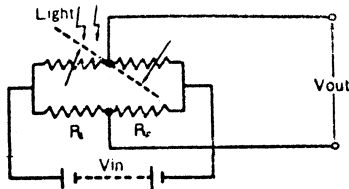
**FB1**



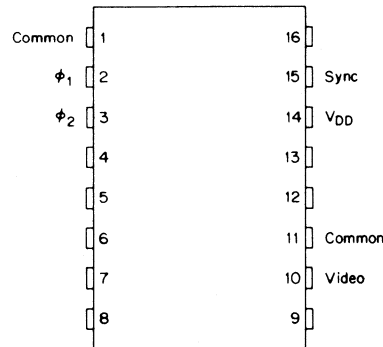
**FB4**



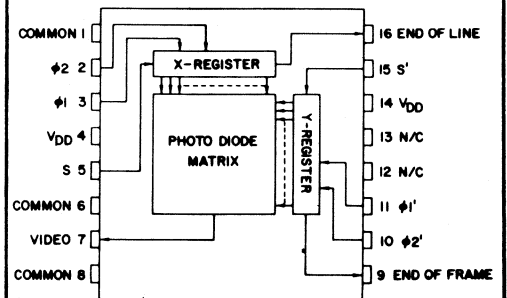
**FB5**



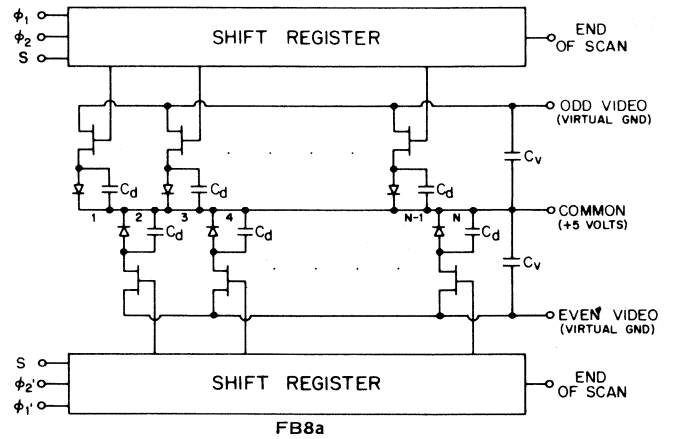
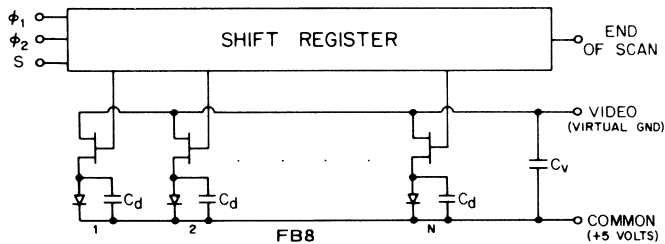
**FB6**



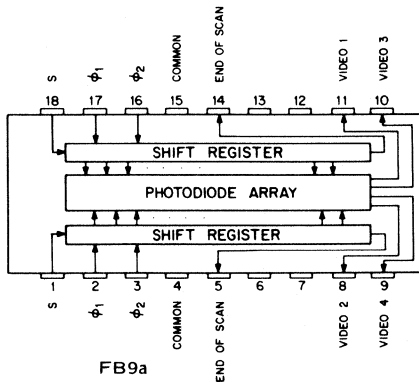
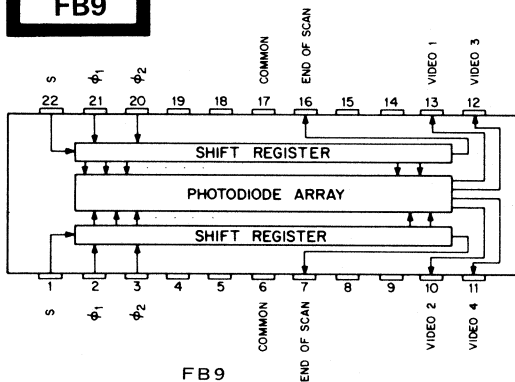
**FB7**



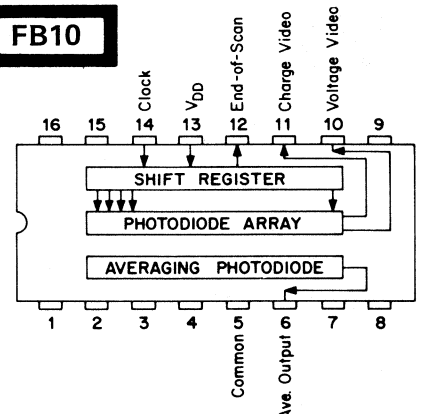
**FB8**



**FB9**



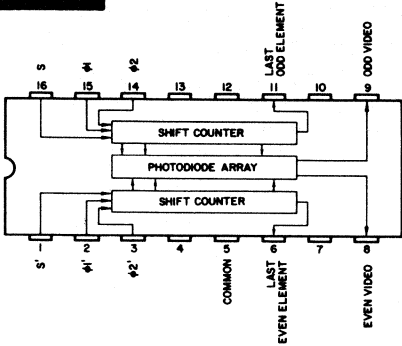
**FB10**



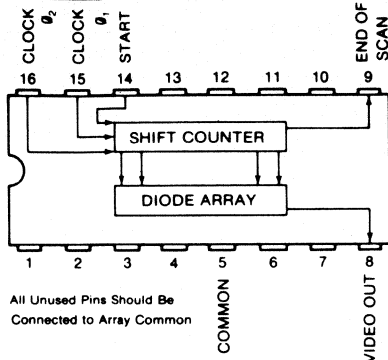
# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER SEQUENCE

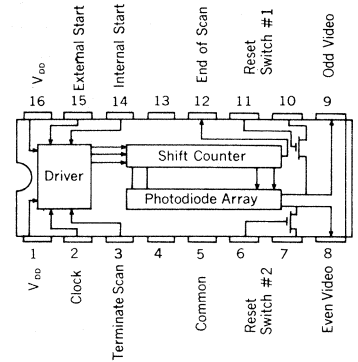
**FB11**



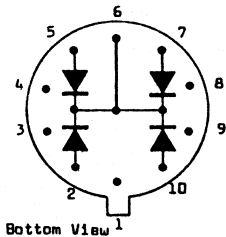
**FB12**



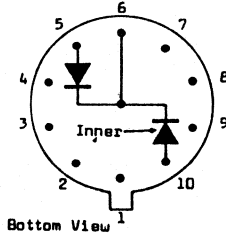
**FB13**



**FB15**



**FB16**



**FB17**

Pin no.	Function
1	N.C.
2	Video Z
3	Video Y
4	Video X
5 - 7	N.C.
8 - 9	Substrate +ve bias
10	Scan Start input
11	Ground (0V)
12	N.C.
13	Clock Pulse $\phi_2$ Input
14	Clock Pulse $\phi_1$ Input
15	Scan Output (normally connected to 0V)
16	Ground (0V)

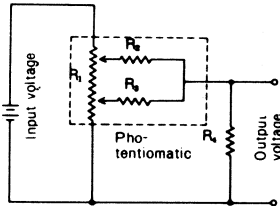
Video X Voltage Sampling Output  
Video Y Voltage Sampling Current Output  
Video Z Recharge Sampling Output

**FB18**

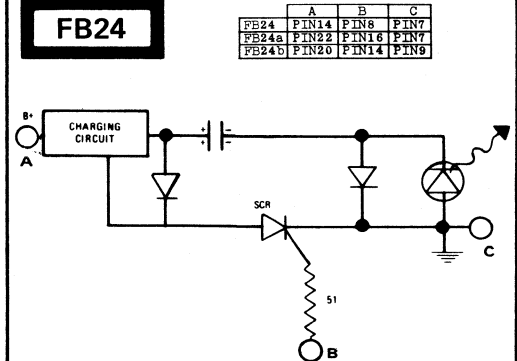
Pin no.	Function
1	N.C.
2	Video Z
3	Video Y
4	Video X
5 - 11	N.C.
12, 13	Substrate +ve bias
14	Scan Start Input
15	Clock Pulse $\phi_2$ Input
16	N.C.
17	Ground (0V)
18, 19	N.C.
20	Ground (0V)
21	N.C.
22	Clock Pulse $\phi_1$ Input
23	Scan Output (normally connected to 0V)
24	Ground (0V)

Video X Voltage Sampling Output  
Video Y Voltage Sampling Current Output  
Video Z Recharge Sampling Output

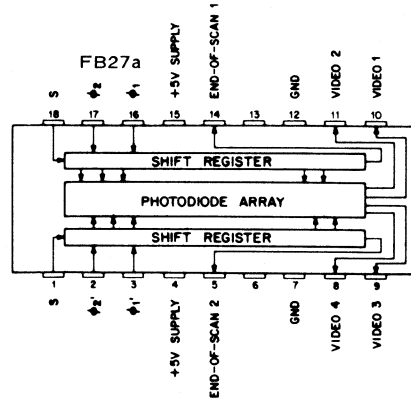
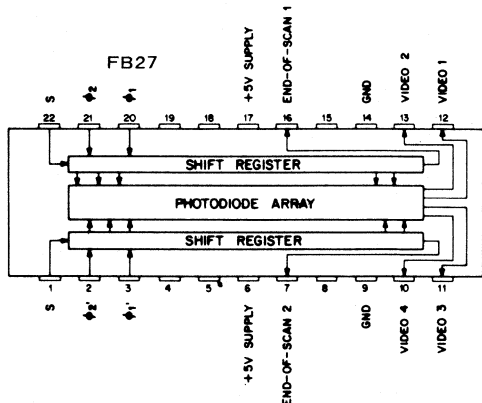
**FB23**



**FB24**



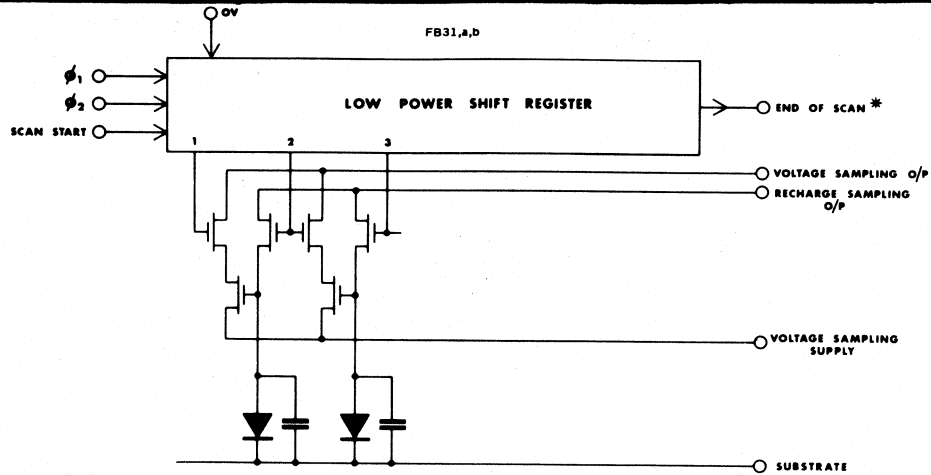
**FB27**



# 48. SCHEMATIC DRAWINGS

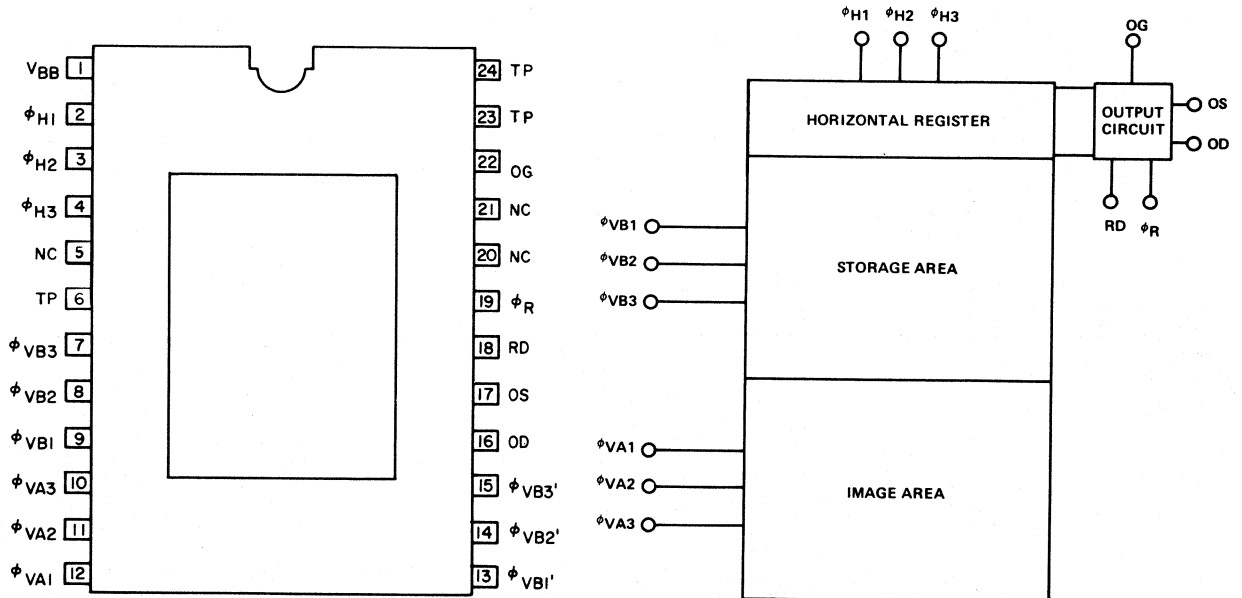
IN DRAWING NUMBER SEQUENCE

## FB31



FB31,a		FB31b		FB31c		FB31d	
Pin No	Function	Pin No	Function	Pin No	Function	Pin No	Function
1	NC	1	NC	1 (Tag)	0 Volts	1 (Tag)	Scan Start i/p
2	Recharge Sampling o/p	2	Recharge sampling o/p	2	NC	2	phi 1 Clock
3	Voltage sampling supply	3	Voltage sampling supply	3	Recharge Sampling o/p (-15V)	3	phi 2 Clock
4	Voltage sampling o/p	4	Voltage sampling o/p	4	Voltage Sampling Supply (-15V)	4	Scan Out
5-7	NC	5-11	NC	5	Voltage Sampling o/p	5	0 Volts
8-9	Substrate +ve bias	12-13	Substrate +ve bias	6	Substrate (+5V)	6	Substrate (+5V)
10	Scan start i/p	14	Scan start i/p	7	Scan Start i/p	7	Recharge Sampling o/p (-15V)
11	Earth (0V)	15	phi 2 clock	8	phi 1 Clock	8	Voltage Sampling Supply (-15V)
12	NC	16	NC	9	Scan Out	9	Voltage Sampling o/p
13	phi 2 clock	17	Earth (0V)	10	phi 2 Clock	10	NC
14	phi 1 clock	18-19	NC				
15	End of Scan	20	Earth				
16	Earth (0V)	21	NC				
		22	phi 1 clock				
		23	End of Scan				
		24	Earth (0V)				

## FB32



# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER SEQUENCE

**FB33**

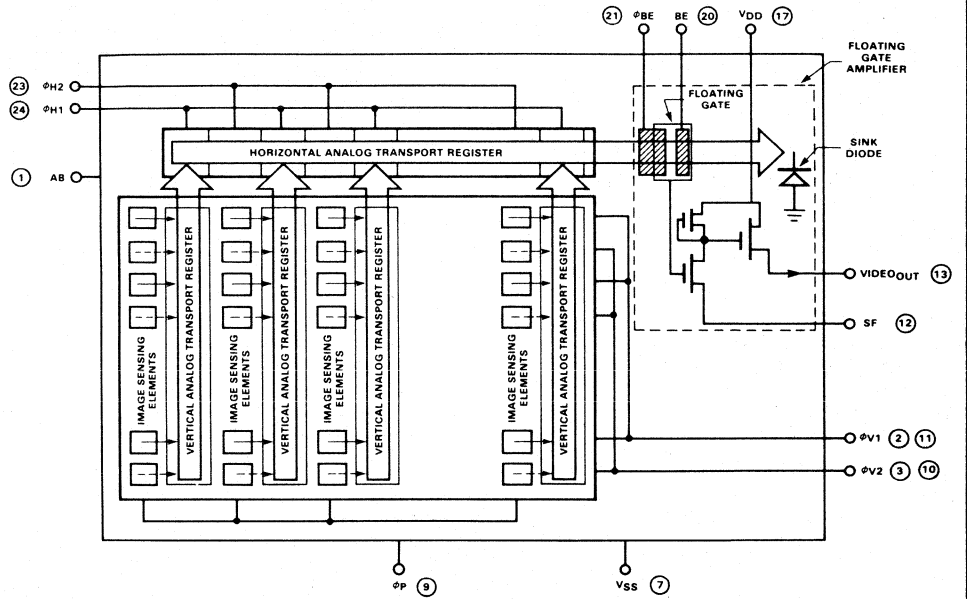
FB33

- 1. VIDEO
- 4. COMMON
- 8. END OF SCAN
- 9.  $\phi$  1
- 10.  $\phi$  2
- 15.  $V_{DD}$
- 16. START PULSE

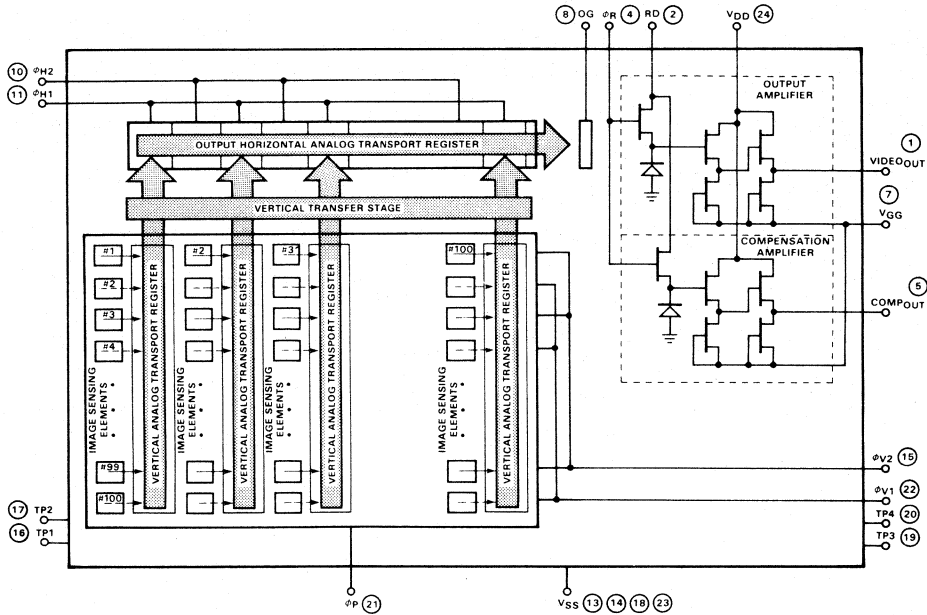
FB33a

- 9. VIDEO
- 11. END OF SCAN
- 12. COMMON
- 14.  $\phi$  1
- 15.  $\phi$  2
- 16. START PULSE

**FB34**



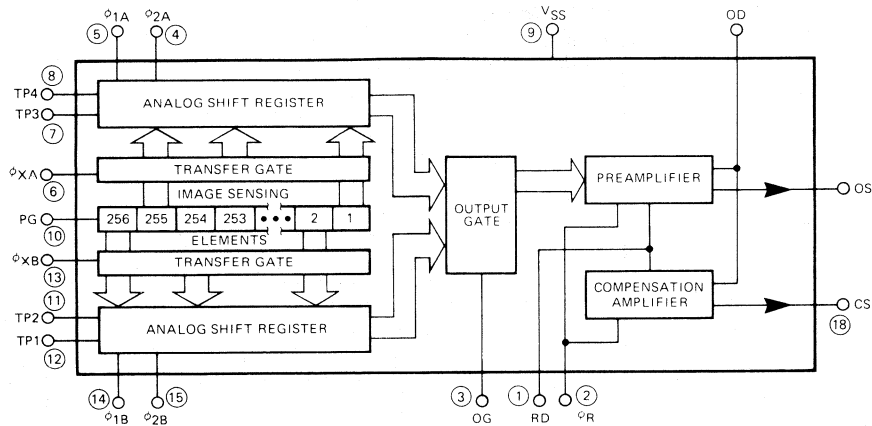
**FB35**



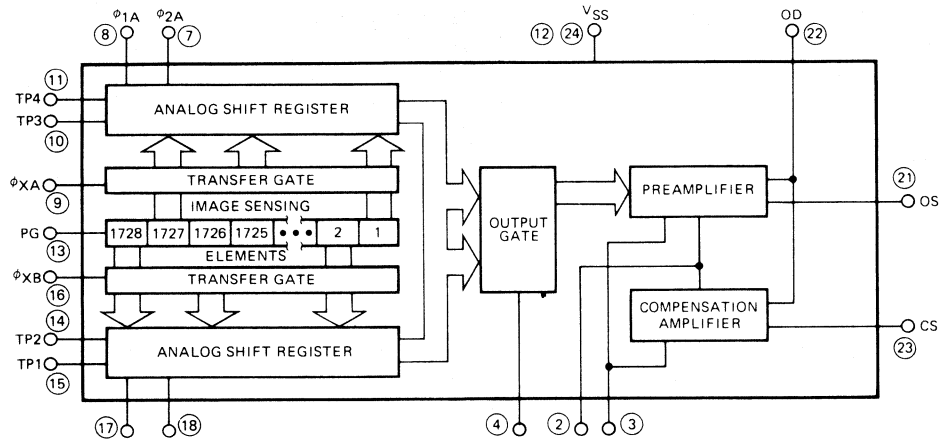
# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER SEQUENCE

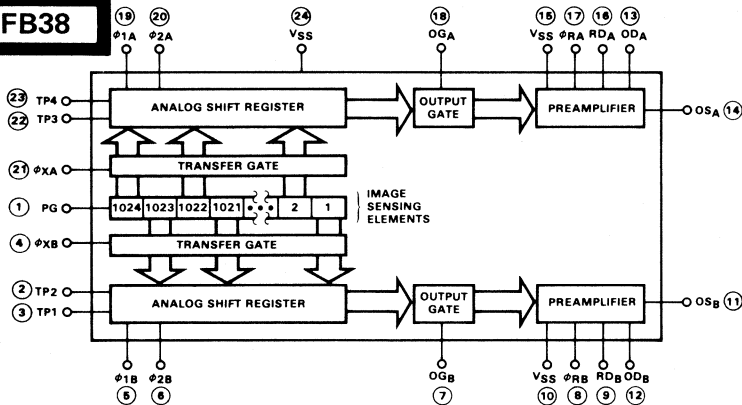
**FB36**



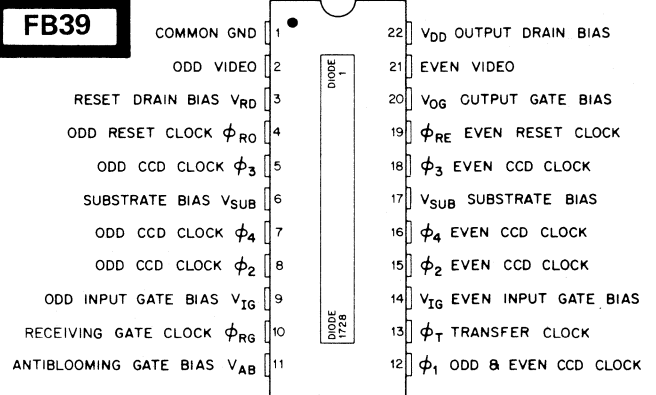
**FB37**



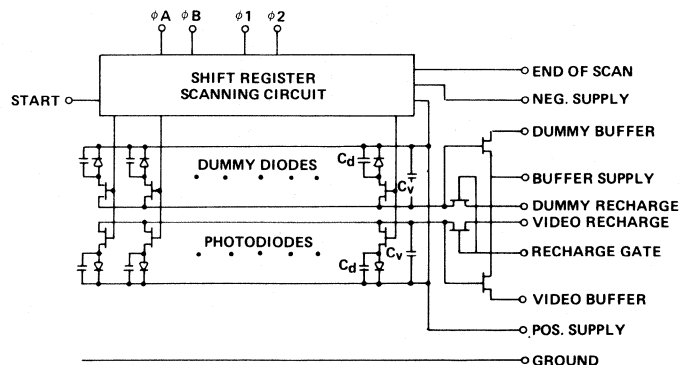
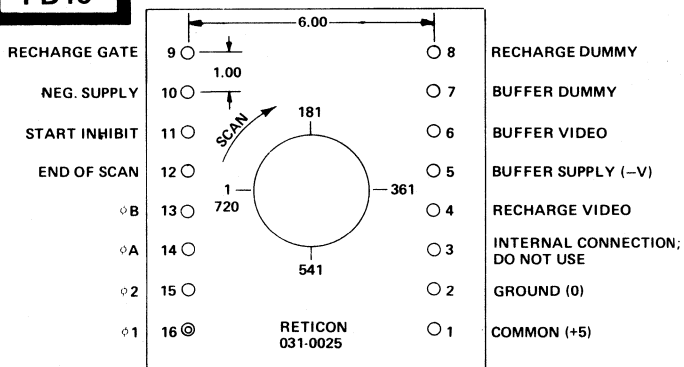
**FB38**



**FB39**



**FB40**

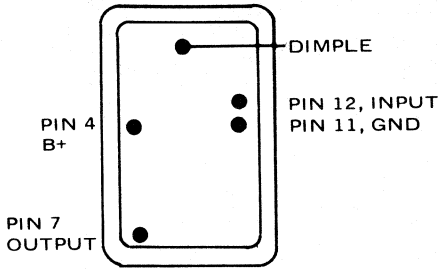




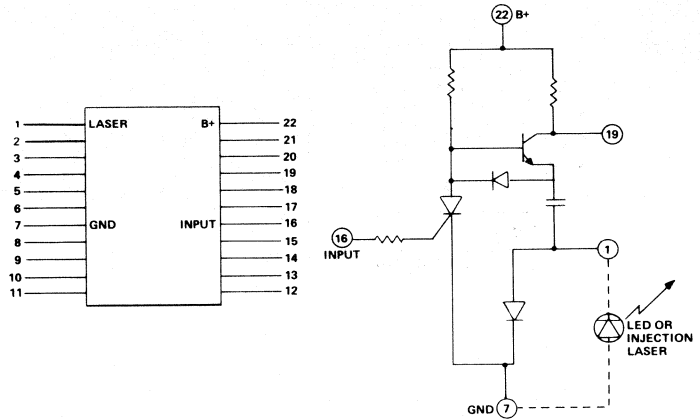
# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

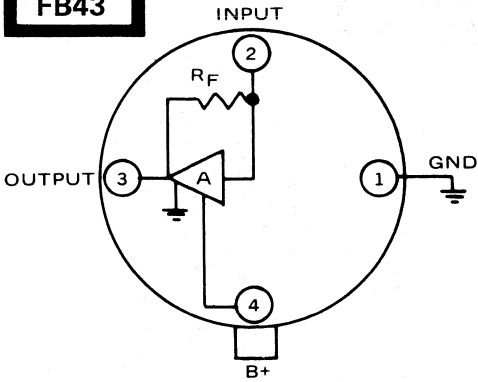
**FB41**



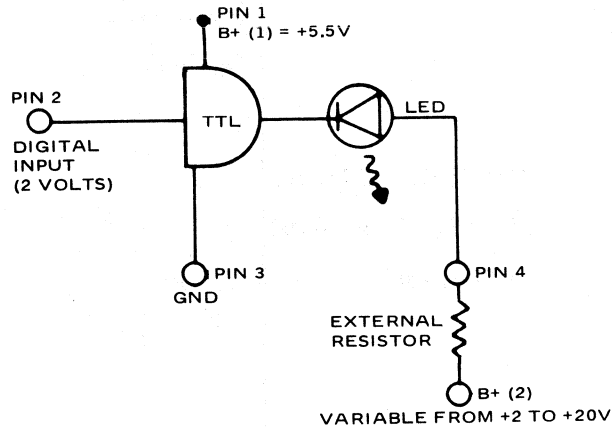
**FB42**



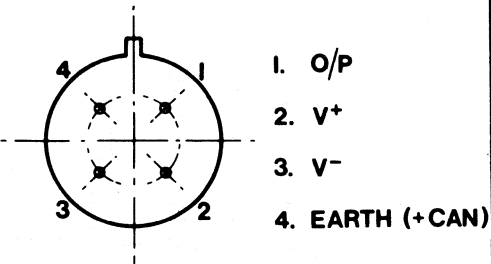
**FB43**



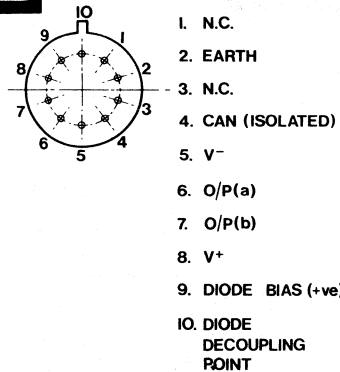
**FB44**



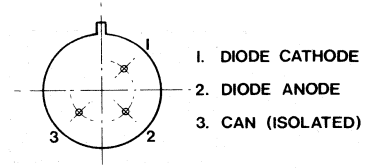
**FB45**



**FB46**

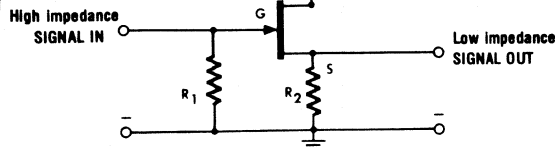


**FB47**

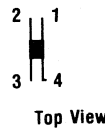
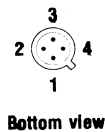
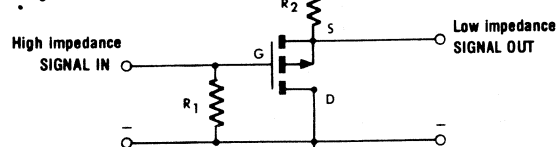


**FB48**

Impedance converter  
using an N-channel JFET



Impedance converter  
using a P-channel MOSFET



	N-ch. JFET	P-ch. MOSFET
1	S	D
2	D	G
3	G	+
4	-	S

FB48

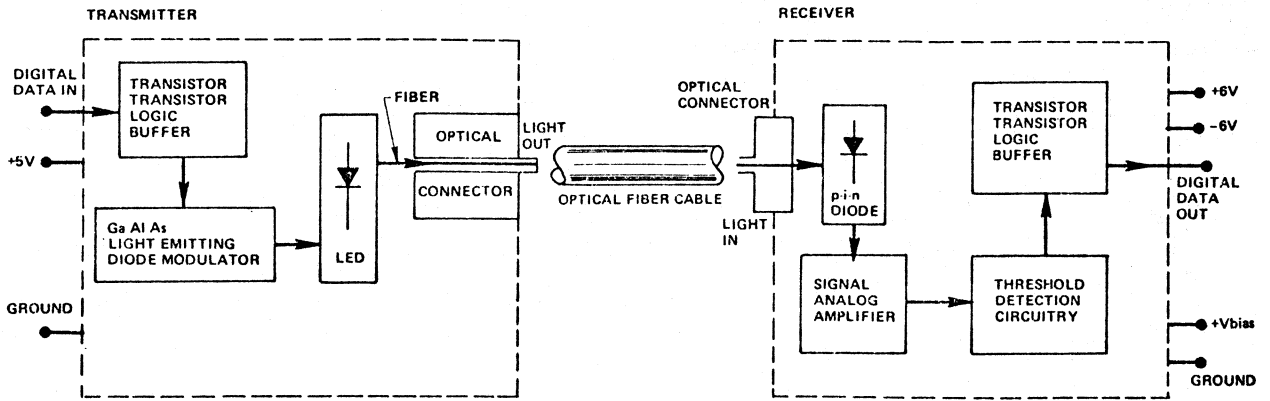
	N-ch. JFET	P-ch. MOSFET
1	-	D
2	D	+
3	S	S
4	G	G

FB48a

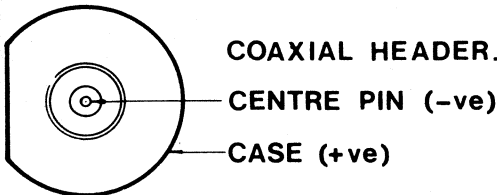
# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER SEQUENCE

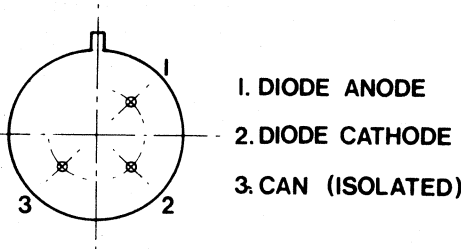
**FB49**



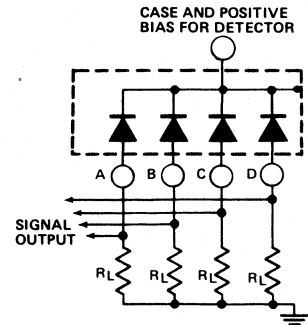
**FB50**



**FB51**

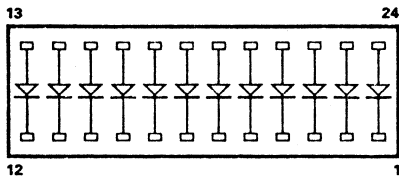


**FB52**



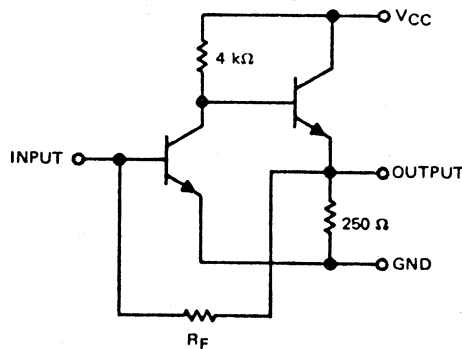
**FB54**

(BOTTOM VIEW)



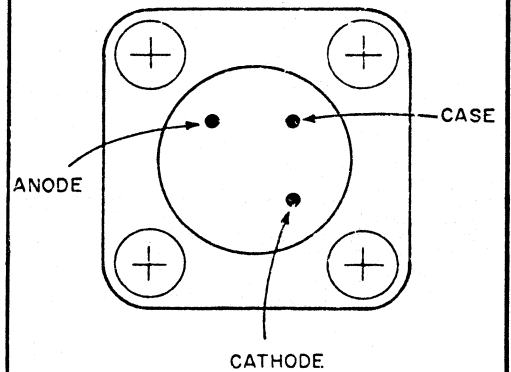
PIN		PIN	
1	CA 1	13	AN 12
2	CA 2	14	AN 11
3	CA 3	15	AN 10
4	CA 4	16	AN 9
5	CA 5	17	AN 8
6	CA 6	18	AN 7
7	CA 7	19	AN 6
8	CA 8	20	AN 5
9	CA 9	21	AN 4
10	CA 10	22	AN 3
11	CA 11	23	AN 2
12	CA 12	24	AN 1

**FB55**

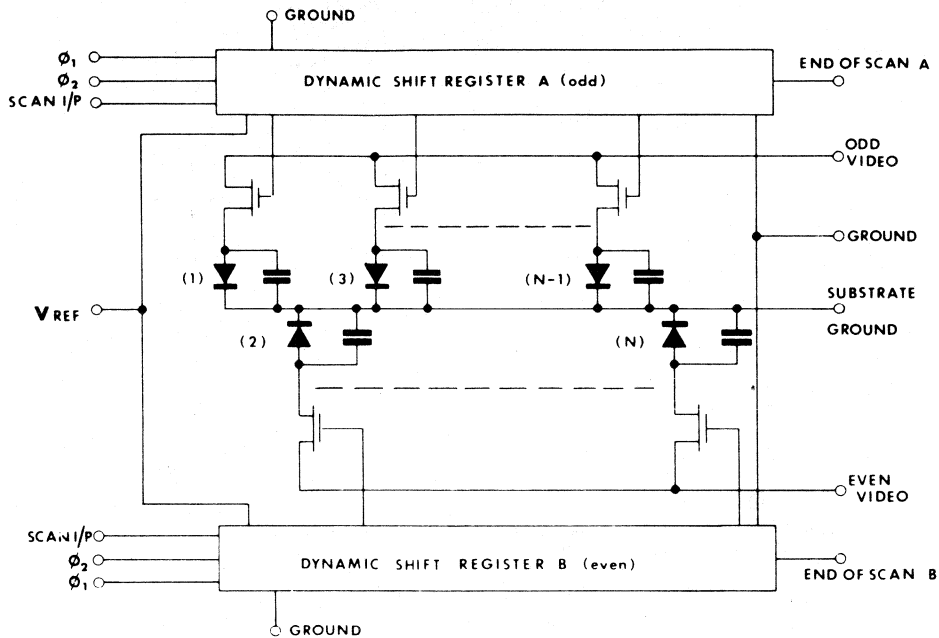


**FB56**

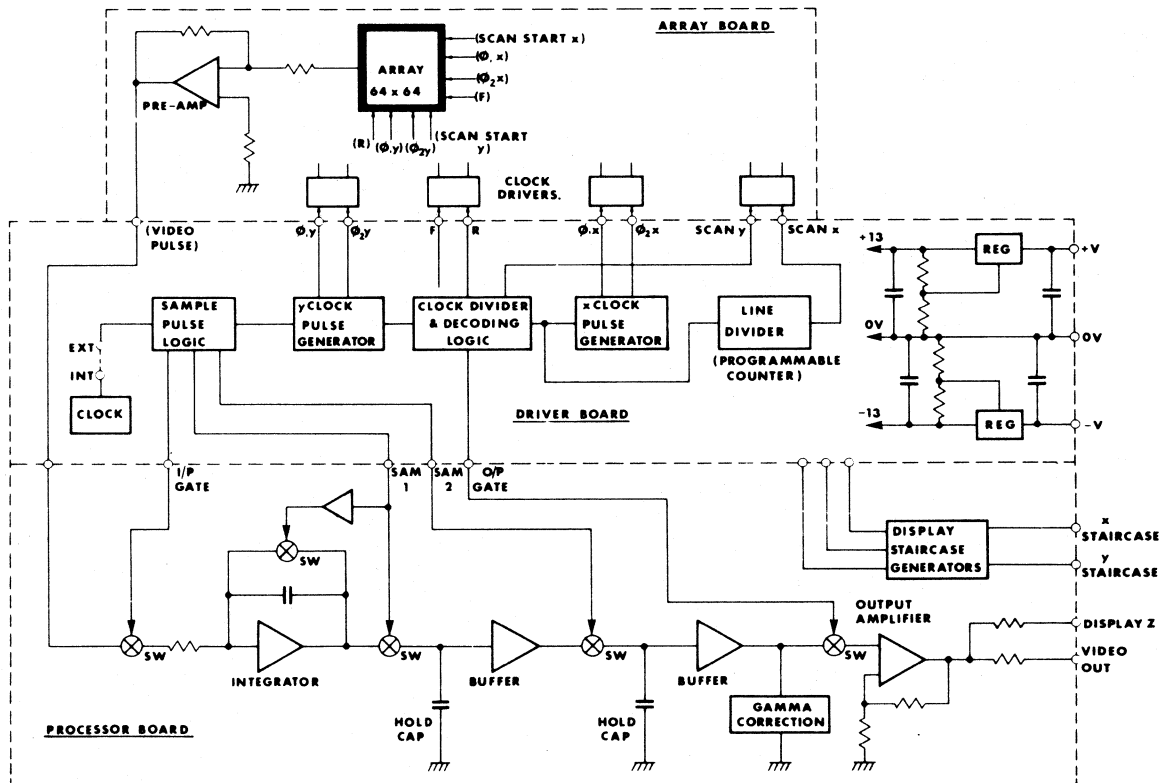
REAR VIEW



FB57



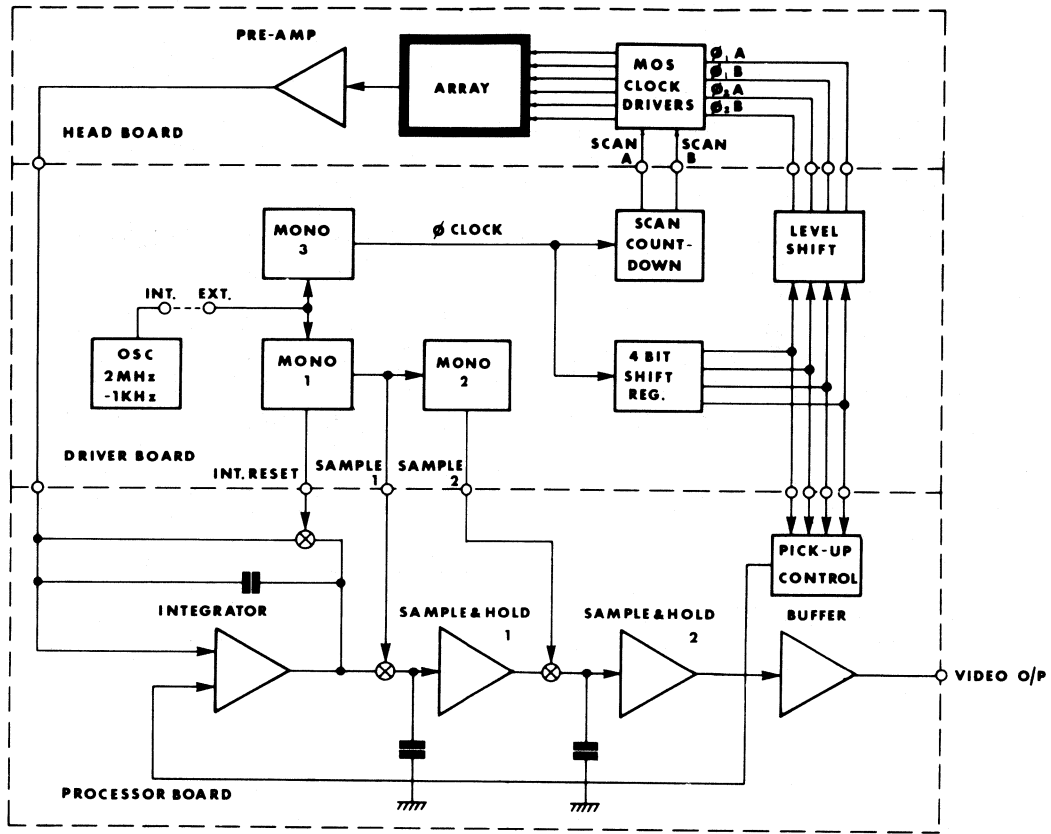
FB59



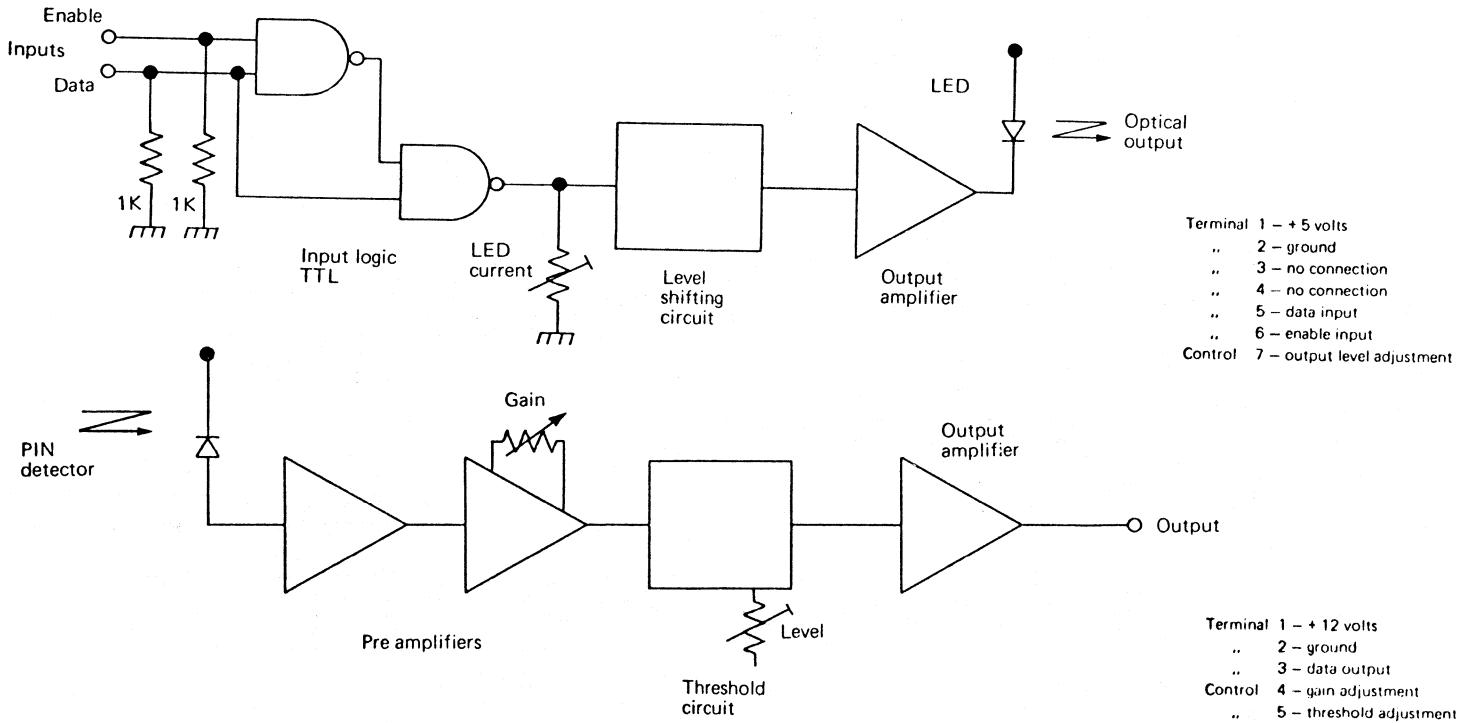
# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

**FB60**



**FB61**



# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

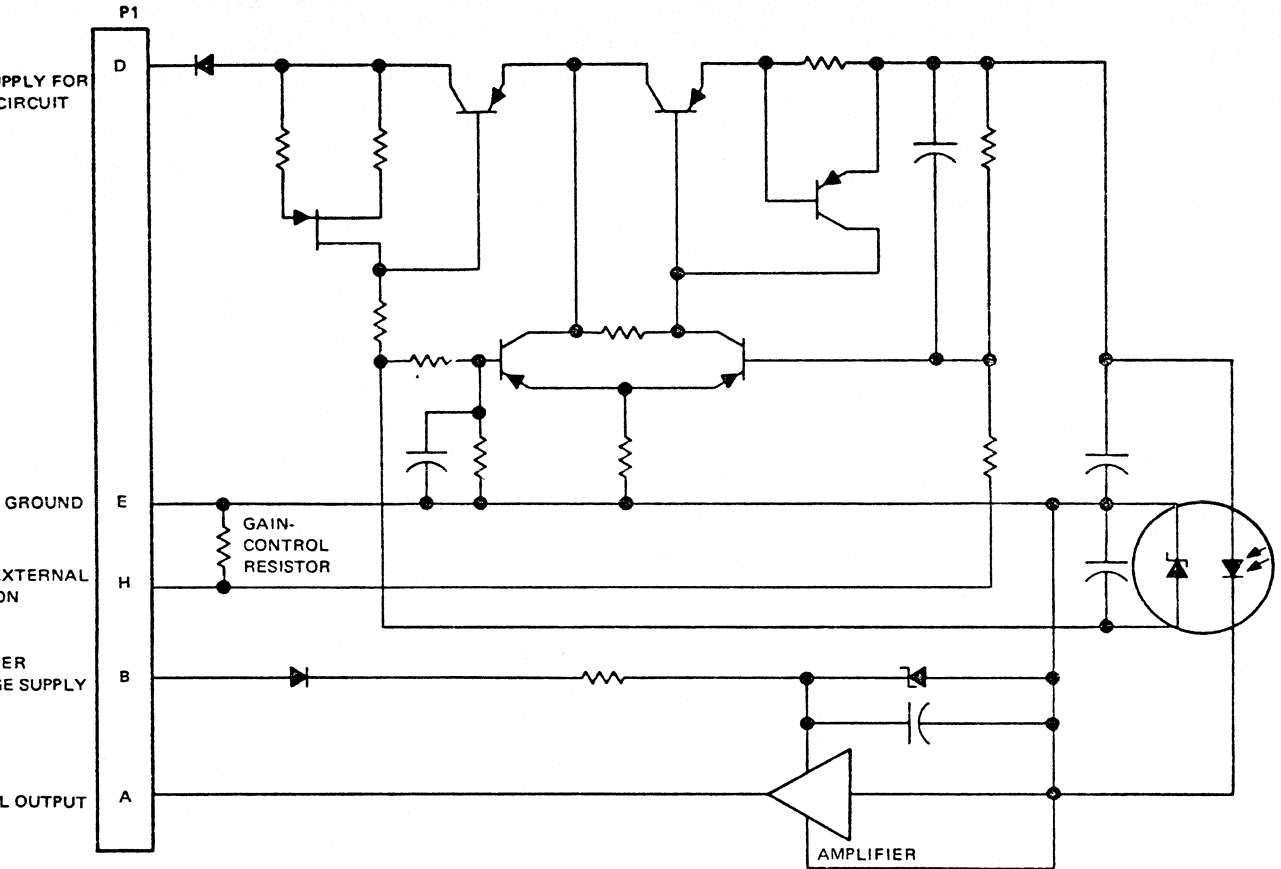
**FB63**

VOLTAGE SUPPLY FOR  
DIODE-BIAS CIRCUIT

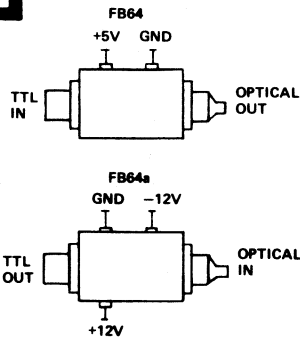
MAKE NO EXTERNAL  
CONNECTION

AMPLIFIER  
VOLTAGE SUPPLY

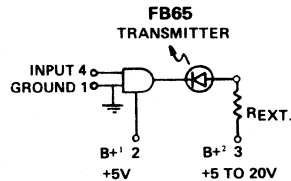
SIGNAL OUTPUT



**FB64**

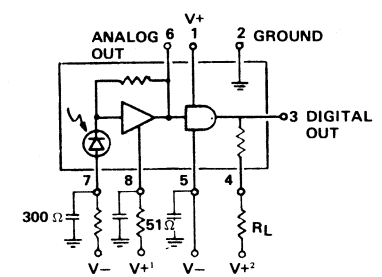


**FB65**



REXT = 27 TO 150 OHMS  
FOR TRANSMITTER "FAIL-SAFE" OPERATION,  
INSERT 1k $\Omega$  RESISTOR BETWEEN PINS 2 AND 4.

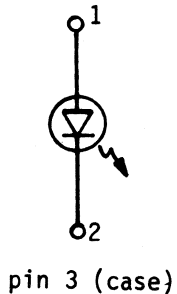
**FB65a**  
RECEIVER



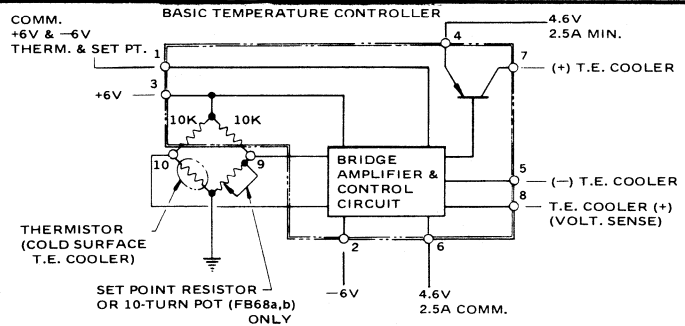
ALL DECOUPLING CAPACITORS = .01 $\mu$  f

RL TO BE SET SUCH THAT  
5V IS APPLIED TO PIN 4.  
(CIRCUIT DRAWS 13 mA  
AT PIN 4).

**FB67**



**FB68**



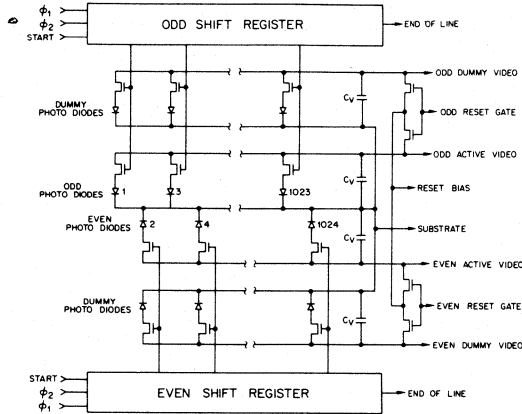
NOTES: THE FOLLOWING CUSTOMER FURNISHED POWER SUPPLIES ARE  
REQUIRED TO OPERATE FB68 AND FB68a.

- A. FOR INPUT POWER TO PASS TRANSISTOR: +4 TO +6V @ 2.5 AMPS MIN. 100mV RIPPLE (MAX.)
- B. FOR INPUT POWER TO AMPLIFIER AND CONTROL CIRCUIT:  $\pm$ 6V @ 25mAMPS AND 10mV RIPPLE (MAX.)

# 48. SCHEMATIC DRAWINGS

IN DRAWING NUMBER SEQUENCE

**FB69**

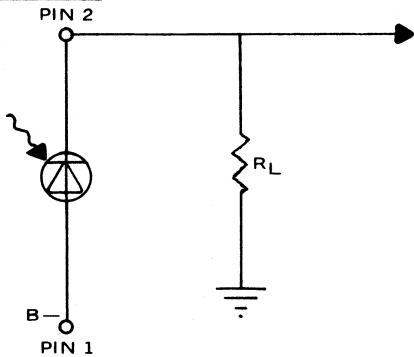


**FB70**

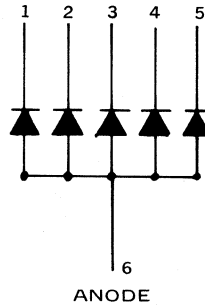
**Pin Connections**

- 1: Signal Output
- 2: No Connection, Do Not Use
- 3:  $-V_{CC}$  Negative Bias for Amplifier
- 4: Positive Bias for Photodiode
- 5: No Connection, Do Not Use
- 6: Case
- 7: Signal Ground
- 8: Temp. Sensing Diode – Anode
- 9: Temp. Sensing Diode – Cathode
- 10: Ground (Power Supply)
- 11: No Connection, Do Not Use
- 12:  $+V_{CC}$  Positive Bias for Amplifier

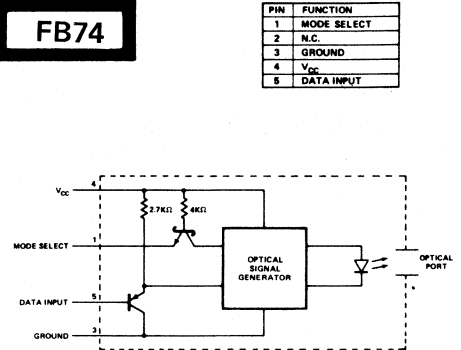
**FB71**



**FB73**

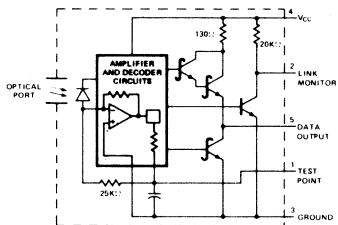


**FB74**

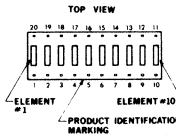


**FB75**

PIN	FUNCTION
1	TEST POINT
2	LINK MONITOR
3	GROUND
4	$V_{CC}$
5	DATA OUTPUT

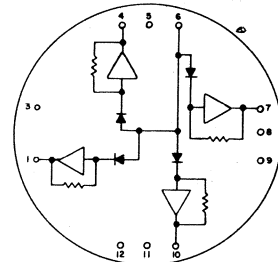


**FB76**



PIN	FUNCTION	PIN	FUNCTION
1	ANODE 1	11	CATHODE 10
2	ANODE 2	12	CATHODE 9
3	ANODE 3	13	CATHODE 8
4	ANODE 4	14	CATHODE 7
5	ANODE 5	15	CATHODE 6
6	ANODE 6	16	CATHODE 5
7	ANODE 7	17	CATHODE 4
8	ANODE 8	18	CATHODE 3
9	ANODE 9	19	CATHODE 2
10	ANODE 10	20	CATHODE 1

**FB77**



PIN	CONNECTION
1	OUTPUT, QUADRANT 1
2	PIN MISSING (REF)
3	CASE (ISOLATED)
4	OUTPUT, QUADRANT 4
5	NO CONNECTION
6	PHOTODIODE $-V$ BIAS
7	OUTPUT, QUADRANT 3
8	0 VOLT
9	GUARD RING
10	OUTPUT, QUADRANT 2
11	NO CONNECTION
12	AMPLIFIER, $+V$ BIAS



# 49. OUTLINE DRAWINGS

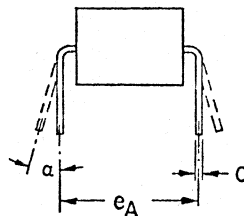
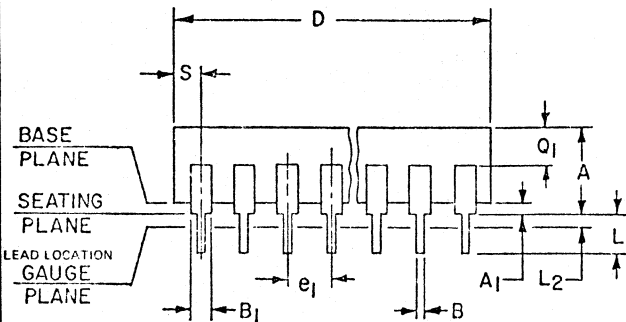
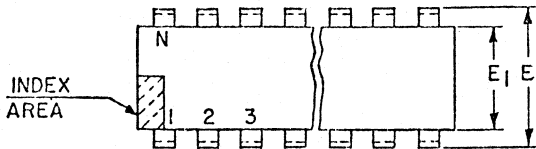
IN DRAWING NUMBER  
SEQUENCE

**NOTES:**  
 These outline drawings are intended as a guide for the user. They should not be used for construction purposes without first checking with the appropriate manufacturer.  
 These drawings are referenced in the Technical Sections of this D.A.T.A.BOOK in accordance with information supplied by the manufacturers.  
 The TO and MO drawings have been reproduced from JEDEC Registration Data Files with the permission of the National Electrical Manufacturer's Association – Electronic Industries Association. JEDEC designations are assigned only to outlines submitted by the JC-11 Committee on Mechanical Standardization. The procedure of assigning and announcing the JEDEC designation constitutes registration. Suffices such as AA, AB or MA, MB following the TO or MO Series number indicates dimensional variations of the basic outline. JEDEC type numbers which have letter S suffices indicate a device that is manufactured with leads shorter than specified in the registered data of the device, but not shorter than 12.7 mm (.5 inch). The suffix letter S need not be marked on individual devices.  
 All dimensions are in inches except where noted.

**MO001**

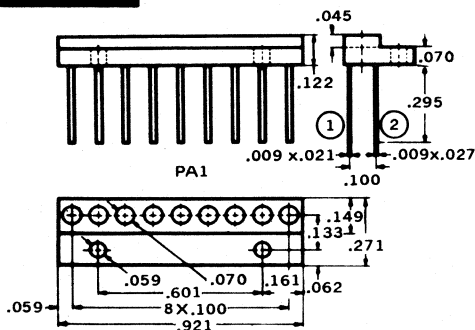
**NOTES:**

1. Refer to applicable symbol list.
2. Dimensioning and tolerancing per ANSI Y14.5-1973.
3. Leads within .005 radius of True Position (TP) at gauge plane with maximum material condition and unit installed.
4.  $e_1$  and  $e_A$  applies in zone  $L_2$  when unit installed.
5.  $\alpha$  applies to spread leads prior to installation.
6.  $N$  is the maximum quantity of lead positions.
7.  $N_1$  is the allowable quantity of missing leads.
8.  $E_1$  does not include mold flash.
9. Outlines on which the seating plane is coincident with the base plane ( $A_1 = 0$ ) terminal lead stand-offs are not required, and  $B_1$  may equal  $B$  along any part of the lead above the seating/base plane.
10. Controlling Dimension: INCH

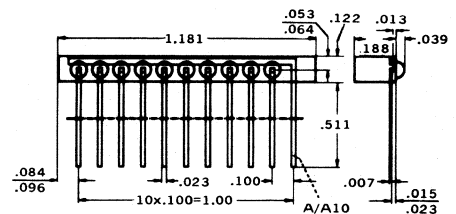
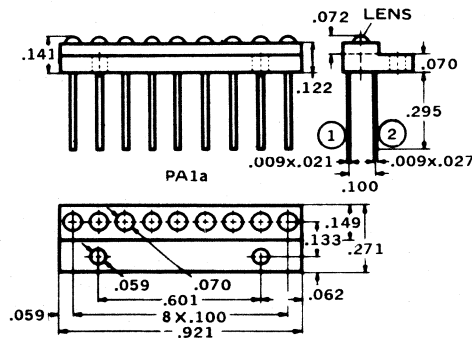


SYMBOL	(ALL DIMENSIONS IN INCHES)		NOTE
	MIN.	MAX.	
A	.115	.215	
A <sub>1</sub>	.015	.070	
B	.015	.021	
B <sub>1</sub>	.040	.070	
C	.008	.012	
D	.320	.350	
E	.290	.325	
E <sub>1</sub>	.225	.280	8
e <sub>1</sub>	.100 TP		3,4
e <sub>A</sub>	.300 TP		3,4
L	.100	.150	
L <sub>2</sub>	.000	.030	
α	0°	15°	5
N	6		6
N <sub>1</sub>	0		7
O <sub>1</sub>	-	-	
S	.050	.080	
NOTE	1,2,10		

**PA1**



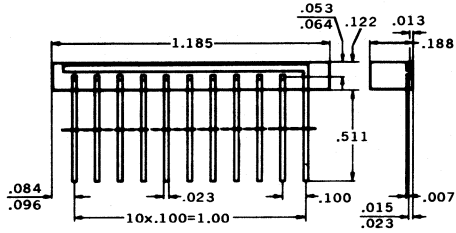
**PA2**



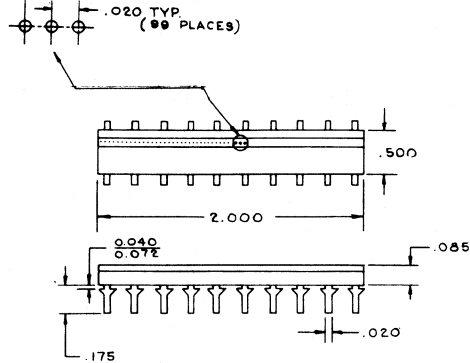
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

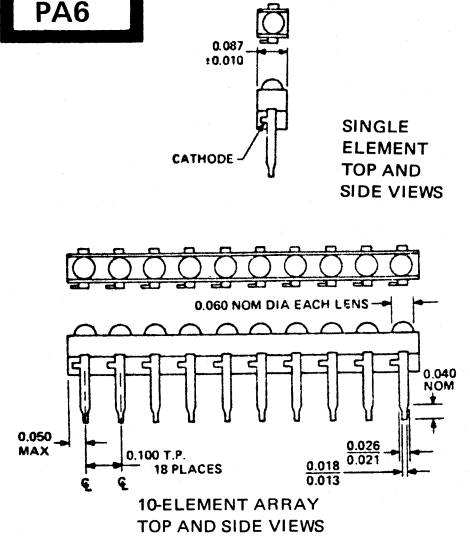
**PA4**



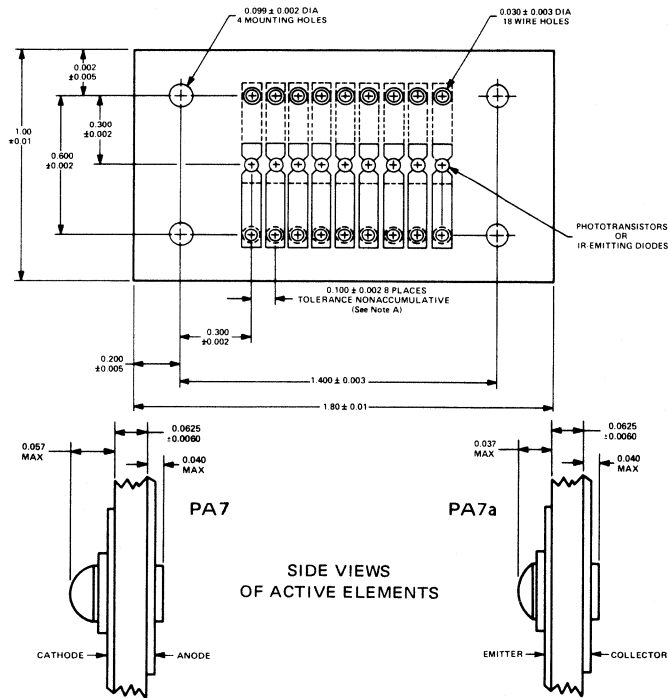
**PA5**



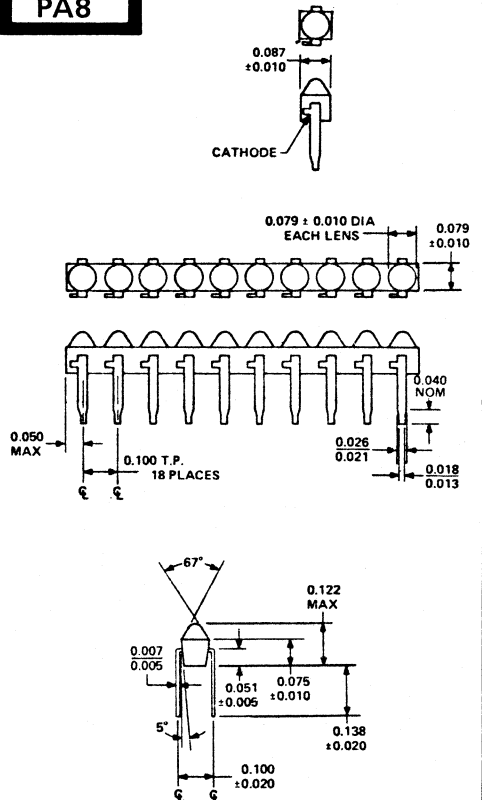
**PA6**



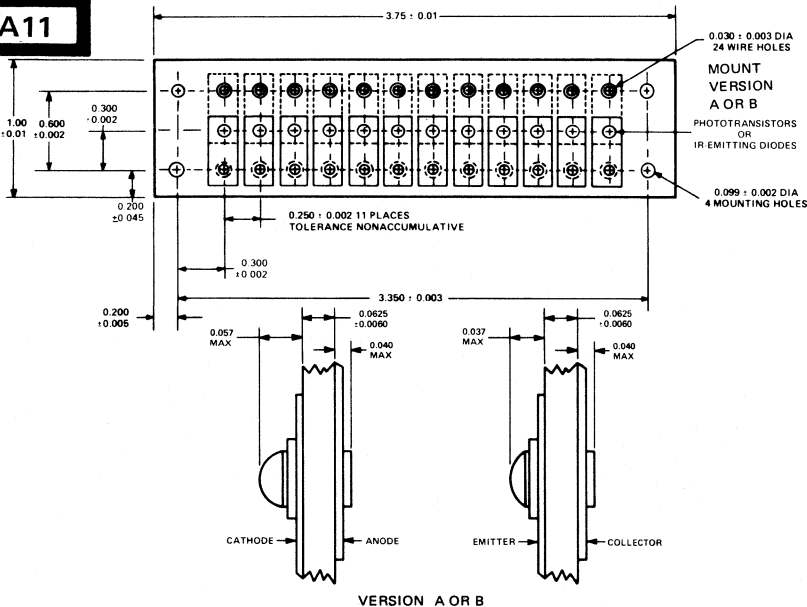
**PA7**



**PA8**

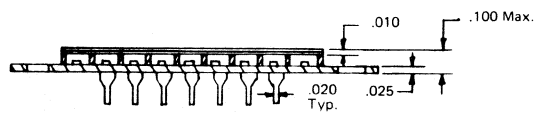
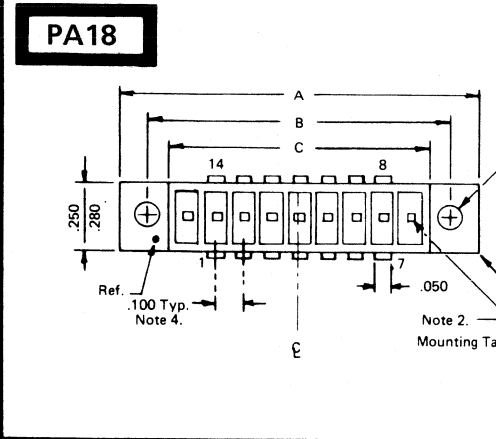
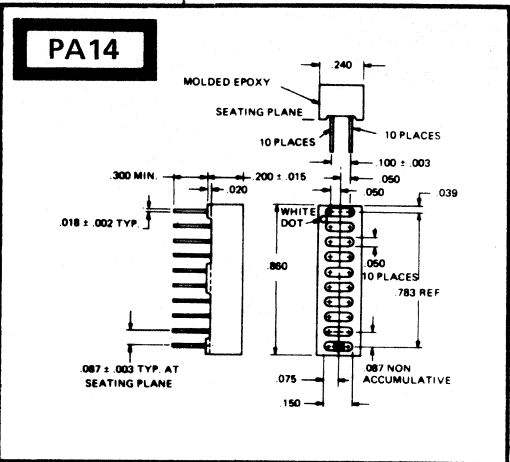
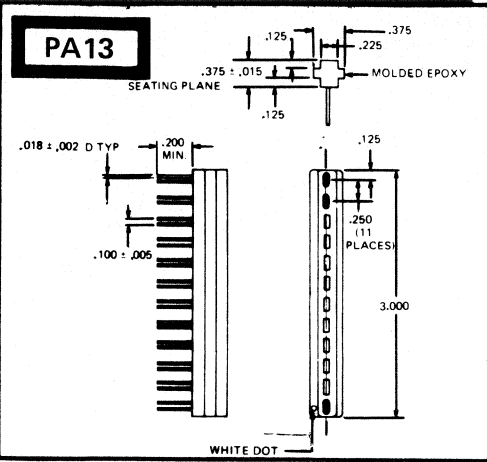
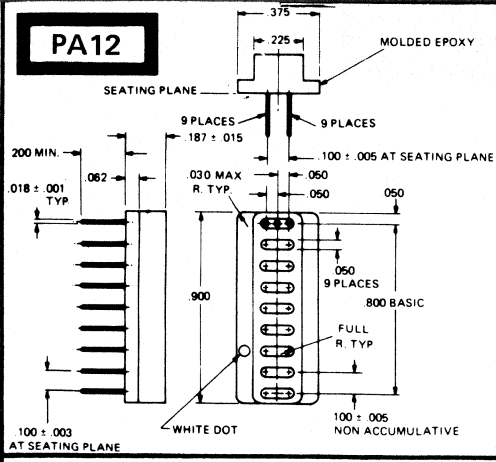


**PA11**



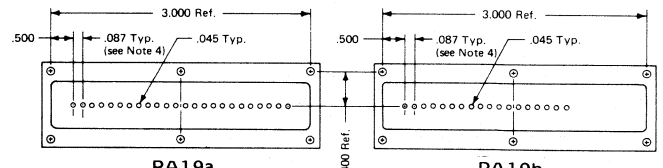
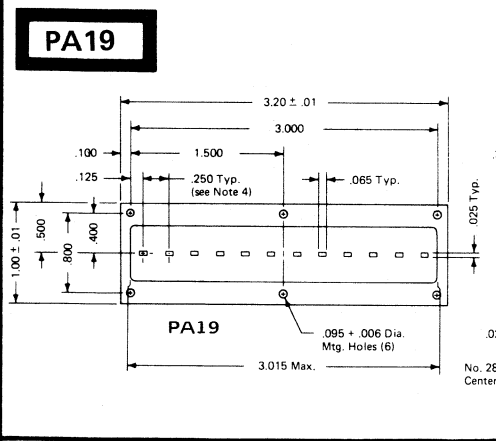
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

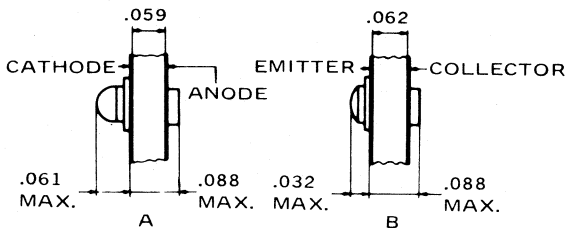
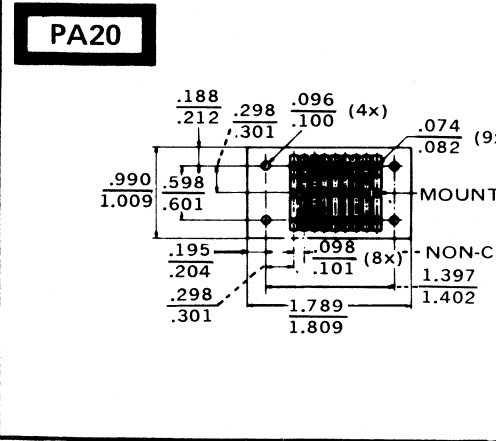


- NOTES:
- All dimensions in inches.
  - Active elements to be aligned on .100" centers ± .005". (Note: Chips are purposely staggered to align non-symmetrical active areas).
  - Mounting holes aligned ± .005" with center line of sensors.
  - Leads symmetrical with package based on number of leads and number of cavities.

	A	B	C
PA18			.22
PA18a			.32
PA18b			.42
PA18c	.90	.70	.52
PA18d	1.00	.80	.62
PA18e	1.10	.90	.72
PA18f	1.20	1.00	.82
PA18g	1.30	1.10	.92
PA18h	1.40	1.20	1.02
PA18i	1.50	1.30	1.12
PA18k	1.60	1.40	1.22



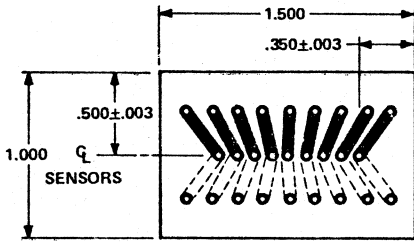
- NOTES:
- All Dimensions in inches.
  - All Decimals ± .005 unless otherwise noted.
  - Tracer Wires are connected to the collector side of the photo sensors.
  - Sensor Active Area to be aligned on centers ± .003 non-accumulative.



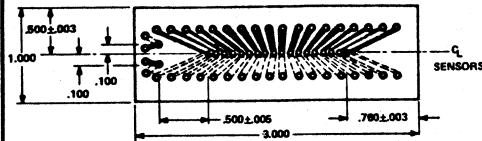
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

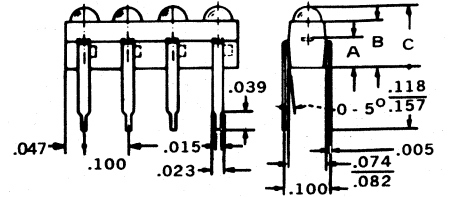
**PA23**



**PA25**

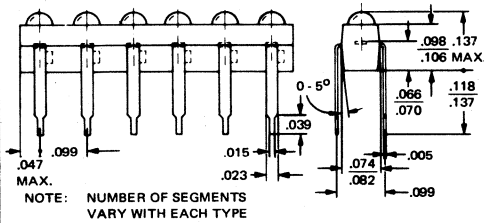


**PA26**

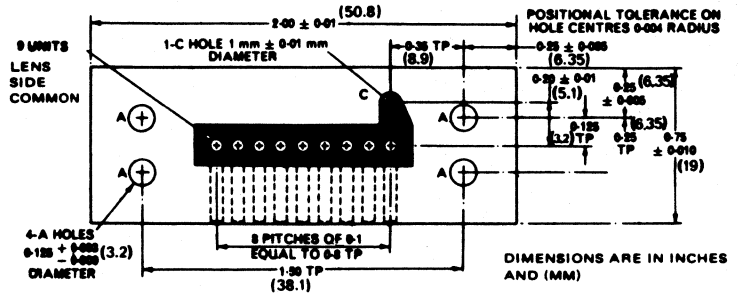


	A	B	C
PA26	.066	.098	.137
PA26a	.070	.106	MAX
	.078	.086	MAX

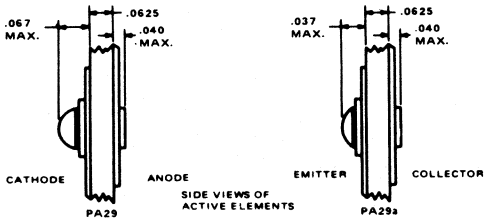
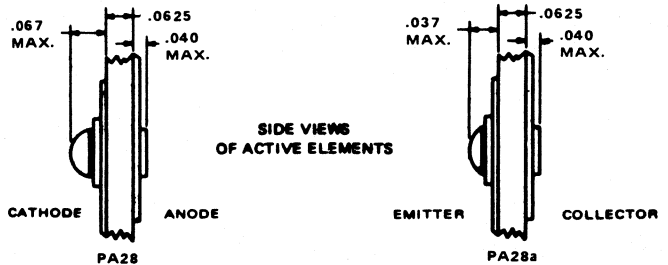
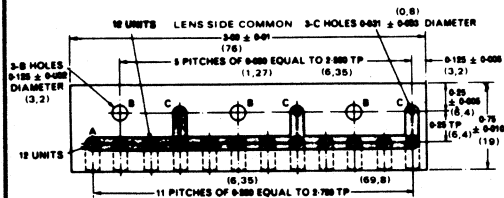
**PA27**



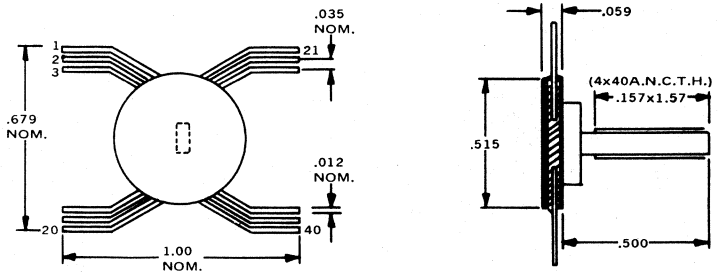
**PA28**



**PA29**



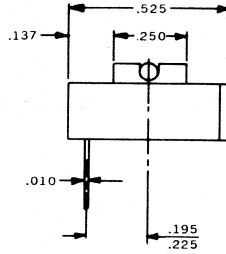
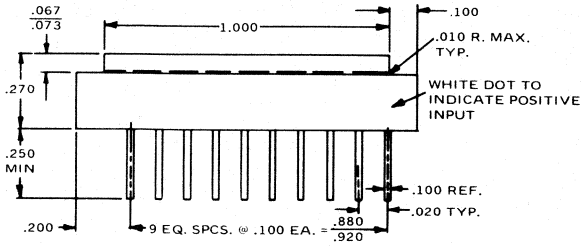
**PA33**



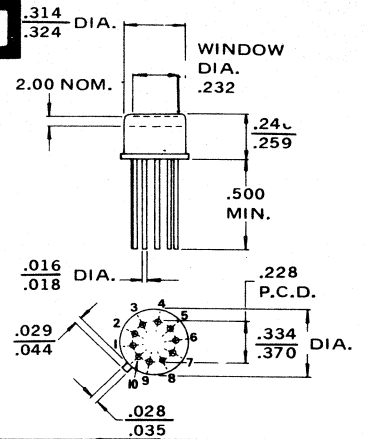
# 49. OUTLINE DRAWINGS

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SEQUENCE

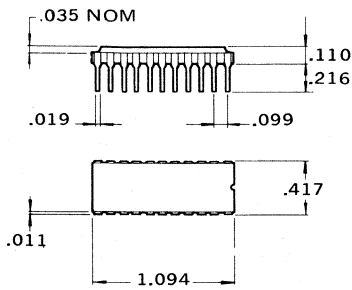
**PA34**



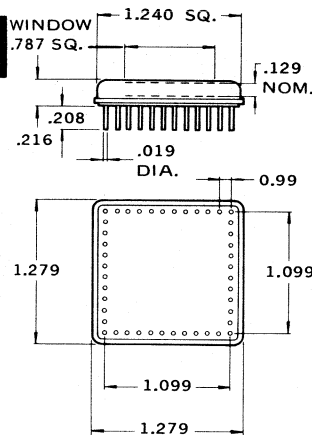
**PA35**



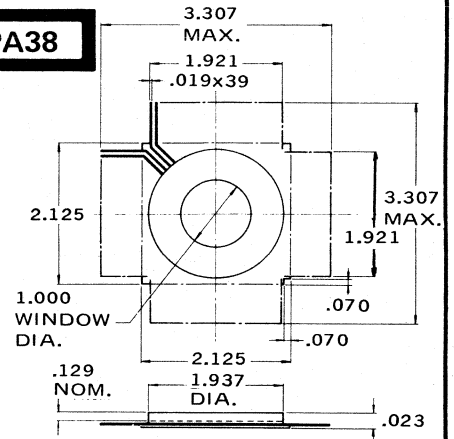
**PA36**



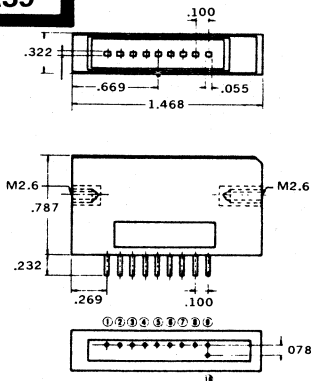
**PA37**



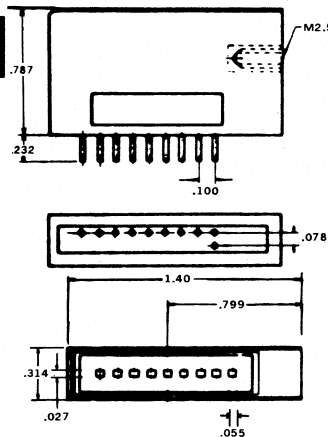
**PA38**



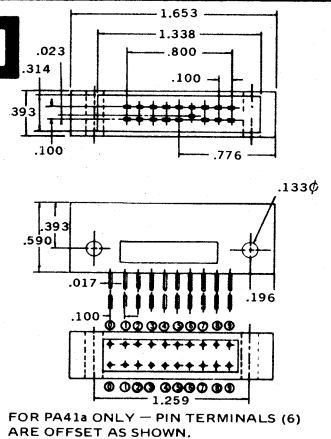
**PA39**



**PA40**

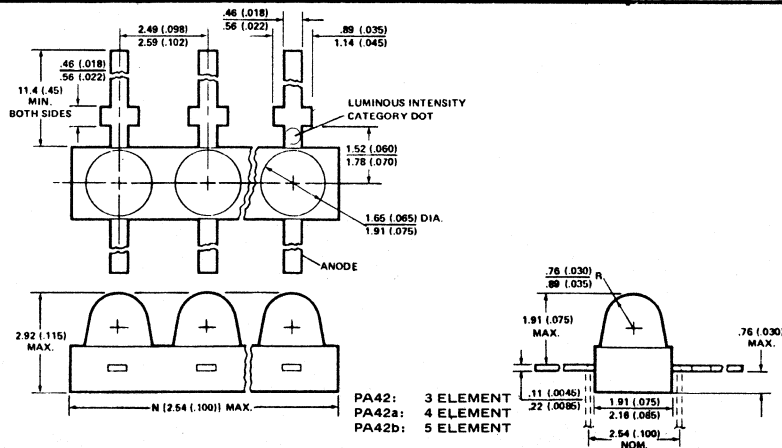


**PA41**



FOR PA41a ONLY - PIN TERMINALS (6) ARE OFFSET AS SHOWN.

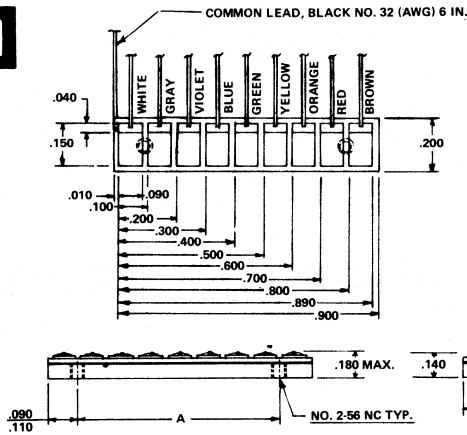
**PA42**



# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

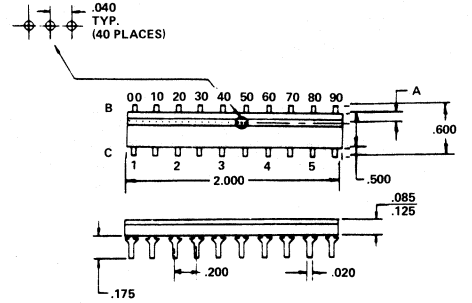
**PA44**



	A
PA44	.200
PA44a	.300
PA44b	.400
PA44c	.500
PA44d	.600
PA44e	.700

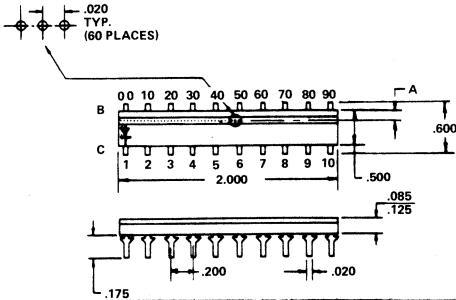
**PA45**

	A	B	C
PA45	.150	Cathodes	Anodes
PA45a	.170	Anodes	Cathodes

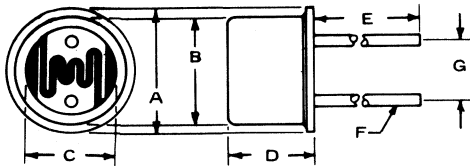


**PA46**

	A	B	C
PA46	.170	Anodes	Cathodes
PA46a	.150	Anodes	Cathodes
PA46b	.150	Cathodes	Anodes

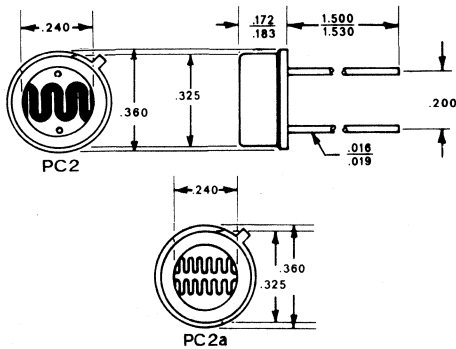


**PC1**

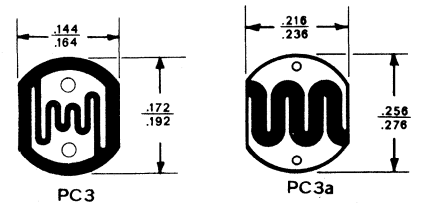


	A	B	C	D	E	F	G
PC1	.210	.183	.155	.140	1.500	.016	.100
PC1a	.550	.486	.430	.190	1.500	.019	.295
PC1b	.540	.481	.425	.174	1.25	.015	.295
	.560	.491	.435	.204	1.50	.019	NOM

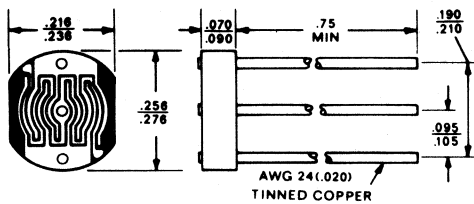
**PC2**



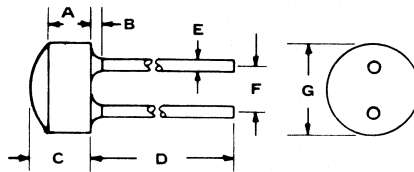
**PC3**



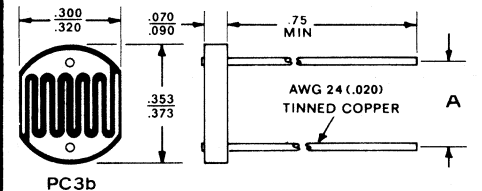
**PC4**



**PC5**



	A	B	C	D	E	F	G
PC5	.240	.060	.330	.750	.014	.265	.520
PC5a	REF	NA	.157	.401	.021	.100	.209
				MIN	MIN		



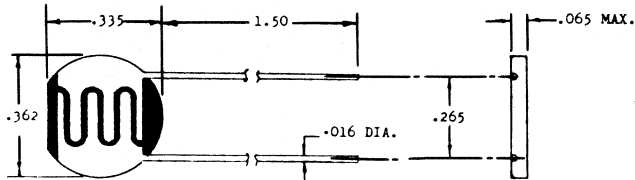
	A
PC3	.090
	.110
PC3a	.190
	.210
PC3b	.255
	.275



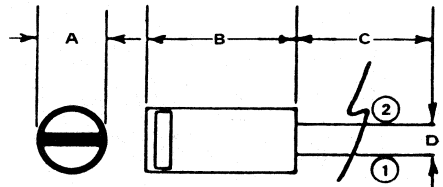
# 49. OUTLINE DRAWINGS

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**PC6**

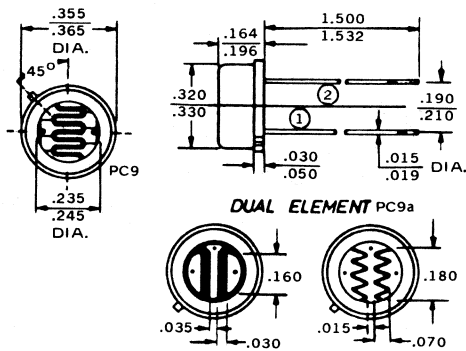


**PC8**

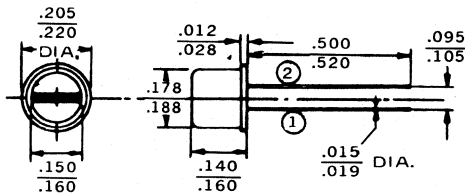


	A	B	C	D
PC8	.235	.500	1.469	.100
PC8a	.250	.531	1.531	

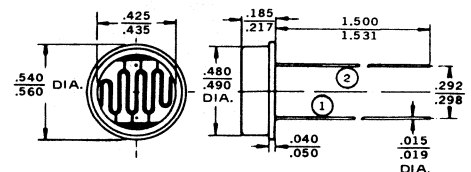
**PC9**



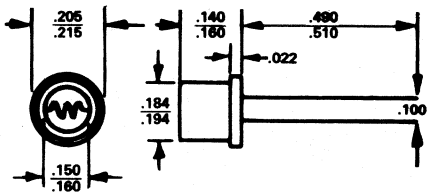
**PC10**



**PC11**



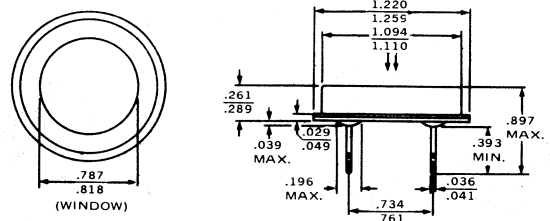
**PC13**



**PC14**

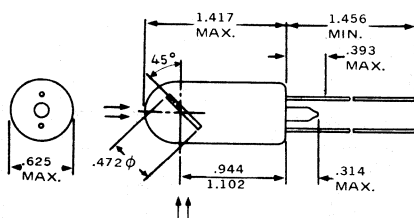
TYPE	SERIES	D	H
PC14	4H	.208	.134
	5H	.256	.138
	7H	.363	.170
	MKV-7H	.363	.142
	MKB-7H	.363	.142
	12H	.59	.185
	25H	1.24	.304
	25H	1.16	.375
	5C	.197	.138
	7C	.319	.165
	12C	.473	.083
	25C	.985	.114

**PC15**

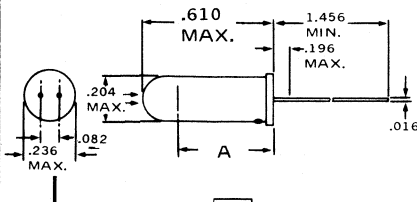


	A	B	C	D	E	F	G	H	J	K	M
PC15	1.220	1.094	.787	.897	.393	.261	.039	.029	.734	.196	.036
PC15a	1.25	1.094	.812	.594		.289	MAX	.049	.761	MAX	.041

**PC16**

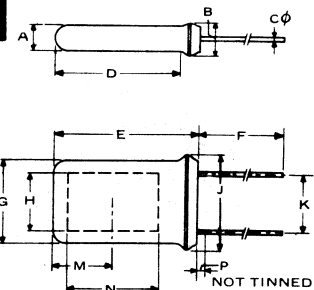


**PC17**



	A
PC17	.393
PC17a	.561
	.492

**PC19**

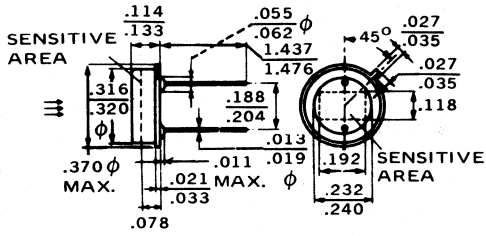


	A	B	C	D	E	F	G	H	J	K	M	N	P
PC19	.173	.236	.016	.866	.944	1.456	.555	.393	.641	.401	.334	.590	.196
PC19a	.173	.236	.016	1.496	1.574	1.456	.555	.433	.641	.401	.590	1.141	.196
		MAX		MIN	1.692	MIN	.625	MAX	MAX	MAX			MAX

# 49. OUTLINE DRAWINGS

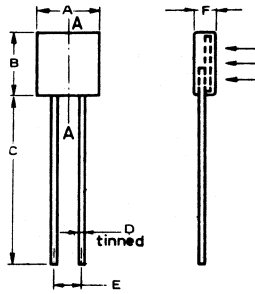
IN DRAWING NUMBER  
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**PC20**



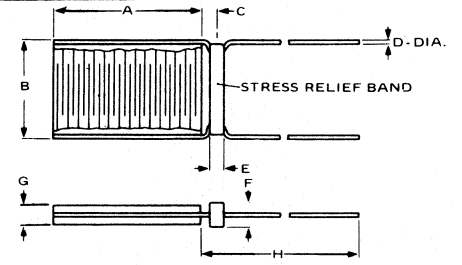
**PC21**

	A	B	C	D	E	F
PC21	.208	.208	1.456	.016	.099	.056
	MAX	MAX	MIN			MAX
PC21a	.185	.185	1.456	.020	.099	.035
	MAX	MAX	MIN			MAX



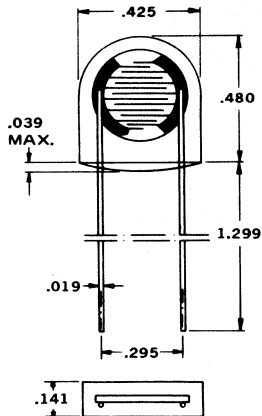
IF IT IS REQUIRED FOR ANY APPLICATION THAT THE DEVICE IS PARTLY SHADED, THE SHADOW LINE SHOULD BE PERPENDICULAR TO THE AXIS A-A OF THE DEVICE.

**PC22**

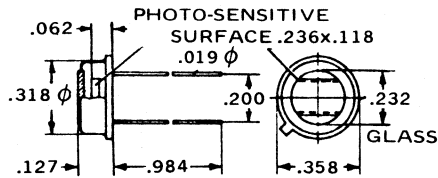


	A	B	C	D	E	F	G	H
PC22	.452	.346	.064	.016	.039	.070	.059	1.456
	MAX	MAX				MAX	MAX	MIN
PC22a	.161	.496	.064	.016	.039	.086	.059	1.456
	MAX	MAX				MAX	MAX	MAX
PC22b	.590	.496	.064	.016	.039	.086	.059	1.456
	MAX	MAX				MAX	MAX	MAX

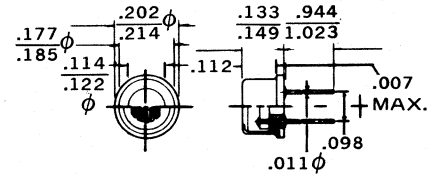
**PC23**



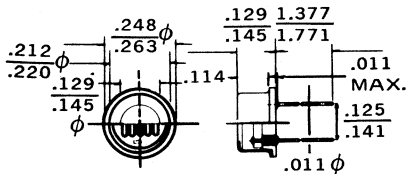
**PC24**



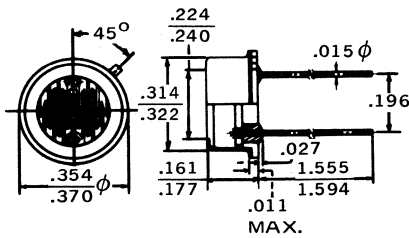
**PC25**



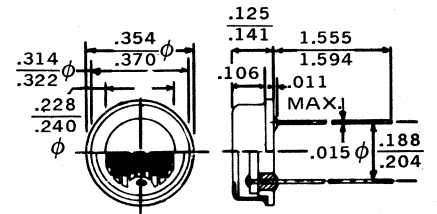
**PC26**



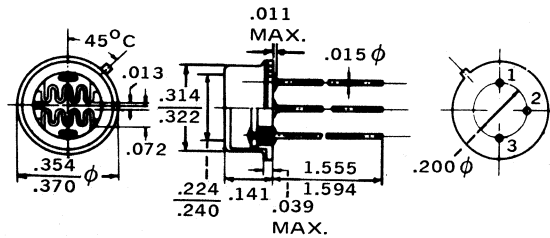
**PC27**



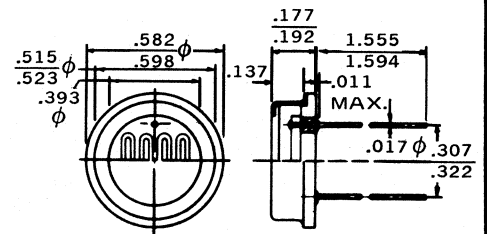
**PC28**



**PC29**

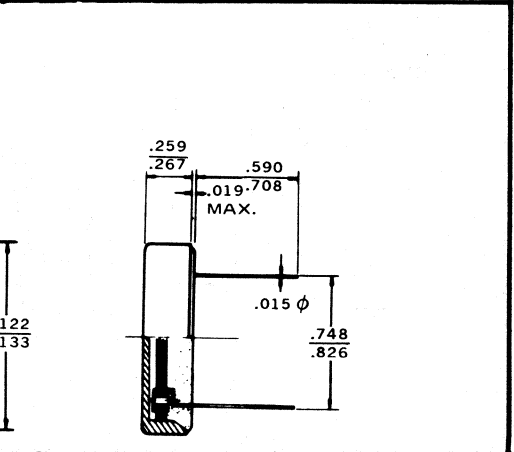
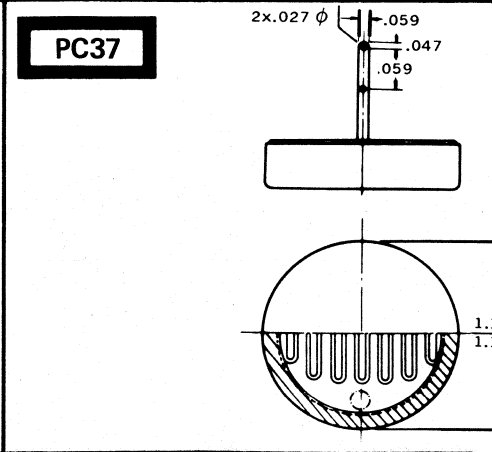
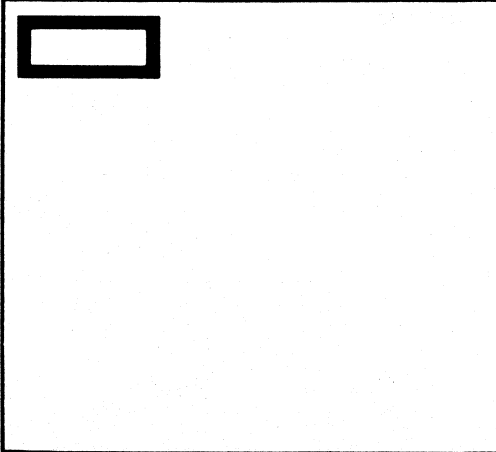
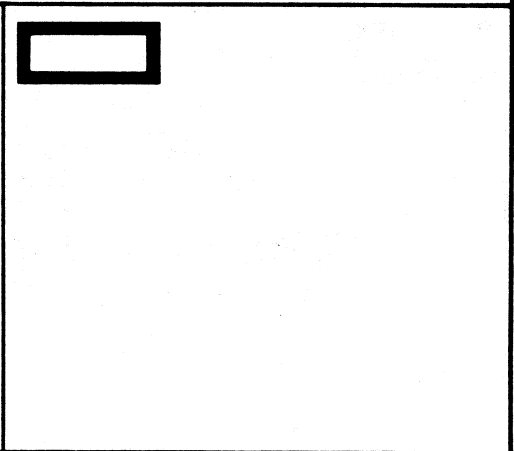
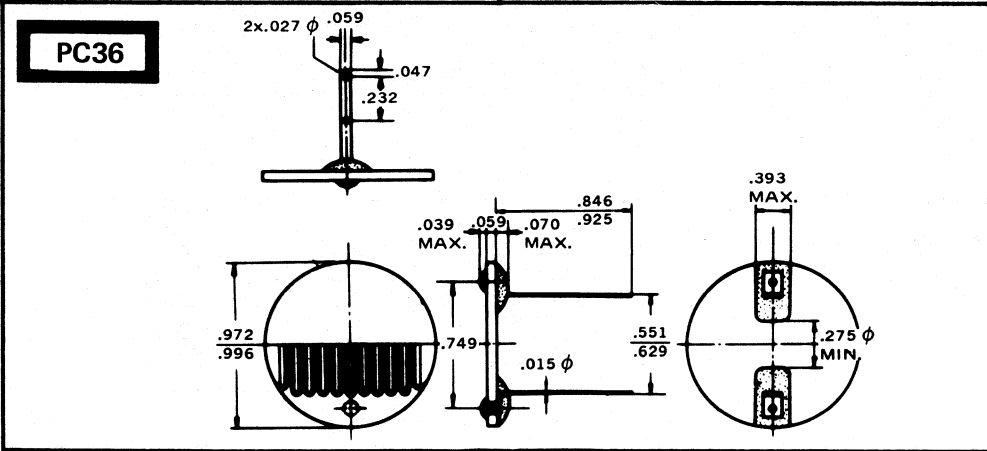
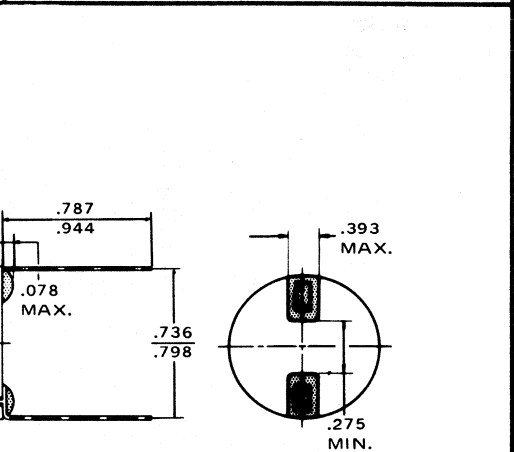
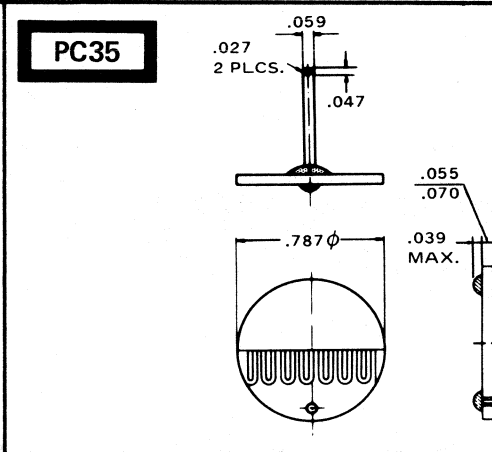
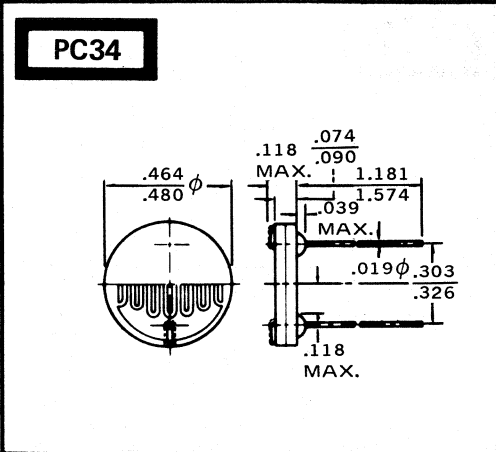
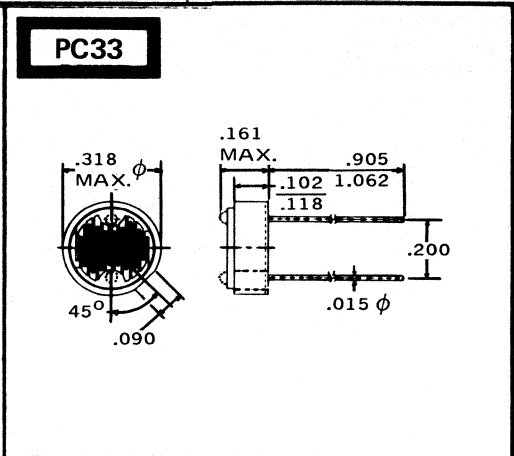
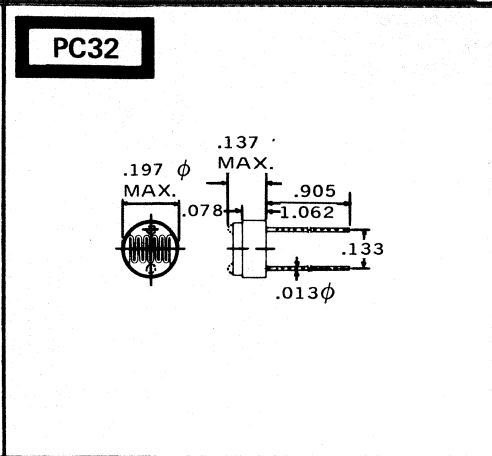
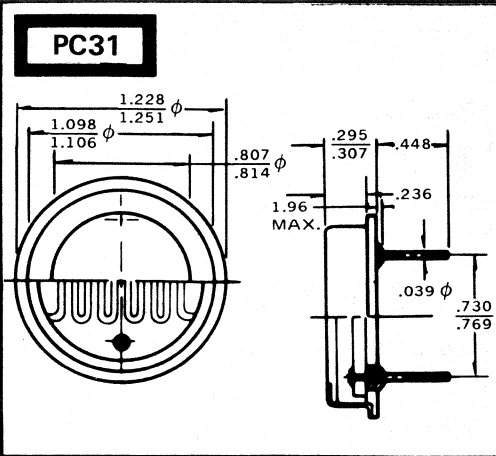


**PC30**



# 49. OUTLINE DRAWINGS

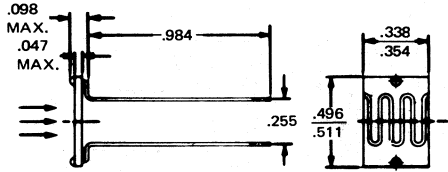
IN DRAWING NUMBER  
SEQUENCE



# 49. OUTLINE DRAWINGS

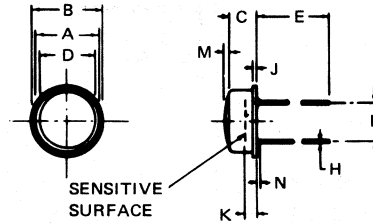
IN DRAWING NUMBER  
SEQUENCE

**PC38**



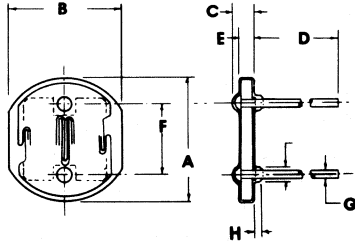
ACTIVE AREA - .354x.433

**PC39**



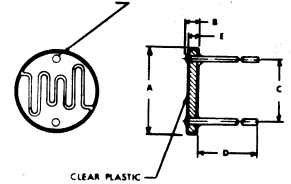
	A	B	C	D	E	F	H	J	K	M	N
PC39	.480 .492	.542 .557	.180 .198	.423 .437	1.50 NOM	.292 .298	.016 .019	.021 .035	.080 .100	.022 .032	.020 .028
PC39a	.182 .193	.205 .215	.140 .150	.150 .160	1.50 NOM	.096 .104	.016 .019	.015 .025	.068 .080	.005 .015	.010 .020
PC39b	.245 .265	.290 .302	.171 .183	.173 .182	1.50 NOM	.171 .178	.016 .018	.056 .064	.083 .090		
PC39c	.493 .507		.243 .257	.458 .472	1.594 TYP	.288 .302	.023 .027		.158 .172		
PC39d	.481 .491	.545 .555	.182 .196		1.50 1.60	.290 .300	.016 .019	.025	.082 .098		.030 .040

**PC40**



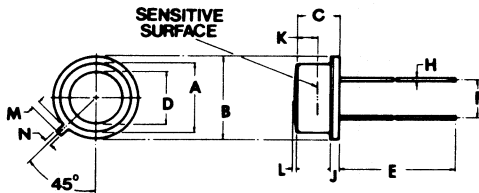
	A	B	C	D	E	F	G	H
PC40	.434 .444	.390 .400	.050 .060	1.37 NOM	.039 .049	.288 .302	.024 .026	.020 .030
PC40a	.434 .444	.390 .400	.050 .060	1.25 MIN		.288 .302	.024 .026	.030 MAX

**PC41**



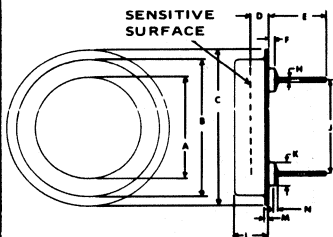
Dims.	Inches		Millimeters	
	Ref.	Min. Max.	Min.	Max.
A		.152 .162	3.86	4.11
B		.039 .049	.99	1.26
C		.096 .104	2.46	2.64
D		1.53 Nominal	38.9	Nominal
E		.038		.968
F		.024 .026	.61	.68

**PC42**



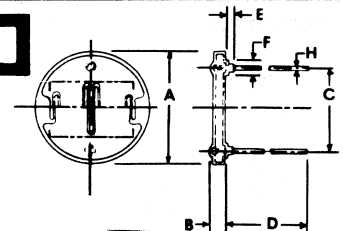
Ref.	Inches		Millimeters	
	Min.	Max.	Min.	Max.
A	.320	.330	8.15	8.35
B	.355	.365	9.05	9.25
C	.173	.182	4.40	4.62
D	.235	.245	5.98	6.22
E	1.50	1.56	38.00	39.80
F	.195	.205	4.80	5.20
H	.016	.019	.409	.482
J	.036	.043	.92	1.10
K	.075	.098	1.90	2.50
L	-.010	+.010	-.26	+.26
M	.035	.045	.90	1.15
N	.026	.036	.68	.92

**PC43**



Dims.	Inches		Millimeters		Dims.	Min.	Max.	Millimeters	
Ref.	Min.	Max.	Min.	Max.	Ref.	Inches	Min.	Max.	
A	.810	.820	20.57	20.82	H	.038 .042	.96	1.06	
B	1.097	1.103	27.86	28.03	J	.745 .755	18.91	19.17	
C	1.247	1.260	31.66	32.00	K	.180 .187	4.57	4.74	
D	.067	.101	1.70	2.56	L	.257 .273	6.52	6.92	
E	.484	.516	12.29	13.10	M	.040 .051	1.01	1.29	
F	.042	.055	1.06	1.39	N	.015 Nominal	.38	Nominal	

**PC44**

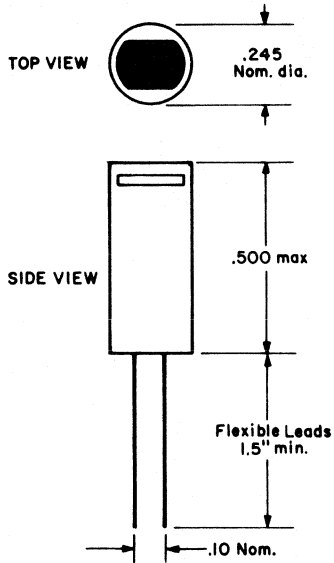


Dims.	Inches		Millimeters	
	Ref.	Min. Max.	Min.	Max.
A		1.010 1.020	25.70	25.90
B		.097 .107	2.47	2.56
C		.742 .758	18.85	19.25
D		9/16 Nominal	14.3	Nominal
E		.095 .155	2.43	3.94
F		.080 .100	2.02	2.55
H		.044 .046	1.12	1.18

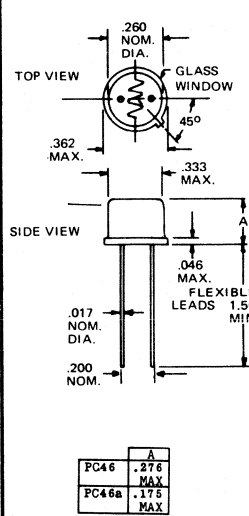
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

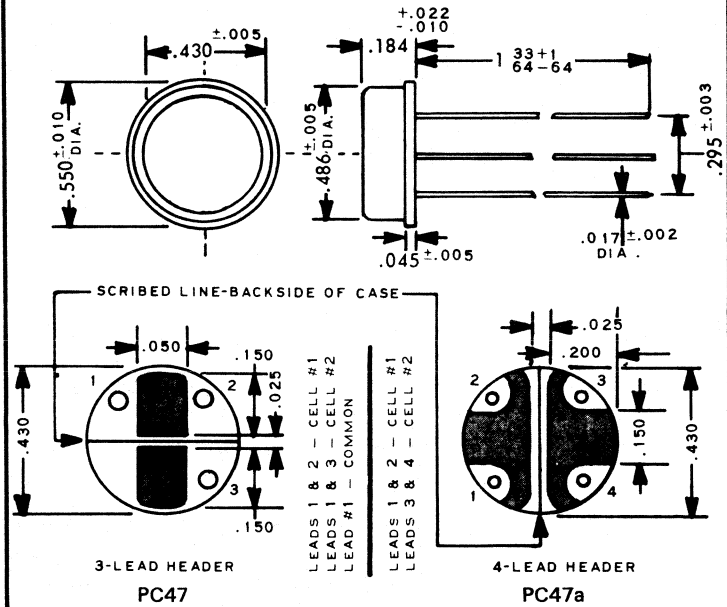
**PC45**



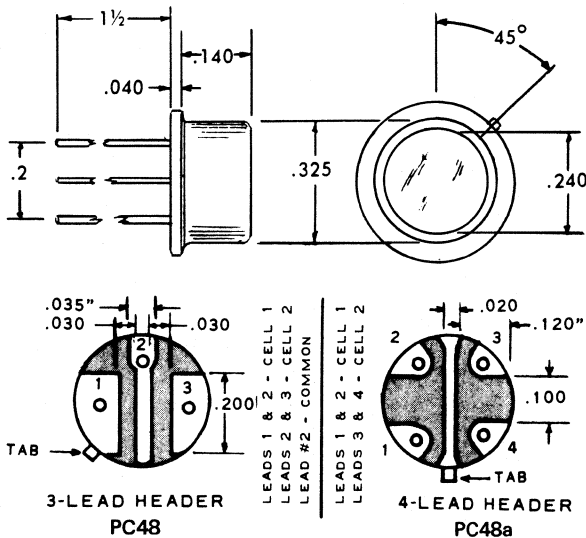
**PC46**



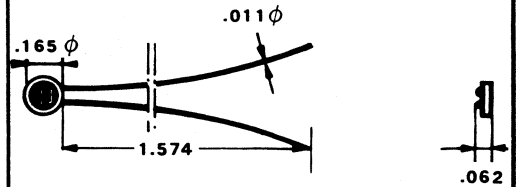
**PC47**



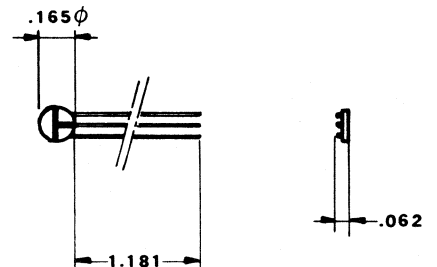
**PC48**



**PC49**



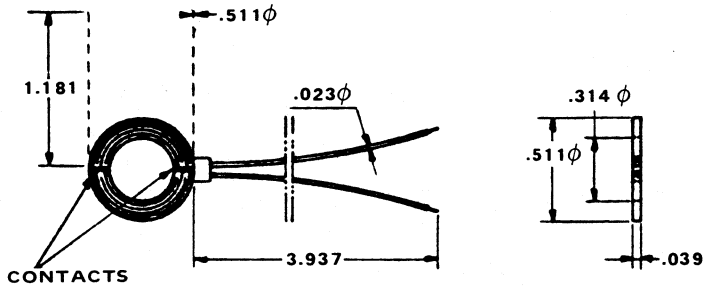
**PC50**



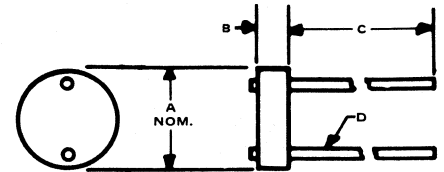
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

**PC51**

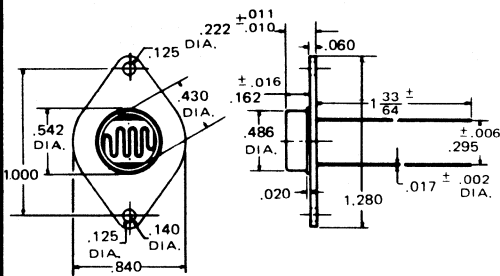


**PC52**

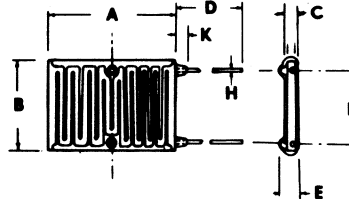


	A	B	C	D
PC52	.210	.030	1.00	.018
PC52a	.265	.030	1.00	.018
PC52b	.465	.090	1.00	.018

**PC53**

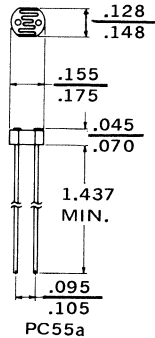
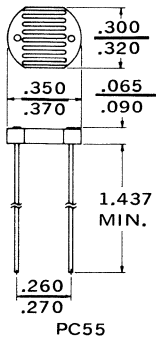


**PC54**

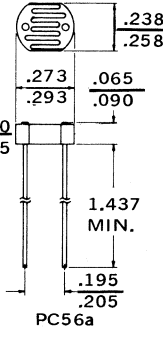
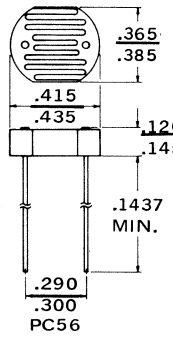


Ref.	Inches	
	Min.	Max.
A	.495	.505
B	.325	.335
C	.037	.047
D	.626	.686
E	.045	.055
F	.245	.255
H	.0177	.0183
K	.160 Max.	

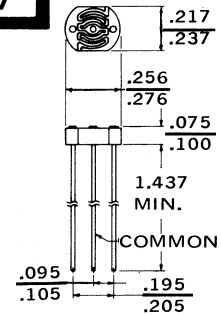
**PC55**



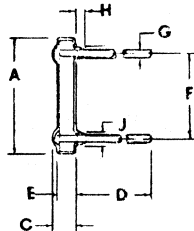
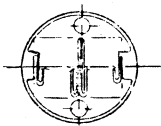
**PC56**



**PC57**

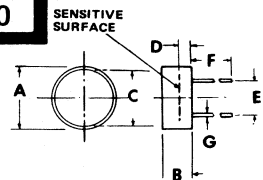


**PC58**



Dims.	Inches		Millimetres	
	Min.	Max.	Min.	Max.
A	.265	.275	6.72	6.99
C	.039	.049	1.00	1.20
D	1.375		34.93	
E	.028	.038	.712	.968
F	.195	.205	4.975	5.205
G	.024	.026	.61	.661
H	.020	.030	.51	.762
J	.035	.045	.90	1.15

**PC60**



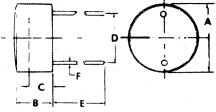
Ref.	Inches		Millimetres	
	Min.	Max.	Min.	Max.
A	.493	.507	12.52	12.88
B	.243	.257	6.17	6.53
C	.458	.472	11.63	11.99
D	.158	.172	4.01	4.37
E	.288	.302	7.32	7.67
F	1.25		3.18	
G	.023	.027	.58	.69



# 49. OUTLINE DRAWINGS

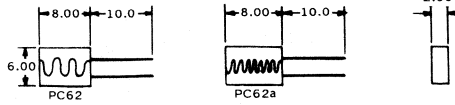
IN DRAWING NUMBER  
SEQUENCE

**PC61**



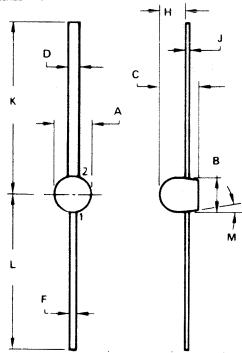
Ref.	INCHES		MILLIMETERS	
	Min.	Max.	Min.	Max.
A	.490	.510	12.446	12.954
B	.240	.260	6.096	6.604
C	.155	.175	3.937	4.445
D	.365	.385	9.271	9.779
E	1 3/16	1 5/16	30.16	33.34
F	.023	.027	.584	.686

**PC62**



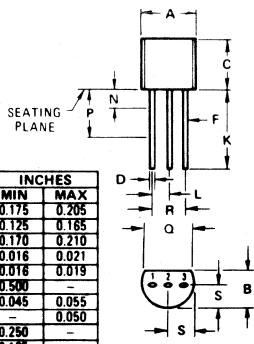
DIMENSIONS IN "MM"

**PD1**



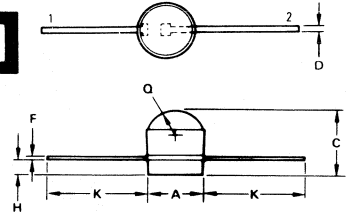
	A	B	C	D	E	F	G	H	J	K	L	M
PD1	.092	.083	.094	.025	.018	.062	.008	.445	.405	9°		
PD1a	.102	.093	.104	.029	.022	.072	.012	.500	.430	11°		
PD1b	.102	.093	.104	.026	.021	.062	.006	.450	.430	11°		
PD1c	.085		.095	.025	.020	.053	.010	.250	.250	MIN		

**PD2**



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	4.450	5.200	0.175	0.205
B	3.180	4.190	0.125	0.165
C	4.320	5.330	0.170	0.210
D	0.407	0.533	0.016	0.021
E	0.407	0.482	0.016	0.019
F	12.700	—	0.500	—
G	1.150	1.390	0.045	0.055
H	—	1.270	—	0.050
I	6.350	—	0.250	—
J	3.430	—	0.135	—
K	2.410	2.670	0.095	0.105
L	2.030	2.670	0.080	0.105

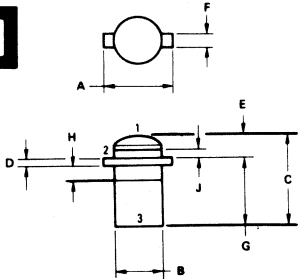
**PD4**



Lead 2 indicated by square bonding  
pad on bottom of device.

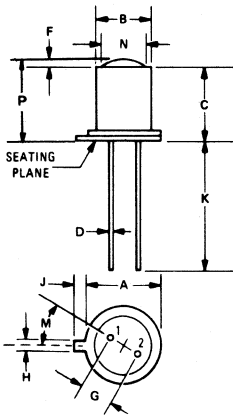
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	3.56	4.06	0.140	0.160
B	4.57	5.33	0.180	0.210
C	0.33	0.48	0.013	0.019
D	0.23	0.28	0.009	0.011
E	1.02	1.27	0.040	0.050
F	6.35	—	0.250	—
G	1.91	NOM	0.075	NOM

**PD5**



	A	B	C	D	E	F	G	H	J
PD5	.083	.058	.125	.003	.023	.018	.082	.014	.008
PD5a	.093	.072	MAX	.007	.029	.022	.094	.020	.012
PD5b	.088	.061	.097		.030		.087		
PD5c	.291	.059	.122		.035	.018	.021		
PD5d	.082	.055	.122		.038	.015	.078	.019	
PD5e	.090	.062			.023	.090	.024		
PD5f	.088	.060		.005	.039		.070	.016	

**PD7**

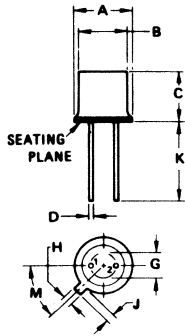


	A	B	C	D	E	F	G	H	J	K	M	N	P
PD7	.209	.178	.180	.016	.020	.100	.039	.039	500	45°	.132		
PD7a	.230	.195	.210	.019	.040	.100	.048	.048	MIN		.158		
PD7b	.219	.185	.200		.035	.100	.040	.028	500			.140	.235
PD7c	.212	.195	.240			.100	.046		500	45°			.240
PD7d	.228	.177	.271	.018	.063	.099	.045	.046	499	45°	.177	.271	
PD7e	MAX	.188	MAX	MAX	MAX		MAX	MAX	MIN		.188	MAX	
PD7f		.185	.283	.017		.100			1.14				.210
PD7g			.307						1.18				.216
PD7h	.210	.185	.192	.017		.088			.492				.244
PD7i	.216	MAX	.204		.111				570				
PD7j	.210	.185	.192	.017	.067	.088			527		.195	.259	
PD7k	.216	MAX	.204		.075	.111			535		MAX	.278	
PD7l	.209	.178	.190	.016	.050	.100	.036	.028	500	45°		.240	
PD7m	.230	.195	.210	.019	MAX		.046	.048	MIN			.260	
PD7n	.210	.183	.192	.017	.045	.100			500		.155	.237	
PD7o	.209	.178	.170	.016	.035	.100	.036	.028	500	45°	.178		
PD7p	.230	.196	.210	.019	.065		.046	.048	MIN		.196		
PD7q	MAX	MAX	MAX	TYF				.480	1.50				.220
PD7r	MAX	MAX	MAX	TYF	.000	.098	.039	.039	511	45°	.118		
PD7s	MAX	MAX	MAX	TYF	.000	.098	.039	.039	511	45°	.118		
PD7t	.224	.185	.157	.017	.000	.100	.039	.039	472	45°	.118		
PD7u	.370	.334	.125	.017	.000	.200	.031	.031	472	45°	.259		
PD7v	.209	.178		.016		.100	.031	.036	500	45°			.265
PD7w	.230	.195		.021		NCM	.044	.046	MIN				MAX
PD7x	.209	.178	.170	.016	.020	.100	.036	.028	1.00	45°		.180	
PD7y	.230	.195	.210	.019	.074		.046	.048	MIN			.284	

# 49. OUTLINE DRAWINGS

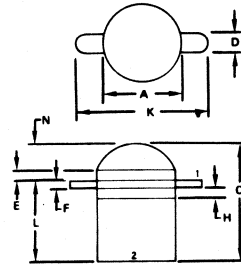
IN DRAWING NUMBER SEQUENCE

**PD8**



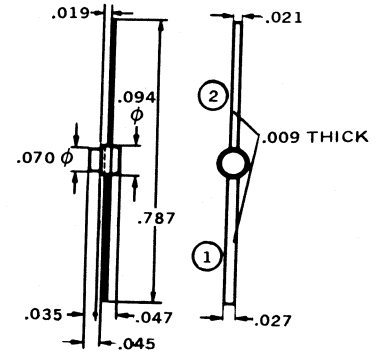
	A	B	C	D	G	H	J	K	M
PD8	.209 .230	.178 .195	.180 .210	.016 .019	.100 BSC	.039 .048	.033 .048	.500 MIN	45°
PD8a	.210	.183	.145					1.500	
PD8b	.219	.185	.147		.100	.040		.500 MIN	
PD8c	.207 .213	.180 .188	.195 .220	.016 .019	.100	.038 .048	.033 .048	.500 MIN	45°
PD8d	.209 .230	.178 .195	.135 .165	.017 .021	.085 .115	.038 .048	.028 .048		
PD8e	.360	.320	.251	.009 .017	.157			1.965	
PD8f	.210	.189	.191	.019	.154			.500	
PD8g	.210 .216	.185 .204	.192 .204	.017 .111	.088			.492 .570	
PD8h	.210	.185	.145	.020		.040	.040	1.500	
PD8j	.360	.325	.180	.017				1.500	
PD8k	.209 .230	.178 .195	.140 .150	.016 .019	.100	.038 .048	.028 .048	.500 MIN	45°
PD8m	.209 .230	.178 .195	.155 MAX	.016 NOM	.100	.031 .044	.036 .045	.500 MIN	45°
PD8n	.209 .230	.178 .195	.170 .190	.016 .019	.100	.038 .048	.028 .048	1.000 MIN	45°

**PD9**

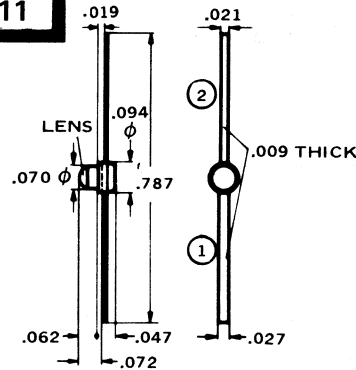


DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	1.47	1.57	0.058	0.062
C	-	3.18	-	0.125
D	0.46	0.56	0.018	0.022
E	0.20	0.30	0.008	0.012
F	0.06	0.18	0.003	0.007
H	0.36	0.51	0.014	0.020
K	2.11	2.38	0.083	0.093
L	2.08	2.39	0.082	0.094
N	0.58	0.79	0.023	0.031

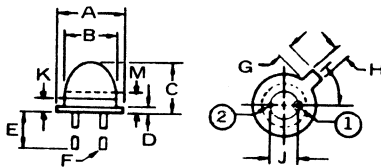
**PD10**



**PD11**

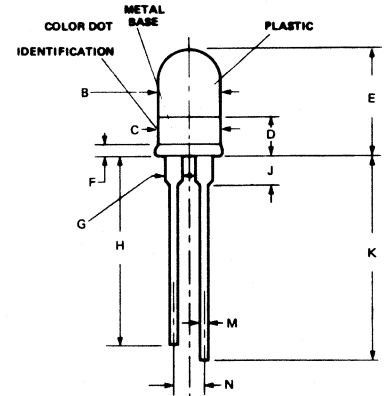
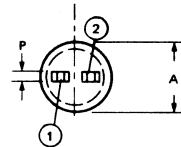


**PD12**



	A	B	C	D	E	F	G	H	J	K	M
PD12	.224 .205 .230	.188 .160 .170	.118 .130 MAX	.010 MIN	.511 MIN	.019 .018 .019	.033 .033 .048	.036 .036 .046	.100	.013	.047
PD12a	.209 .230	.164 .170	.180 MAX	.010 MAX	.500 MIN	.016 .019	.033 .048	.036 .046	.100		
PD12b	.209 .230	.164 .170	.180 MAX	.010 MAX	.500 MIN	.016 .019	.033 .048	.036 .046	.100		
PD12c	.209 .230	.166 .170	.178 .230	.010 .016	.500 MIN	.018 .019	.033 .048	.038 .046	.100		
PD12d	.212	.168	.100	.012	.500 MIN	.020	.048		.100		
PD12e	.228 MAX	.161 .178	.199 MAX		.499 MIN	.018 MAX	.046 MAX	.045 MAX	.099		
PD12f	.210	.170	.200		.500	.107			.100	.100	
PD12g	.217	.165	.126	.008	.500 MIN	.018			.100	.082	
PD12h	.228 MAX	.161 .169	.196 MAX	.007	.944 MIN	.017	.047	.039	.098	.098	
PD12j	.228 MAX		.275 MAX	.019	.944 MIN	.017	.039	.039	.099		
PD12k	.211		.240 MAX			.018	.039	.039	.098	.078	
PD12m	.211	.181	.260		.512	.018	.039	.039	.098	.177	
PD12n	.211	.177	.240	.008	.512	.018	.047	.039	.100	.079	
PD12p	.210 .216	.161 .169	.157 MAX		.527 .535	.017		.088 .111		.106 .110	
PD12q	.216	.185	.291		1.000 MIN	.017			.098		
PD12r		.161 MAX	.157 MAX		.527 .535	.017		.100		.110 MAX	
PD12s	.211	.181	.295	.016	.492 MIN	.018	.041	.039	.100	.161	
PD12t	.211	.165	.217 MAX	.008	.492 MIN	.018	.041	.039	.100	.070	
PD12u	.211	.181	.240	.016	.492 MIN	.018	.041	.039	.100	.122	
PD12v	.224	.185	.267		.787	.017	.039	.039	.098	.177	
PD12w	.224	.185	.260		.511	.017	.039	.039	.098	.177	

**PD13**



	A	B	C	D	E	F	G	H	J	K	M	N	P
PD13	.220 .240	.170 .200	.190 .210	.115 .125	.320 .380	.025 .035	.030 .055	.600 MIN	.080 .120	.650 MIN	.020 .030	.080 .120	.020 .030
PD13a	.222 .229			.122 .354	.330	.031	.047	.240	.106	.279	.031	.100	.031
PD13b	.130 MAX	.105 .125			.130 NOM			.560 MIN	.050 NOM	.610 MIN	.015 .025	.080 .100	.015 .025
PD13c	.126 MAX	.118			.177	.039		.893	.098		.020	.100	.020
PD13d	.220 .240	.170 .200	.170 .210	.190 .210	.320 .380	.025 .035	.035 .050	.230 MIN	.100	.280 MIN	.025 .040	.080 .120	.025 .040

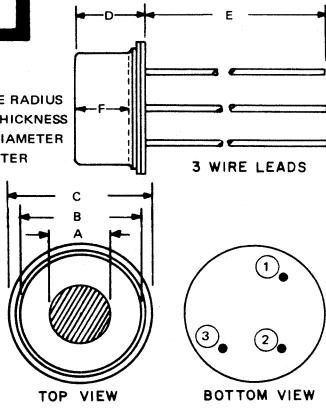


# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

## PD21

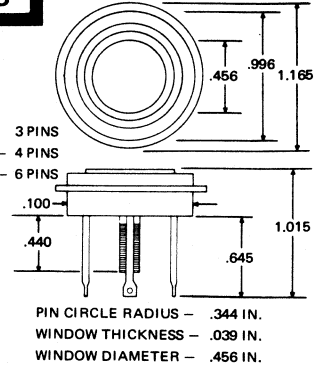
G=PIN CIRCLE RADIUS  
H=WINDOW THICKNESS  
J=WINDOW DIAMETER  
K=PIN DIAMETER



	A	B	C	D	E	F	G	H	J	K
PD21	.440	.820	1.25	.250	.500	.210	.370	.060	.830	.040
PD21a	.299	.503	.551	.295	1.496		.456	.050	.417	.018
PD21b		.470	.550	.210	.410				.410	.017

## PD23

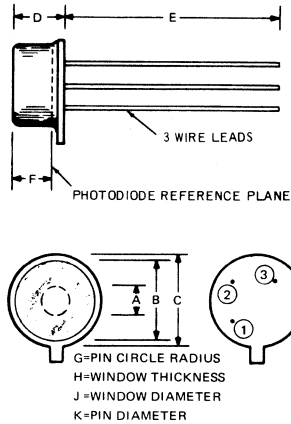
PD23 - 3 PINS  
PD23a - 4 PINS  
PD23b - 6 PINS



PIN CIRCLE RADIUS - .344 IN.  
WINDOW THICKNESS - .039 IN.  
WINDOW DIAMETER - .456 IN.

## PD22

	A	B	C	D	E	F	G	H	J	K
PD22	.100	.330	.360	.170	1.500	.090	.100	.050	.240	.018
PD22a	.160	.480	.550	.200	1.500	.140	.100	.050	.420	.018
PD22b	.039	.330	.358	.165	1.500	.090	.098	.051	.240	.018
PD22c	.039	.181	.244	.200	1.500	.145	.051	.035	.137	.018
PD22d	.098	.330	.358	.165	1.500	.090	.098	.051	.240	.018
PD22e	.137	.484	.551	.200	1.500	.145	.098	.051	.421	.018
PD22f		.325	.360	.250	1.500				.250	.017
PD22g		.230	.318	.240					.106	.037
			.330	.259					.145	

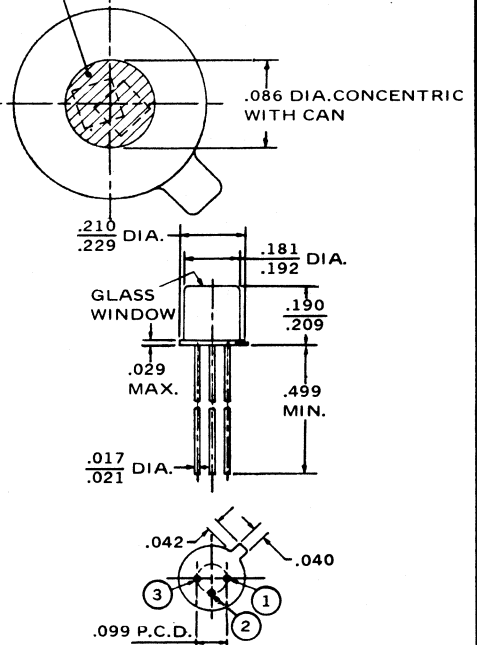


## PD24

NOTE:  
CHIP SIZE=.040x.040  
ACTIVE AREA=.024x.024

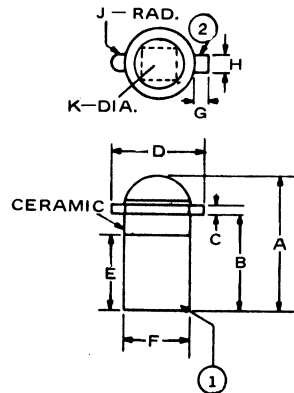
View looking down on to top of can.

CHIP CAN BE ANYWHERE WITHIN SHADED AREA.

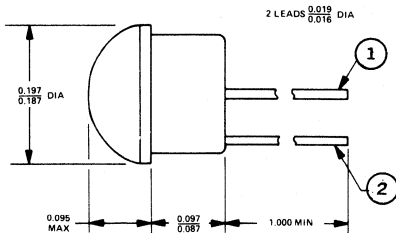


## PD25

	A	B	C	D	E	F	G	H	J	K
PD25	.122	.082	.005	.084	.063	.058	.009	.016	.009	
	.135	.088	.010	.092	.067	.062	.019	.024	.011	
PD25a	.109	.085	.007	.088		.060			.020	.030
PD25b	.128	.085	.005	.088		.060			.020	.043
PD25c	.118	.079	.005	.083	.061	.062		.015		
	.141	.088	.009	.092	.068	MAX		.023		
PD25d	.118	.080	.005		.082	.059			.016	.036
	.128	.089	.010		.069	.061			.024	.040
PD25e	.100	.072	.005	.083	.053	.058	.012	.016		
	.130	.090	.010	.093	.089	.082	.016	.024		
PD25f	.118	.080	.005	.084	.062	.058		.018		.038
	.135	.089	.010	.092	.069	.062		.024		.042
PD25g	.102	.080	.005	.084	.062	.058		.016		.028
	.118	.089	.010	.094	.069	.062		.024		.034



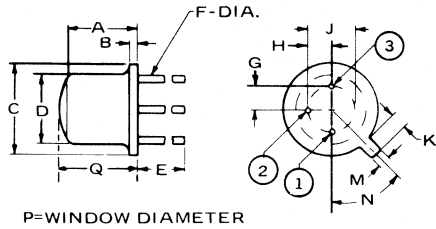
## PD26



# 49. OUTLINE DRAWINGS

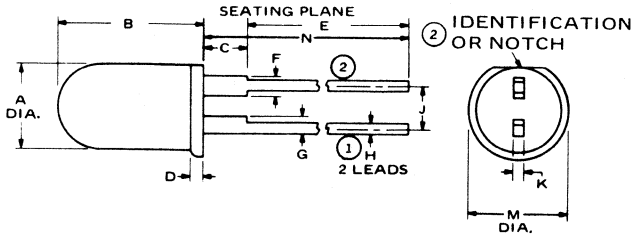
IN DRAWING NUMBER SEQUENCE

## PD27



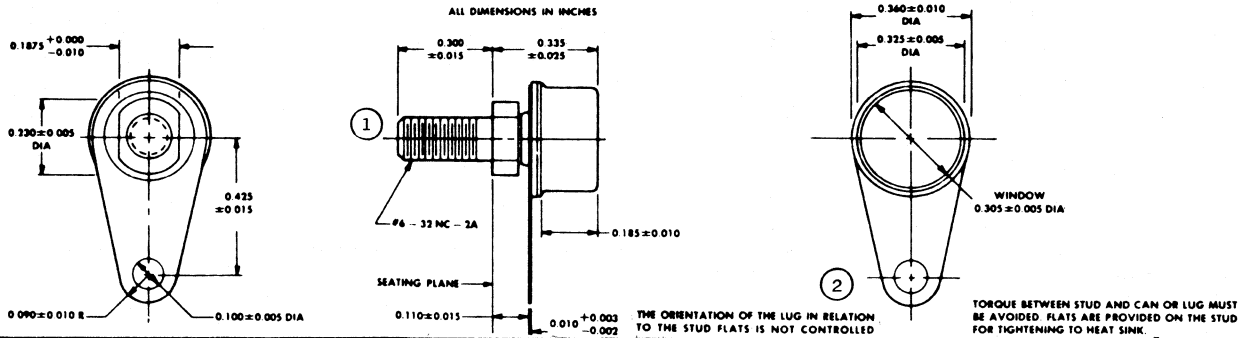
	A	B	C	D	E	F	G	H	J	K	M	N	P	Q
PD27	.190 .210	.030 MAX	.209 .230	.178 .195	.500 MIN	.016 .019	.050	.050	.100	.028 .048	.036 .046	45°	.140	
PD27a		.018 .024	.207 .213	.180 .188	.500 MIN	.016 .019			.100	.033 .048	.036 .046	45°	.120	.220 .260
PD27b			.209 .230	.178 .194	.500 MIN	.017 .020			.090 .109	.028 .048	.035 .046		.149	.188 .208
PD27c			.334 .370	.289 .334	.500 MIN	.017 .020			.188 .208	.029 .044	.028 .035		.240	.165 .185
PD27d			.212 .205	.165 .178	.551 1.00	.017 .017	.050		.100					.078 .220
PD27e			.215 .188	.188 .188		.019 .019	.052							.235
PD27f	.190 .210	.300	.209 .230	.180 .190	.500 MIN	.016 .019	.050	.050	.100	.028 .048	.036 .046	45°		
PD27g	.170 .210	.030 MAX	.209 .230	.178 .195	.500 MIN	.016 .019		.050	.100	.028 .048	.036 .046	45°		.190 .230
PD27h	.188 .208		.209 .229		.500 MIN	.016 .018			.090 .109	.027 .048	.035 .046		.153	
PD27j				.188 MAX	.500 MIN	.018 MAX	.050	.050	.100	.046 MAX	.045 MAX	45°		.271 MAX

## PD28

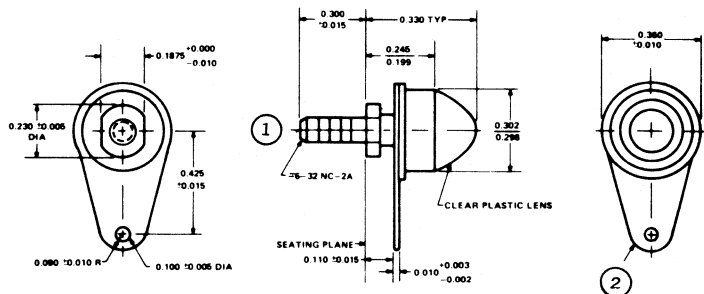


	A	B	C	D	E	F	G	H	J	K	M	N
PD28	.190 .210	.330 .360	.120 .140	.020 .040	.850 MIN	.035 .045	.027 .037	.022 .028	.095 .105	.023 .027	.220 .240	.970 MIN
PD28a	.192	.240		.045				.025	.100	.025		.500 MIN
PD28b	.200	.300	.130	.040	.700 MAX			.025	.100	.025		
PD28c	.192 .200	.283 .291	.125	.039	.492 .511			.019	.100	.019	.220 .228	
PD28d	.192 .200	.330 .338	.098	.039	.492 .511	.039	.027	.019	.100	.019	.220 .228	
PD28e	.190	.340	.100	.040	.450			.025	.100	.025	.230	.550 MIN
PD28f	.190	.340	.130	.040	.420			.025	.100	.025	.230	.550 MIN
PD28g	.200	.338	.096	.039		.039		.025	.100	.025	.228	.905
PD28h	.192 .200	.330 .338	.145	.039	.492 .511	.039	.027	.019	.100	.019	.220 .228	.637 .657
PD28j	.194	.285	.166	.039	.492 .511			.019	.100	.019	.220 .228	.662 .682
PD28k	.192 .200	.248 .255	.157	.039	.492 .511	.039	.027	.019	.100	.019	.220 .228	.649 .688
PD28m	.190 .210	.330 .350	.090 .110	.020 .040	.850 MIN	.040 NOM	.032 NOM	.022 .028	.100 NOM	.023 .027	.220 .240	
PD28n	.196	.340	.103		.684			.021 .027	.100	.021	.230	.787
PD28p	.193 .209	.331 .346	.075 .090	.039	.492 .512	.039	.027	.020	.100	.020	.230 .236	.567 .602
PD28q	.190 .210	.330 .350	.140 .170	.020 .040	.500 MIN	.035 MIN	.027 .037	.022 .028	.100	.022 .028	.220 .240	
PD28r	.190 .210	.330 .350	.120 .140	.020 .040	.550 MIN	.035 MIN	.027 .037	.025 .045	.095 .105	.025 .025	.220 .240	1.00 MIN
PD28s	.190 .210	.330 .350	.160 .180	.020 .040	.500 MIN	.035 MIN	.027 .037	.025 .045	.100	.025 .025	.220 .240	
PD28t	.190 .210	.330 .350	.160 .180	.020 .040	.500 MIN	.035 MIN	.027 .037	.022 .028	.095 .105	.026 .039	.220 .240	

## PD29



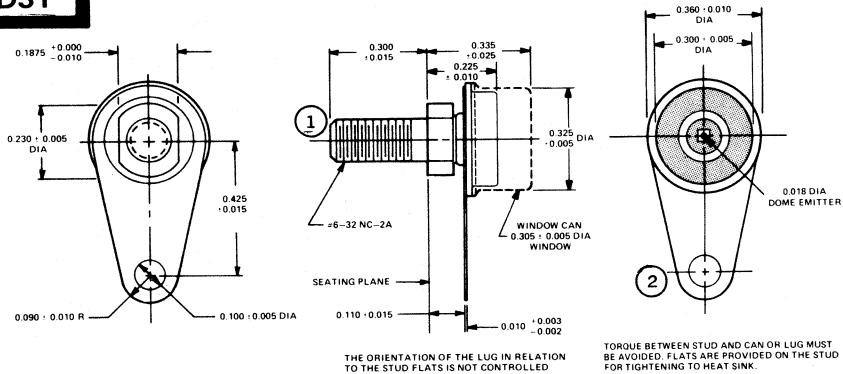
## PD30



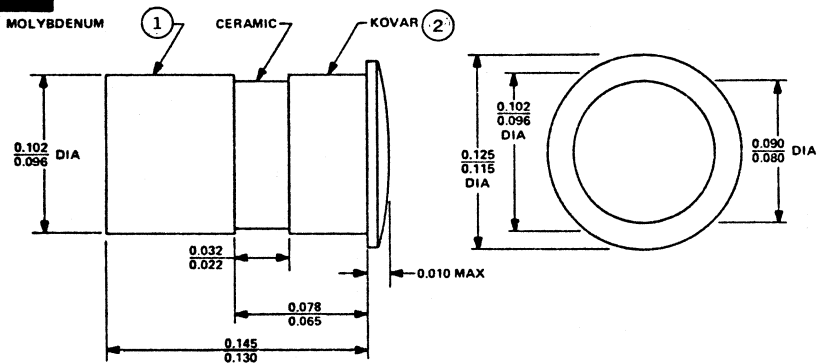
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

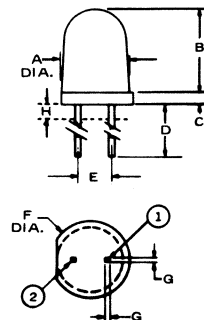
**PD31**



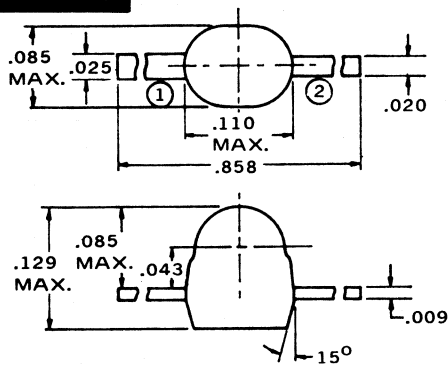
**PD32**



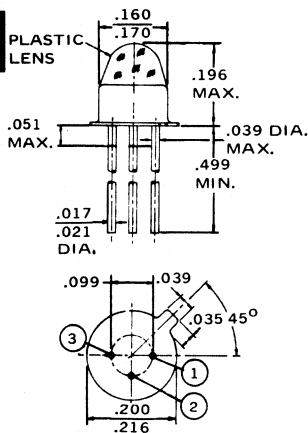
**PD33**



**PD36**

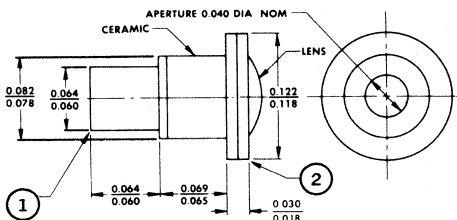


**PD37**

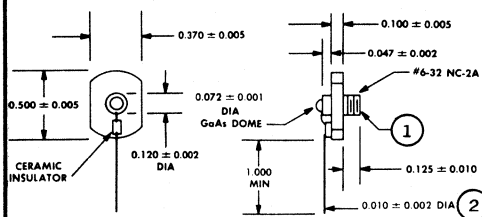


	A	B	C	D	E	F	G	H
PD33	.110 .130	.170	.020 .040 MIN	.500 .045 MIN	.140 .055 MIN	.160 .160	.018 .024	
PD33a	.190	.240	.030 .060 MIN	.500 .500 MIN	.100 .230	.013 .023	.050	
PD33b	.200	.170	.060 .500 MIN	.100 .230	.013 .023			
PD33c	.205 MAX	.355 .380	.055 .070 MIN	.500 .090 MIN	.225 .110 MIN	.016 .235	.019	
PD33d	.190	.300	.040 1.000 MIN	.100 .230	.025			
PD33e	.200	.340	.040 .750 MIN	.100 .230	.020			
PD33f	.118	.177	.019 .492	.050 .157	.015			
PD33g	.110 .125	.180 .200	.030 MIN	.500 .060	.150 .160	.018 .022		
PD33h	.110 .130	.190 .210	.020 .040 MIN	.500 .045 MIN	.140 .160	.018 .022		
PD33j	.200	.300	.040 MIN	.100 .230				
PD33k	.110 .130	.190 .210	.500 MIN	.045 .145	.018 .024			

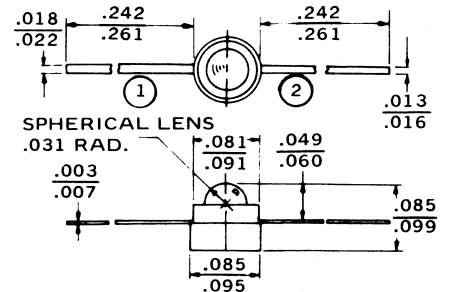
**PD38**



**PD39**



**PD40**

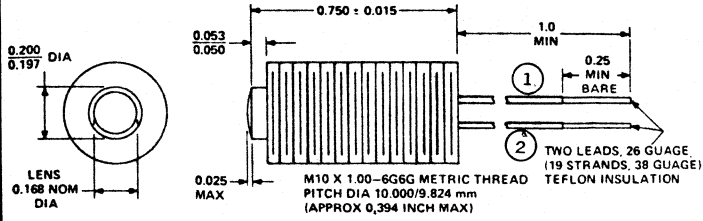




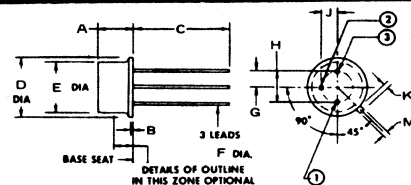
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

**PD41**



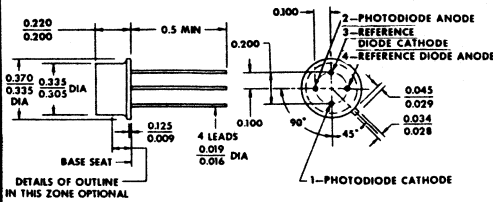
**PD42**



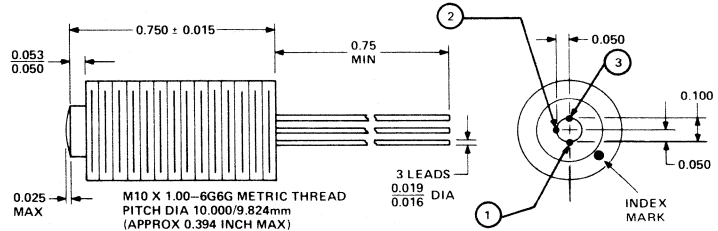
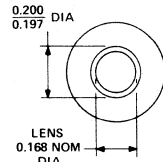
	A	B	C	D	E	F	G	H	J	K	M
PD42	.200	.009	.500	.335	.305	.016	.100	.200	.100	.029	.028
	.220	.125	MIN	.370	.335	.019				.045	.034
PD42a	.150	.020	1.500	.335	.305	.016	.100	.200	.100	.029	.028
	.170	.030	MIN	.370	.335	.019				.045	.034
PD42b	.240	.009	1.500	.335	.305	.016	.100	.200	.100	.029	.028
	.260	.125	MIN	.370	.335	.019				.045	.034
PD42c	.259		1.499	.370	.334	.018	.100	.200	.100	.039	.033
	MAX		MIN	MAX	MAX	MAX				MAX	MAX
PD42d	.208		.499	.228	.188	.018	.049	.099	.049	.046	.045
	MAX		MIN	MAX	MAX	MAX				MAX	MAX
PD42e	.216		.499	.228	.188	.018	.049	.099	.049	.046	.045
	MAX		MIN	MAX	MAX	MAX				MAX	MAX
PD42f	.249	.015	1.496	.350	.320	.018	.099	.199	.099	.033	.031
	MAX		MAX	MAX	MAX	MAX				MAX	MAX
PD42g	.232		.500	.228	.188	.021	.100	.500		.046	.045
	MAX		MAX	MAX	MAX	MAX				MAX	MAX
PD42h	.196		.551	.212	.185			.100			
	MAX		MAX	MAX	MAX						
PD42j	.165		.335	.290	.017			.190		.029	.028
	.185		.370	.335	.021			.210		.045	.035

**PD43**

THE REFERENCE DIODE CATHODE IS IN ELECTRICAL CONTACT WITH THE CASE

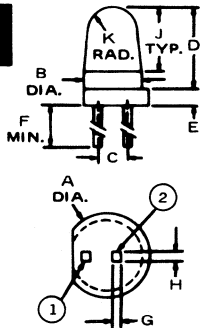


**PD44**



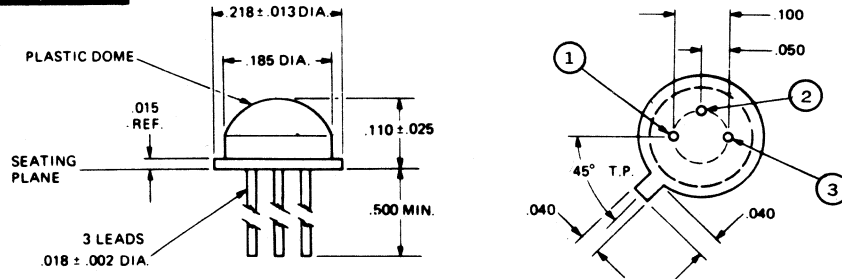
Dimensions without tolerance designate true position, Leads having maximum diameter (0.019") measured in gaging plane 0.054" +0.001" -0.000" below the seating plane of the device shall be within 0.007" of their true positions.

**PD47**

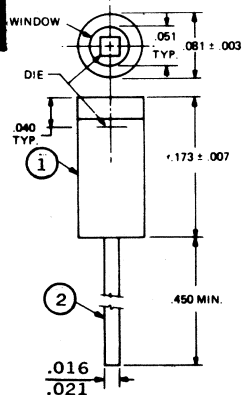


	A	B	C	D	E	F	G	H	J	K
PD47	.220	.185	.100	.290	.045	.500	.013	.013	.225	.080
					.075	MIN	.023	.023	TYP	
PD47a	.230	.194	.100	.240	.029	.590	.031	.011		
					.059					

**PD48**



**PD49**

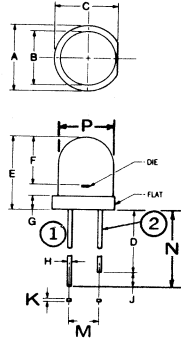


# 49. OUTLINE DRAWINGS

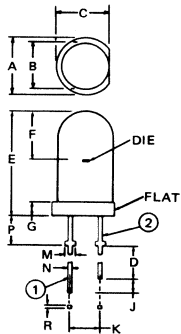
IN DRAWING NUMBER  
SEQUENCE

## PD50

	A	B	C	D	E	F	G	H	J	K	M	N	P
PD50	.220 .240	.180 .200	.215	.500 .740 TYP	.210 .250	.165	.038 .062	.014 .020	.050	.013 .017	.100		
PD50a	.220 .240	.180 .200	.215	.500 .630 TYP	.320 .360	.165	.038 .062	.014 .020	.050	.013 .017	.100		
PD50b	.220 .240	.180 .200	.215	.500 .690	.265 .305	.165	.038 .062	.014 .020	.050	.013 .017	.100		
PD50c	.230			.500 MIN	.285		.050	.017		.015	.100		
PD50d	.220 .240	.170 .200		.600 MIN	.313 .373		.025 .035	.014 .020	.040 MIN	.014 .016	.100		
PD50e	.240 .250	.185 .195					.035 .055	.022 .028		.018 .022	.100	.450 .500	.160
PD50f	.230	.200		.500 MIN	.340		.022 .028	.028		.018 .022	.100		
PD50g	.230 .203	.180		.215	.300		.020			.020	.100	1.125	
PD50h	.228				.291		.039	.019		.019	.100	.677	.200
PD50j	.228				.338		.039	.019		.019	.100	.657	.200
PD50k	.220 .240	.170 .200		1.000 MIN	.210 .250		.055 .065	.014 .020	.050 MIN	.014 .016	.100 NOM	1.050 MIN	
PD50m	.230	.200		1.000 MIN	.340		.030	.020	.050	.020	.100 NOM	1.050 MIN	
PD50n	.220 .240	.205 MAX		1.000 MIN	.225 .250		.055 .075	.020 .023		.020 .023	.095 .105		
PD50p	.220 .240	.205 MAX		1.000 MIN	.355 .380		.055 .075	.020 .023		.020 .023	.095 .105		
PD50q	.140 .160	.110 .130		.500 MIN	.190 .210		.020 .040	.018 .022		.018 .022	.045 .055		
PD50r	.225 .235			1.000 MIN	.340 .360		.020 .040	.014 .018	.030 .050	.013 .017	.090 .110		.195 .205
PD50s	.230	.190		.500 MIN	.285		.050	.017	.050	.015	.100	.550 MIN	
PD50t	.220 .240	.190 .210		.750 MIN	.330 .360		.020 .040	.018 .022	.050 MIN	.018 .022	.095 .105	.800 MIN	.190 .210
PD50u	.220 .240	.170 .200		1.000 MIN	.313 .373		.025 .035	.014 .025	.014 NOM	.014 .016	.100 NOM	1.050 MIN	.170 .200
PD50v	.230	.180 .200	.215	.680 .705	.260 .295		.042 TYP	.015 MIN	.040 MIN	.017		.720 .745	.180 .200
PD50w	.230	.180 .200	.215	.720 .745	.205 .240		.042 TYP	.015 MIN	.040 MIN	.017		.760 .785	.180 .200
PD50x	.230	.180 .200	.215	.625 .650	.315 .350		.042 TYP	.015 MIN	.040 MIN	.017		.665 .690	.180 .200
PD50z	.230		.215	1.060	.285		.050	.019	.050	.019	.100		.190

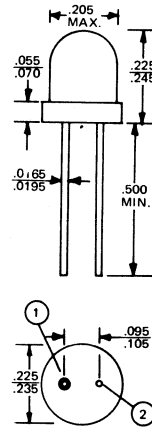


## PD52

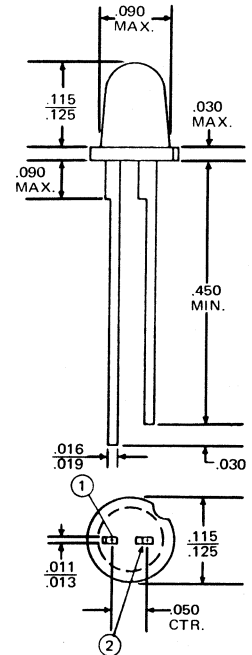


	A	B	C	D	E	F	G	J	K	M	N	P	R
PD52	.200 .240	.180 .200	.215	.500 .528 TYP	.320 .360	.165	.038 .062	.050	.100	.040 .060	.022 .028	.085 .115	.023 .027
PD52a	.230	.190		.400	.340		.050	.050	.100	.050	.025	.100	.025
PD52b	.230	.180 .220	.215	.520 TYP	.315 .350		.042 TYP	.040 MIN			.025	.112 TYP	.025
PD52c	.230	.190		.500 MIN	.340		.050	.050	.100	.050	.025	.100	.025

## PD53



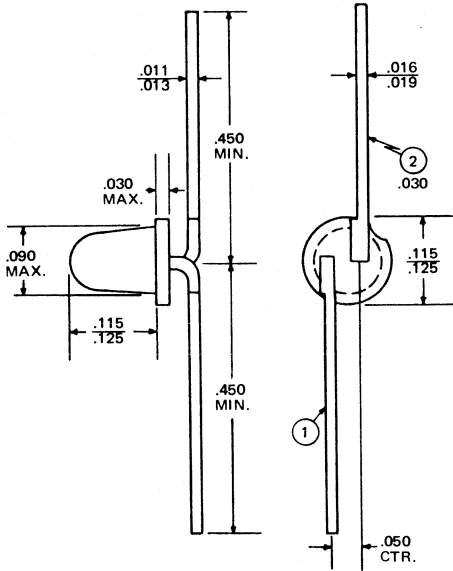
## PD54



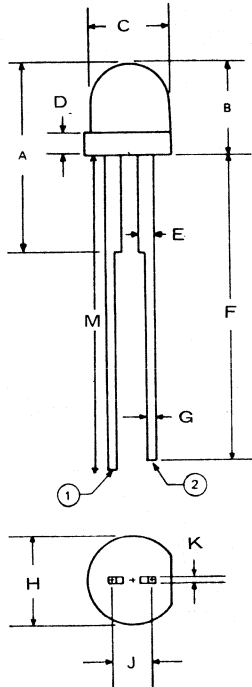
# 49. OUTLINE DRAWINGS

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**PD55**

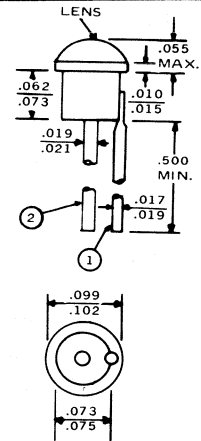


**PD56**

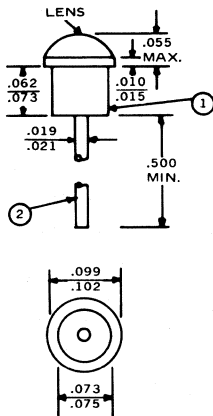


	A	B	C	D	E	F	G	H	J	K	M
PD56	.560	.355 MAX	.205	.055 .070	.040	1.00 MIN	.020 .023	.225 .105	.095 .020		
PD56a	.510	.355 MAX	.205	.055 .070	.040	1.00 MIN	.020 .023	.225 .105	.095 .020		
PD56b	.480	.355 MAX	.205	.055 .070	.040	1.00 MIN	.020 .023	.225 .105	.095 .020		
PD56c	.510	.225 MAX	.205	.055 .070	.040	1.00 MIN	.020 .023	.225 .105	.095 .020		
PD56d	.480	.225 MAX	.205	.055 .070	.040	1.00 MIN	.020 .023	.225 .105	.095 .020		
PD56e	.286	.198	.118	.023		.590	.019	.149		.017	.669

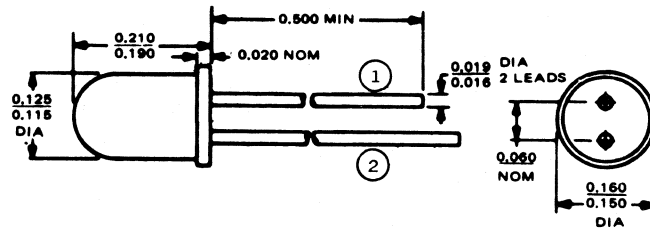
**PD58**



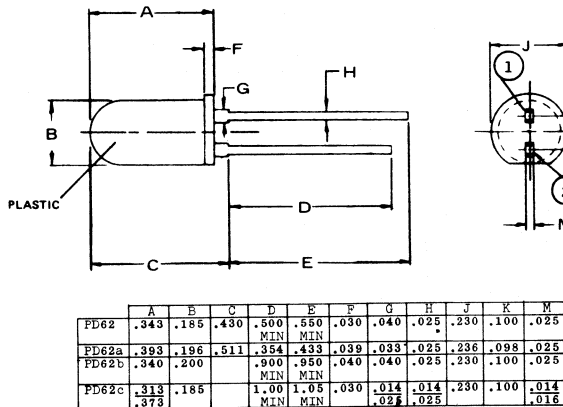
**PD59**



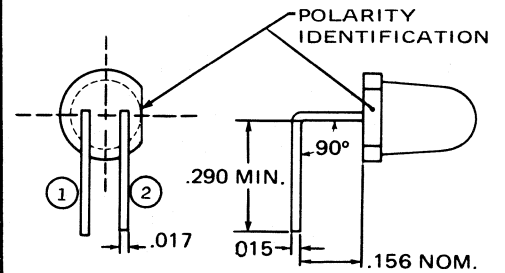
**PD61**



**PD62**



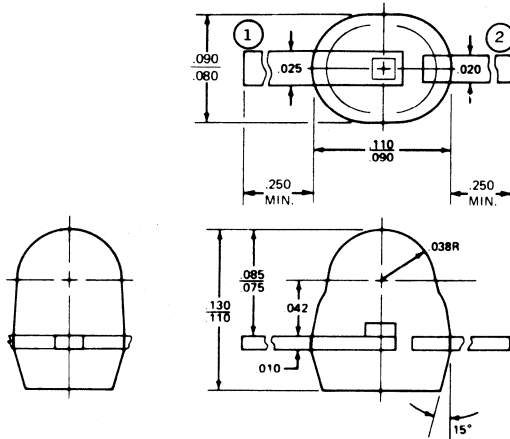
**PD63**



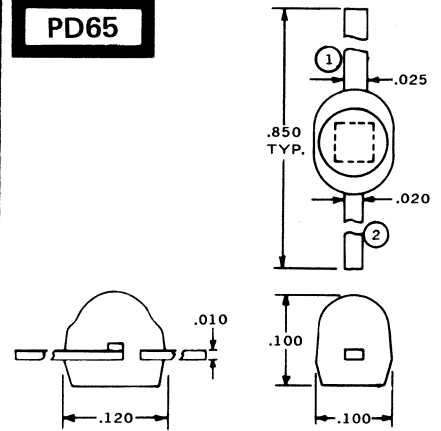
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

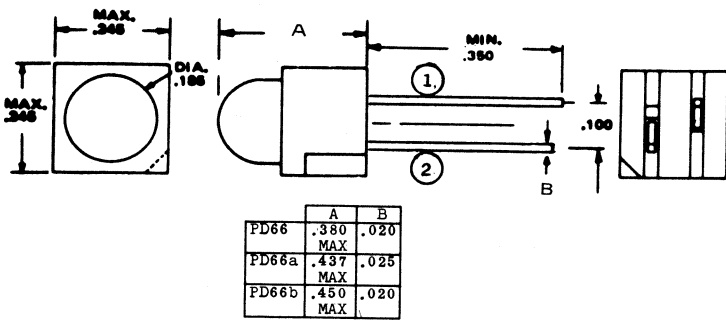
**PD64**



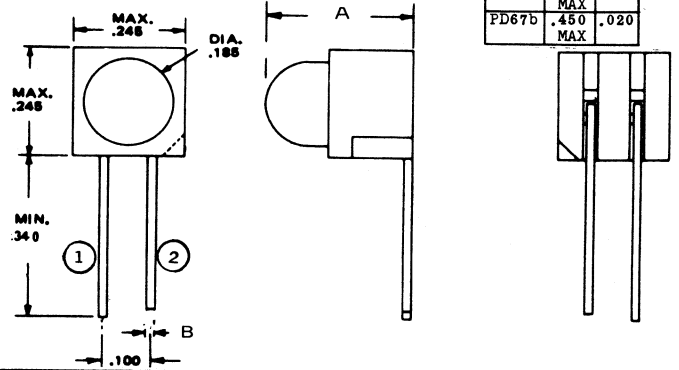
**PD65**



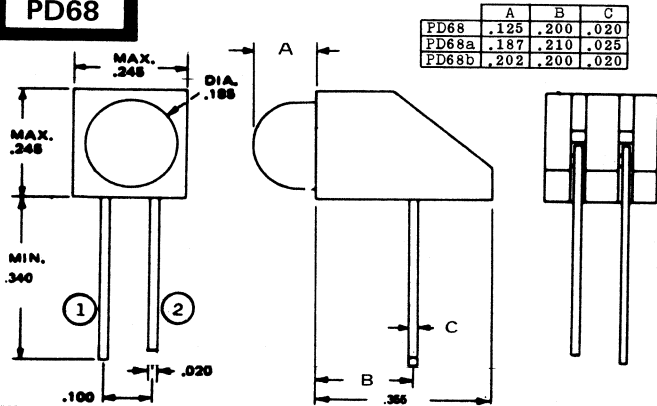
**PD66**



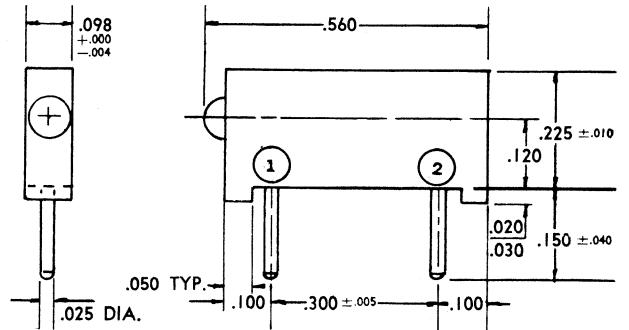
**PD67**



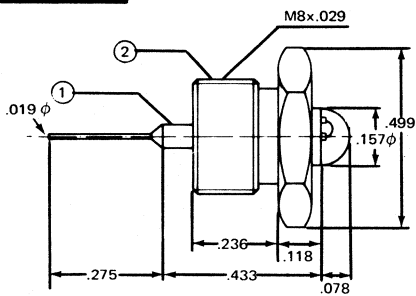
**PD68**



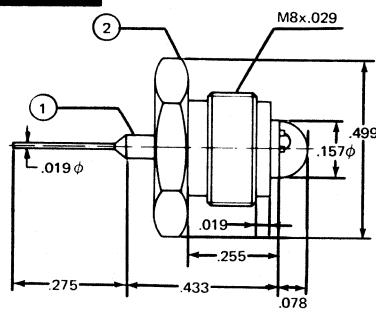
**PD69**



**PD73**



**PD74**

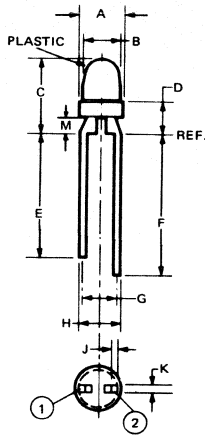


# 49. OUTLINE DRAWINGS

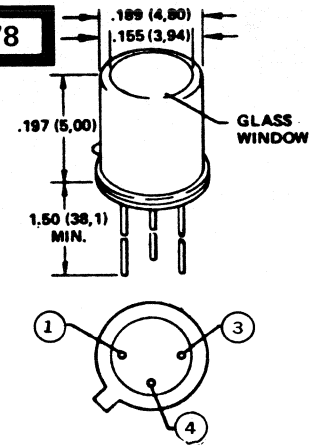
IN DRAWING NUMBER SEQUENCE

**PD77**

	A	B	C	D	E	F	G	H	J	K	M
PD77	.115	.105	.200	.070	.560	.610	.080	.120	.015	.015	
	.135	.125	.240	.110		MIN	MIN	.100	.025	.025	
PD77a	.130	.105	.190		.550	.600	.090	.120	.015	.015	.060
	MAX	.125	.250		MIN	MIN		MAX	.025	.025	
PD77b	.105	.115	.200	.070	.685	.735	.080		.015	.015	
	.125	.135	.240	.110	.700	.750	.100		.025	.025	
PD77c	.122	.110	.216		.559	.610	.90			.019	.047
	.125	.114	.232		.590	.649					
PD77d	.122	.110	.252		.559	.645	.090		.019	.019	.063
	.125	.114	.267		.590	.649					MIN
PD77e	.135				.550	.600		.120	.020	.020	.040
	MAX		TYP		MIN	MIN		MAX	NGM	NGM	TYP

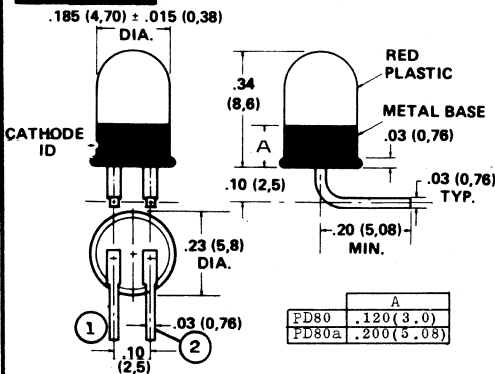


**PD78**

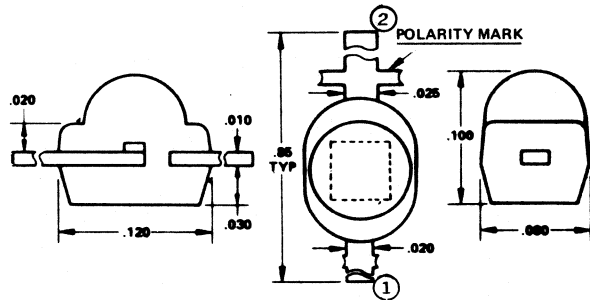


**PD80**

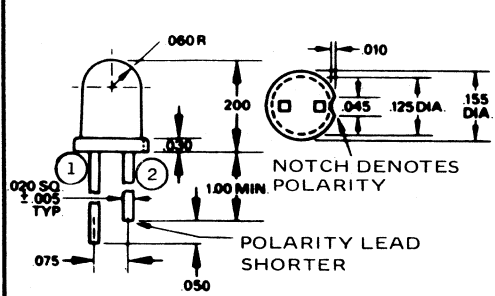
INCH (MM)



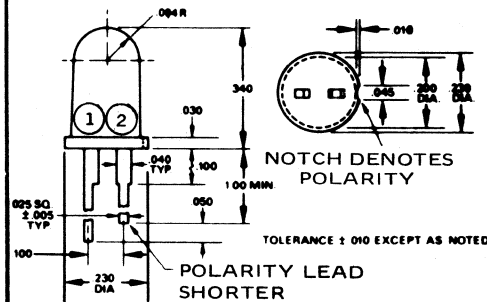
**PD81**



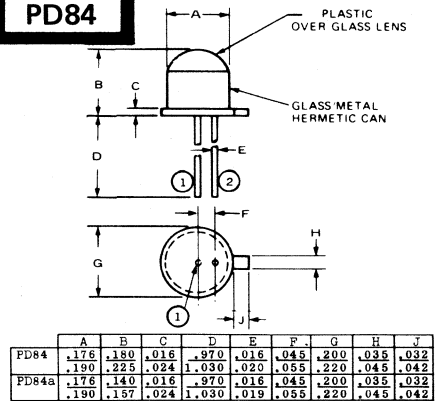
**PD82**



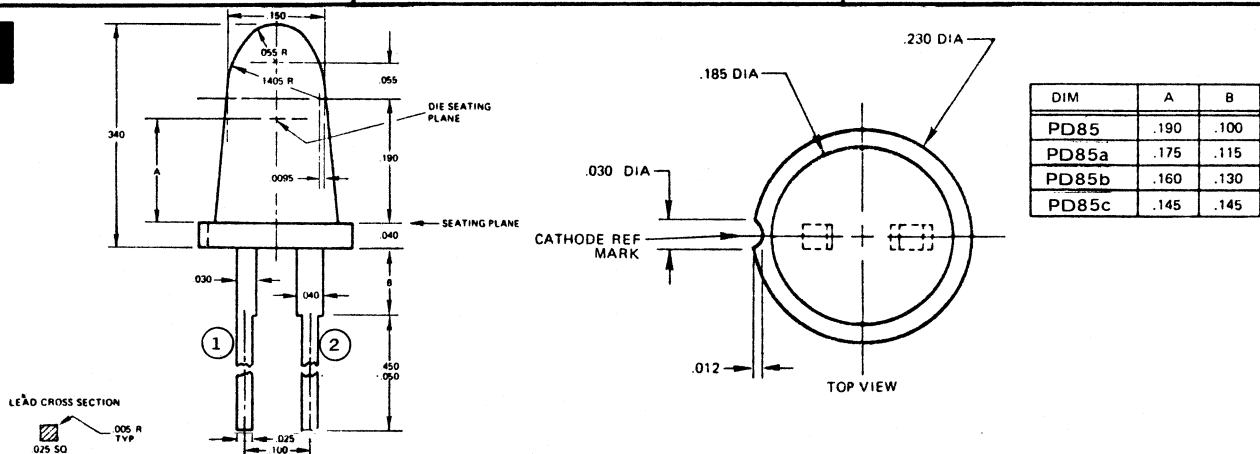
**PD83**



**PD84**



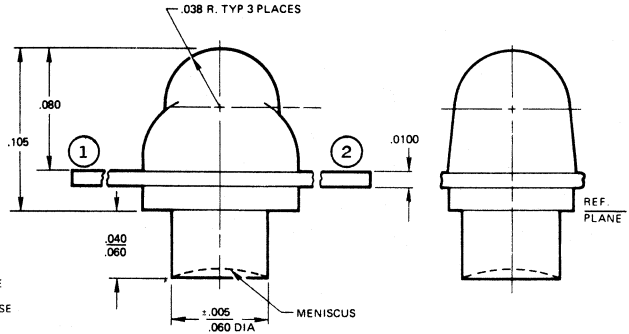
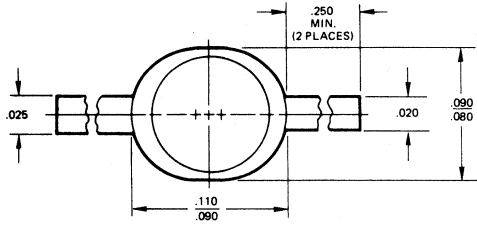
**PD85**



# 49. OUTLINE DRAWINGS

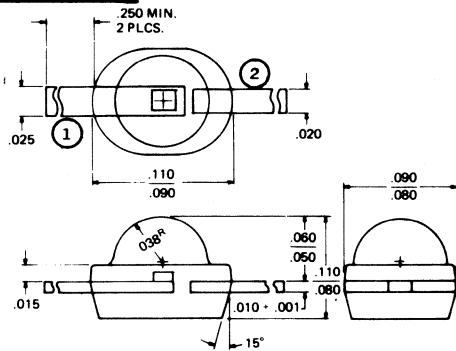
IN DRAWING NUMBER  
SEQUENCE

## PD86



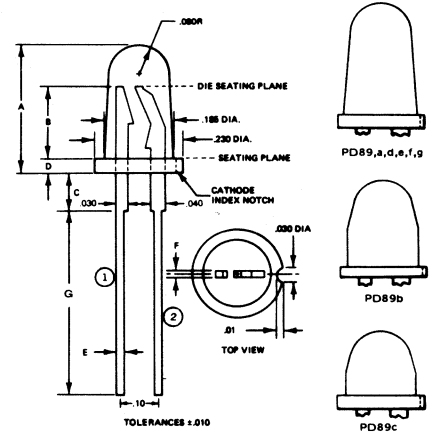
NOTE: 1. CENTERLINE OF STUD TO CENTERLINE OF LENS TIR = .010  
2. TOLERANCE = .010 UNLESS OTHERWISE SPECIFIED

## PD88

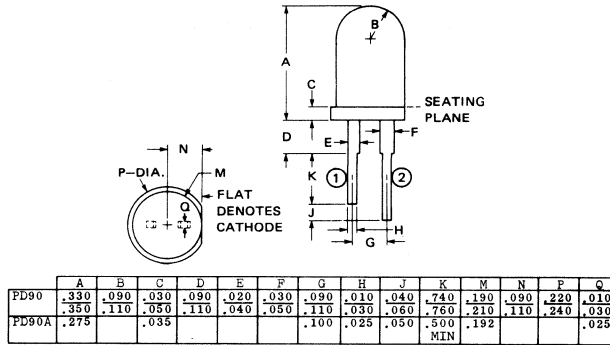


## PD89

	A	B	C	D	E	F	G
PD89	.340	.190	.100	.040	.025	.025	.400
PD89a	.340	.160	.130	.040	.025	.025	.500
PD89b	.270	.125	.100	.030	.020	.020	.400
PD89c	.212	.0625	.100	.040	.020	.020	.400
PD89d	.340	.175	.115	.040	.025	.030	.400
PD89e	.340	.145	.145	.040	.025	.030	.400
PD89f	.340		.100	.040	.025	.025	.500
PD89g	.340		.130	.040	.025	.025	.750
PD89h	.340		.190	.040	.025	.025	.650
							.750

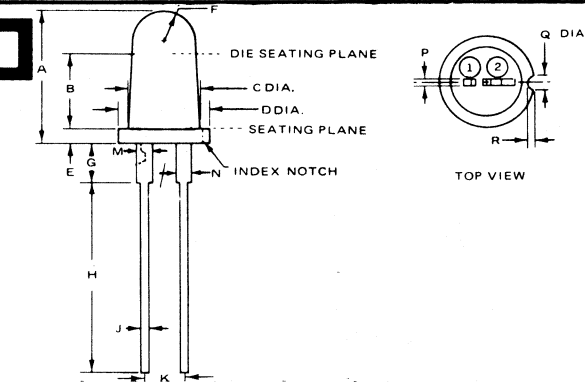


## PD90



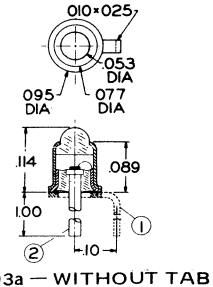
	A	B	C	D	E	F	G	H	J	K	M	N	P	Q
PD90	.330	.090	.030	.090	.020	.030	.090	.010	.040	.740	.190	.090	.220	.010
PD90A	.275	.110	.035	.110	.040	.050	.110	.030	.050	.500	.192	.110	.240	.025

## PD92



	A	B	C	D	E	F	G	H	J	K	M	N	P	Q	R	REMARKS
PD92	.340	.160	.185	.230	.040	.080R	.130	.400	.025	.100	.040	.040	.025	.030	.010	INDEX NOTCH
PD92a	.354		.177	.244	.039		.099	.529	.025	.099						DESIG NOTCH ON LEAD

## PD93

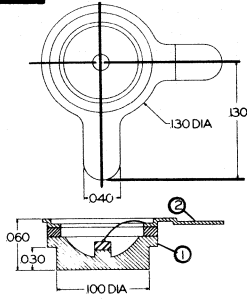


PD93a — WITHOUT TAB

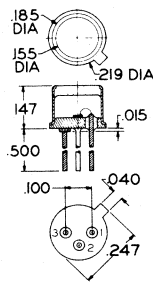
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

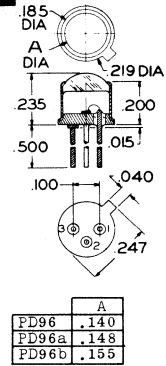
**PD94**



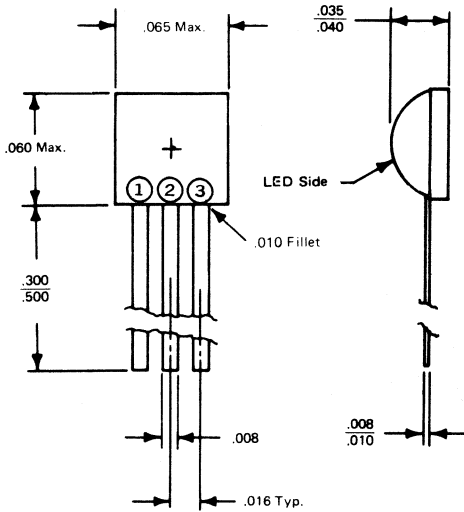
**PD95**



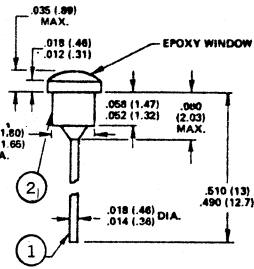
**PD96**



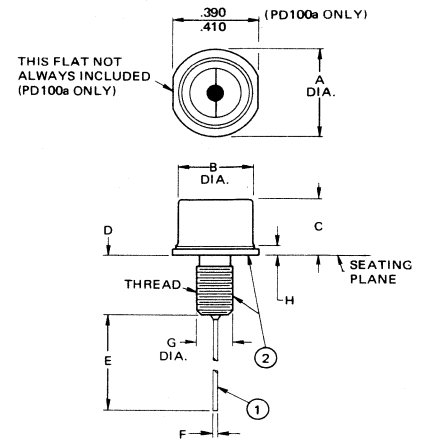
**PD97**



**PD99**

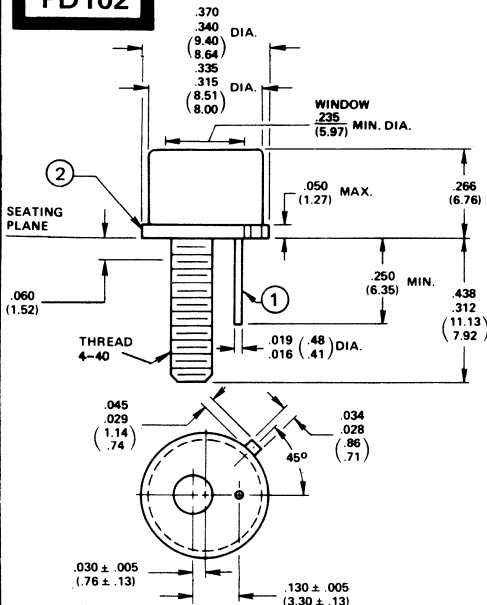


**PD100**

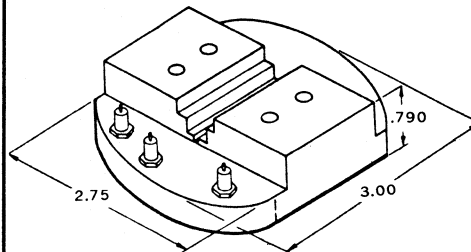


	A	B	C	D	E	F	G	H	THREAD	REMARKS
PD100	.235	.170	.160	.340	.750	.016			8-32	
	.265	.190	.195	MAX	MIN	.021				
PD100a	.425	.325	.255	.286	.750	.018	.165	.035	10-32	
	.450	.335	.280	.315	1.10	.022	.169	.050		
PD100b	.425	.330	.580	.286	.750	.018	.165	.030	10-32	Fiber Optic Output Cable 127mm min length
	.450	.365	.640	.315	1.10	.022	.169	.040		
PD100c	.235	.170	.160	.340	.750	.016			8-32	Laser Chip Is Geometrically Centered in the Pkg
	.265	.190	.195	MAX	MIN	.021				
PD100d	.425	.325	.255	.286	.750	.018	.165	.035	10-32	Laser Chip Is Geometrically Centered in the Pkg
	.450	.335	.280	.315	1.10	.022	.169	.050		

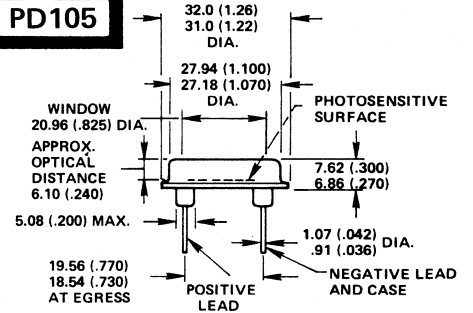
**PD102**



**PD103**



**PD105**



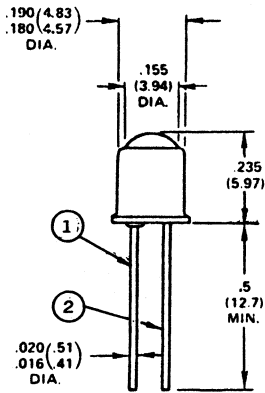
Dimensions in millimeters.  
Dimensions in parentheses are in inches.



# 49. OUTLINE DRAWINGS

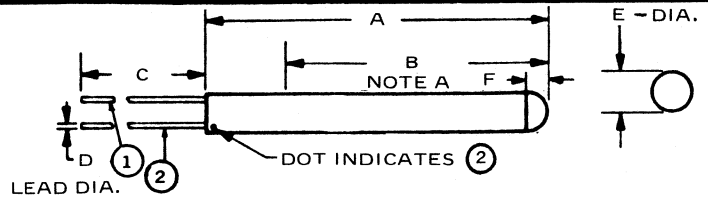
IN DRAWING NUMBER SEQUENCE

## PD106



PD106a: FLAT WINDOW

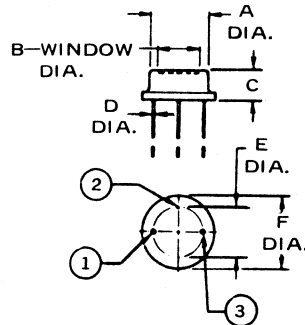
## PD107



NOTES: A. WITHIN THIS ZONE, BODY DIAMETER IS  $.076$   $.082$

	A	B	C	D	E	F	NOTE A
PD107	.400 .500	.300	1.300 MIN	.009 .076 .011	.085		YES
PD107a	.368 MAX		1.102 MIN	.014 MAX	.102 .110		NO
PD107b	.362 MAX		.905 MIN	.014 MAX	.082 .110		NO
PD107c	.362 MAX		.905 MIN	.014 MAX	.110		NO

## PD108



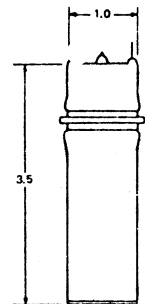
	A	B	C	D	E	F
PD108	.444 .524	.375	.200 .250	.017 .021	.400 .440	.550 .650
PD108a	1.100	.810	.270	.040	.750	1.250
PD108b	.497	.360	.220	.018	.420	.575
PD108c	.444 .524		.270 .330	.027 .033	.272 .292	.500 .650

## PD109

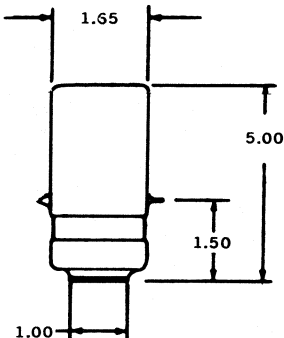
	A	B	C	D	E	F
PD109	.165 .185	.240	.290 .335	.017 .021		
PD109a	.200 .260	.100	.290 .335	.017 .021		
PD109b	.200 .260	.200	.290 .335	.017 .021		
PD109c	.110 .141	.232	.314 .324	.016 .018	.500 MIN	.055 NOM
PD109d	.110 .141	.232	.314 .324	.016 .018	.500 MIN	.047 NOM
PD109e	.240 .259	.232	.314 .324	.016 .018	.500 MIN	.106 NOM

(SUFFIX)	DIODE OPTION
-R	Electrically Isolated from the Can
-2	Centrally Mounted to A Tolerance $\pm 0.25$ mm on the Header
-R2	Electrically Isolated and Centrally Mounted

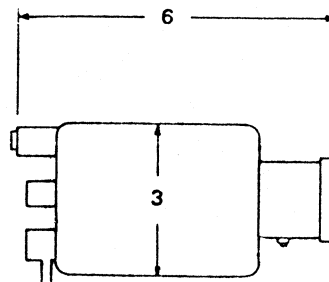
## PD110



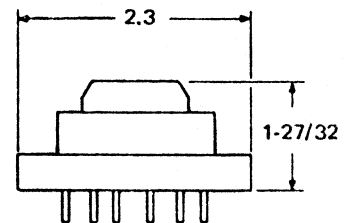
## PD111



## PD112



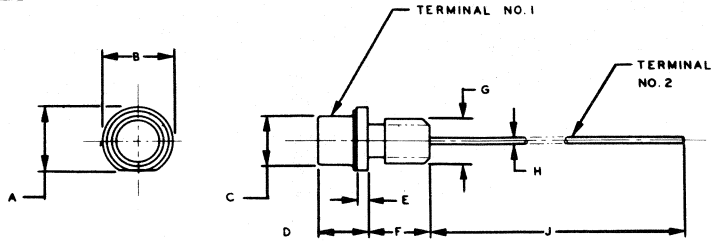
## PD113



# 49. OUTLINE DRAWINGS

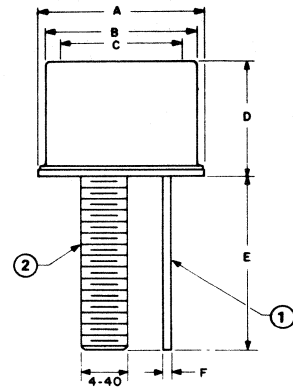
IN DRAWING NUMBER  
SEQUENCE

**PD114**

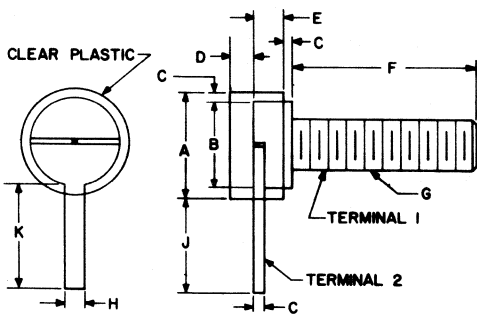


	A	B	C	D	E	F	G	H	J
PD114	.418	.437	.325	.288	.030	.200	10-32	.035	1.09
PD114a	.232	.250	.185	.176	.040	.200	8-32	.030	1.13

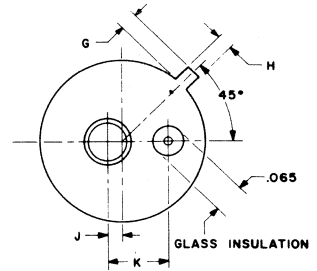
**PD115**



**PD116**

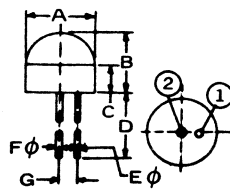


SYMBOL	INCHES	MILLIMETERS
	TYP.	TYP.
A	.355	9.017
B	.325	8.255
C	.260	6.604
D	.255	6.477
E	.375	9.525
F	.017	.432
G	.037	.940
H	.031	.787
J	.030	.762
K	.130	3.302



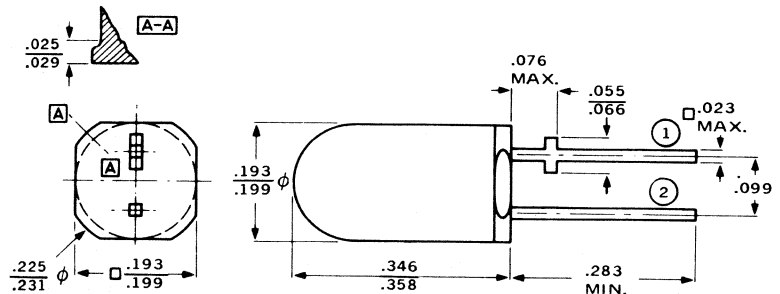
SYMBOL	INCHES	MILLIMETERS
	TYP.	TYP.
A	.220	5.588
B	.180	4.572
C	.020	.508
D	.050	1.270
E	.060	1.524
F	.375	9.525
G	4-40THD	
H	.040	1.016
J	.250	6.350
K	.270	6.858

**PD118**



	A	B	C	D	E	F	G
PD118	.120	.130	.079	.490	.012	.018	.035
PD118a	.106	.157	.078	.433	.011	.017	.035
				MIN			
PD118b	.117	.138	.079	.531	.012	.018	.035
PD118c	.120	.161	.081	.531	.010	.020	.040
PD118d	.120	.140	.080	.490	.010	.020	.035
PD118e	.138	.157	.083	.827	.014		.039

**PD119**

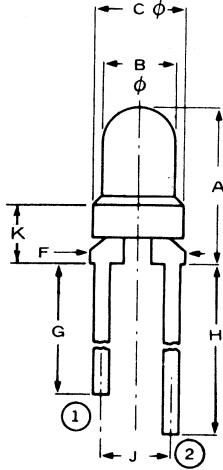
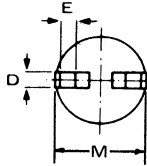


# 49. OUTLINE DRAWINGS

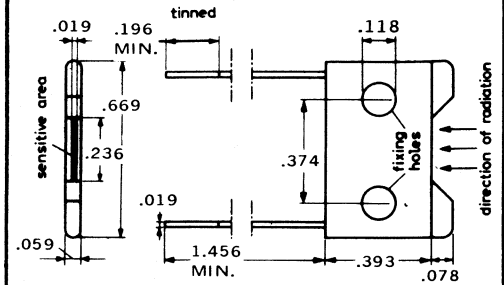
IN DRAWING NUMBER SEQUENCE

**PD120**

	A	B	C	D	E	F	G	H	J	K	M
PD120	.188 .248	.104 .124	.129 MAX	.016 .022	.019	.129 MAX	.551 MIN	.610 MIN	.099		
PD120a	.228 .248	.094 .102	.118 .124			.129 MAX	.551 MIN	.610 MIN	.099		
PD120b	.200 .240	.104 .124	.114 .133		.022 MAX		.551 MIN	.610 MIN	.100 .070 .110		.129
PD120c	.275	.118	.137	.020			.787	.924	.100	.137	.137

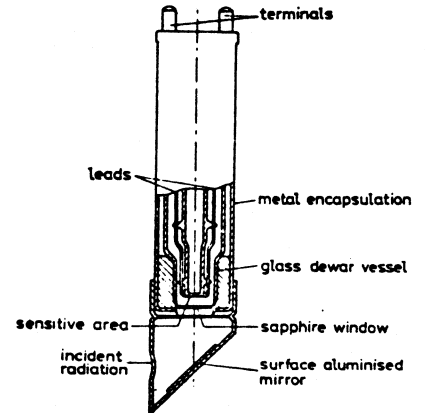
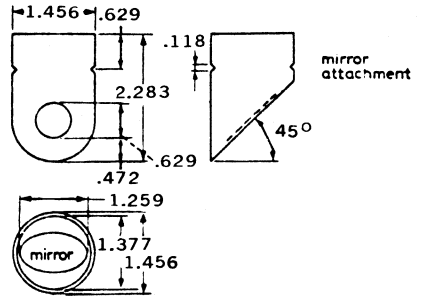
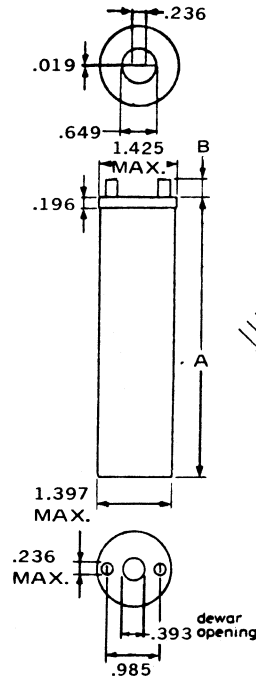


**PD121**



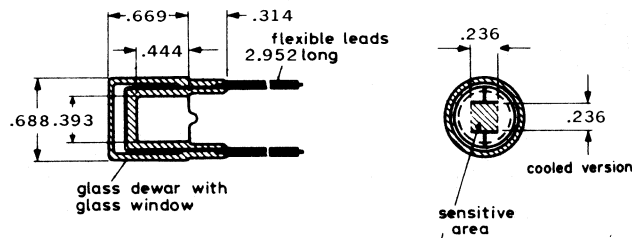
**PD122**

	A	B
PD122	5.078 MAX	.354 MAX
PD122a	4.999 MAX	.314 MAX

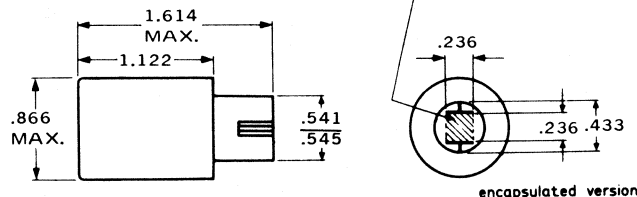


**PD123**

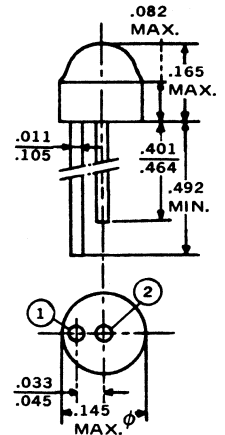
Cooled version



Encapsulated version



**PD124**

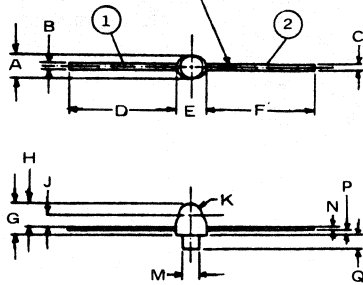


# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

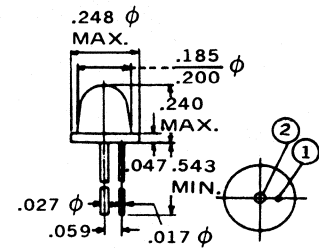
**PD125**

LEAD DESIGNATION

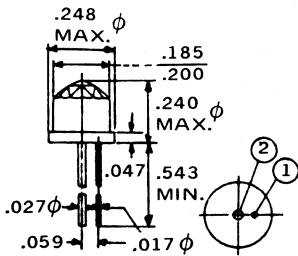


	A	B	C	D	E	F	G	H	J	K	M	N	P	Q
PD125	.072	.021	.015	.350	.088	.350	.093	.072	.041	.038	.055	.009	.014	.035
PD125a	.092	.029	.023	.389	.111	.389	.116	.089		.063	.010			.059
PD125b		.027	.021	.503		.503		.072		.070	.094			

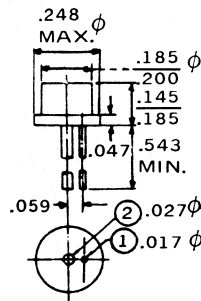
**PD126**



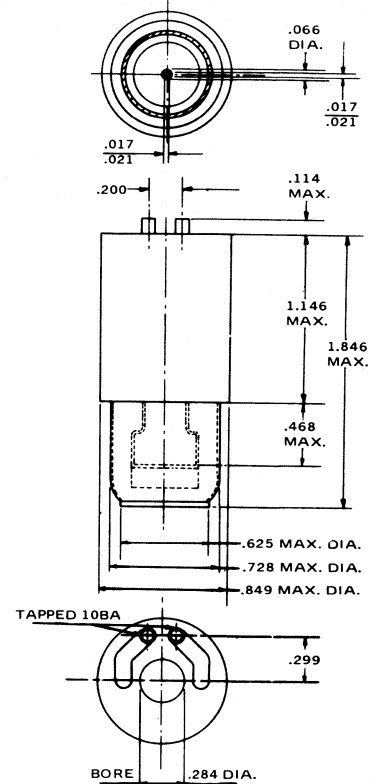
**PD127**



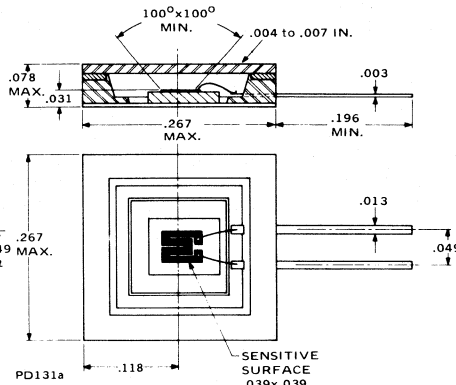
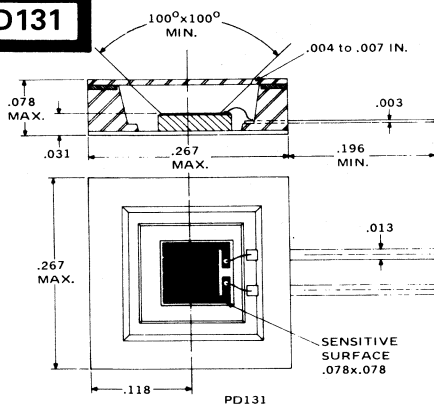
**PD128**



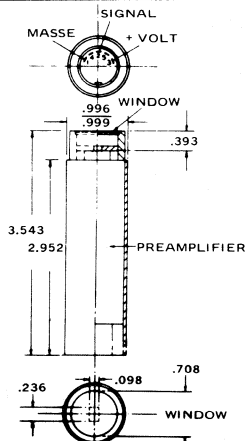
**PD130**



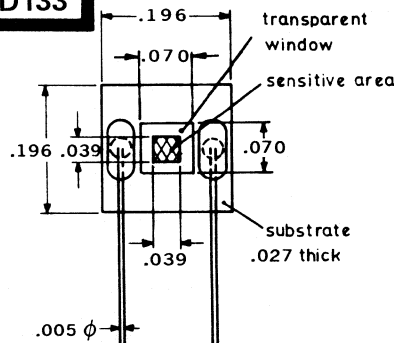
**PD131**



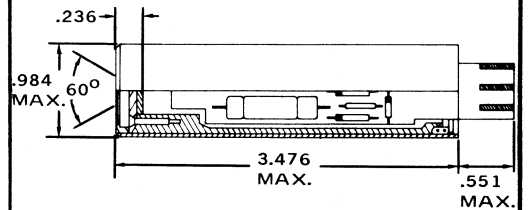
**PD132**



**PD133**



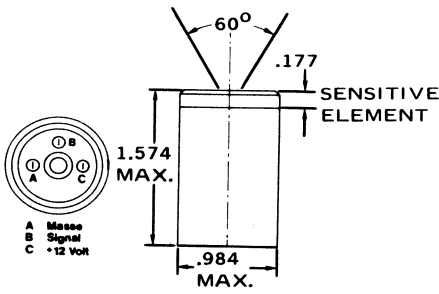
**PD134**



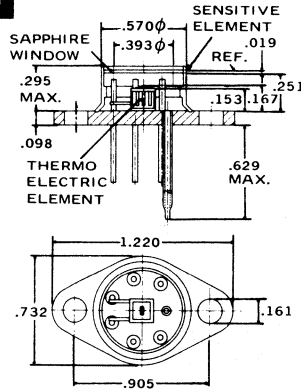
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

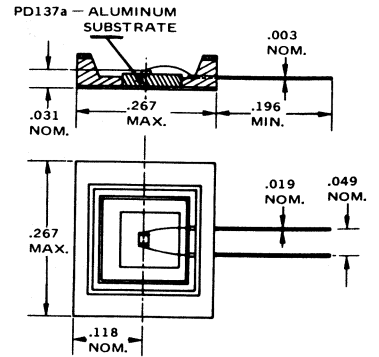
**PD135**



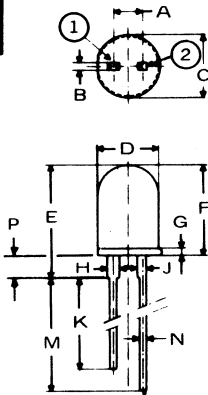
**PD136**



**PD137**

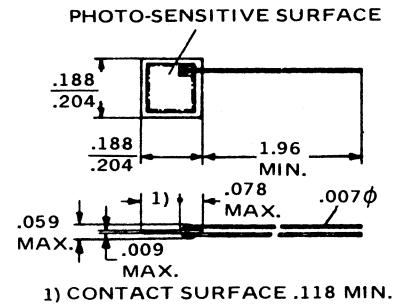


**PD138**

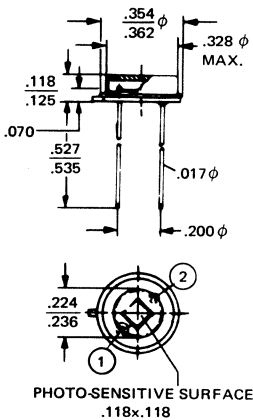


	A	B	C	D	E	F	G	H	J	K	M	N	P
PD138	.099	.022	.220	.179	.389	.311	.025	.039	.029	.499	.551	.022	.078
		.027	.240	.204	.448	.370	.035			MIN	MIN	.027	TYP
PD138a	.100	.020	.230	.200	.440	.340	.030		.040	500	950	.020	.100
		.030							TYP	MIN	MIN	.030	

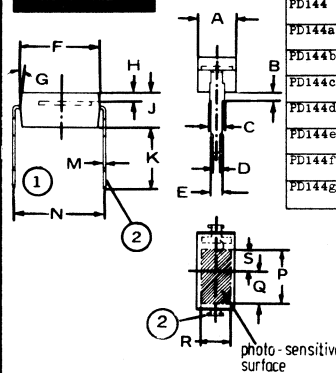
**PD142**



**PD143**

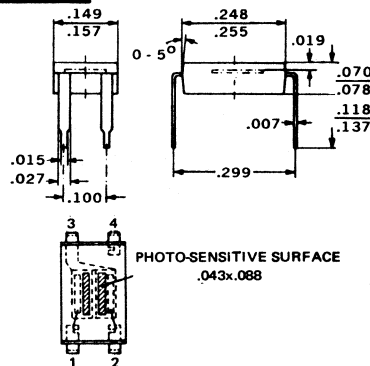


**PD144**

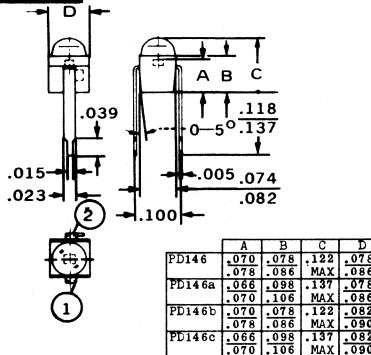


	A	B	C	D	E	F	G	H	J	K	M	N	P	Q	R	S
PD144	.076	.019	.035	.015	.027	.169	5°	.019	.070	.118	.007	.200	.125	.070	.070	
	.086		.043		.027	.169	5°	.019	.070	.137		.200	.118	.070	.118	
PD144a	.149	.019	.035	.015	.027	.169	5°	.019	.070	.118	.007	.200	.059		.039	.019
	.157		.043		.027	.169	5°	.019	.070	.137		.200	.059		.059	
PD144b	.051	.010	.035	.015	.027	.169	5°	.019	.070	.118	.007	.200	.059			
	.059		.043		.027	.169	5°	.019	.070	.137		.200	.059			
PD144c	.070	.019	.035	.015	.027	.169	5°	.019	.070	.118	.007	.200	.059			
	.078		.043		.027	.169	5°	.019	.070	.137		.200	.059			
PD144d	.149	.019	.035	.015	.027	.169	0°	.019	.070	.118	.007	.200	.108	.054	.108	.054
	.157		.043		.027	.169	0°	.019	.070	.137		.200	.108	.054	.108	.054
PD144e	.070	.019	.035	.015	.027	.169	0°	.019	.070	.118	.007	.200	.039	.019	.039	.019
	.078		.043		.027	.169	0°	.019	.070	.137		.200	.039	.019	.039	.019
PD144f	.051	.019	.035	.015	.027	.169	0°	.019	.070	.118	.007	.200	.049	.024	.029	.024
	.059		.043		.027	.169	0°	.019	.070	.137		.200	.049	.024	.029	.024
PD144g	.078	.019	.035	.015	.027	.169	0°	.019	.070	.118	.007	.200	.120	.060	.064	.060
	.086		.043		.027	.169	5°	.019	.070	.137		.200	.120	.060	.064	.060

**PD145**



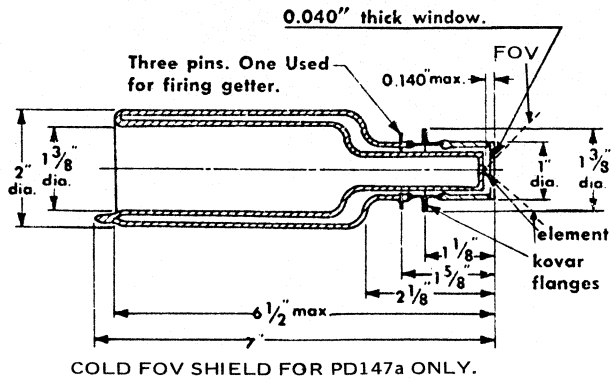
**PD146**



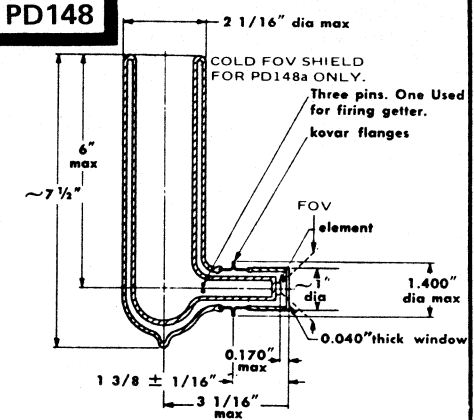
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

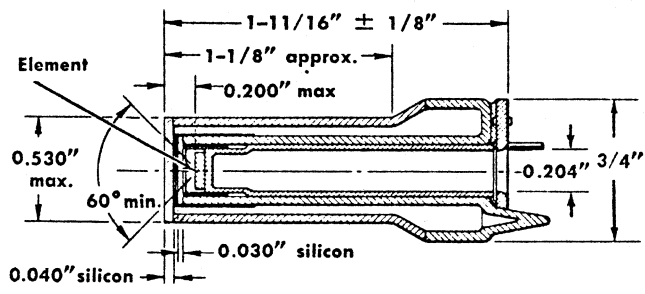
**PD147**



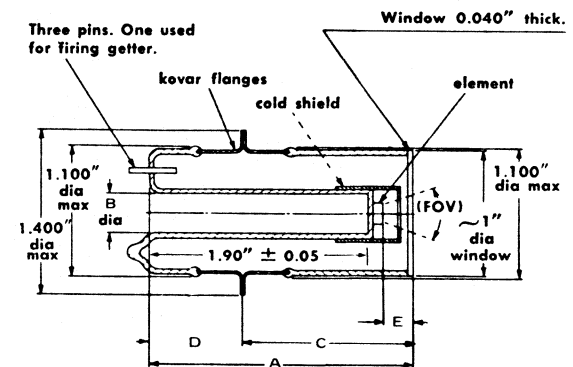
**PD148**



**PD150**

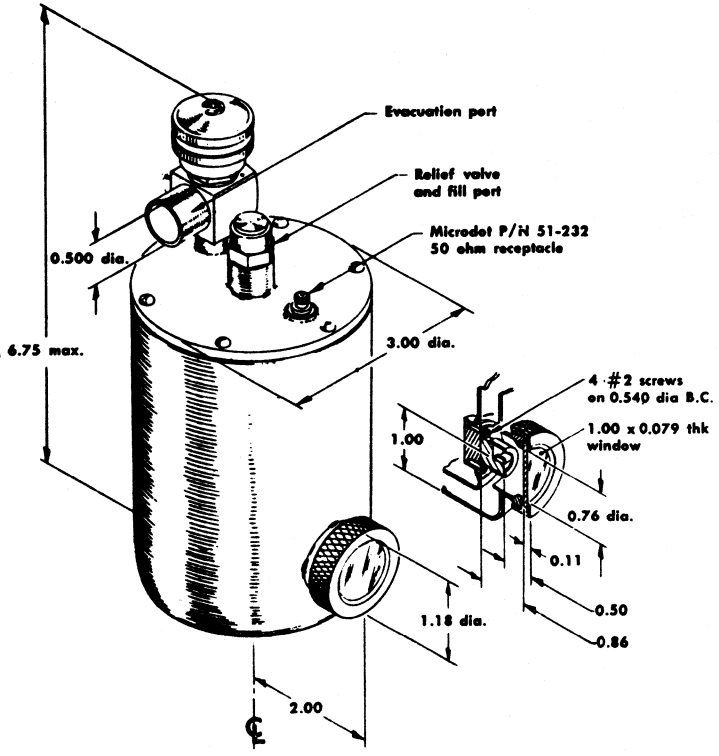


**PD151**

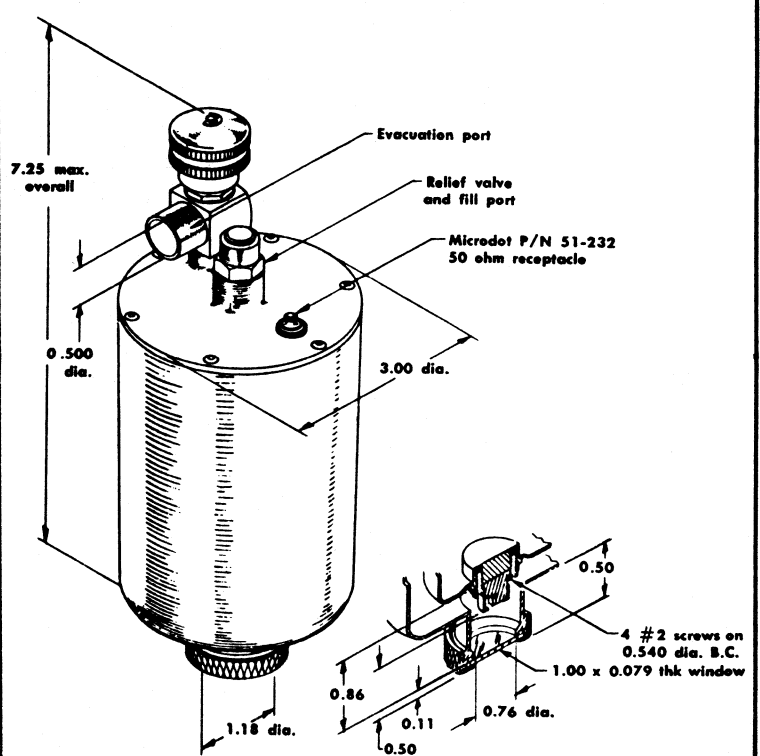


	A	B	C	D	E	REMARKS
PD151	2.062	.326	1.312	.687	.170	Without POV Cold Shield
	2.157		1.437	.812	MAX	
PD151a	2.500	.326			VARIES	As Shown

**PD152**



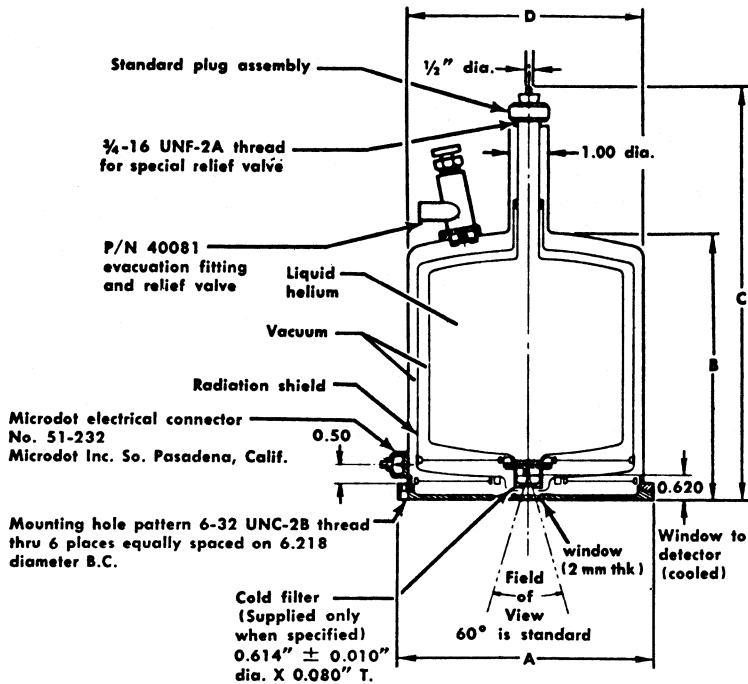
**PD153**



# 49. OUTLINE DRAWINGS

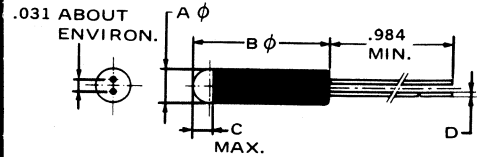
IN DRAWING NUMBER  
SEQUENCE

**PD154**



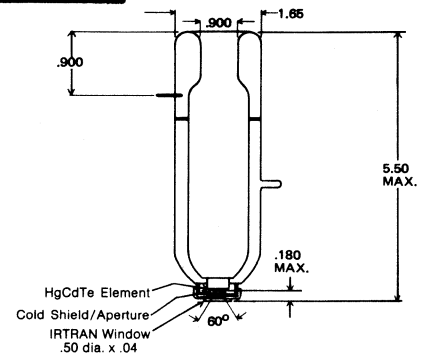
	A	B	C	D
PD154	6.50	5.42	9.20	6.00
PD154a	6.50	7.00	10.78	6.00

**PD158**

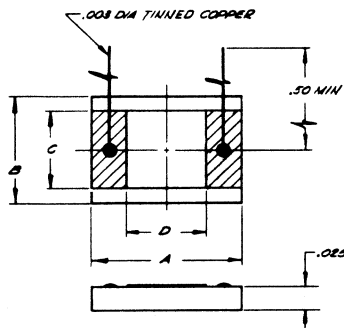


	A	B	C	D
PD158	.070	.354	.055	.007
	.086	.511		.015
PD158a	.165	.659	.137	.016
	.188	.748		.018

**PD159**

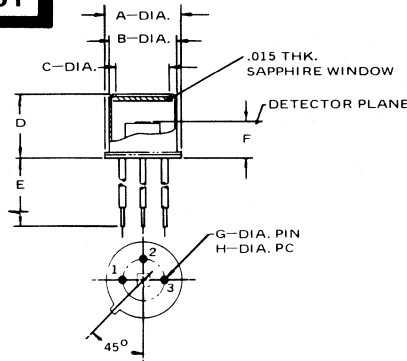


**PD160**



	A	B	C	D	THICKNESS
PD160	.098	.098	.039	.039	.029
PD160a	.177	.098	.078	.078	.029
PD160b	.149	.196	.118	.118	.029
PD160c	.196	.149	.118	.118	.029
PD160d	.098	.098	.039	.039	.039
PD160e	.117	.098	.078	.078	.039
PD160f	.196	.149	.118	.118	.039
PD160g	.110	.098	.039	.039	.025
PD160h	.177	.098	.078	.078	.025
PD160j	.149	.196	.118	.118	.025
PD160k	.256	.177	.157	.157	.025

**PD161**



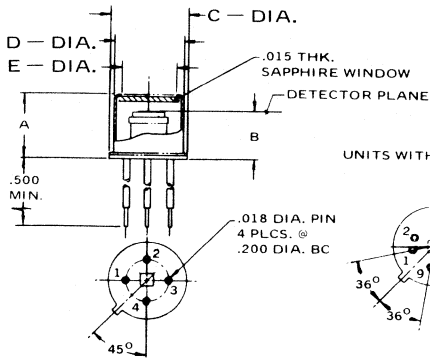
	A	B	C	D	E	F	G	H
PD161	.212	.185	.125	.205	1.500 MIN	.120	.018	.200
PD161a	.360	.325	.260	.240	.500 MIN	.125	.018	.200
PD161b	.360	.325	.240	.177	1.500 MIN	.070	.018	.200
PD161c	.212	.185	.125	.150	1.500 MIN	.060	.018	.100



# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

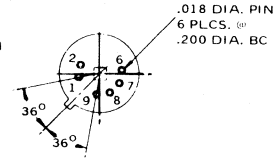
## PD162



### PIN FUNCTIONS

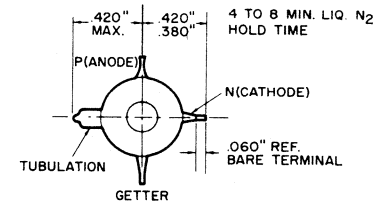
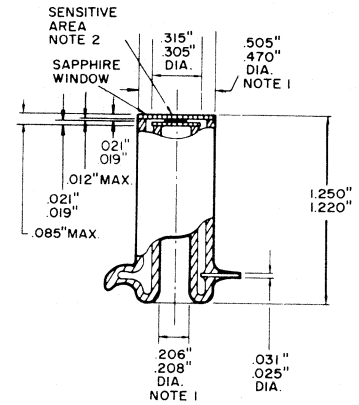
PIN NO.	COLOR	FUNCTION
2 & 3	WH.	DETECTOR
1	RED	COOLER (+)
4	BLK.	COOLER (-)
1 & 2	YEL.	THERMISTOR
6 & 7	WH.	DETECTOR
8	BLK.	COOLER (-)
9	RED	COOLER (+)

### UNITS WITH THERMISTORS (OPT.)



	A	B	C	D	E
PD162a	.265	.204	.360	.325	.260
PD162b,c	.380	.304	.360	.325	.260
PD162d	.265	.220	.360	.325	.260
PD162e	.390	.320	.360	.325	.260
PD162f	.270	.200	.360	.330	.265

## PD163



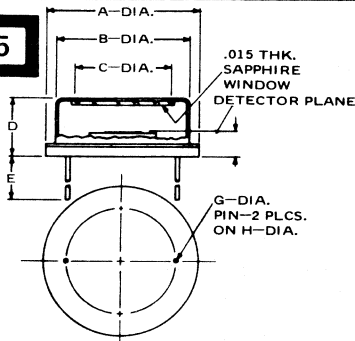
### NOTE 1

Diameters to be concentric with .096"/.088" dia. within .030" T.I.R.

### NOTE 2

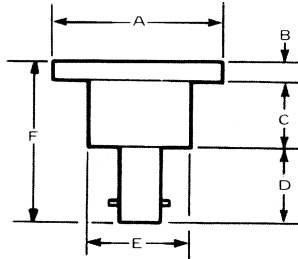
Cell Area: Circular/2.25 mm dia. (4.0 mm<sup>2</sup>)

## PD165



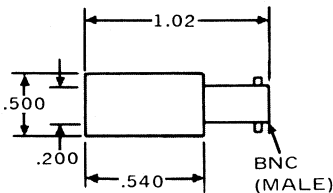
	A	B	C	D	E	F	G	H
PD165	.550	.490	.195	1.500	.020			
PD165a	.575	.497	.360	.200	.500	.090	.018	.420
				MIN				
PD165b	1.250	1.100	.810	.270	.500	.072	.040	.750
PD165c	.575	.497	.360	.220	1.500	.070	.018	.420
PD165d	.550	.486	.430	.230	1.500		.019	.295

## PD166

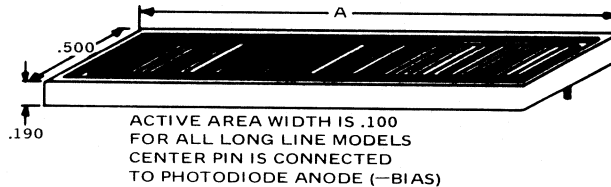


	A	B	C	D	E	F
PD166	.980	.175	.390	.470	.826	1.036
PD166a	.975	.175	.475	.450	.825	1.100
PD166b	1.675	.250	.400	.500	.620	1.150
PD166c	1.230		.325		.625	1.325
PD166d	1.230		.400			1.180

## PD167

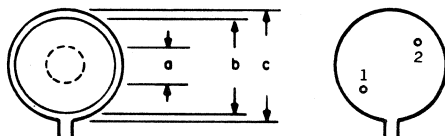
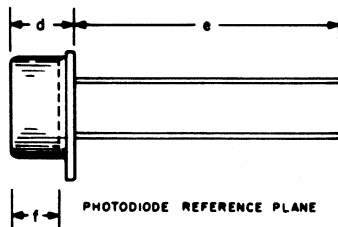


## PD168



	LENGTH A
PD168	5.025
PD168a	10.025

## PD169



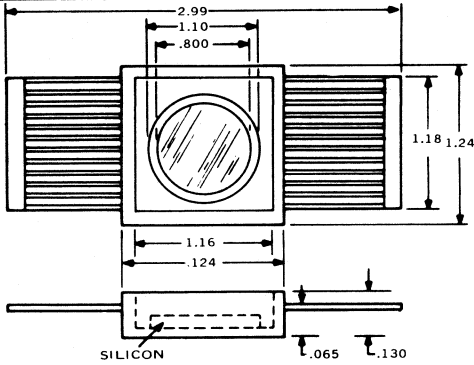
\*PD169d,e - ACTIVE AREA (a) CHANGES ACCORDING TO TYPE NO.

	A	B	C	D	E	F	PIN CIRCLE RADIUS	WINDOW THICKNESS	WINDOW DIA	LEAD DIA
PD169	.100	.331	.358	.165	1.50	.091	.098	.052	.240	.018
PD169a	.215	.421	.551	.200	1.50	.136	.149	.052	.421	.018
PD169b	.040	.180	.240	.200	1.50	.150	.052	.035	.138	.018
PD169c	.444	.819	1.21	.290	.500	.212	.374	.063	.826	.040
PD169d	*	.325	.360	.177	.500		.100	.015	.240	.018
					MIN					
PD169e	*	.185	.212	.150	.500		.050	.015	.125	.018
					MIN					
PD169f		.325	.360	.177	1.500		.100	.015	.240	.018
PD169g		.185	.212	.150	1.500		.050	.015	.125	.018
PD169h	.275	.330	.362	.157	.787	.090	.110	.039	.303	.017

# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

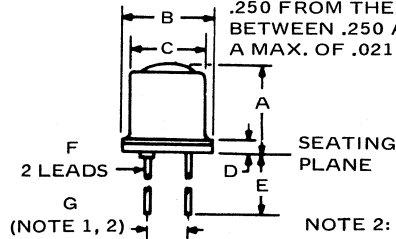
**PD170**



**PD171**

NOTE 1: (PD171)

LEAD DIAMETER IS CONTROLLED IN THE ZONE BETWEEN .050 AND .250 FROM THE SEATING PLANE. BETWEEN .250 AND END OF LEAD A MAX. OF .021 IS HELD.

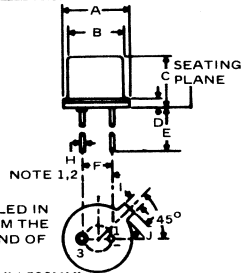


NOTE 2: (PD171a)

LEADS HAVING MAX. DIAMETER .021" MEASURED IN GAUGING PLANE .054" + .001" - .000 (137 + .025 - .000MM) BELOW THE REFERENCE PLANE OF THE DEVICE SHALL BE WITHIN .007" (.778MM) THEIR TRUE POSITION RELATIVE TO A MAX. WIDTH TAB.

	A	B	C	D	E	F	G	H	J
PD171	.255	.209	.178	.040	.500	.016	.100	.031	.036
	MAX.	.230	.195	MAX	MIN	.019	NOM	.044	.046
PD171a	.255	.209	.180	.030	1.00	.016	.100	.031	.036
	MAX.	.230	.187	MAX	MIN	.021	NOM	.044	.046
PD171b	.155	.209	.180	.030	1.00	.016	.100	.031	.036
	MAX.	.230	.187	MAX	MIN	.021	NOM	.044	.046

**PD172**

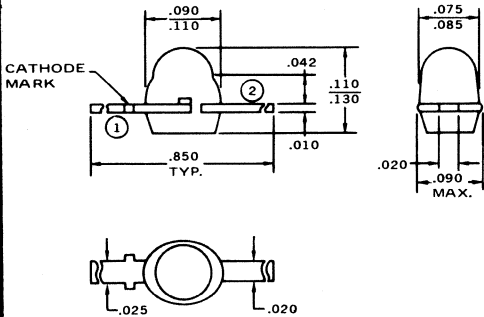


NOTE 1: LEAD DIAMETER IS CONTROLLED IN THE ZONE BETWEEN .050 AND .250 FROM THE SEATING PLANE. BETWEEN .250 AND END OF LEAD A MAX. OF .021 IS HELD.

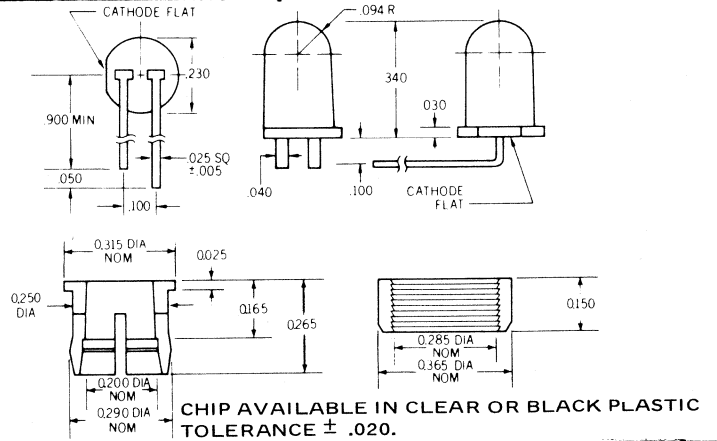
NOTE 2: LEADS HAVING MAX. DIA. .021" (.533MM) MEASURED IN GAUGING PLANE .054" + .001" - .000 (137 + .025 - .000MM) BELOW THE REFERENCE PLANE OF THE DEVICE SHALL BE WITHIN .007" (.778MM) THEIR TRUE POSITION RELATIVE TO A MAX. WIDTH TAB.

	A	B	C	D	E	F	H	I	J
PD172	.209	.178	.155	.040	.500	.100	.016	.031	.036
	230	.195	MAX	MAX	MIN	NOM	.019	.044	.046
PD172a	.209	.180	.155	.030	1.00	.100	.016	.031	.036
	.230	.187	MAX	MAX	MIN	NOM	.021	.044	.046

**PD174**

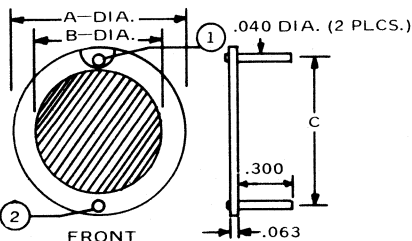


**PD175**

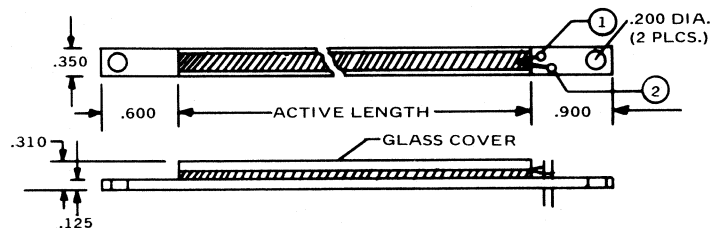


**PD177**

	A	B	C
PD177	.870	.100	.750
PD177a	1.000	1.100	1.430



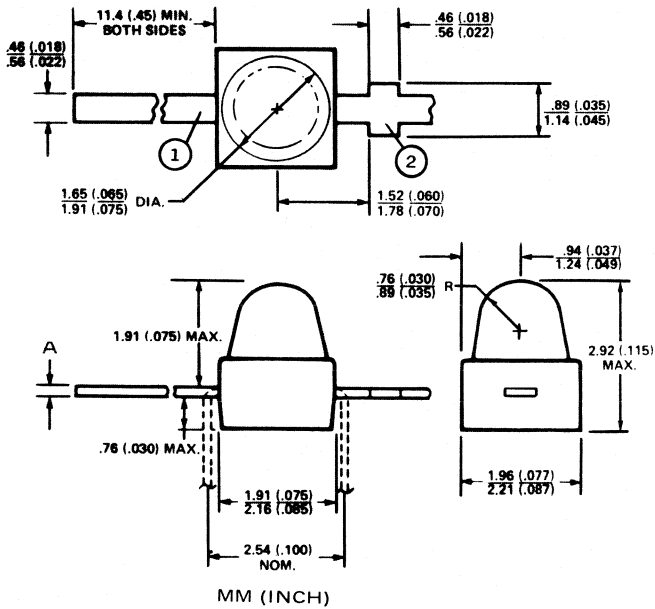
**PD178**



# 49. OUTLINE DRAWINGS

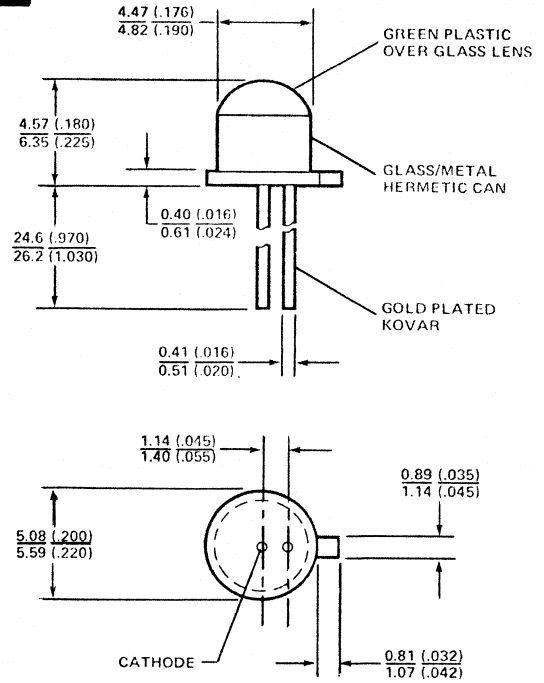
IN DRAWING NUMBER SEQUENCE

## PD180



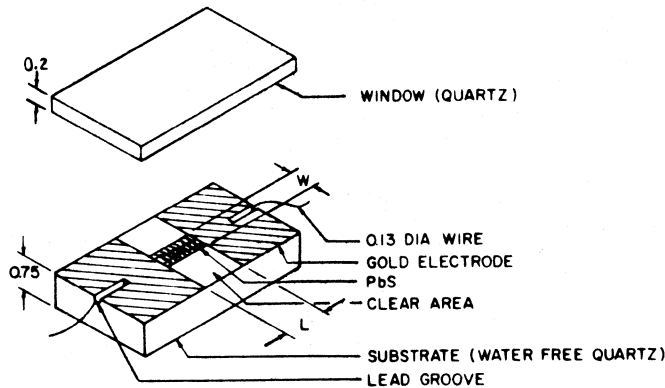
	A
PD180	.11 (.0045) .22 (.0085)
PD180a	.18 (.007) .23 (.009)

## PD181



DIMENSIONS IN MILLIMETERS AND (INCHES).

## PD182



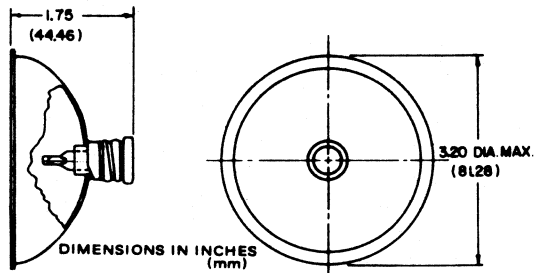
NOTE: ALL DIMENSIONS IN MILLIMETERS (mm), 1mm = 0.03937 INCHES

SIZE NUMBER	SENSITIVE AREA L x W (mm)	SUBSTRATE SIZE (mm)
AVAILABLE SIZES FOR TYPES 1, 2, AND 3		
01	.25 x .25	6.3 x 6.3
02	.5 x .5	6.3 x 6.3
03	1.0 x 1.0	6.3 x 6.3
04	1.5 x 1.5	6.3 x 6.3
05	2.0 x 2.0	6.3 x 6.3
06	3.0 x 3.0	6.3 x 6.3
07	4.0 x 4.0	6.3 x 6.3
08	5.0 x 5.0	9.5 x 9.5
09	6.0 x 6.0	9.5 x 9.5
10	8.0 x 8.0	13.0 x 13.0
11	10.0 x 10.0	13.0 x 13.0
12	.25 x 1.0	6.3 x 6.3
13	1.0 x 2.0	6.3 x 6.3
14	1.0 x 3.0	6.3 x 6.3
15	1.0 x 4.0	6.3 x 6.3
21	.25 x 2.5	6.3 x 6.3
AVAILABLE SIZES FOR TYPES 4 AND 5		
16*	1.5 x 1.5	6.3 x 6.3
17	4.0 x 4.0	6.3 x 6.3
18**	.25 x 1.0	6.3 x 6.3

\* TYPE 4 ONLY

\*\* TYPE 5 ONLY

## PD183



Sensitive Area in. (mm)

Overall Size in. (mm)

PD183 .025 x .015 (.64 x .38) .250 x .125 (6.4 x 3.2)

PD183a Same detector mounted on a bayonet base.

PD183b Same base-mounted detector in 3" diameter collector providing optical gain of approximately 500.

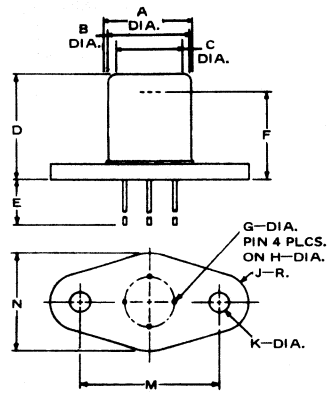
PD183c Same detector-collector assembly with 3" diameter filter.

# 49. OUTLINE DRAWINGS

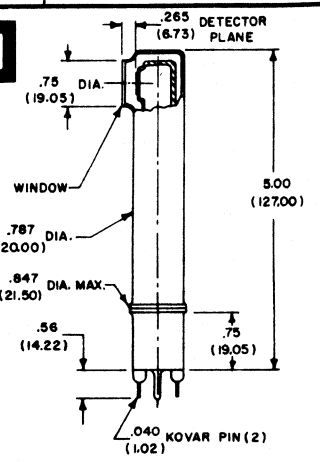
IN DRAWING NUMBER SEQUENCE

**PD184**

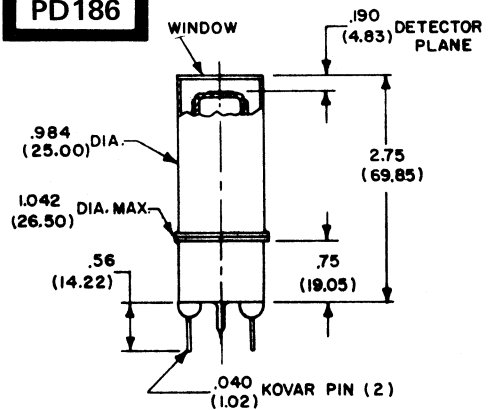
	A	B	C	D	E	F	G	H	J	K	M	N
PD184	.360	.325	.260	.418	.500 MIN	.318	.018	.200	.114	.125	.562	.390
PD184a	.360	.330	.265	.290	.500 MIN	.218	.018	.200	.114	.125	.562	.390
PD184b	.330	.290	.290	.500	.230	.018	.200	.114	.125	.562	.390	



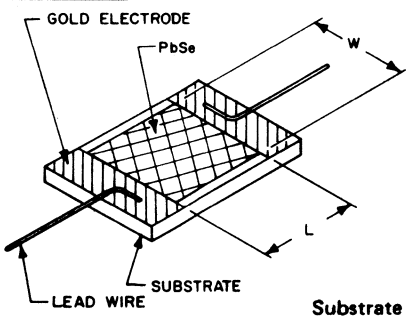
**PD185**



**PD186**



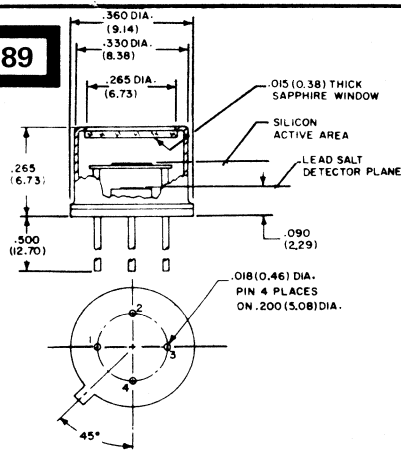
**PD187**



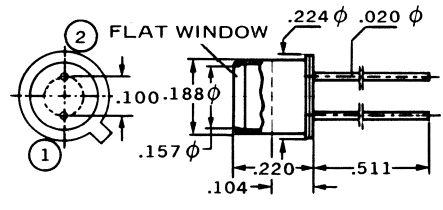
ELEMENT	SUBSTRATE
L (mm) x W (mm)	L (mm) x W (mm)
1 x 1	2 x 3
2 x 2	2.5 x 3.5
3 x 3	4 x 5
4 x 4	5 x 6

Substrate thickness = 0.5mm.

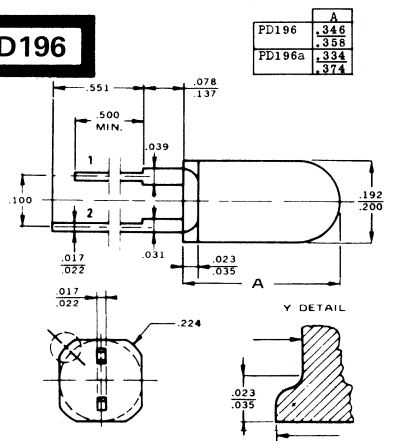
**PD189**



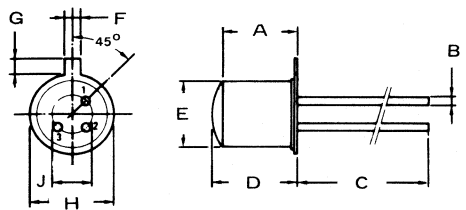
**PD192**



**PD196**

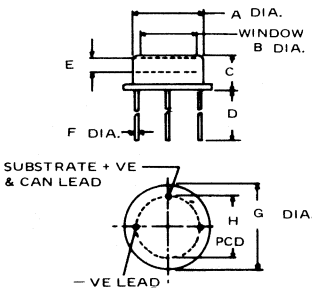


**PD197**



	A	B	C	D	E	F	G	H	J
PD197	.908 MAX	.021 MAX	.500 MIN	.238 MAX	.170 MAX	.045 MAX	.046 MAX	.229	.100
PD197a		.018 MAX	.500 MIN	.271 MAX	.188 MAX	.045 MAX	.046 MAX	.228	.099

**PD199**



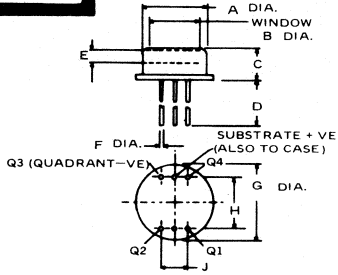
	A	B	C	D	E	F	G	H
PD199	.443	.374	.188	.500	.098	.017	.550	.400
	.523	.250	.250	MIN	NOM	.020	.649	.440
PD199a	.531	.437	.157	.500	.098	.016	.590	.393
	.570	.177	MIN	NOM	.018	.629	.433	
PD199b	.543	.437	.157	.499	.098	.016	.598	.390
	.555	.177	MIN	NOM	.018	.614	.423	
PD199c	.543	.437	.157	.500	.059	.016	.598	.390
	.555	DIA	.177	MIN	NOM	.018	.614	.423
							PCD	

(SUFFIX)	DIODE OPTION
-R	Electrically Isolated from the Can
-2	Centrally Mounted to A Tolerance ±0.25mm on the Header
-R2	Electrically Isolated and Centrally Mounted

# 49. OUTLINE DRAWINGS

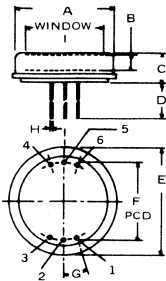
IN DRAWING NUMBER SEQUENCE

## PD200



	A	B	C	D	E	F	G	H	J
PD200	.443	.374	.188	.500	.098	.017	.350	.393	.196
	.523	.250	MIN	NOM	.020	.049			
PD200a	.531	.437	.157	.500	.098	.016	.520	.393	.196
	.570		.177	MIN	NOM	.018	.629		

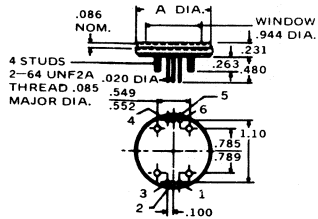
## PD201



	A	B	C	D	E	F	G	H	I
PD201,a	.984	.149	.236	.500	1.02	.747	20*	.020	.747
	DIA	NOM		MIN	DIA	TYP	DIA	DIA	DIA
PD201b	.968	.090	.188	.502	1.02	.748	20*	.020	.747
	DIA	NOM		MIN	DIA	TYP	DIA	DIA	DIA

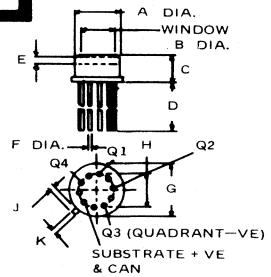
PIN	1	2	3	4	5	6
PD201	Q1	Guard Ring	Q2	Q3 (Quadrant-VE)	Substrate +VE	Q4 (also to case)
PD201a				-VE	Substrate +VE (also to case)	Guard Ring
PD201b	Q1			-VE LEAD	Substrate +VE (also can lead)	

## PD202



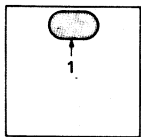
PIN	1	2	3	4	5	6
PD202	Q1	Guard Ring	Q2	Q3 (Quadrant-VE)	Substrate+VE	Q4 (also to case)
PD202a				-VE	Substrate+VE (also to case)	Guard Ring
PD202	A					
PD202a	1.250					
PD202a	1.248					
PD202a	1.251					

## PD203



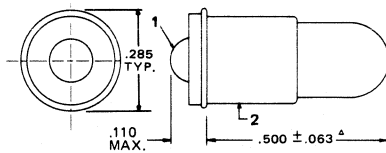
	A	B	C	D	E	F	G	H	J	K
PD203	.289	.240	.165	.500	.047	.017	.334	.278	.029	.028
	.334		.185	MIN	NOM	.020	.370		.044	.035
PD203a	.314	.232	.165	.500	.078	.016	.334	.228	.029	.028
	.324		.185	MIN	NOM	.018	.370		.044	.035

## PD206



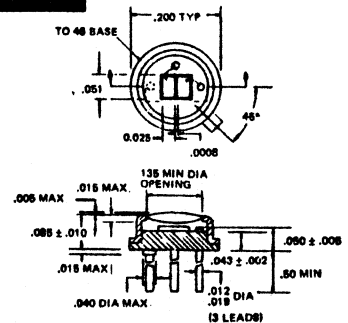
LEAD 2 - ON BOTTOM OF CHIP.

## PD208

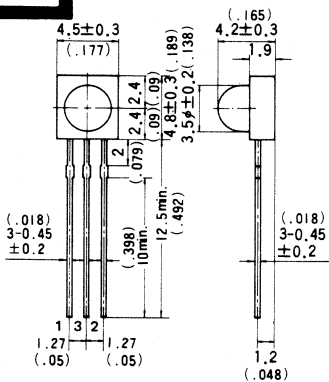


PD208a - .562 ± .063

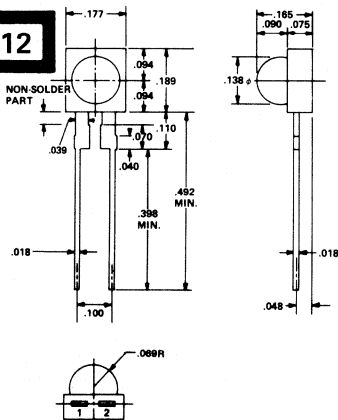
## PD209



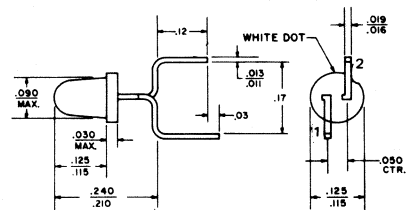
## PD211



## PD212



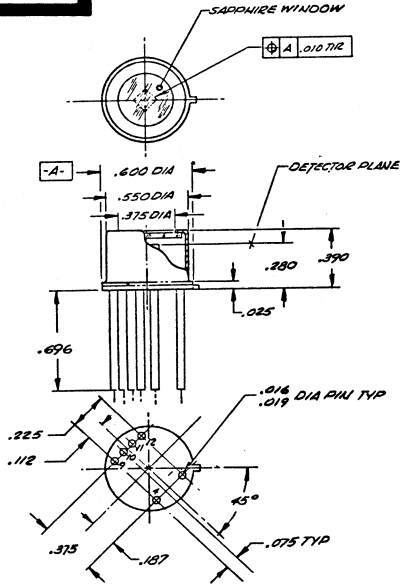
## PD213



# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

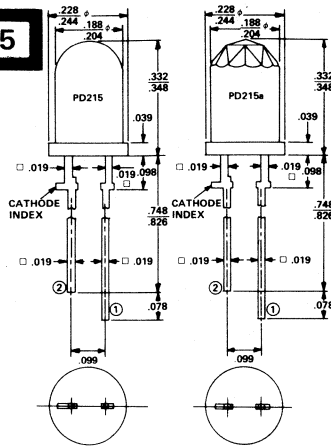
**PD214**



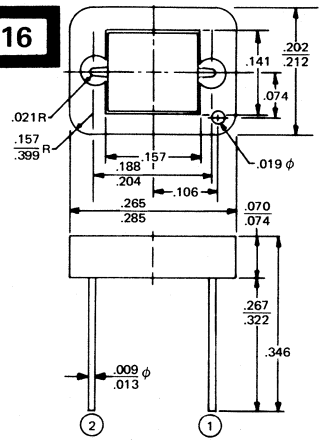
RING NO.	COLOR	FUNCTION
1	BLACK	COOLER (M.S.)
4	RED	COOLER (P.O.S.)
9	WHITE	DETECTOR
10	YELLOW	THERMISTOR
11	YELLOW	THERMISTOR
12	WHITE	DETECTOR

NOTE: AVAILABLE WITHOUT THERMISTORS.

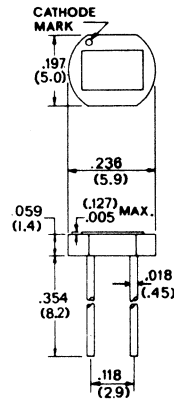
**PD215**



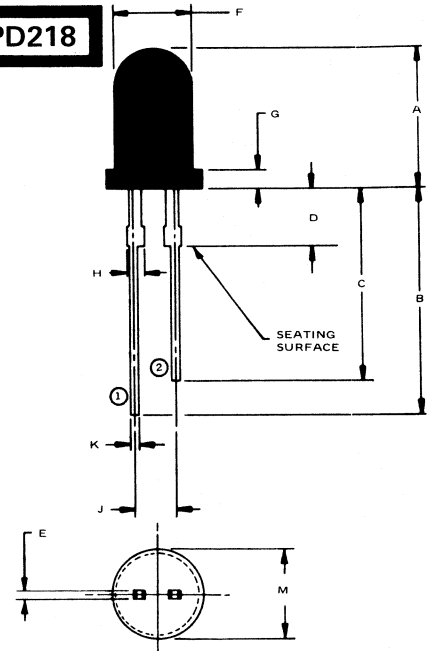
**PD216**



**PD217**

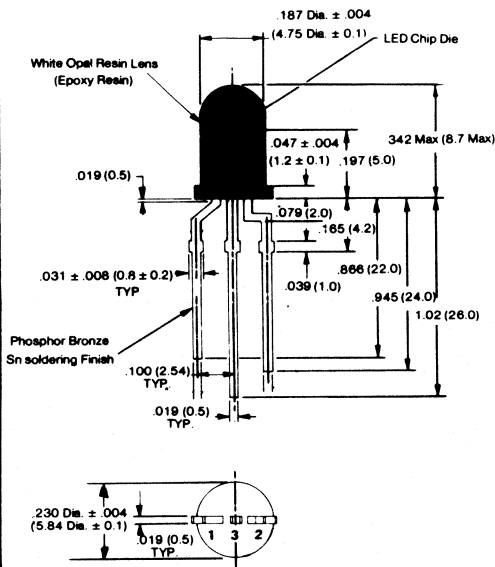


**PD218**

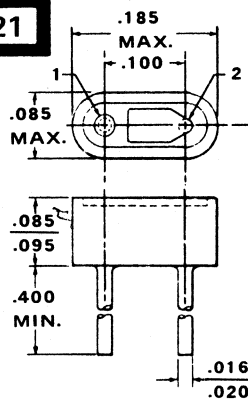


	A	B	C	D	E	F	G	H	J	K	M
PD218	.350	.551	.472	.098	.015	.183	.043	.031	.100	.015	.226
	MAX				.025	.191	.051	.039		.025	.234
PD218a	.343	.591	.512	.150	.012	.183	.043	.031	.100	.015	.226
	MAX				.028	.191	.051	.039		.025	.234
PD218b	.342	.590	.511	.149	.019	.187	.047		.100	.019	.229
	MAX										
PD218c	.346	.591	.512	.150	.012	.191	.022		.100	.012	.218
	MAX				.028	.203	.038			.028	.234

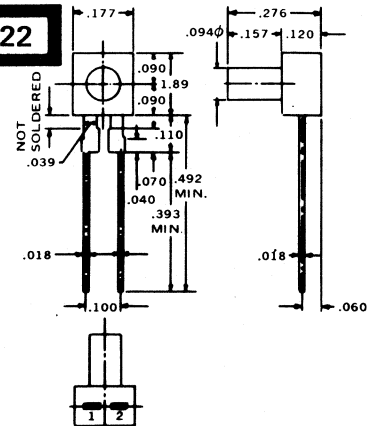
**PD220**



**PD221**

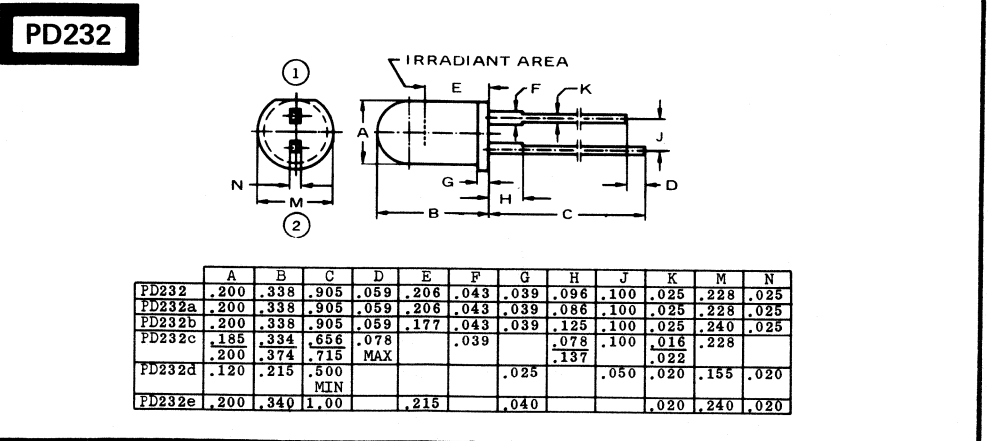
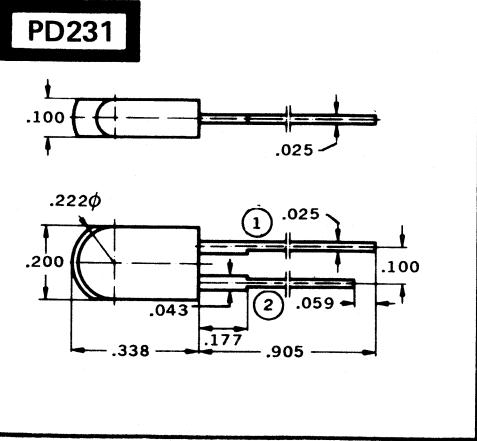
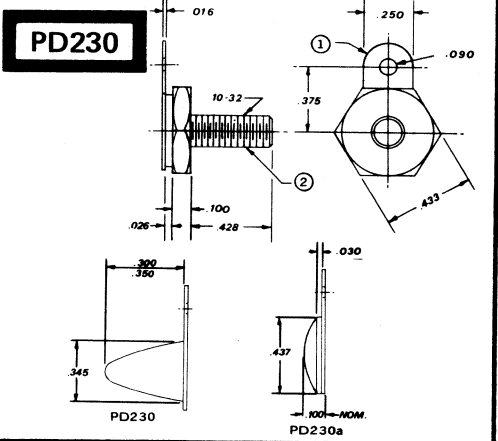
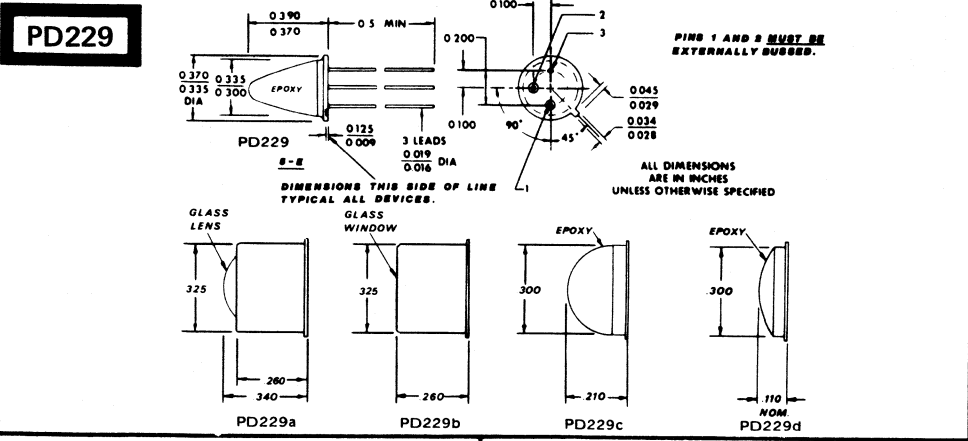
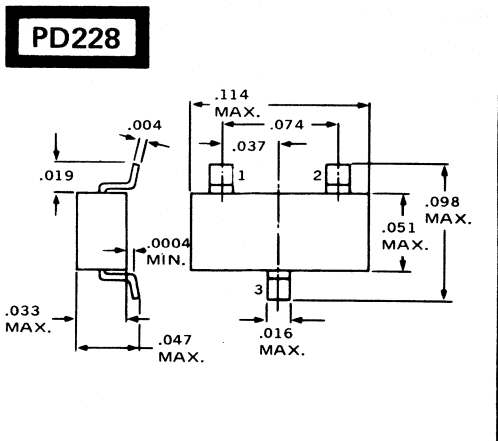
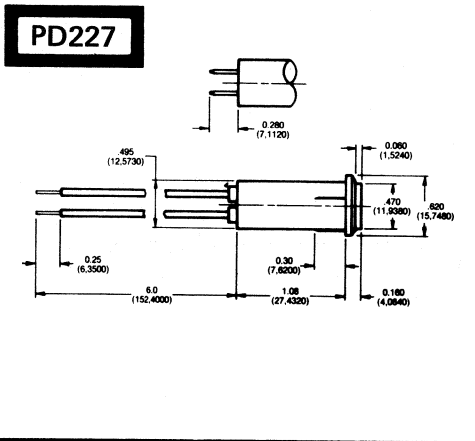
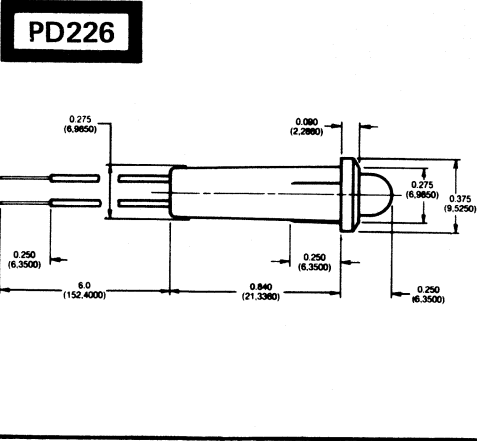
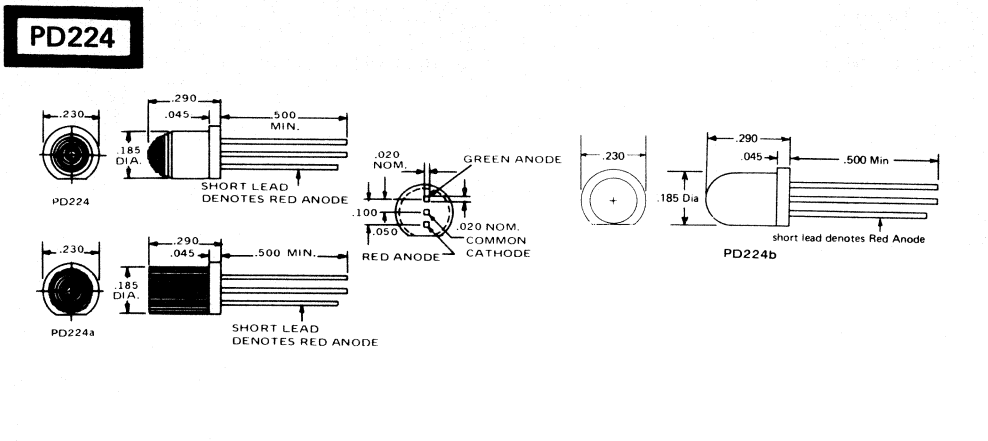
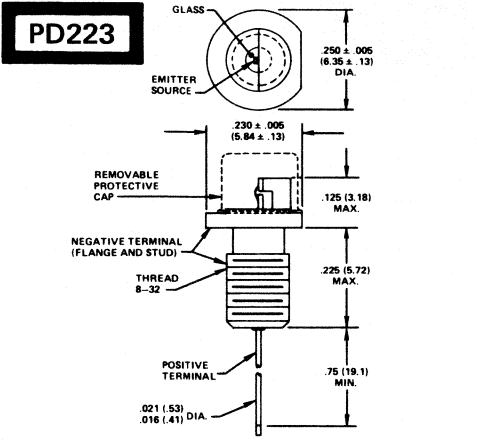


**PD222**



# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

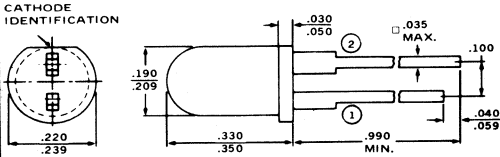




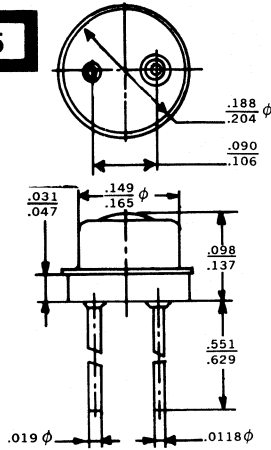
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

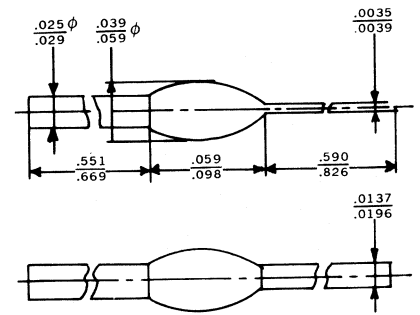
**PD233**



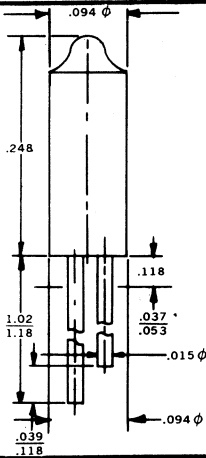
**PD235**



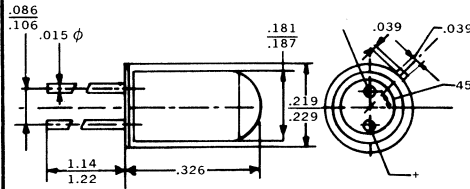
**PD236**



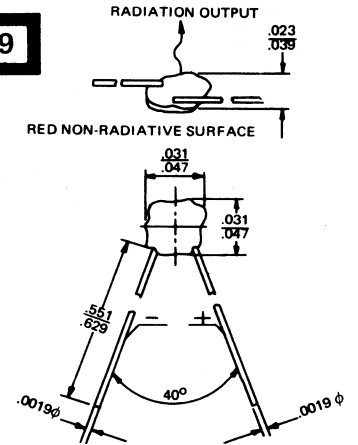
**PD237**



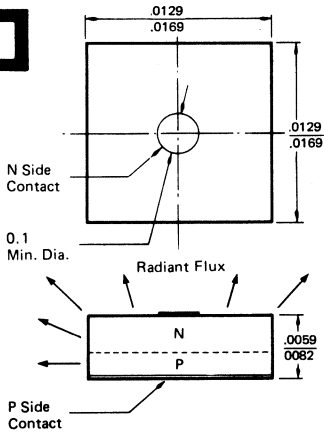
**PD238**



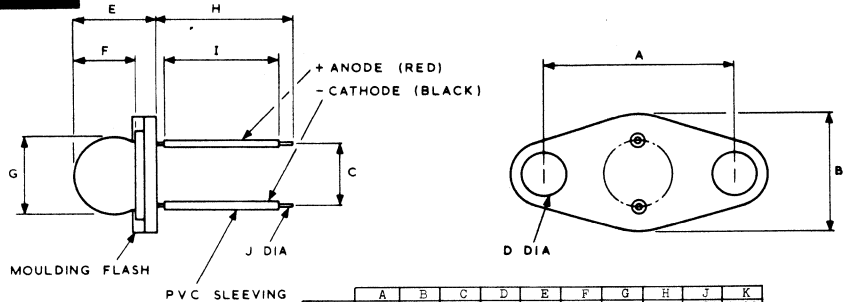
**PD239**



**PD241**

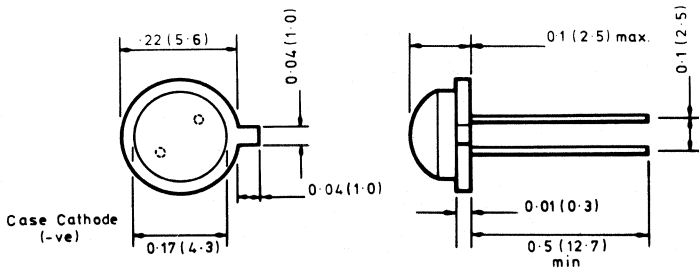


**PD243**

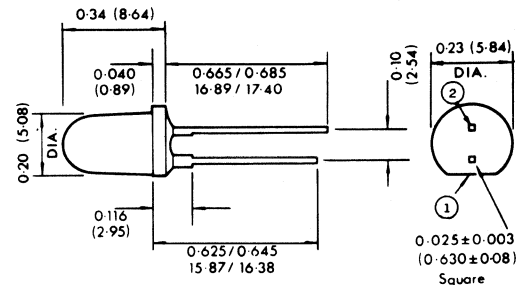


	A	B	C	D	E	F	G	H	J	K
PD243	.552	.390	.190	.120	.260	.155	.215	1.50	.020	1.00
	.572	MAX	.210	.130	.310	.220	.255	TYP	TYP	TYP

**PD244**



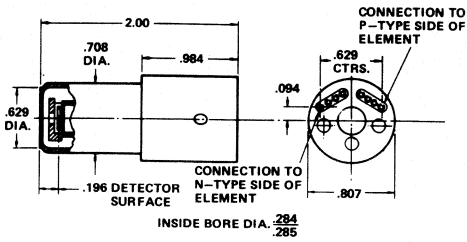
**PD245**



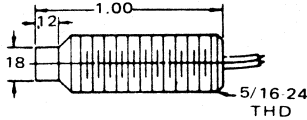
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

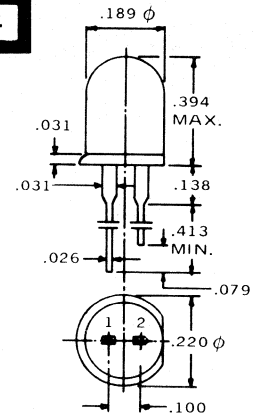
**PD249**



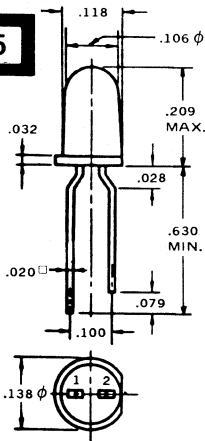
**PD253**



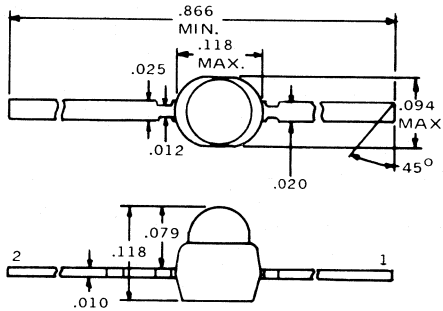
**PD254**



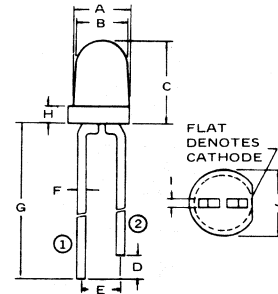
**PD255**



**PD256**

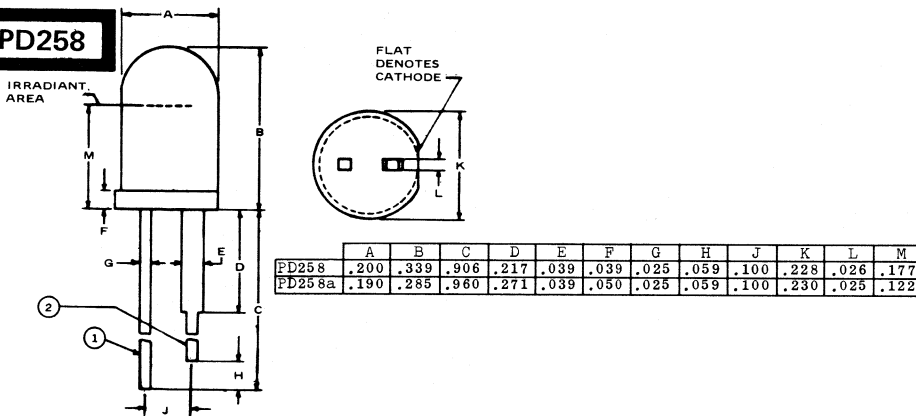


**PD257**



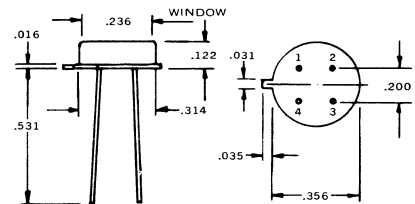
	A	B	C	D	E	F	G	H	I	J
PD257	.130	.118	.197	.059	.090	.021	.750	.039	.021	.187
PD257a	.135	.115	.190		.090	.018	.500	.020	.020	.140
PD257b			.210		.022	MIN	.060			.160
PD257c			.220		.090	.020	.500	.020	.020	.177
			.240			MIN	.040			.197
			.190		.090	.020	.500	.020	.020	.140
			.210			MIN	.040			.160

**PD258**

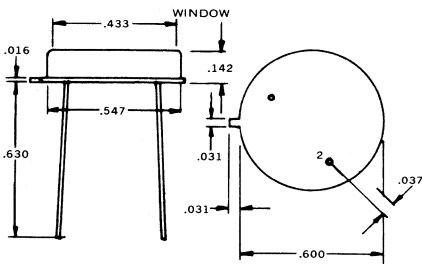


	A	B	C	D	E	F	G	H	J	K	L	M
PD258	.200	.339	.906	.217	.039	.039	.025	.059	.100	.228	.026	.177
PD258a	.190	.285	.960	.271	.039	.050	.025	.059	.100	.230	.025	.122

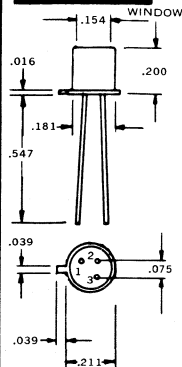
**PD259**



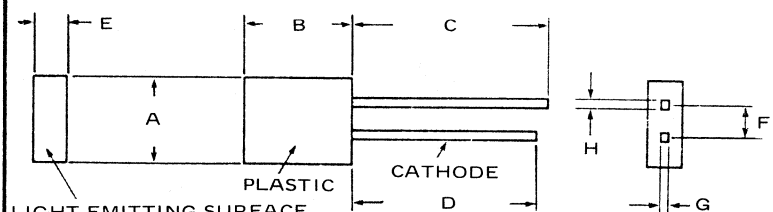
**PD260**



**PD261**



**PD262**

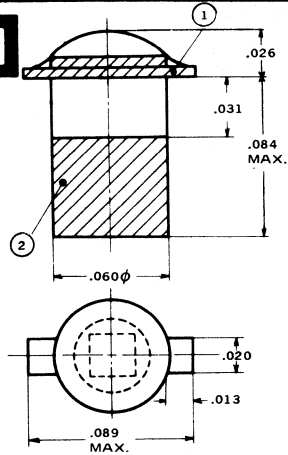


	A	B	C	D	E	F	G	H
PD262	.275	.290	1.05	1.00	.090	.100	.013	.014
	.295	.315	MIN	MIN	.100	NOM	.017	.025
PD262a	.196	.275	1.02	.972	.110	.098	.019	.019
			MIN	MIN		NOM		
PD262b	.275	.290	1.05	1.00	.090	.100	.014	.014
	.295	.315	MIN	MIN	.100	NOM	.025	.025

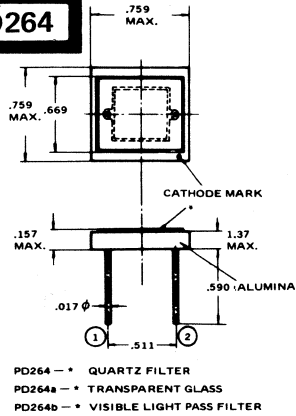
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

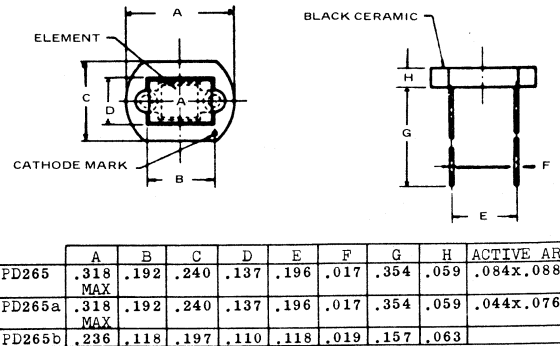
**PD263**



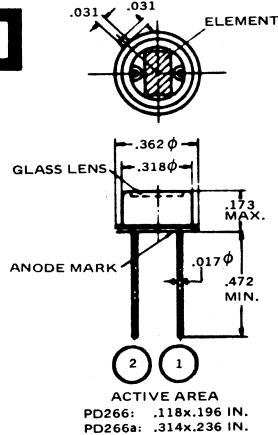
**PD264**



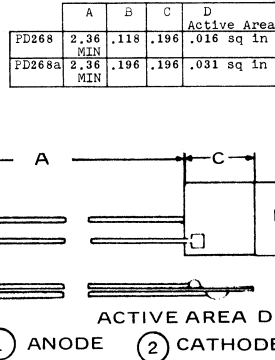
**PD265**



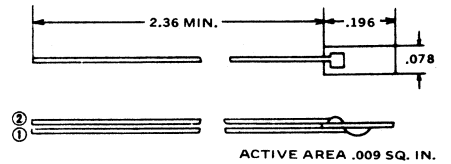
**PD266**



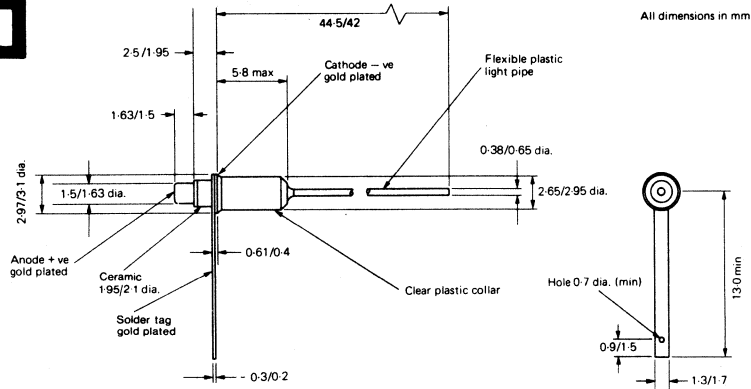
**PD268**



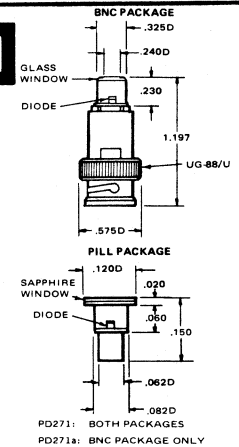
**PD269**



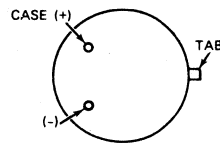
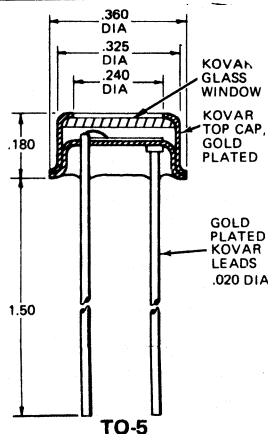
**PD270**



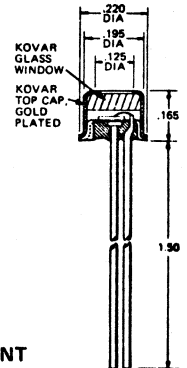
**PD271**



**PD272**



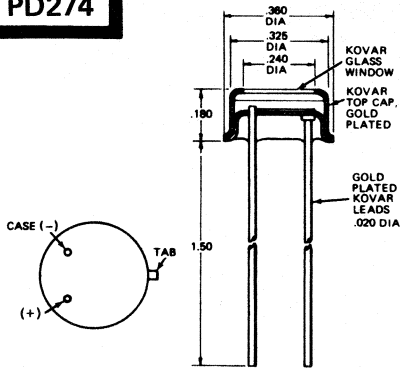
**PD273**



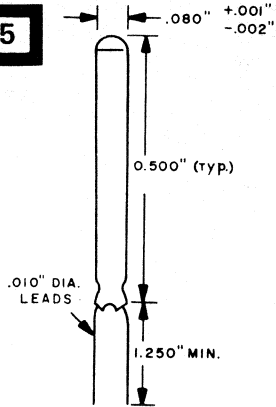
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

**PD274**

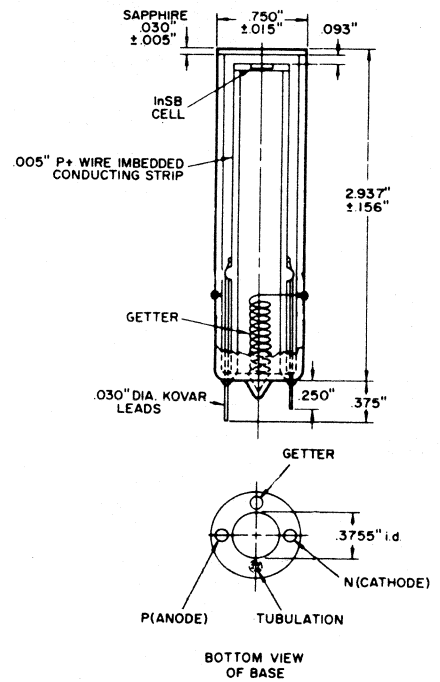


**PD275**



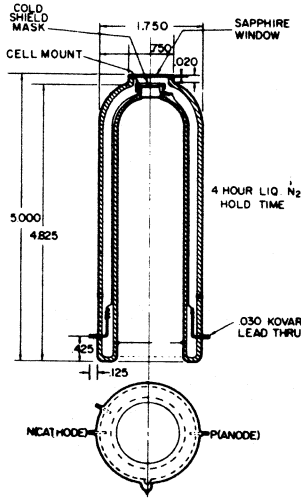
NOTE  
Red lead - "P" electrode (irradiated surface)

**PD276**



NOTES  
Cell Area; Circular/1.25 mm dia.

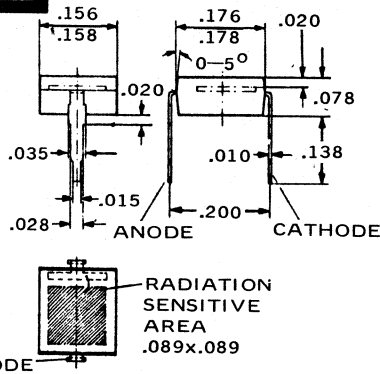
**PD277**



NOTES

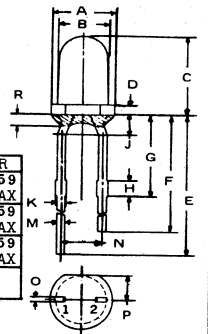
Cell Area: Circular 0.6 mm dia.

**PD278**



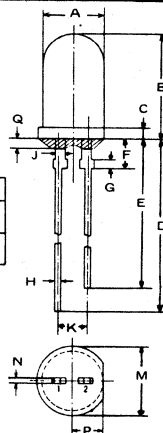
**PD279**

	A	B	C	D	E	F	G	H	J	K	M	N	P	Q	R
PD279	.141	.110	.188	.023	.610	.570	.200	.039	.066	.031	.019	.094	.066	.017	.059
	.157	.125	.204		MIN	MIN	.240		MAX	MAX					MAX
PD279a	.141	.110	.188	.023	1.03	.992	.200	.039		.045	.019	.100	.066	.019	.059
	.157	.125	.209		MIN	MIN	.240			MAX					MAX
PD279b	.181	.150	.229	.039	1.03	.987	.189	.039		.043	.019	.100		.019	.059
	.197	.165	.244		MIN	MIN	.229			MAX					MAX
PD279c	.142	.114	.181	.051	1.05	.972			.067	.024	.016	.100			
	.157	.130	.196		MIN	MIN			.098						

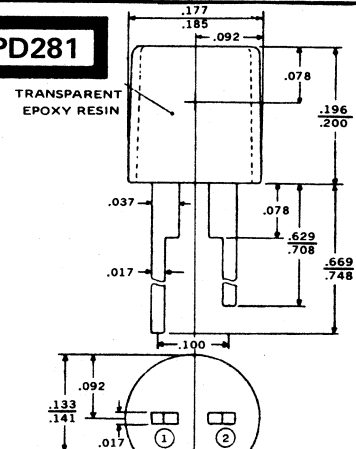


**PD280**

	A	B	C	D	E	F	G	H	J	K	M	N	P	Q
PD280	.190	.330	.029	.531	.492	.129	.039	.019	.031	.100	.218	.019	.098	.059
	.202	.346		MIN	MIN	.169					.234			MAX
PD280a	.190	.330	.029	.964	.925	.129	.039	.019	.031	.100	.218	.019	.098	.059
	.202	.346		MIN	MIN	.169					.234			MAX



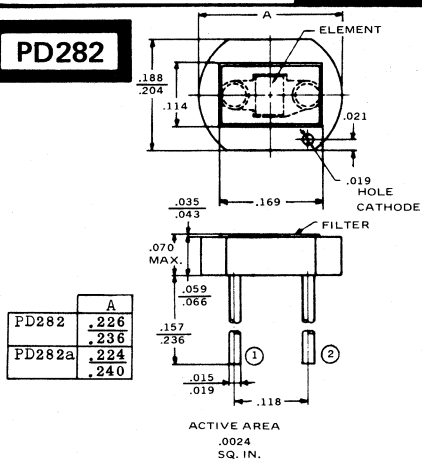
**PD281**



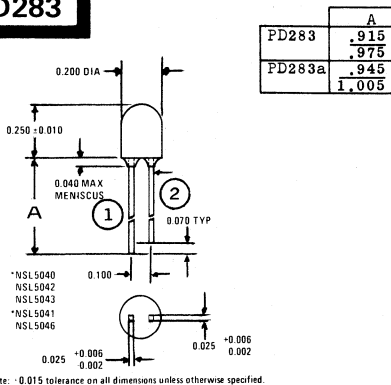
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

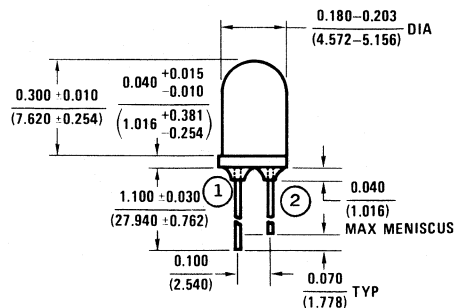
**PD282**



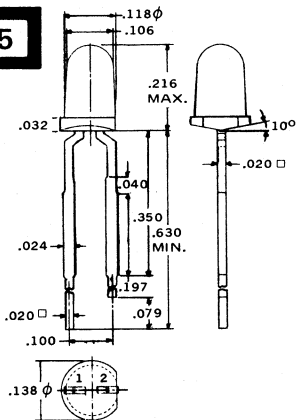
**PD283**



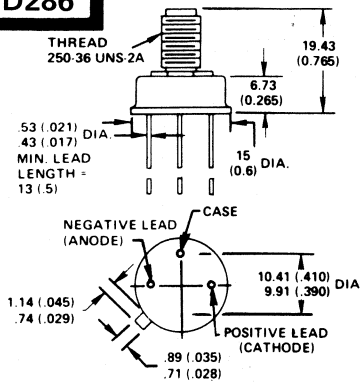
**PD284**



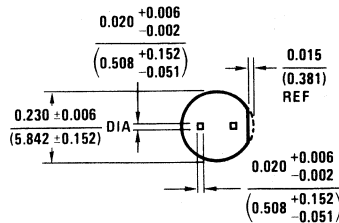
**PD285**



**PD286**

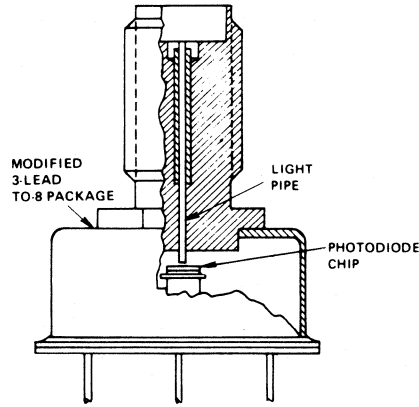
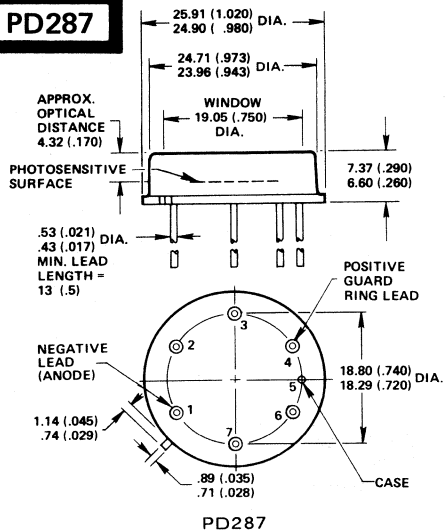


**PD287**



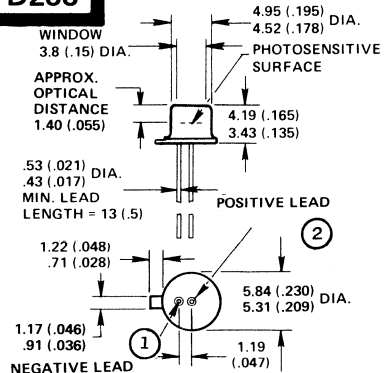
Note: ±0.015/(0.381) tolerance on all dimensions unless otherwise specified.

**PD287**

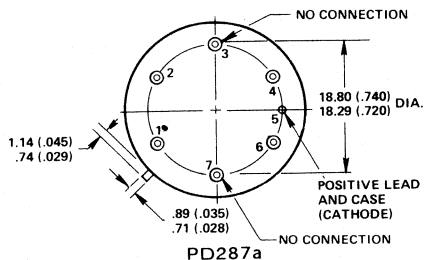


Dimensions in millimeters.  
Dimensions in parentheses are in inches.

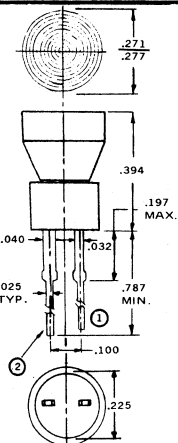
**PD288**



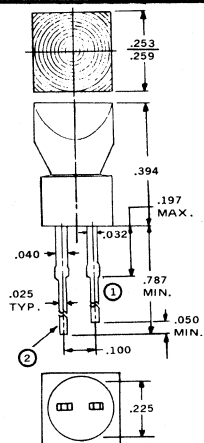
**PD287a**



**PD289**



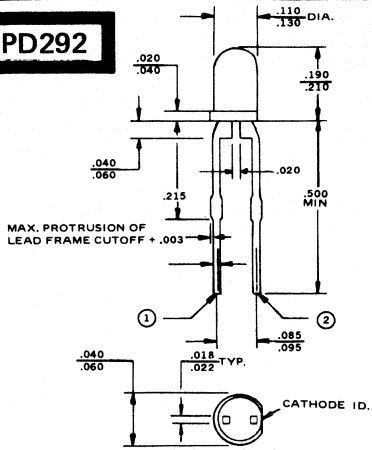
**PD290**



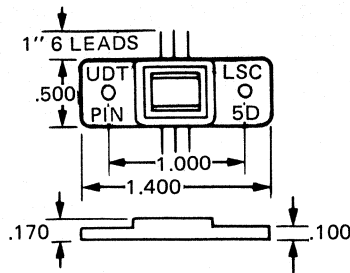
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

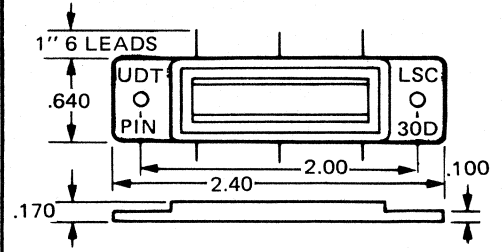
**PD292**



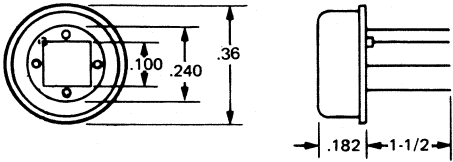
**PD294**



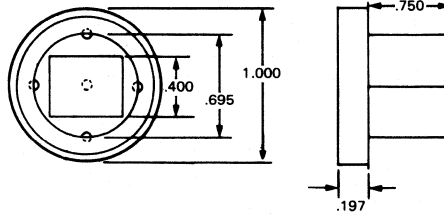
**PD295**



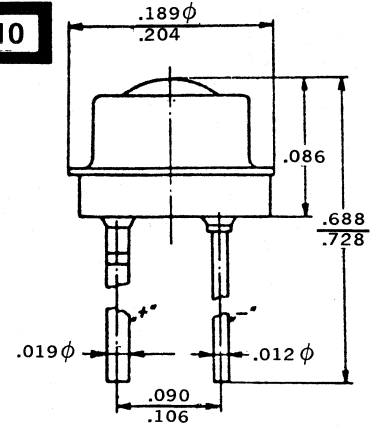
**PD296**



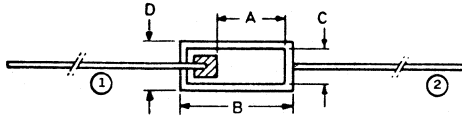
**PD297**



**PD310**

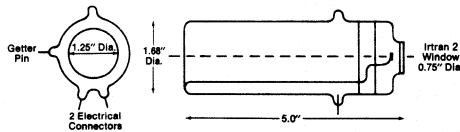


**PD312**

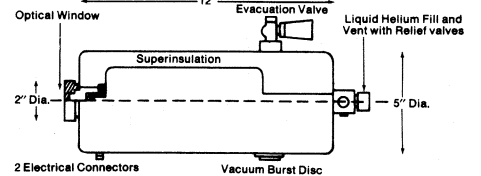


	A	B	C	D
PD312	.086	.125	.374	.043
	TYP	.137	TYP	.055
PD312a	.137	.173	.070	.074
	TYP	.185	TYP	.086

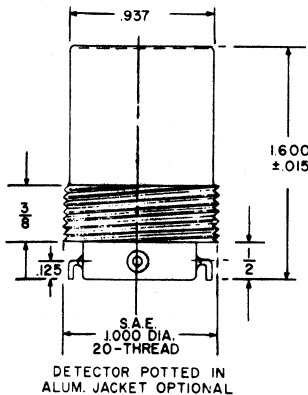
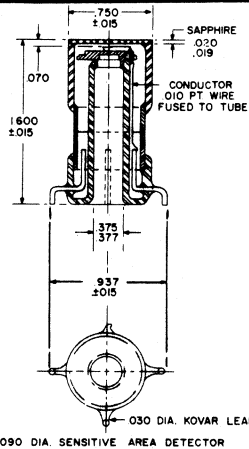
**PD313**



**PD314**



**PD315**



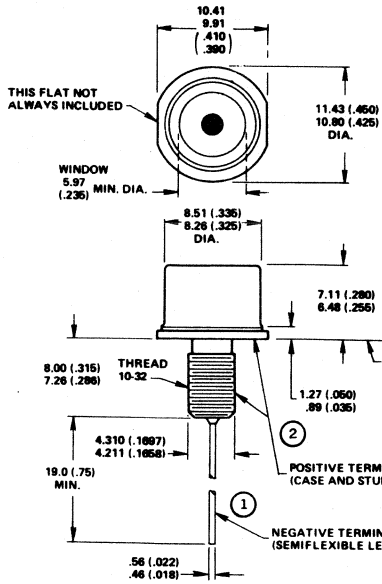




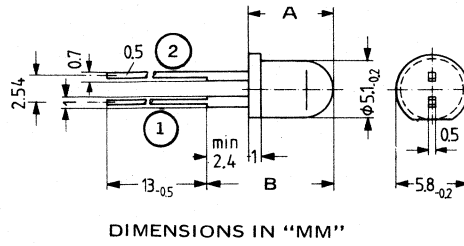
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

**PD324**



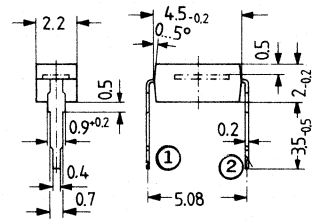
**PD325**



DIMENSIONS IN "MM"

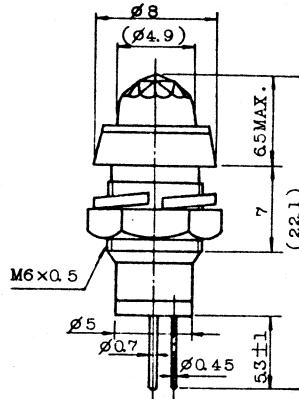
	A	B
PD325	8.6	11.6
PD325a	6.5	10.8
PD325b	8.6	12.2

**PD326**



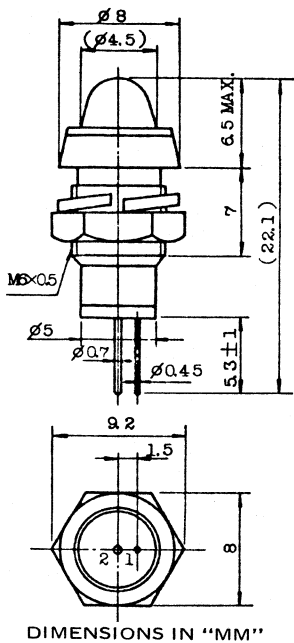
DIMENSIONS IN MM

**PD327**

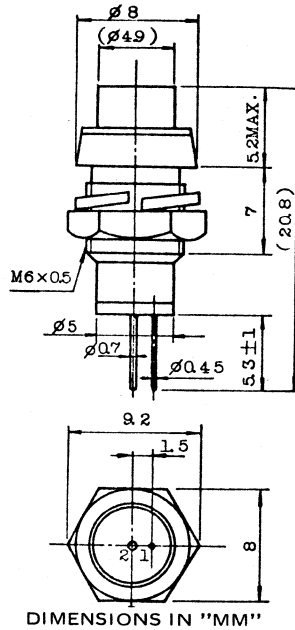


DIMENSIONS IN "MM"

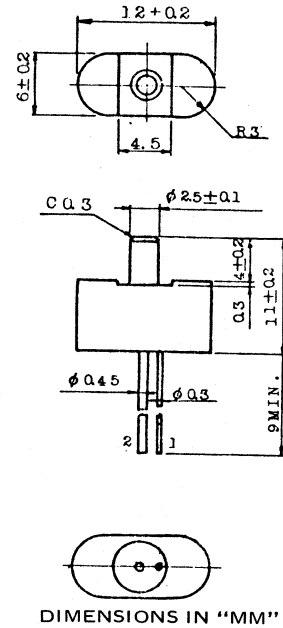
**PD328**



**PD329**



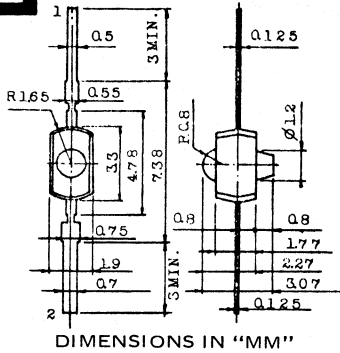
**PD330**



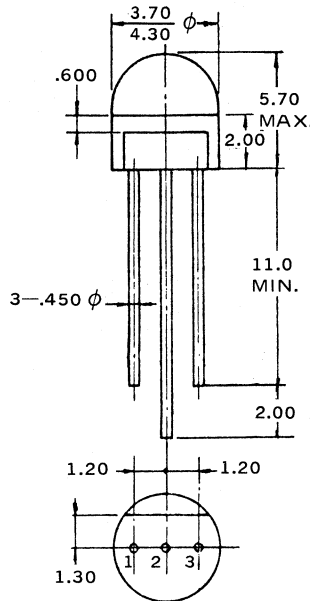
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

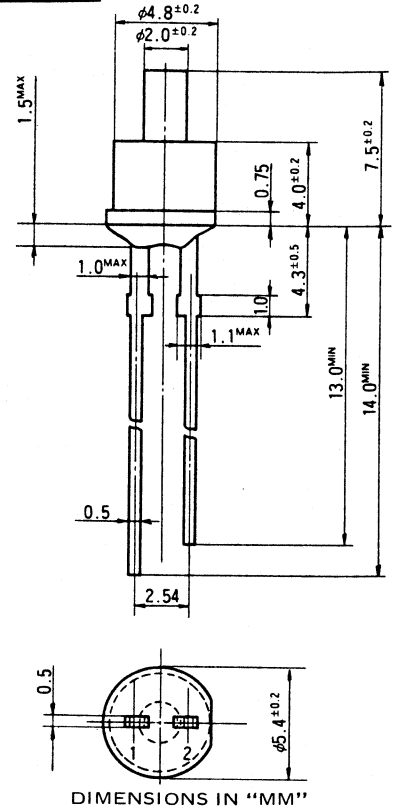
**PD331**



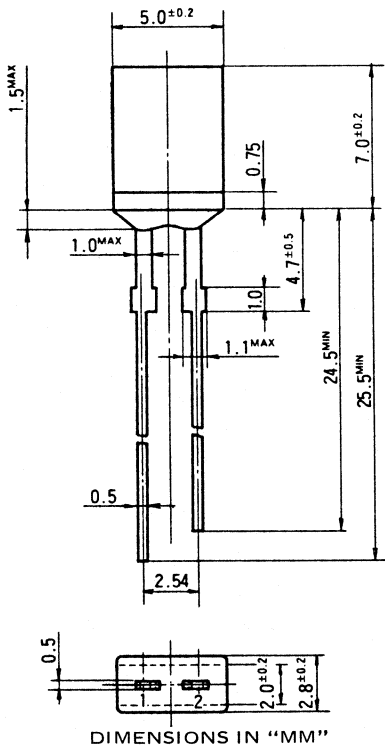
**PD332**



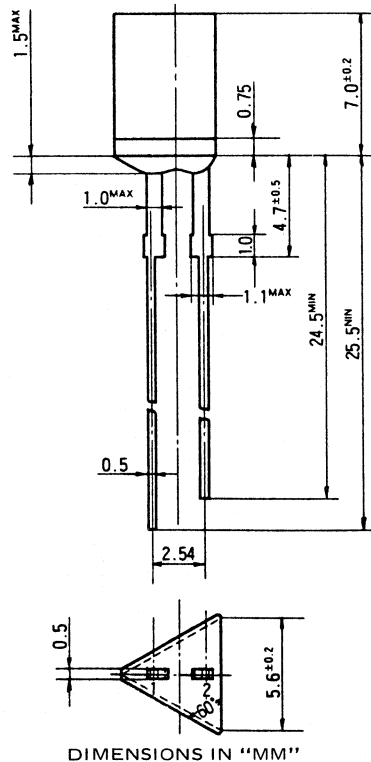
**PD333**



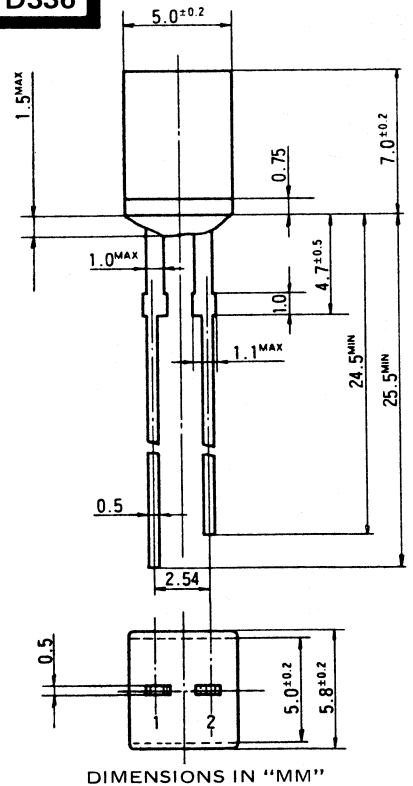
**PD334**



**PD335**



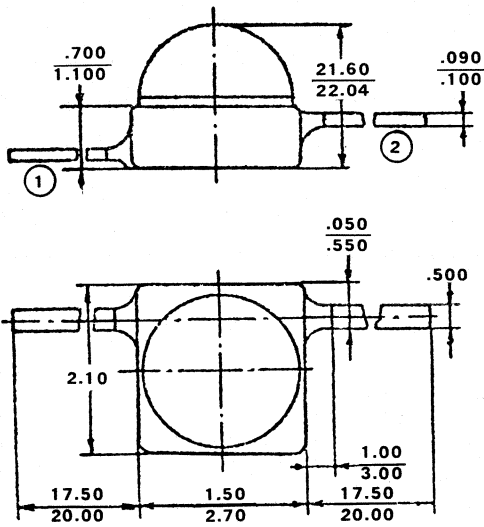
**PD336**



# 49. OUTLINE DRAWINGS

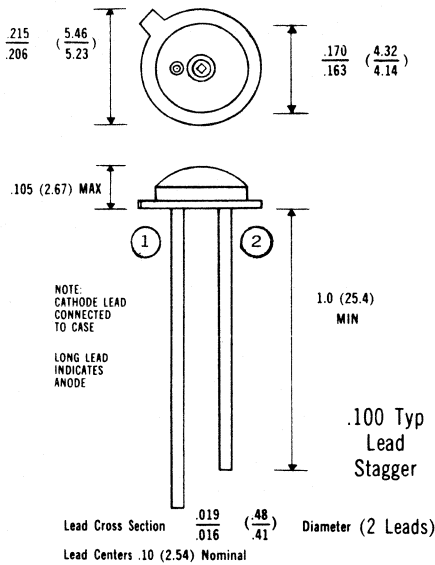
IN DRAWING NUMBER SEQUENCE

**PD337**



DIMENSIONS IN "MM"

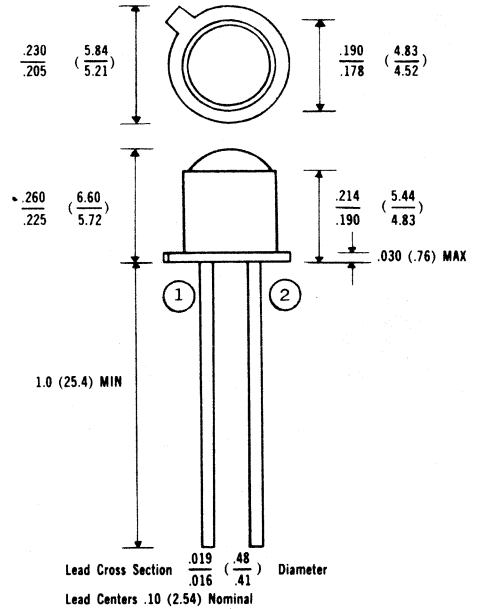
**PD338**



.100 Typ Lead Stagger

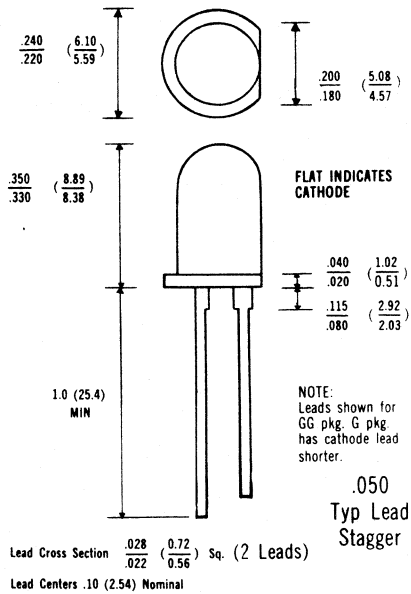
Lead Cross Section  $\frac{.019}{.016}$  ( $\frac{.48}{.41}$ ) Diameter (2 Leads)  
Lead Centers .10 (2.54) Nominal

**PD339**



Lead Cross Section  $\frac{.019}{.016}$  ( $\frac{.48}{.41}$ ) Diameter  
Lead Centers .10 (2.54) Nominal

**PD340**

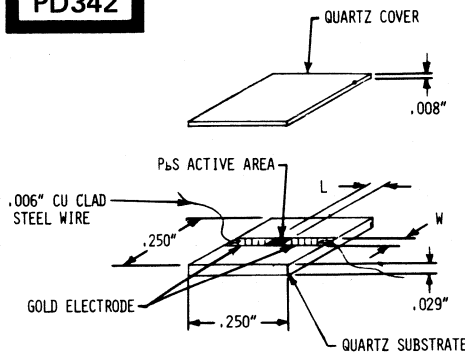


NOTE:  
Leads shown for GG pkg. G pkg has cathode lead shorter.

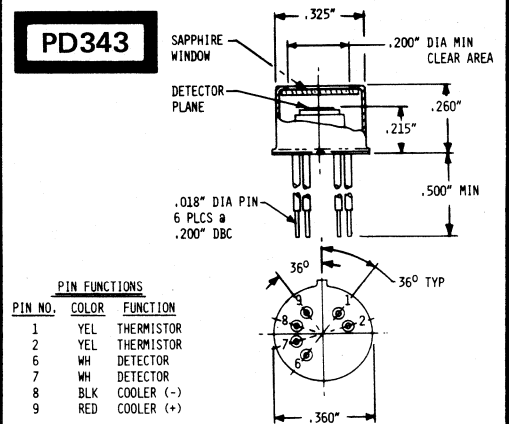
.050 Typ Lead Stagger

Lead Cross Section  $\frac{.028}{.022}$  ( $\frac{.072}{.056}$ ) Sq. (2 Leads)  
Lead Centers .10 (2.54) Nominal

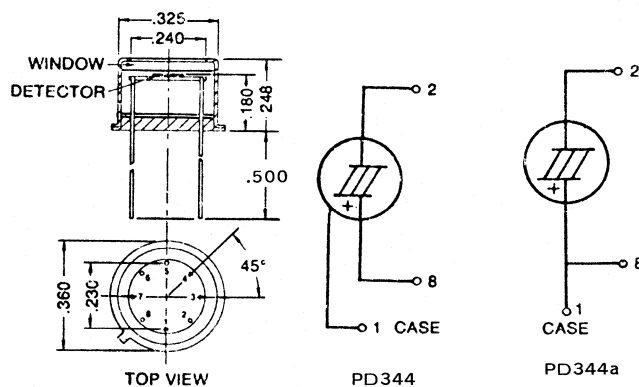
**PD342**



**PD343**



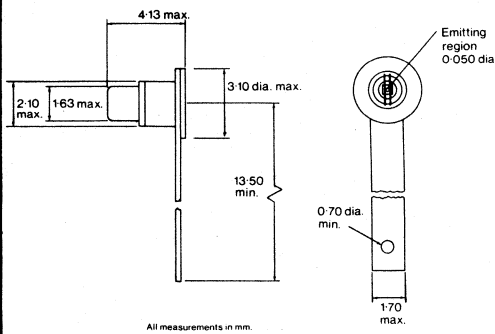
**PD344**



# 49. OUTLINE DRAWINGS

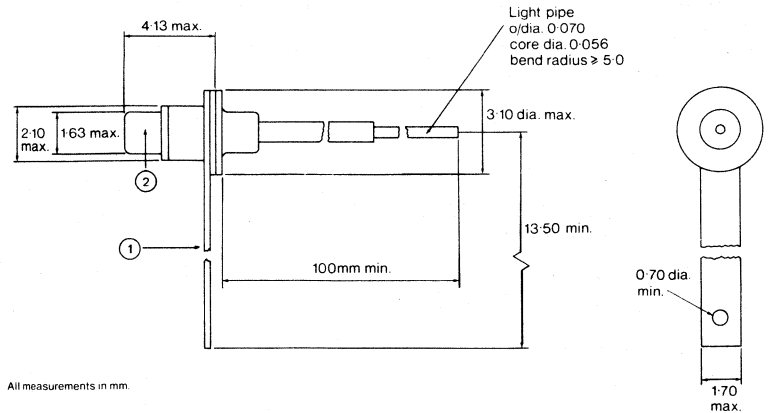
IN DRAWING NUMBER  
SEQUENCE

**PD345**



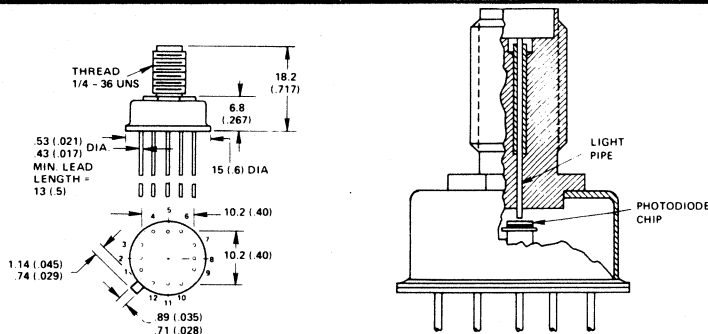
All measurements in mm.

**PD346**



All measurements in mm.

**PD347**



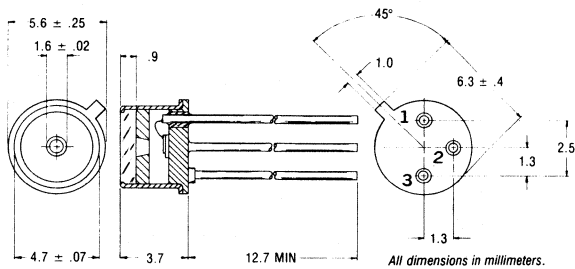
Cutaway of Package

**Lead Connections**

- Lead No. 1: Signal Output
- Lead No. 2: No Connection, Do Not Use
- Lead No. 3: -6 V DC (Amplifier)
- Lead No. 4: Positive Bias for Photodiode
- Leads 5 through 9: No Connection, Do Not Use
- Lead No. 10: Ground
- Lead No. 11: No Connection, Do Not Use
- Lead No. 12: +6 V DC (Amplifier)

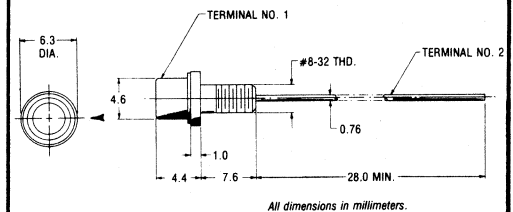
Dimensions in millimeters. Dimensions in parentheses are in inches.

**PD348**



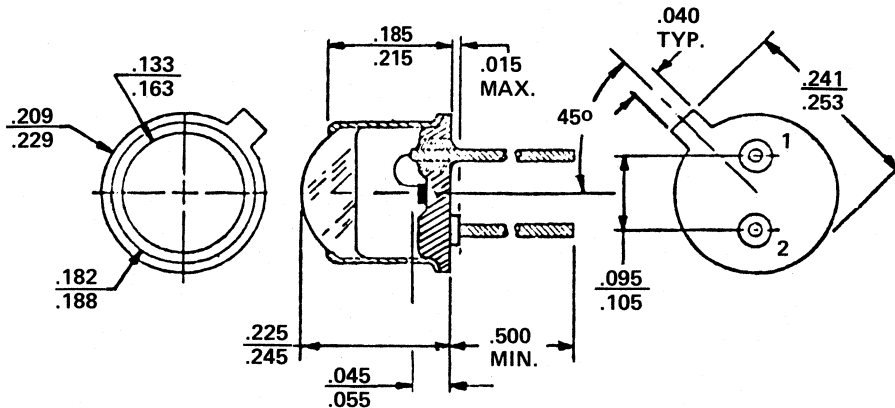
All dimensions in millimeters.

**PD349**



All dimensions in millimeters.

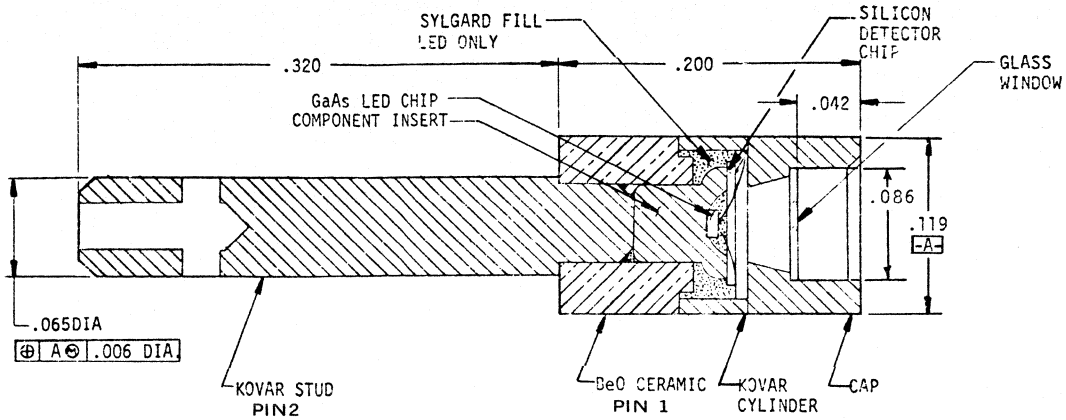
**PD350**



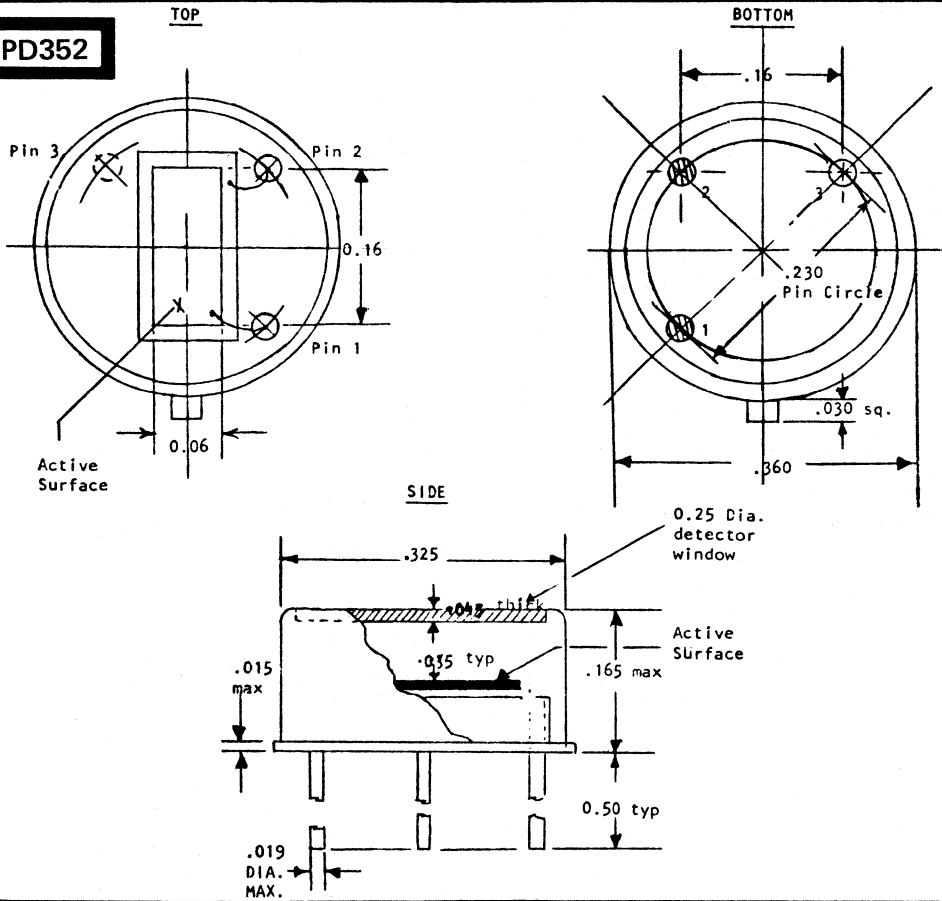
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

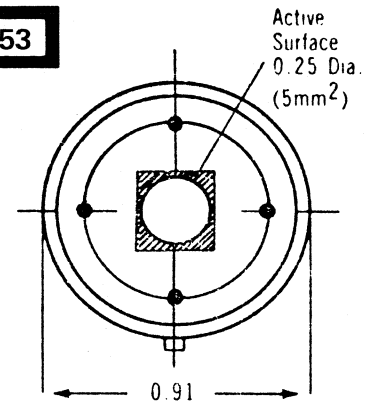
**PD351**



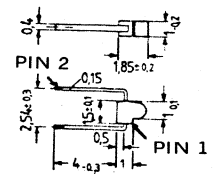
**PD352**



**PD353**

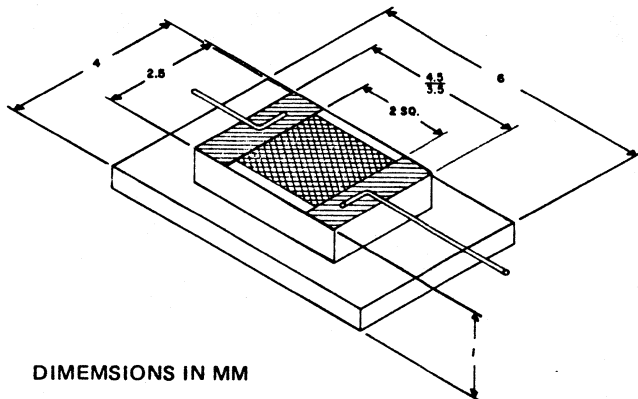


**PD354**

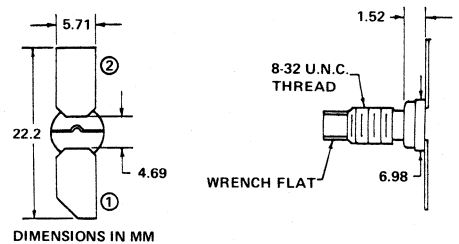


(DIMENSIONS IN MM)

**PD355**



**PD356**



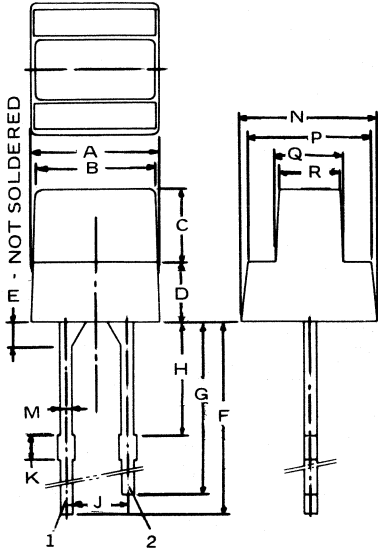


# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

## PD361

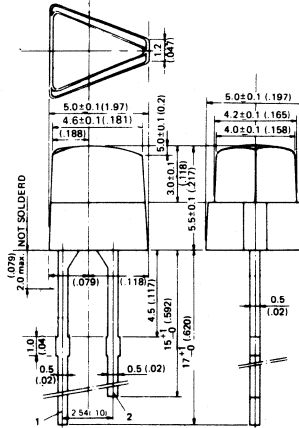
	A	B	C	D	E	F	G	H	J	K	M	N	P	Q	R
FD361	5.00	4.90	2.90	2.50	2.00	17.0	15.0	4.50	2.54	1.00	.500	5.40	4.90	2.65	2.52
	5.10	5.00	3.10		MAX	18.0	16.0					5.60	5.10	2.85	2.62
PD361a	3.80	3.30	2.30	3.00	2.00	17.0	15.0	4.50	2.54	1.00	.500	3.80	3.40	2.10	1.60
	4.20	3.70	2.70		MAX	18.0	16.0					4.20	3.80	2.50	2.00



DIMENSIONS IN MM

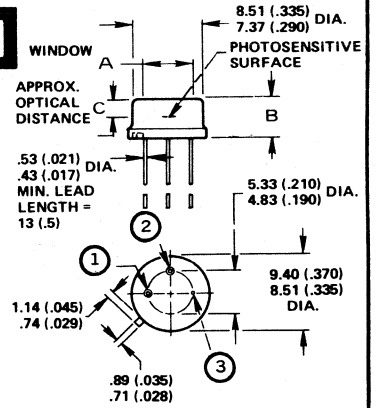
## PD362

MM  
(INCHES)



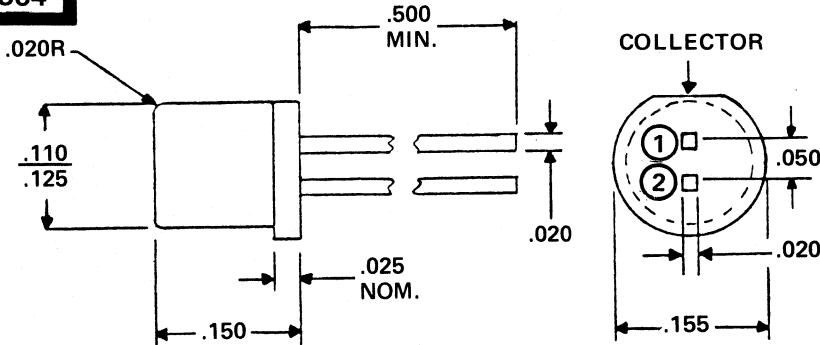
## PD363

MM  
(INCHES)

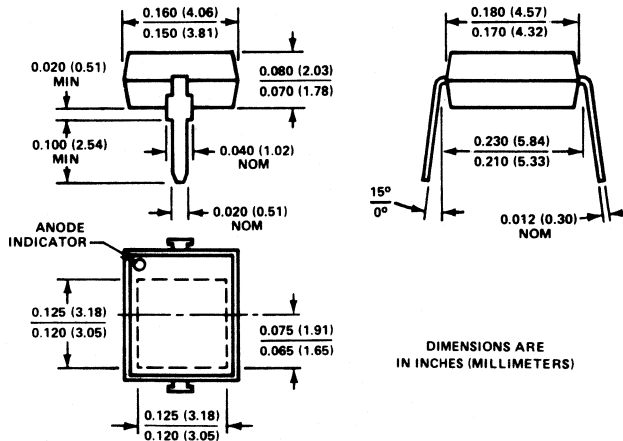


	A	B	C
PD363	7.1 (.28)	5.51 (.217)	3.56 (.140)
PD363a	6.1 (.24)	3.94 (.155)	1.78 (.070)
		4.70 (.185)	

## PD364

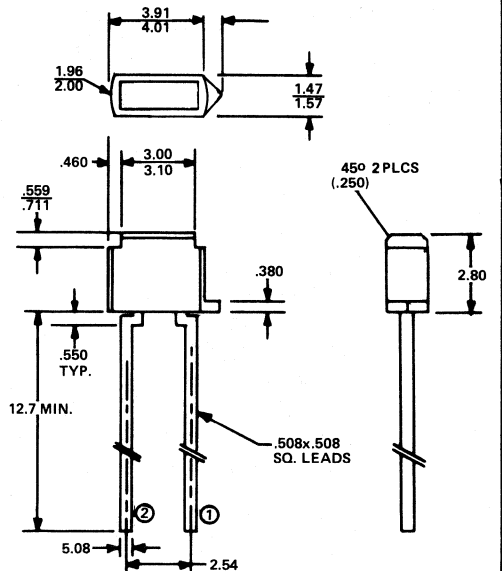


## PD366



## PD365

DIMENSIONS IN MM

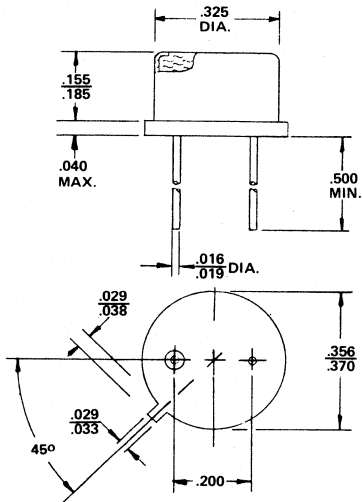




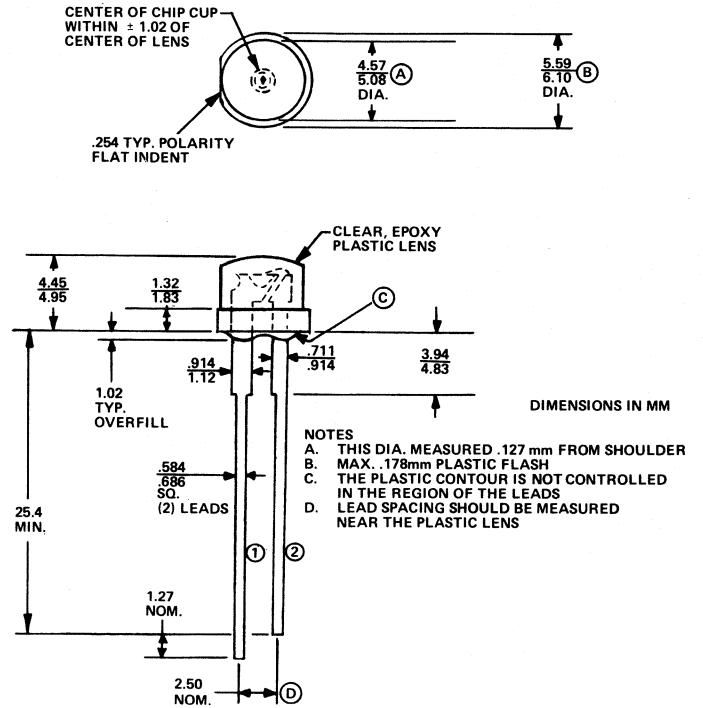
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

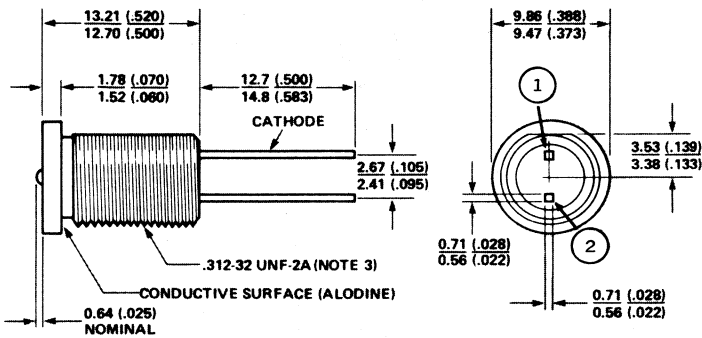
**PD367**



**PD368**

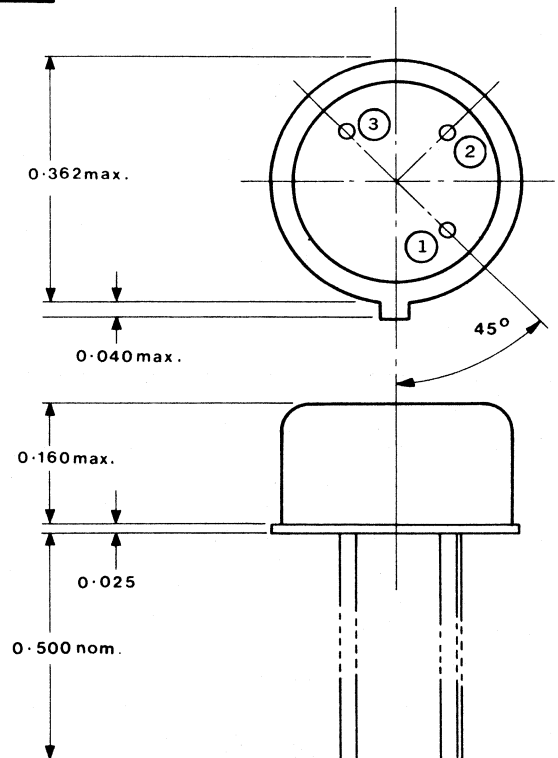


**PD369**



- NOTES:
1. ALL EXTERNAL METAL SURFACES OF THE PACKAGE ARE BLACK ANODIZED EXCEPT FOR THE ALODINE AREA OF THE FLANGE AND THE GOLD PLATED LEADS.
  2. MOUNTING HARDWARE WHICH INCLUDES ONE LOCK WASHER AND ONE HEX NUT IS INCLUDED WITH EACH PANEL MOUNTABLE HERMETIC SOLID STATE LAMP.
  3. USE OF METRIC DRILL SIZE 8.20 MILLIMETRES OR ENGLISH DRILL SIZE P (0.323 INCH) IS RECOMMENDED FOR PRODUCING HOLE IN THE PANEL FOR PANEL MOUNTING.
  4. ALL DIMENSIONS ARE IN MILLIMETRES (INCHES).

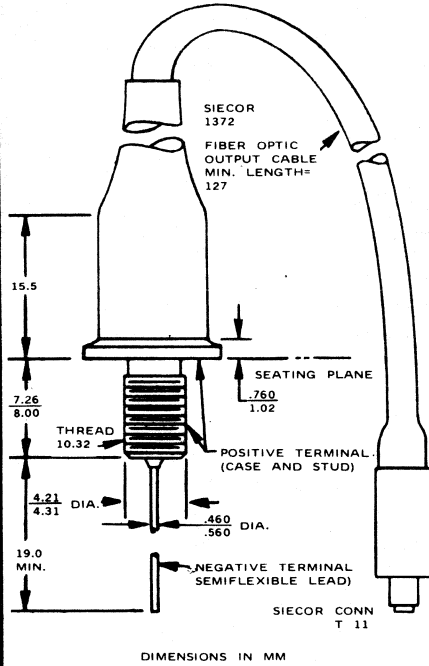
**PD370**



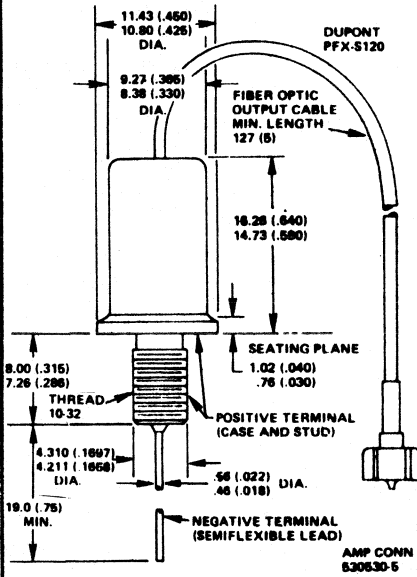
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

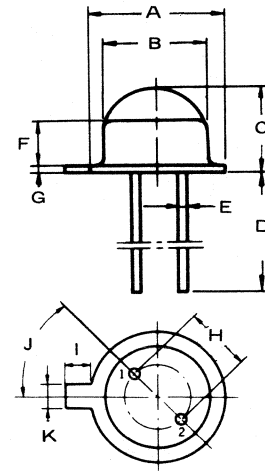
PD371



PD372

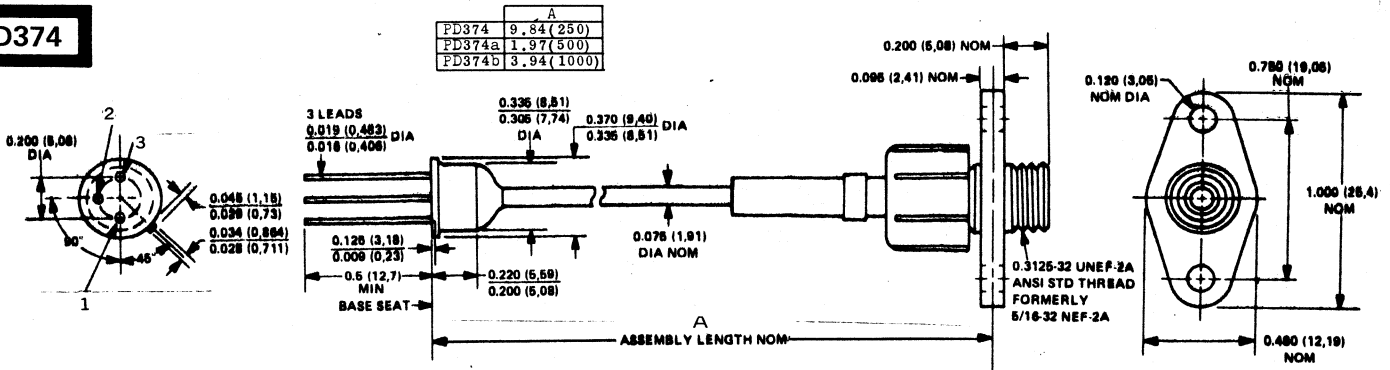


PD373



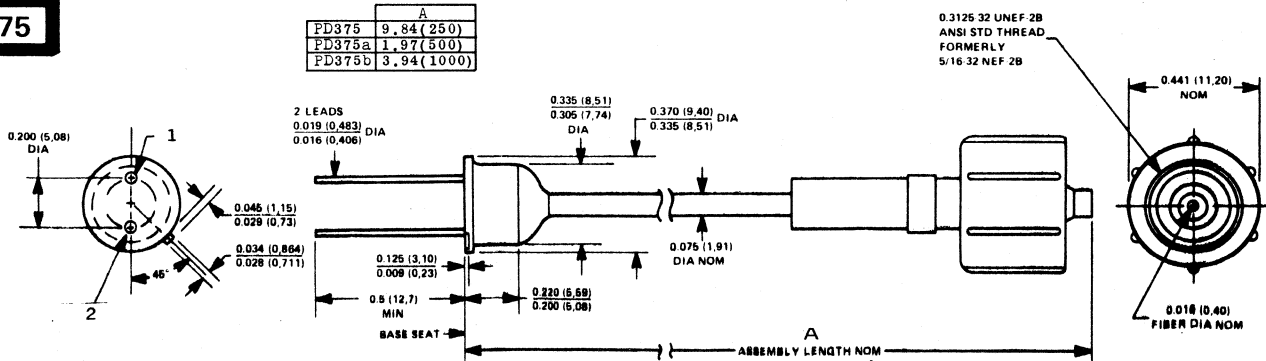
	A	B	C	D	E	F	G	H	I	J	K
PD373	.211	.165	.149 MAX	.492 MIN	.018	.070	.008	.100	.041	45°	.037
PD373a	.228 MAX	.101 MAX	.197 MAX	.945 MIN	.018	.098	.008	.100	.047	45°	.047

PD374



ALL LINEAR DIMENSIONS ARE IN INCHES AND PARENTHETICALLY IN MILLIMETERS. INCH DIMENSIONS GOVERN.

PD375



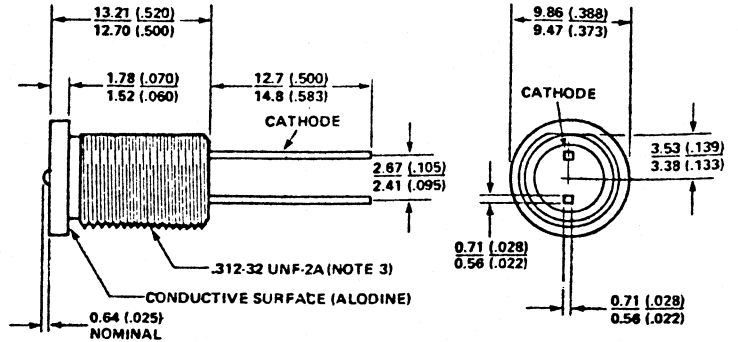
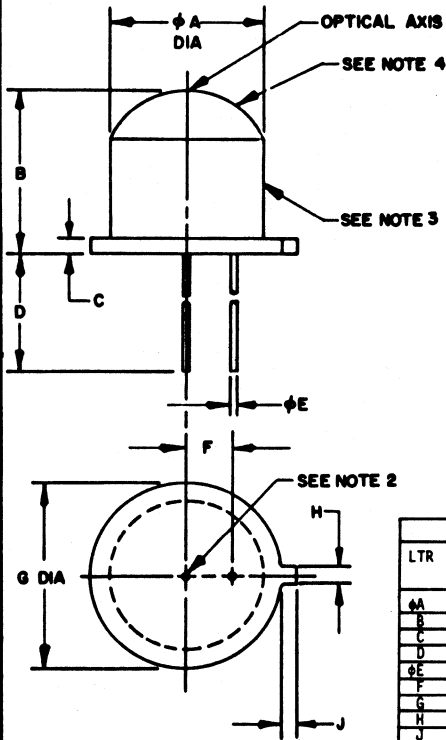
ALL LINEAR DIMENSIONS ARE IN INCHES AND PARENTHETICALLY IN MILLIMETERS. INCH DIMENSIONS GOVERN.

# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

**PD376**

- NOTES:  
 1. Metric equivalents (to the nearest .01 mm) are given for general information only and are based upon 1 inch = 25.4 mm.  
 2. Cathode lead; both leads isolated from case.  
 3. Glass/metal hermetic can.  
 4. Colored lens.



VARIATION II: PANEL-MOUNTED ASSEMBLIES

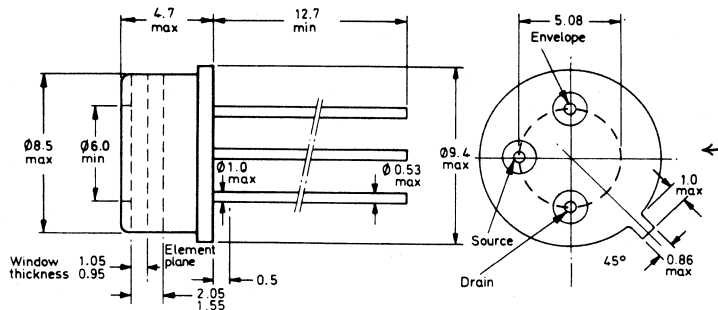
LTR	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	.176	.190	4.47	4.83
B	.180	.225	4.57	5.72
C	.016	.024	.41	.61
D	.970	1.030	24.64	26.16
E	.016	.019	.41	.48
F	.045	.055	1.14	1.40
G	.200	.220	5.08	5.59
H	.035	.045	.89	1.14
J	.032	.042	.81	1.07

1. ALL EXTERNAL METAL SURFACES OF THE PACKAGE ARE BLACK ANODIZED EXCEPT FOR THE ALODINE AREA OF THE FLANGE AND THE GOLD PLATED LEADS.
2. MOUNTING HARDWARE WHICH INCLUDES ONE LOCK WASHER AND ONE HEX-NUT IS INCLUDED WITH EACH PANEL MOUNTABLE HERMETIC SOLID STATE LAMP.
3. USE OF METRIC DRILL SIZE 8.20 MILLIMETERS OR ENGLISH DRILL SIZE P (0.323 INCH) IS RECOMMENDED FOR PRODUCING HOLE IN THE PANEL FOR PANEL MOUNTING.
4. ALL DIMENSIONS ARE IN MILLIMETERS (INCHES).

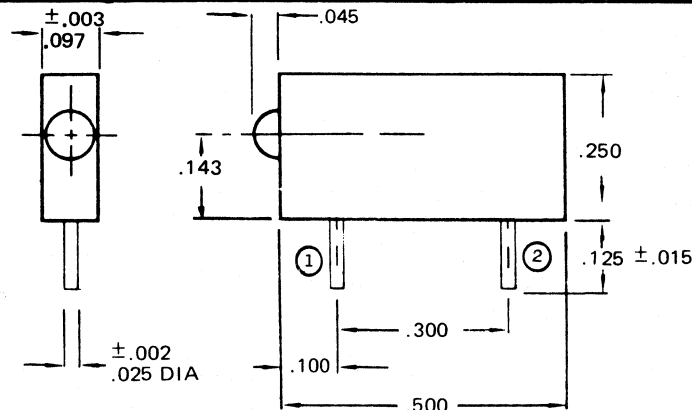
VARIATION I

Dimensions in mm

**PD377**



**PD378**

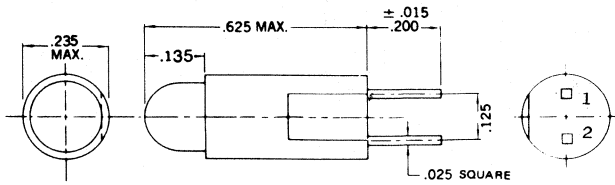


• DECIMALS ±.010

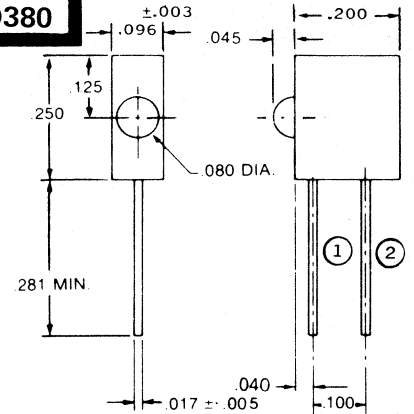
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

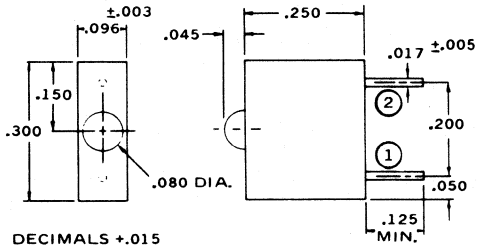
**PD379**



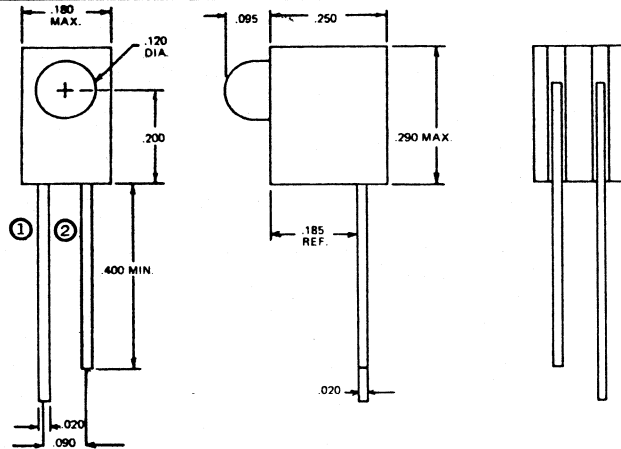
**PD380**



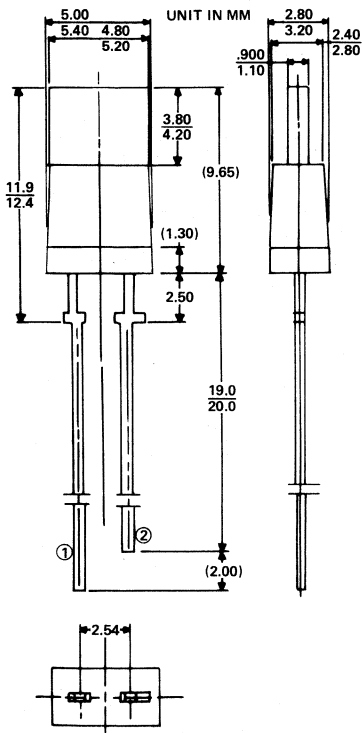
**PD381**



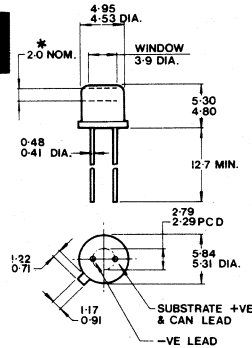
**PD382**



**PD383**

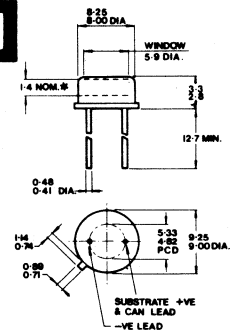


**PD384**



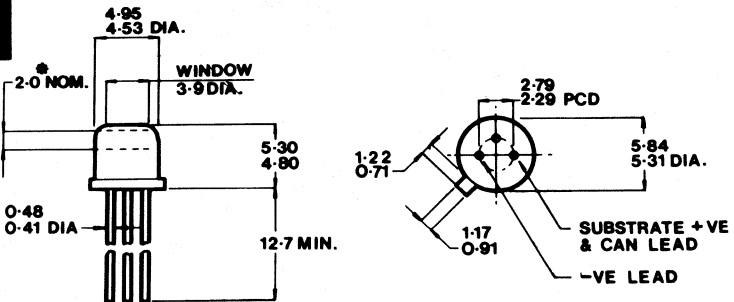
(all dimensions in mm)  
Dimension\* refers to distance between window and active surface.

**PD385**



(all dimensions in mm)  
Dimension\* refers to distance between window and active surface.

**PD386**



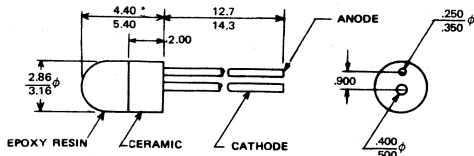
(all dimensions in mm) Dimension\* refers to distance between window and active area.

(SUFFIX)	DIODE OPTION
-H	Electrically Isolated from the Can
-2	Centrally Mounted to A Tolerance ±0.25mm on the Header
-R2	Electrically Isolated and Centrally Mounted

# 49. OUTLINE DRAWINGS

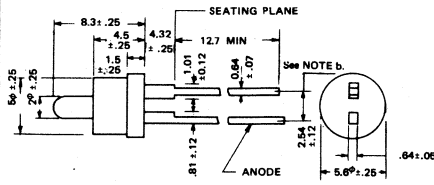
IN DRAWING NUMBER SEQUENCE

**PD389**



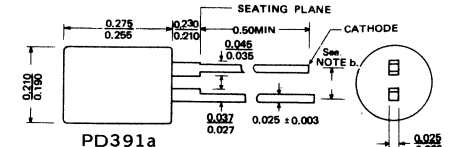
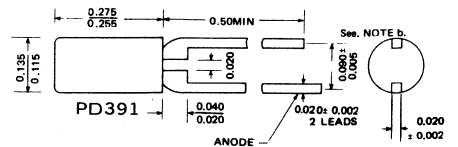
\*PD389a:  $\frac{3.20}{4.30}$

**PD390**



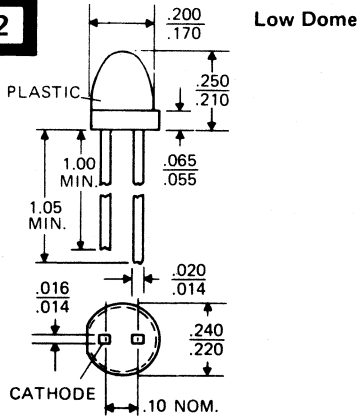
NOTES: a. All dimensions are in millimeters.  
b. Lead spacing is measured where the leads emerge from the package.

**PD391**

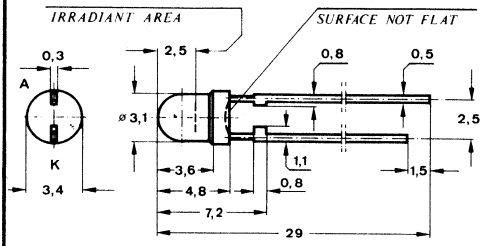


NOTES: a. All dimensions are in inches.  
b. Lead spacing is measured where the leads emerge from the package.

**PD392**

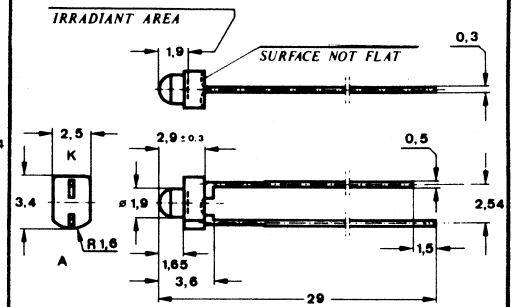


**PD393**



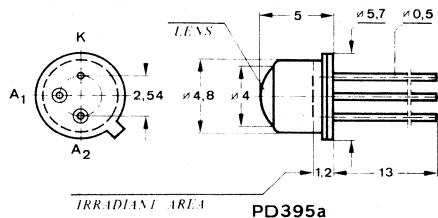
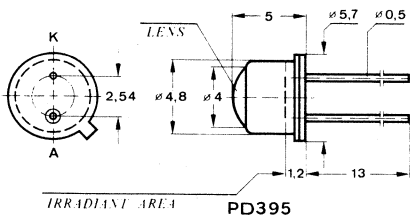
DIMENSIONS IN "MM"

**PD394**



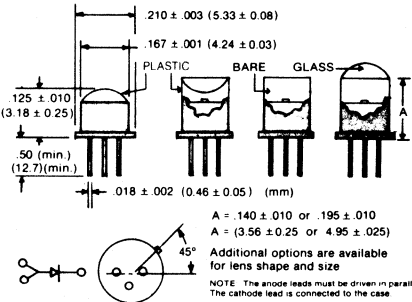
DIMENSIONS IN "MM"

**PD395**



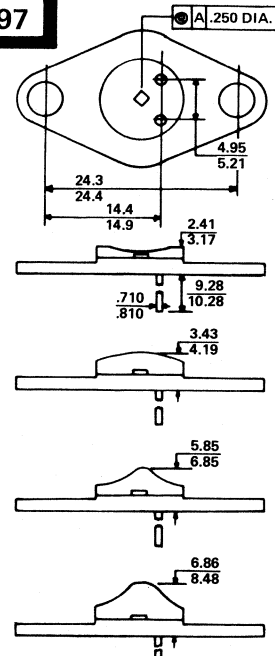
DIMENSIONS IN "MM"

**PD396**

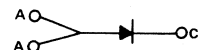


A =  $140 \pm .010$  or  $195 \pm .010$   
A =  $(3.56 \pm 0.25$  or  $4.95 \pm 0.25)$   
Additional options are available for lens shape and size  
NOTE: The anode leads must be driven in parallel! The cathode lead is connected to the case

**PD397**

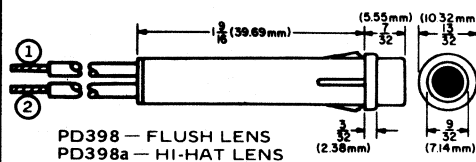


DIMENSIONS IN "MM"



NOTE: THE ANODE LEADS MUST BE DRIVEN IN PARALLEL. THE CATHODE LEAD IS CONNECTED TO THE CASE.

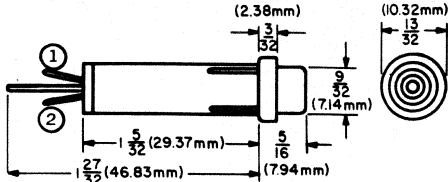
**PD398**



# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

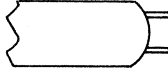
**PD399**



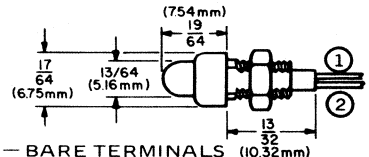
PD399 AND PD399b — FLUSH LENS  
PD399a AND PD399c — HI-HAT LENS

PD399b,c

SAME AS PD399 AND PD399a EXCEPT WITH MALE PIN TERMINALS .040" (1.0mm) DIAMETER WITH 5/32" (3.96mm) SPACING. .020" (.50mm) OFF CENTER — SEE CUTAWAY DRAWING.

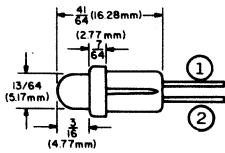


**PD400**



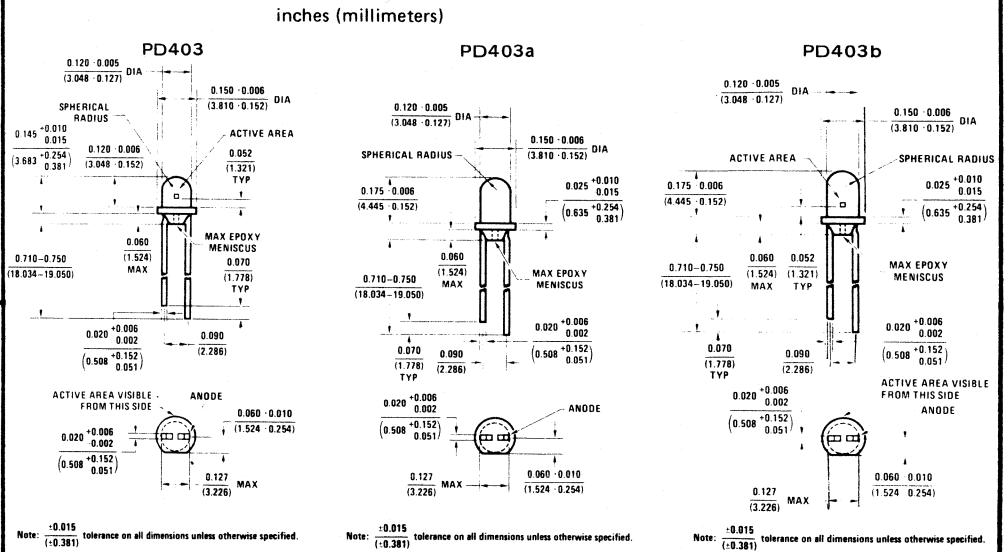
PD400 — BARE TERMINALS  
PD400a — INSULATED WIRE

**PD401**

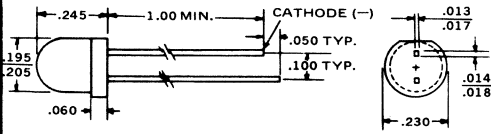


PD401 — BARE TERMINALS  
PD401a — INSULATED WIRE

**PD403**



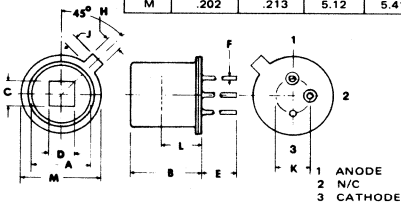
**PD404**



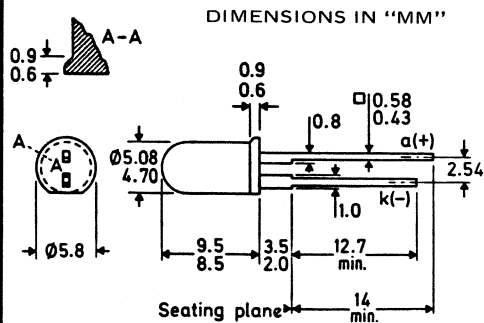
TOLERANCE ± .010

**PD405**

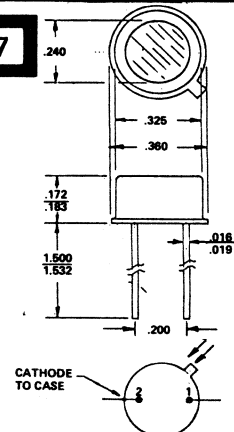
Ref.	Inches		Millimeters	
	Min.	Max.	Min.	Max.
A	.178	.188	4.52	4.78
B	.195	.205	4.96	5.21
C	.075	.080	1.91	2.03
D	.075	.080	1.91	2.03
E	.5 Nominal		12.8 Nominal	
F	.016	.019	.41	.48
H	.035	.045	.89	1.15
J	.033	.048	.84	1.22
K	.096	.104	2.43	2.65
L	.105	.115	2.68	2.92
M	.202	.213	5.12	5.41



**PD406**



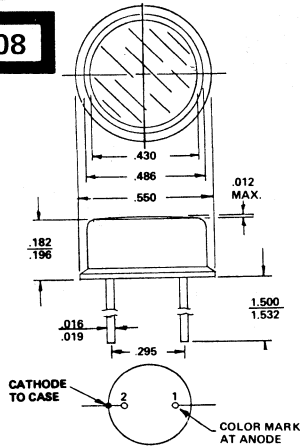
**PD407**



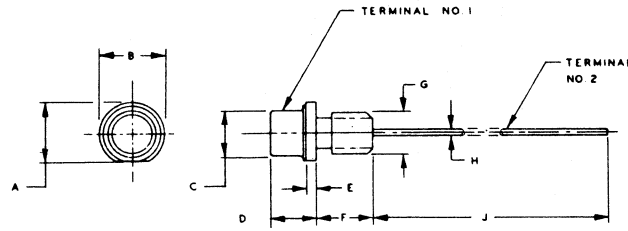
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

**PD408**

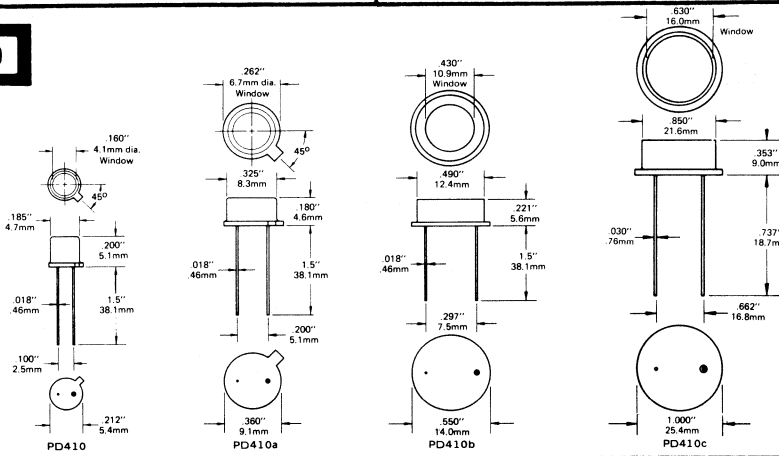


**PD409**

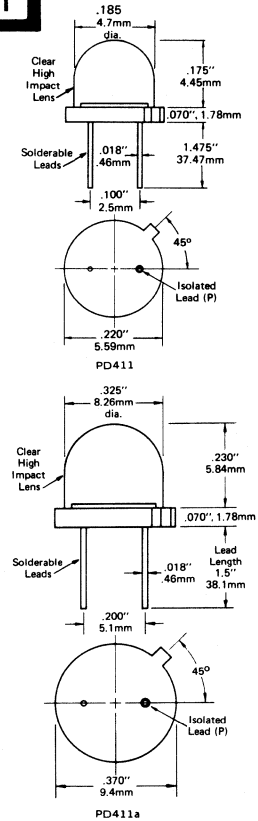


SYMBOL	INCHES	MILLIMETERS
	TYP.	TYP.
A	.232	5.893
B	.250	6.350
C	.183	4.648
D	.176	4.470
E	.040	1.016
F	.200	5.080
G	#8-32 THD	
H	.030	0.762
J	1.130	28.702

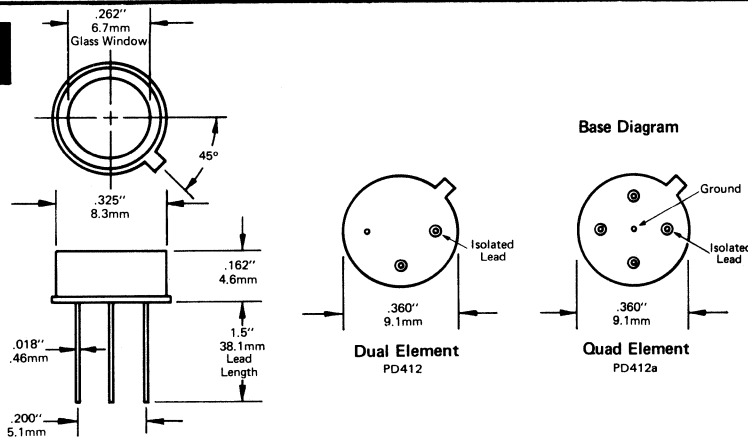
**PD410**



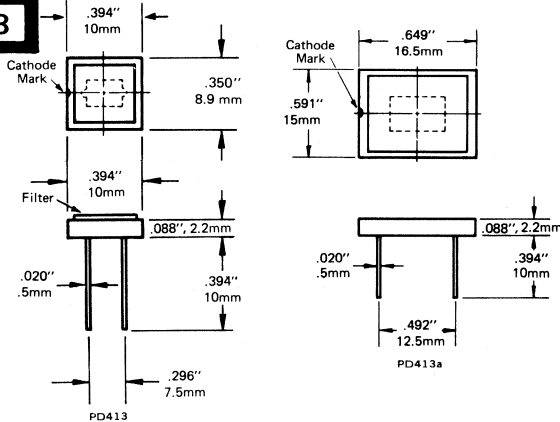
**PD411**



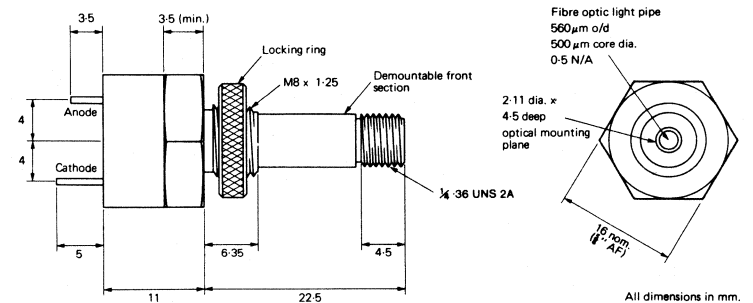
**PD412**



**PD413**



**PD414**

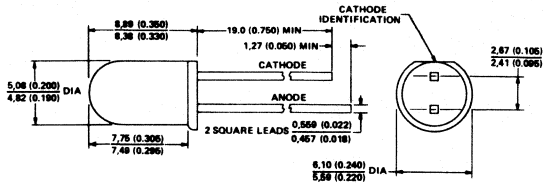




# 49. OUTLINE DRAWINGS

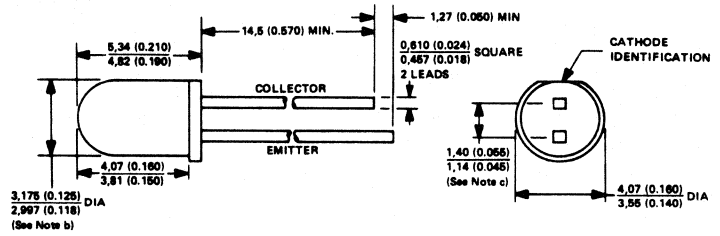
IN DRAWING NUMBER SEQUENCE

PD415



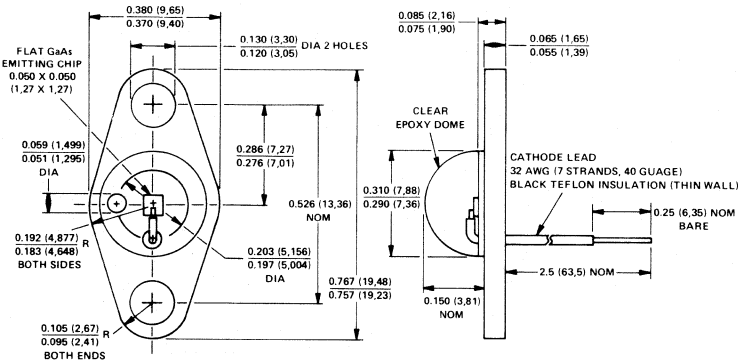
ALL DIMENSIONS ARE IN MILLIMETERS AND PARENTHETICALLY IN INCHES

PD416



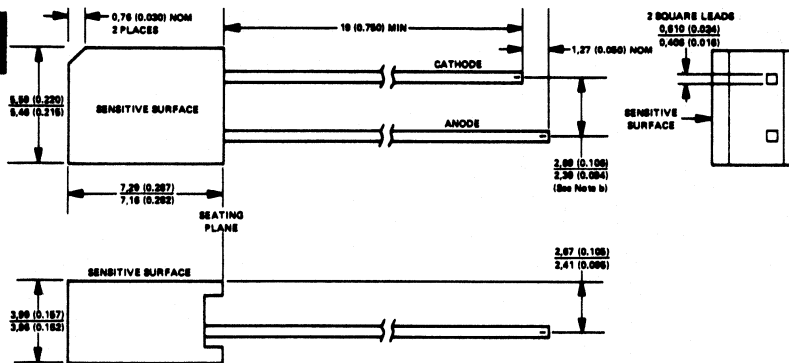
NOTES: a. All dimensions are in millimeters and parenthetically in inches.  
b. This diameter is measured 0.127 mm (0.005 inches) from the shoulder.  
c. Lead spacing is measured where the leads emerge from the package.

PD417



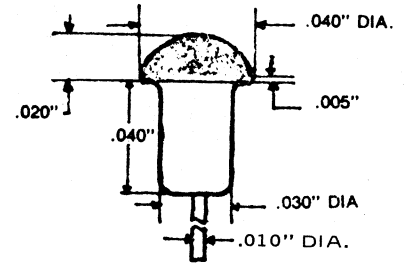
ALL DIMENSIONS ARE IN INCHES AND PARENTHETICALLY IN MILLIMETERS, INCH DIMENSIONS GOVERN

PD418



NOTES: a. All dimensions are in millimeters and parenthetically in inches.  
b. Lead spacing is measured at the seating plane.

PD419

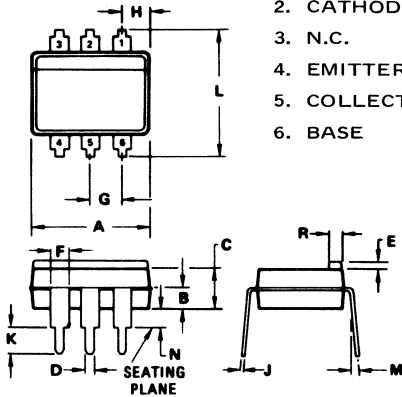


# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

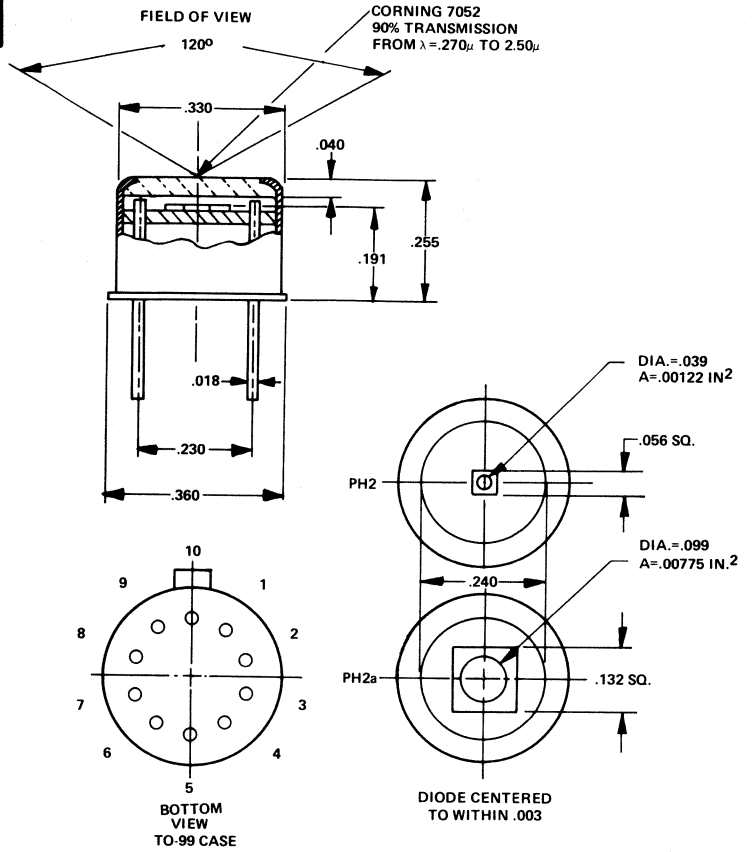
## PH1

1. ANODE
2. CATHODE
3. N.C.
4. EMITTER
5. COLLECTOR
6. BASE

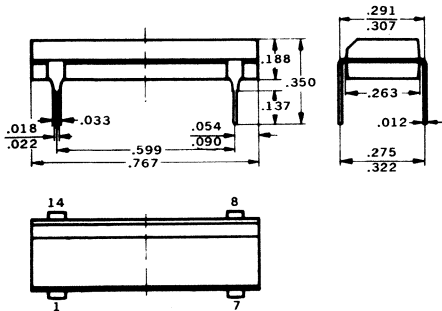


DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	8.38	8.89	0.330	0.350
B	1.40	1.65	0.055	0.065
C	2.92	3.18	0.115	0.125
D	0.38	0.53	0.015	0.021
E	-	1.02	-	0.040
F	1.02	1.27	0.040	0.050
G	2.54 BSC		0.100 BSC	
H	1.57	1.83	0.062	0.072
J	0.23	0.28	0.009	0.011
K	2.92	3.30	0.115	0.130
L	7.37	7.87	0.290	0.310
M	-	10°	-	10°
N	0.51	1.27	0.020	0.050
R	-	1.90	-	0.075

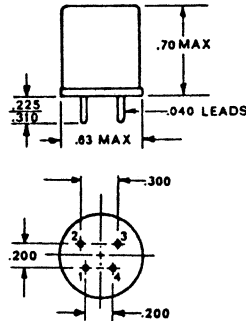
## PH2



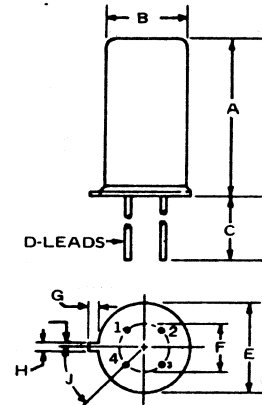
## PH3



## PH6



## PH7

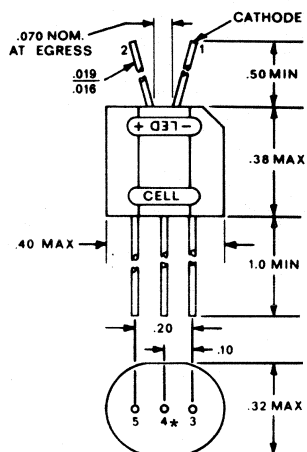


	A	B	C	D	E	F	G	H	J
PH7	.640	.325	1.00	.017	.360	.200	.040	.032	45°
PH7a	.265	.325	1.00	.016	.360	.200	.040	.032	45°
PH7b	.170	.178	.500	.016	.209	.100	.028	.036	45°
PH7c	.259	.334	.499	.018	.370	.199	.039	.033	45°
PH7d	.192	.185	.492	.017	.210	.088	.218	.111	
PH7e	.460	.330	1.299	.354	.200	.200	.031	.031	45°
PH7f	.454	.346	1.456	.370	.212	.100			

# 49. OUTLINE DRAWINGS

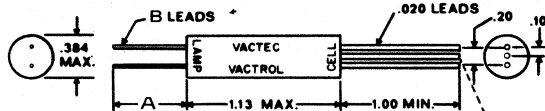
IN DRAWING NUMBER  
SEQUENCE

**PH8**



\*-LEAD OMITTED FOR PH8a.

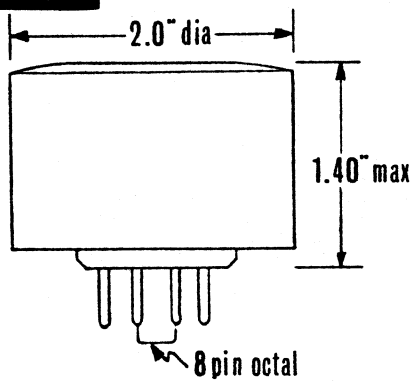
**PH9**



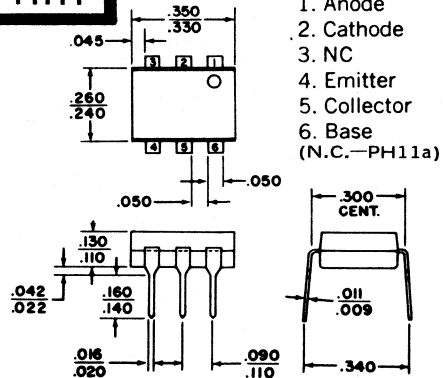
LEAD FOR PH9b and c ONLY.

	A	B	REMARKS
PH9	.380 MIN	.010	5 Leads
PH9a	.750 MIN	.015	5 Leads
PH9b	.380 MIN	.010	6 Leads
PH9c	.750 MIN	.015	6 Leads

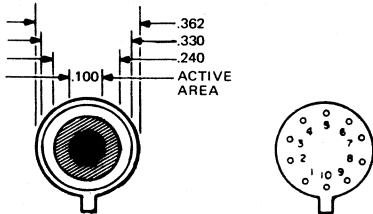
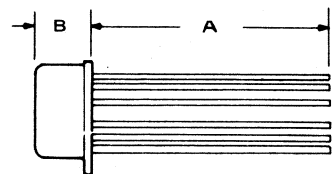
**PH10**



**PH11**

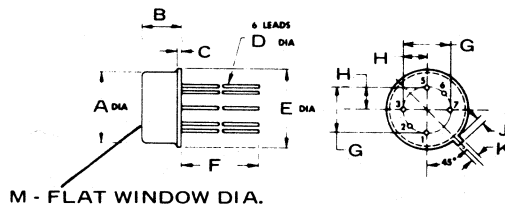


**PH12**



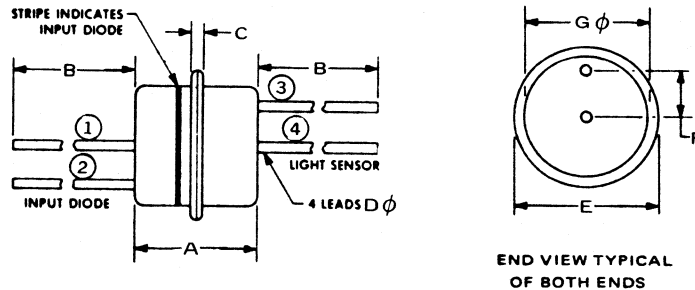
	A	B
PH12	1.496	.240
PH12a	.787	.244

**PH13**



	A	B	C	D	E	F	G	H	J	K	M
PH13	.305	.155	.040	.016	.335	.500	.200	.100	.028	.028	
PH13a	.335	.185	MAX	.019	.370	MIN			.045	.034	
		.191		.019	.210	.500	.100		.040		.125
						MIN					MIN

**PH14**

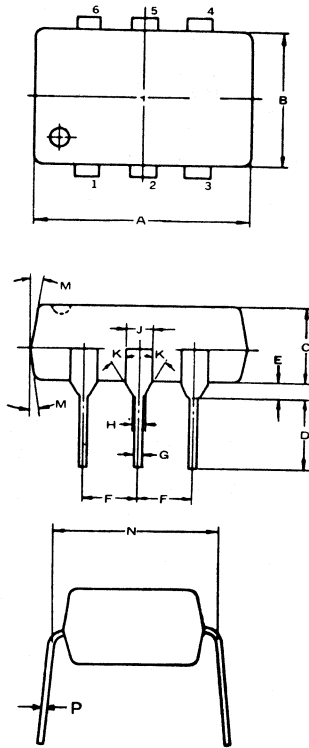


	A	B	C	D	E	F	G	REMARKS	LEAD CODE
PH14	.194	1.00	.013	.018	.187	.045	.161		1 2 3 4
	.206	MIN	.018	.018	.220	.055	.171		A K E C
PH14a	.212	.433	.015	.017	.228	.049	.194	No Stripe	K A C E

# 49. OUTLINE DRAWINGS

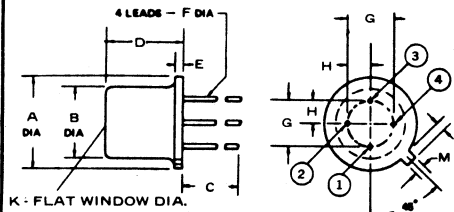
IN DRAWING NUMBER  
SEQUENCE

## PH16



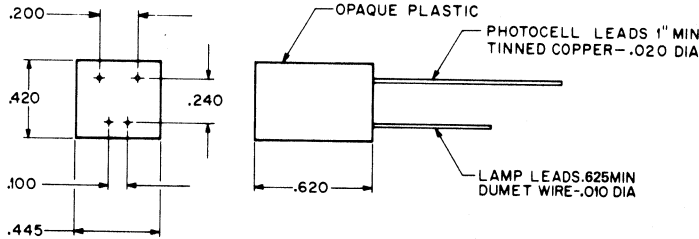
	A	B	C	D	E	F	G	H	J	K	M	N	P
PH16	.330 .370	.240 .260	.180	.125 MIN	.020 MIN	.100	.015 .021	.033 MIN				.300	
PH16a	.366 .271	.232 .157	.118 .157	.118 MIN	.015 MIN	.099	.017 .039	.027	.047	30°	8°	.280 .319	
PH16b	.319 .350	.244 .255	.153 .169	.087 MIN	.035 MIN	.099	.014 .020	.029 .037	.044 .055			.307 .324	.007 .011
PH16c	.393 MAX	.256 MAX	.157 MAX	.100 MIN	.020 MIN	.100	.014 .026		.041 .053			.290 .310	.008 .014
PH16d	.334	.244	.183	.130	.025	.100	.020					.300	.011
PH16e	.334 .342	.244 .251	.137 MAX	.122 MIN	.019 MIN	.100	.017					.291 .307	.009
PH16f	.350	.250	.125					.018				.300	.010
PH16g	.340	.250	.120	.150	.032	.100	.015 .021	.100	.050			.300	.008 .012
PH16h	.330 .370	.242 MAX	.175 MIN	.125 MIN	.020 MIN	.100	.016 .020		.060			.300	.008 .014
PH16j	.345 .365	.245 .265	.150	.150	.025	.090 .110	.018 .022					.300	.010 .014
PH16k	.364		.138	.098	.035	.100	.020	.047				.299	
PH16m	.280	.240	.151	.106	.031	.100	.019		.047			.300	.009
PH16n	.280	.240	.143	.106	.031	.100	.019		.047			.300	.009
PH16p	.344 .383	.236 .275	.118 MIN	.098 MIN	.016 MIN	.100	.019 .055		.047			.300	.010 .014
PH16r	.350	.250	.180	.125	.020	.100	.015 .021	.033 MIN				.300	.008 .012

## PH17

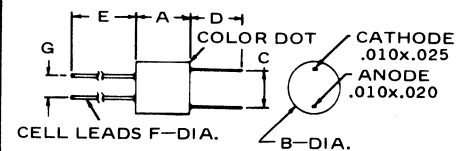


	A	B	C	D	E	F	G	H	J	K	M	
PH17	.209 .230	.178 .195	.500 MIN	.170 MIN	.030 MAX	.016 .018	.100	.060	.028 .045			.036 .046
PH17a	.210		.500 MAX	.191		.019	.100			.125		
PH17b	.209	.189	.500	.191		.019				.136		
PH17c	.210	.189	.500	.191		.019	.100			.154		
PH17d	.209 .230	.178 .195	.500 MIN	.170 MIN	.030 MAX	.016 .019	.100	.060	.028 .046			.036 .046
PH17e	.228 MAX	.189 MAX	.500 MAX	.216 MAX		.019 MAX	.100		.046 MAX			.045 MAX
PH17f	.335 MAX	.305 MAX	.500 MIN	.240 MIN		.016 MAX	.200		.029 PCD	.240		.027 .033
PH17g	.370 MAX	.335 MAX	1.50 MAX	.280 MAX		.017 MAX	.190 MAX		.031 MAX			.031
PH17h	.370 MAX	.370 MAX	1.50 MAX	.650 MAX		.017 MAX	.200		.031			.031
PH17j	.334 .370	.314 .324	.500 MIN	.240 MIN		.016 .018	.189 .209		.029 .044	.232		.027 .035

## PH18

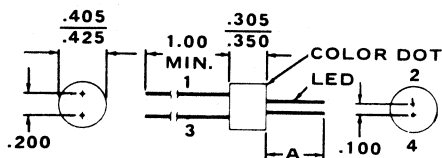


## PH19



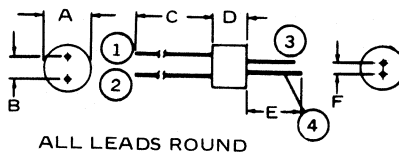
	A	B	C	D	E	F	G
PH19	.215 .260	.250	.130	.220 MIN	1.00 MIN	.016 .020	.100
PH19a	.750	.500 REF	.300 REF	1.00 NOM	.650 NOM	.010 REF	.150

## PH20



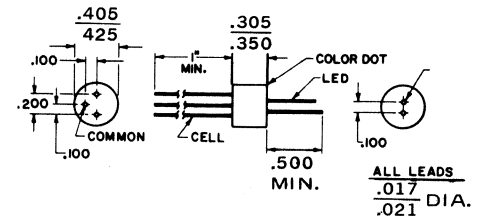
	A	1	2	3	4
PH20	.500 MIN	.017 .021	.017 .021	.017 .021	.017 .021
PH20a	.250 MIN	.020 x.025	.010 x.025	.020 x.025	.010 x.025

## PH21



	A	B	C	D	E	F	LEADS
PH21	.405 .425	.200	1.000	.305 MIN	.500 MIN	.100	.017 .021
PH21a	.310	.100	.500 MIN	.510 MAX	.500 MIN	.100	
PH21b	.310	.100	.500 MIN	.215 MIN	.500 MIN	.100	.018 .020

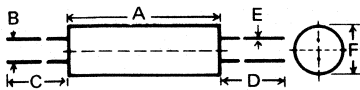
## PH22



# 49. OUTLINE DRAWINGS

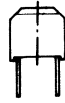
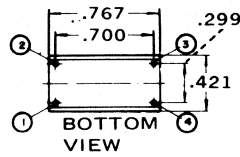
IN DRAWING NUMBER SEQUENCE

**PH23**



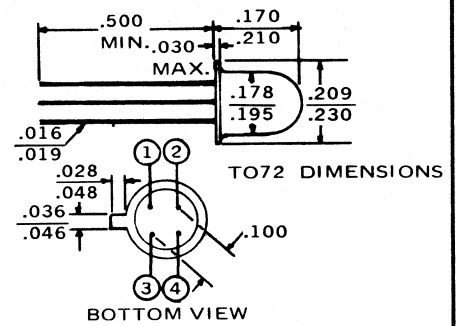
	A	B	C	D	E	F
PH23	1.095	.190	.970	.970	.019	.405
	1.155	.210	1.030	1.030	REF.	.425
PH23a	.375	.100	1.500	1.500	.016	.330
	TYP	MIN	MIN	MIN	.019	
PH23b	4.120	.100	1.500	1.500	.016	.435
	TYP	MIN	MIN	MIN	.019	
PH23c	.650		1.300	1.300	.009	.125
	.850		MIN	MIN	.011	.129
PH23d	.618	.182	.750	1.50	.019	.316
	.632	.192	NCM	NCM		.323
PH23e	.265	.150	1.00	.220	.010X	.235
	TYP	TYP	TYP	MIN	.020	.280
PH23f	.511	.118				.275

**PH25**



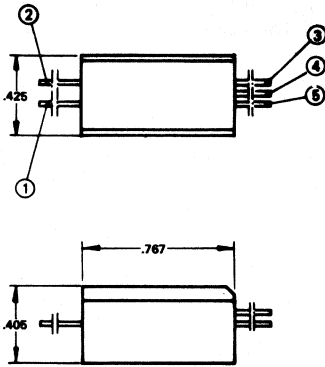
FRONT VIEW

**PH26**

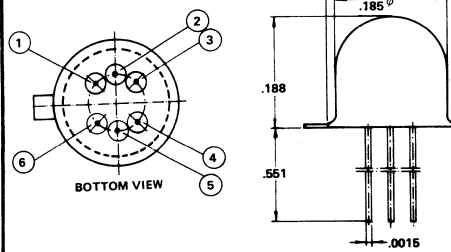


BOTTOM VIEW

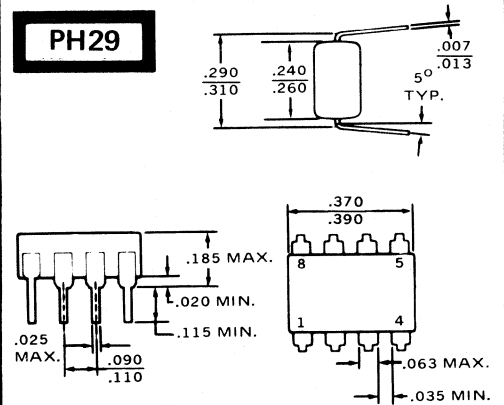
**PH27**



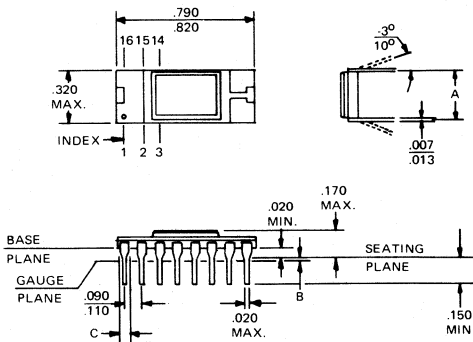
**PH28**



**PH29**

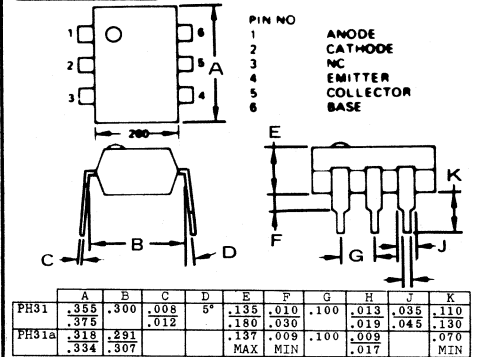


**PH30**



	A	B	C
PH30	.290		
	.310		
PH30a	.277	.000	.055
	.303	.030	MAX

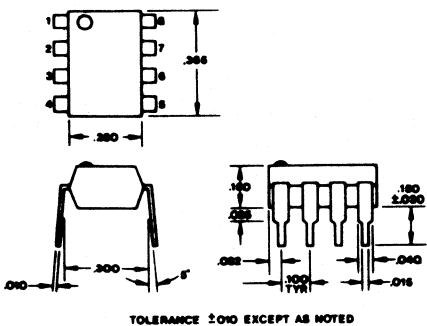
**PH31**



PIN NO  
 1 ANODE  
 2 CATHODE  
 3 NC  
 4 EMITTER  
 5 COLLECTOR  
 6 BASE

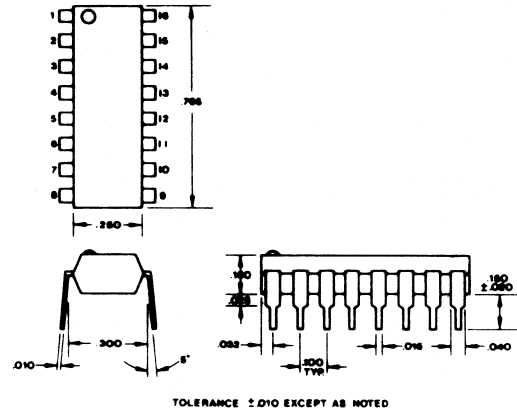
	A	B	C	D	E	F	G	H	J	K
PH31	.355	.300	.008	5°	.135	.010	.100	.013	.035	.110
	.375		.012		.180	.030		.019	.045	.130
PH31a	.318	.291			.137	.009	.100	.009		.070
	.334	.307			MAX	MIN		.017		MIN

**PH32**



TOLERANCE ±.010 EXCEPT AS NOTED

**PH33**

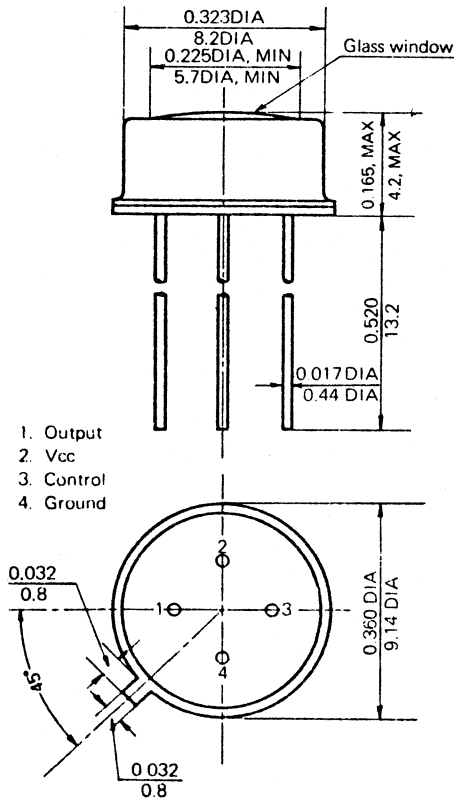


TOLERANCE ±.010 EXCEPT AS NOTED

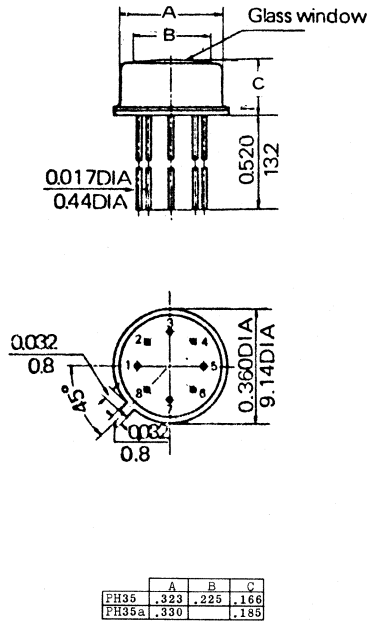
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

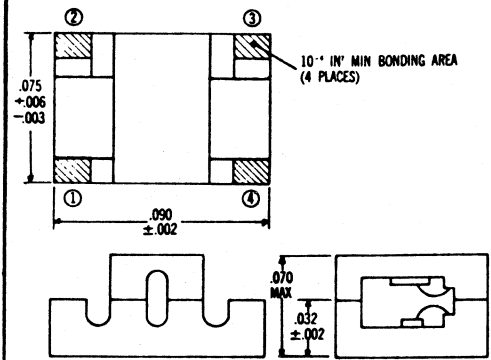
**PH34**



**PH35**



**PH38**

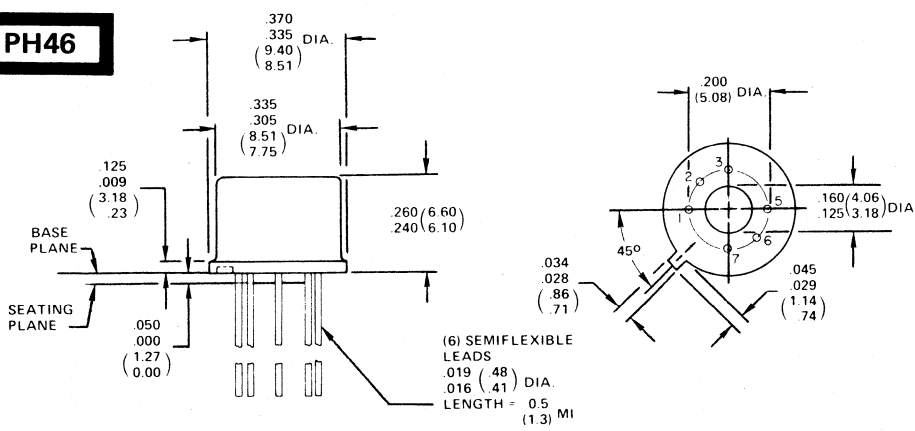


**PH39**

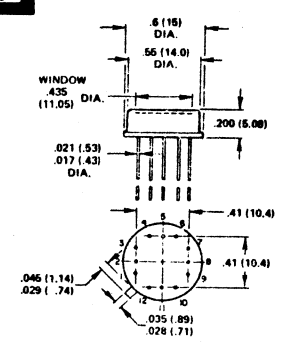
COUPLER SERIES	D	H	L*
PH39 MCL	.360		.870
MCN	.360		1.140
YOD	.360	.510	
MPL	.360	.470	
MTD	.360	.470	

\*AXIAL PACKAGE

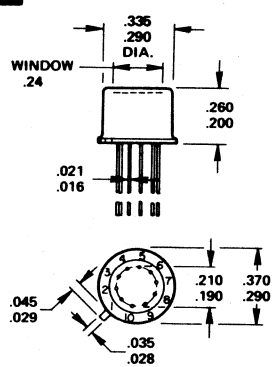
**PH46**



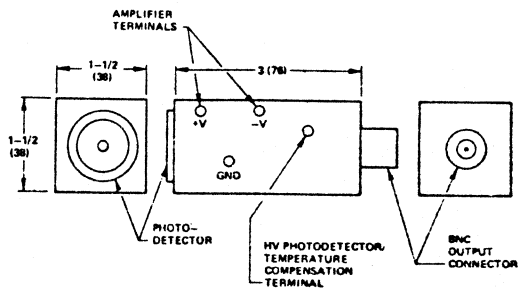
**PH47**



**PH48**



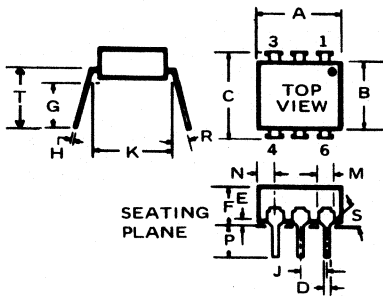
**PH49**



# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

## PH50

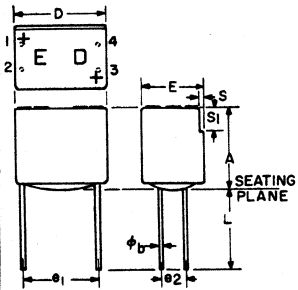


	A	B	C	D	E	F	G	H	J	K	M	N	P	R	S	T	
PH50	.330 .385	.260 .280	.325 MAX	.015 .021	.020 MIN	.160 MAX	.100 MIN	.008 .015	.090 .110	.290 .310	.050 .070	.065 .090			.0° 15°	45° REF	
PH50a	.330 .385	.260 .280	.350 MAX	.015 .020	.020 MIN	.200 MAX	.120 MIN	.008 .012	.090 .110	.300	.050 .070	.065 .095			.0° 15°	45° REF	
PH50b	.330 .350	.225 .280	.340 MAX	.016 .020				.008 .012	.090 .110	.300	.040 .070	.085	.100 MIN				
PH50c	.350	.225	.340	.018				.010		.300	.050						.225
PH50d	.330 .350	.225 .280	.340 MAX	.016 .020	.015 MIN	.200		.008 .012	.090 .110	REF	.040 .070	.085 MAX	.100 MIN	15°			

**NOTES:**

- LEADS MISSING FROM THEIR DESIGNATED POSITIONS SHALL BE COUNTED WHEN NUMBERING LEADS FOR SPECIAL APPLICATIONS.
- INSTALLED POSITION OF LEAD CENTERS.
- OVERALL INSTALLED DIMENSION.
- BASED ON A .035" DIA. MOUNTING HOLE.
- APPLIES TO LEADS PRIOR TO INSTALLATION

## PH51

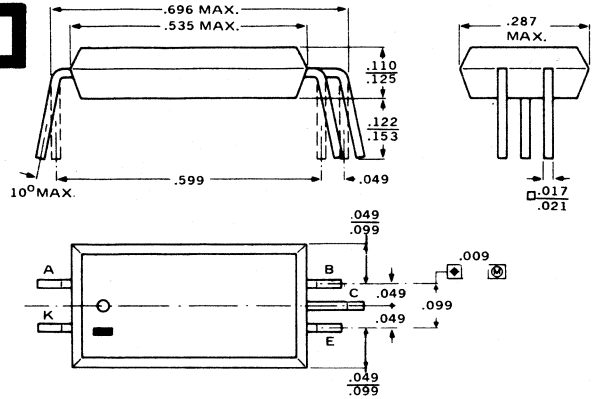


SYMBOL	INCHES		MILLIMETERS		NOTES
	MIN.	MAX.	MIN.	MAX.	
A		.350		8.89	
phi b	.016	.019	.407	.482	I
D		.375		9.52	
phi 1	.285	.315	7.24	8.00	
phi 2	.090	.110	2.29	2.79	
E		.250		6.35	
L	.300		7.62		I
S	.010	.020	.26	.50	
Si	.085	.105	2.16	2.66	

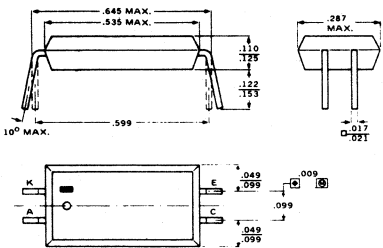
**NOTES:**

- FOUR LEADS. LEAD DIAMETER CONTROLLED BETWEEN .050" (1.27MM) FROM THE SEATING PLANE AND THE END OF THE LEADS.

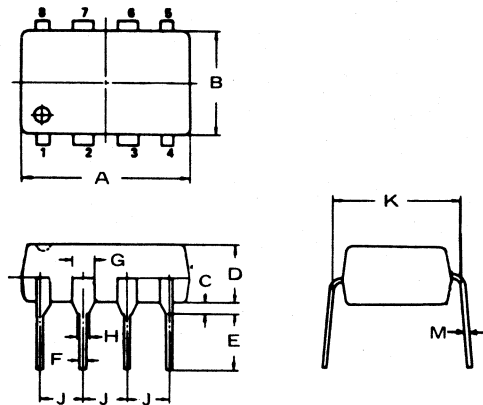
## PH54



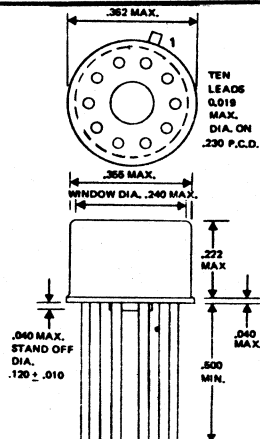
## PH55



## PH56



## PH57



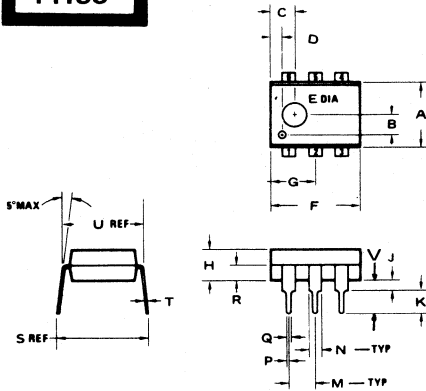
	A	B	C	D	E	F	G	H	J	K	M
PH56	.366 .405	.232 .271	.015 .039	.118 .157	.118 .157	.017 .017	.041 .053		.099	.280 .319	
PH56a	.393 MAX	.256 MAX	.020 MIN	.157 MAX	.100 MIN	.014 .026	.041 .053		.100	.290 .310	.008 .014
PH56b	.380	.240	.031	.143	.106	.019	.047		.100	.300	.009
PH56c	.400 MAX	.240 .260	.020 MIN	.180 MAX	.125 MIN	.015 .021	.070 MAX	.033 MIN	.100 TYP	.300 TYP	.008 .014



# 49. OUTLINE DRAWINGS

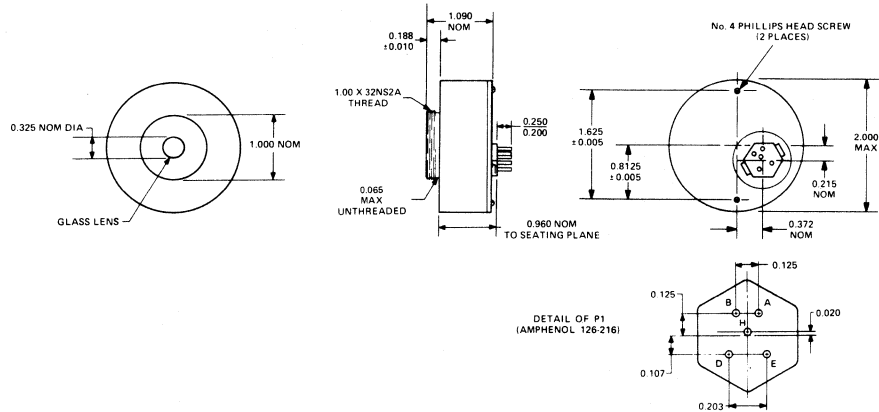
IN DRAWING NUMBER  
SEQUENCE

## PH58

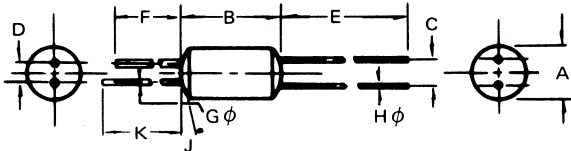


	A	B	C	D	E	F	G	H	J	K	M	N	P	Q	R	S	T	U	V
PH58	.250	.078	.090	.045	.092	.340	.170	.120	.040 MAX	.090	.100	.050	.009	.016 .020	.060	.345 MAX	.009 .011	.302	
PH58a	.240					.330 .370		.180	.020 MIN	.125 MIN	.100	.033 MIN	.021	.015 .021		.300 .350	.008 .014	.300	
PH58b						.350		.125					.060	.018			.010	.300	.225
PH58c	.245 .255					.345 .355	.172 .177	.180	.020 MIN	.125 MIN	.100 TYP			.015 .021		.300 .350	.008 .012	.300 TYP	.145 MIN
PH58d	.250			.045		.340	.170	.120	.032	.150	.100	.050		.015 .021		.340 TYP	.008 .012	.300 TYP	.182
PH58e	.250					.350		.135				.050		.018			.010	.300	

## PH62

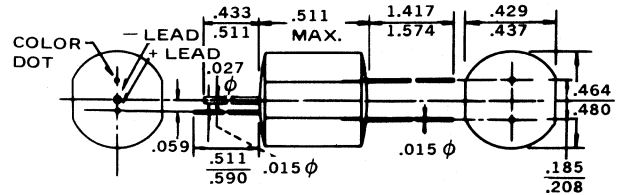


## PH64

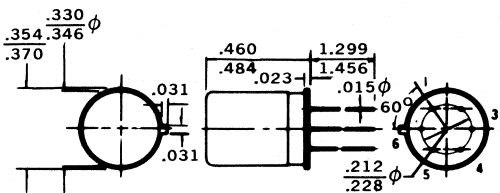


	A	B	C	D	E	F	G	H	J	K	DOT	
PH64	.259 .275 MAX	.551 .141	.125 .107	.092 1.614	1.535 .354	.275	.017	.011				
PH64a	.311 .321	1.173 1.203	.195 .205	.182 .192	1.00	1.00	.027 .029	.024 .026	.010 .020	.393 .472	CELL SIDE	

## PH65

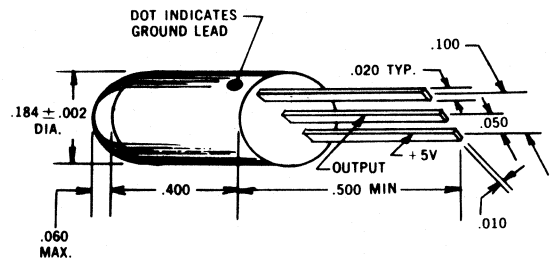


## PH66



## PH67

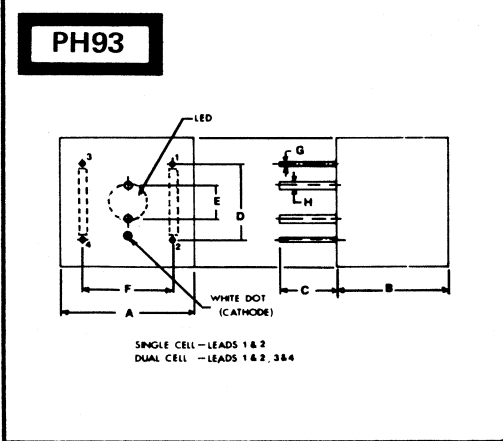
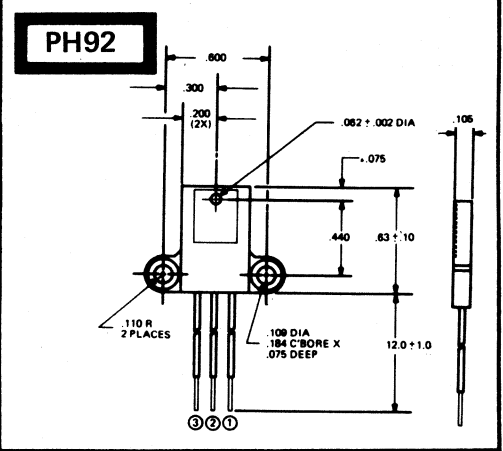
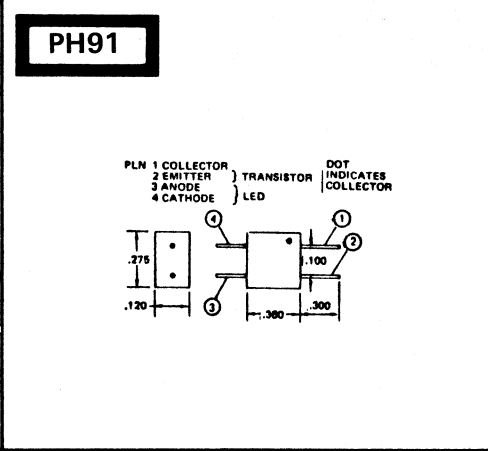
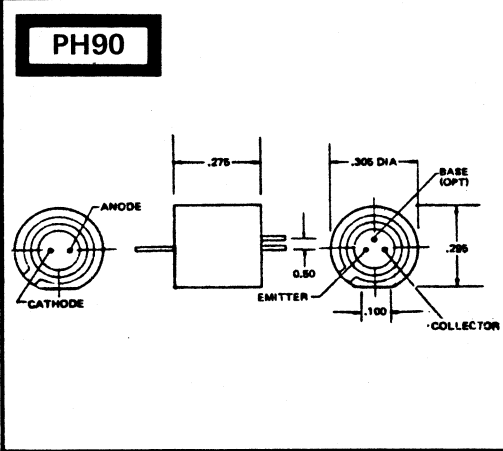
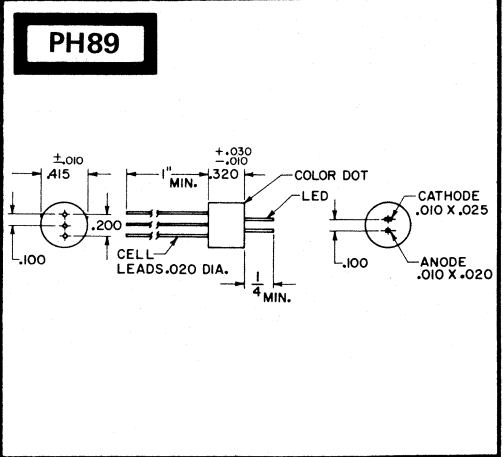
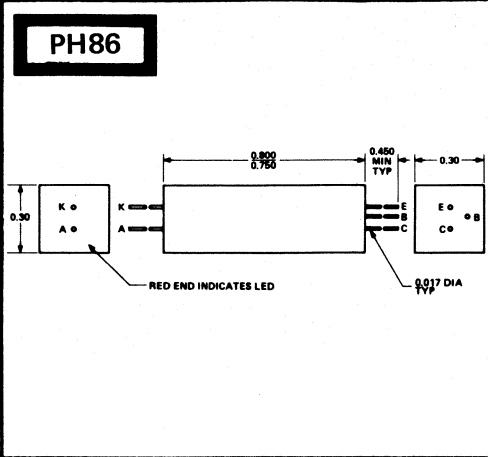
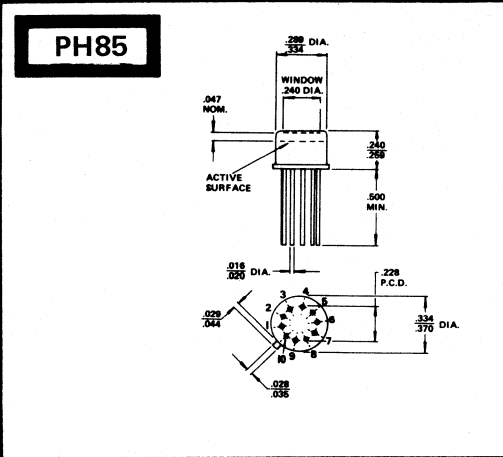
LENS MATERIAL: MOLDED CLEAR EPOXY



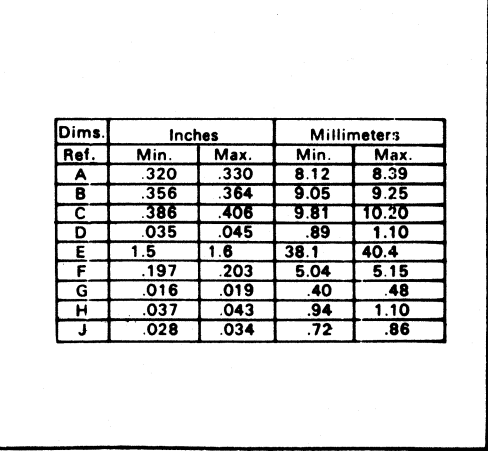
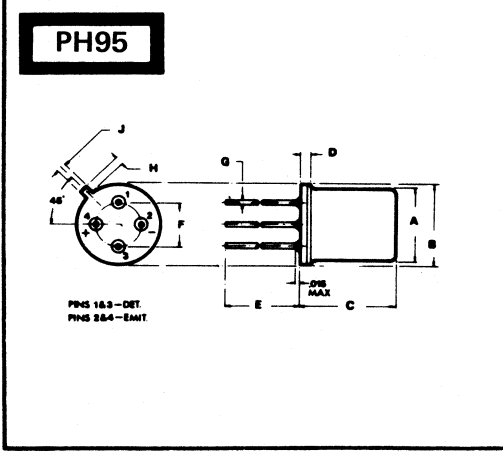
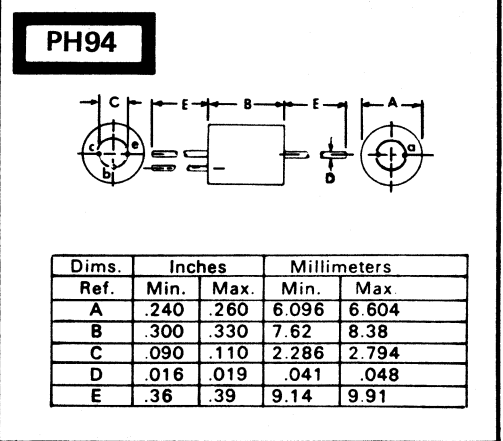


# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

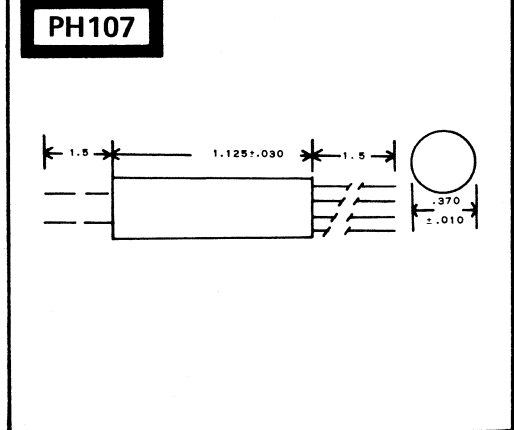
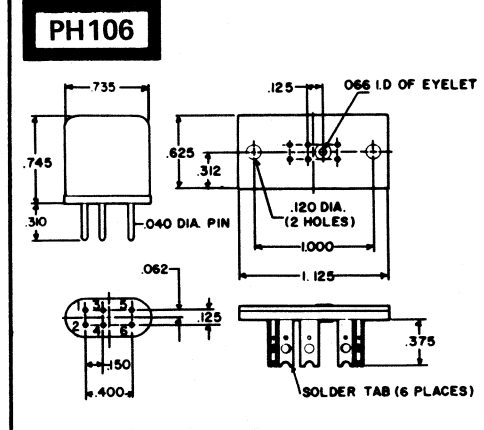
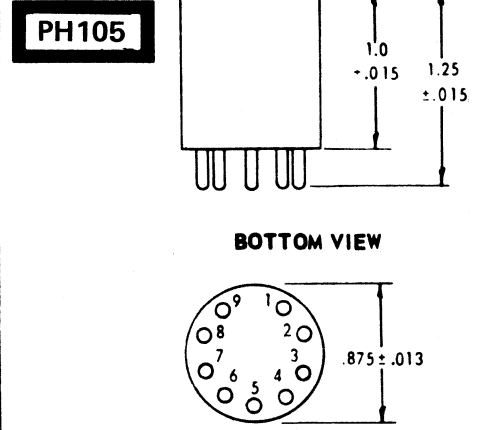
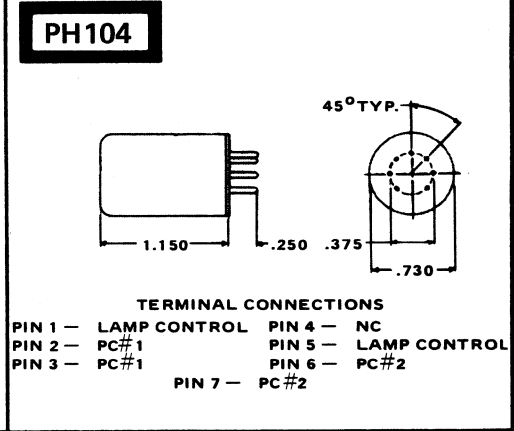
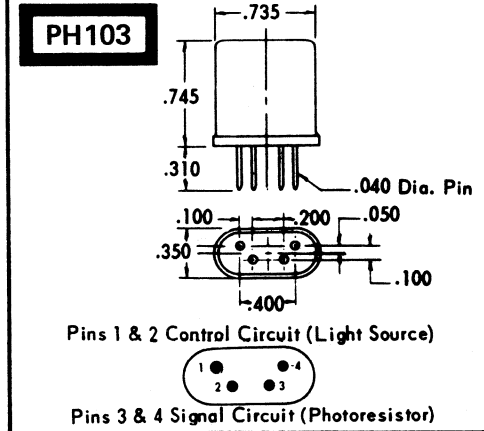
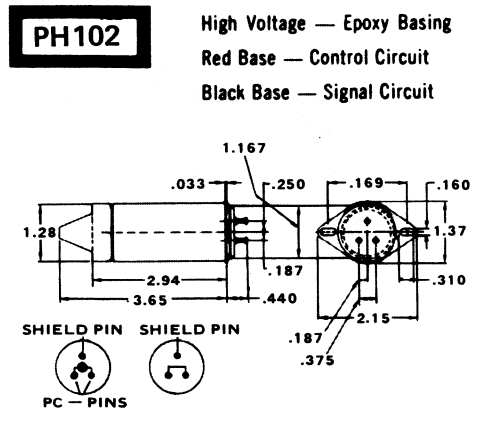
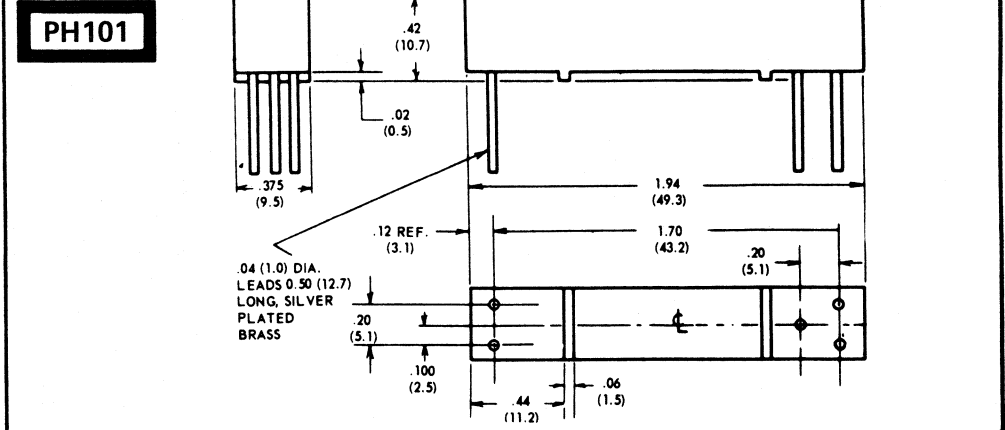
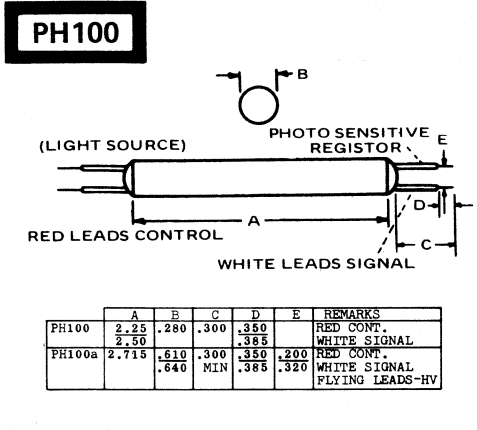
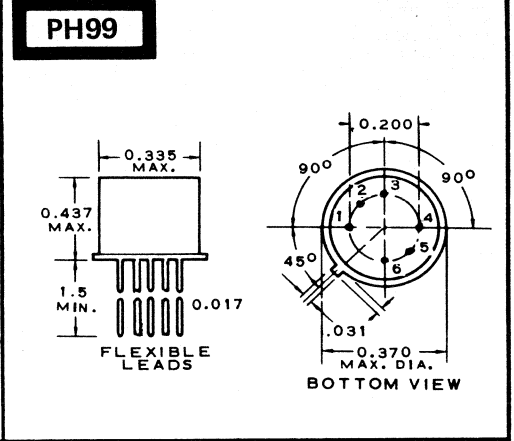
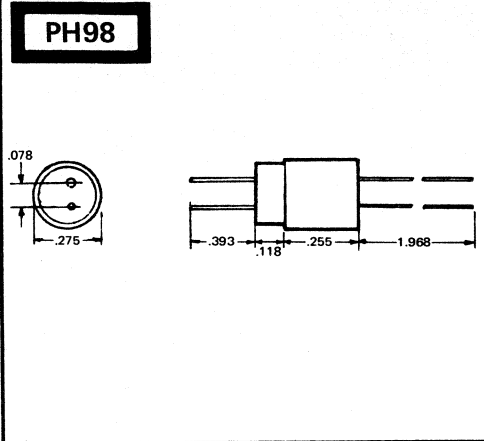
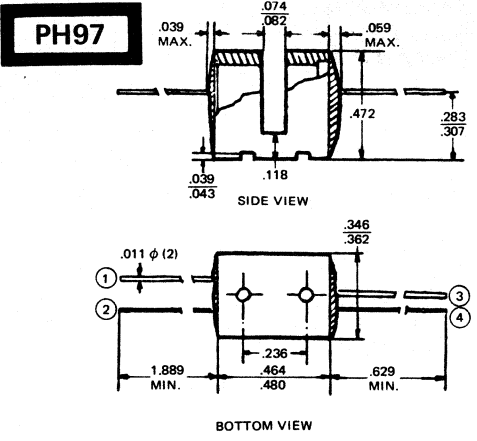


Dims. Ref.	Inches		Millimeters	
	Min.	Max.	Min.	Max.
A	.743 Sq.	.757 Sq.	18.95 Sq.	19.65 Sq.
B	.618	.632	15.80	16.55
C	.31 Nominal		8 Nominal	
D	.418	.432	10.80	11.00
E	.178	.192	4.52	4.88
F	.493	.507	12.45	12.85
G	.024	.026	.61	.64
H	.0385	.0415	.99	1.04



# 49. OUTLINE DRAWINGS

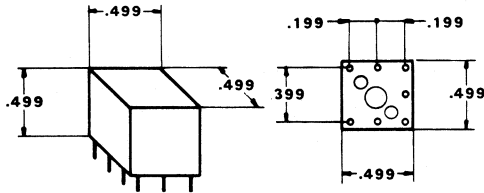
IN DRAWING NUMBER  
SEQUENCE



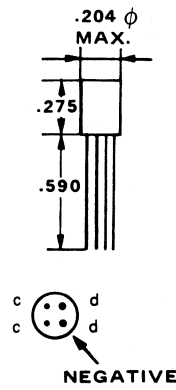
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

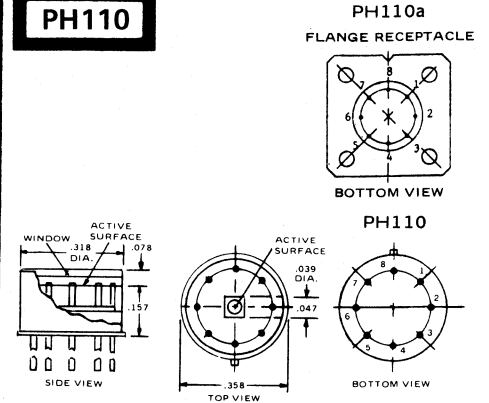
**PH108**



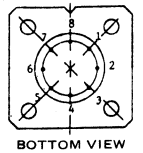
**PH109**



**PH110**

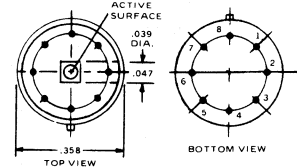


**PH110a**  
FLANGE RECEPTACLE



BOTTOM VIEW

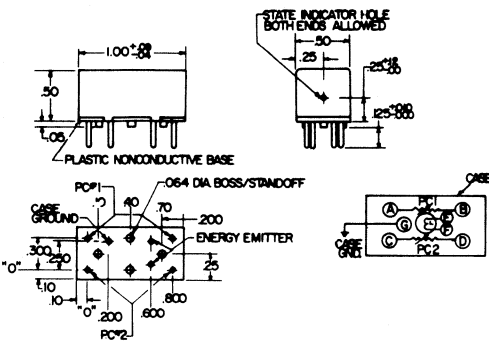
**PH110**



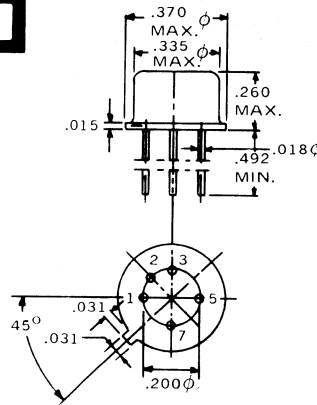
TOP VIEW

BOTTOM VIEW

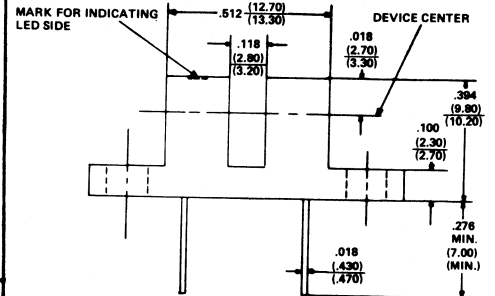
**PH111**



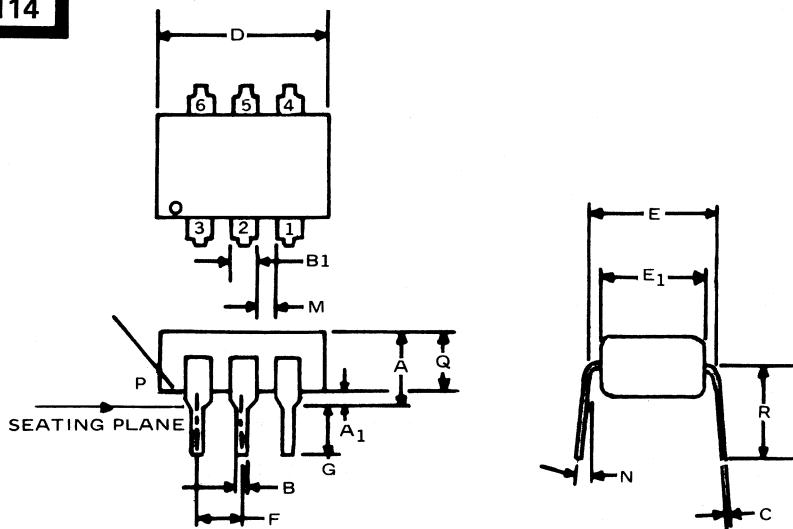
**PH112**



**PH113**

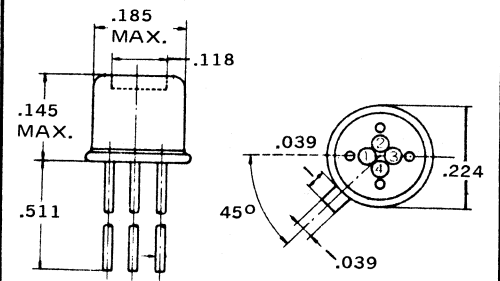


**PH114**



	A	A1	B	B1	C	D	E	E1	F	G	M	N	P	Q	R
PH114	.185 MAX	.020 MIN	.025 MAX	.063 MAX	.007 MAX	.370 .390	.290 .310	.240 .260	.090 .110	.105 MIN	.035 MIN	15° MAX	50° TYP		
PH114a			.018 MAX	.050 MAX	.010 MAX	.350 .300	.300 .250	.250 .200	.090 .110	.100 MIN		15° MAX	NA	.135	.225
PH114b	.200 MAX	.015 MIN	.016 MAX	.040 MAX	.008 MAX	.330 .350	.300 REF	.225 .280	.090 .110	.100 MIN		15° MAX			

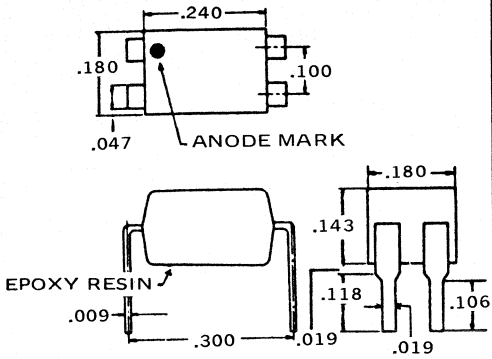
**PH115**



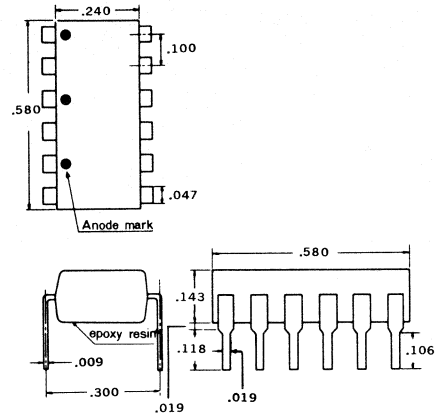
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

**PH116**

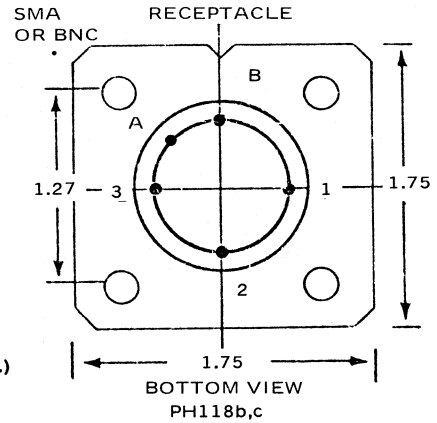
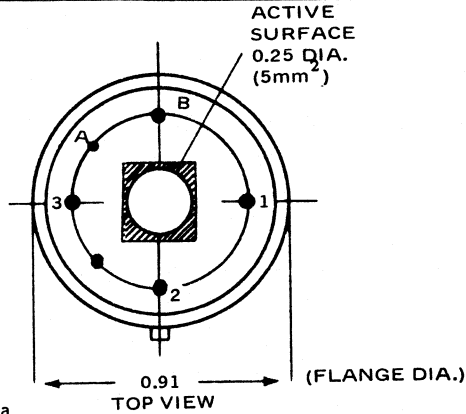
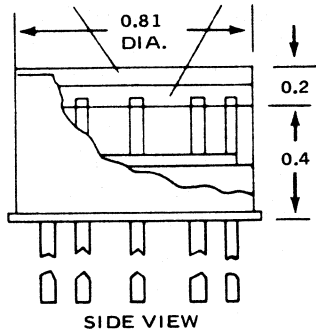


**PH117**



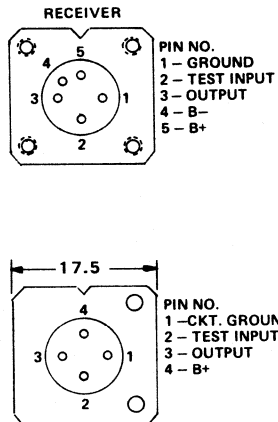
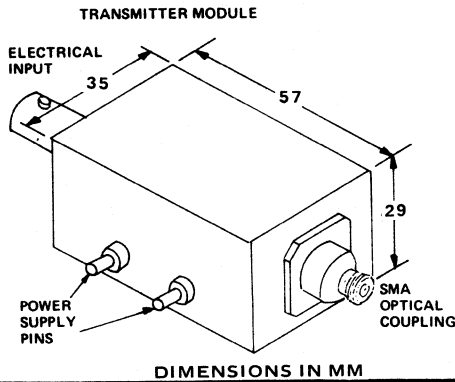
**PH118**

WINDOW ACTIVE SURFACE

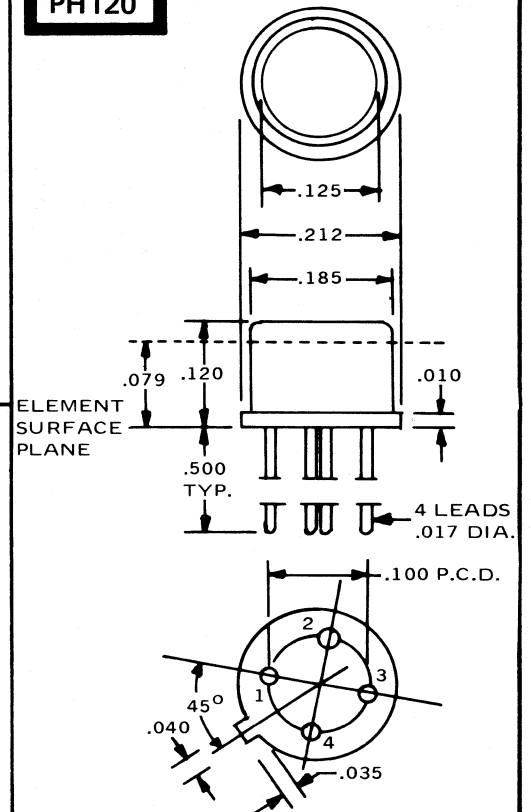


PH118, PH118b: A ABSENT, B = PIN 4 PH118,a  
PH118a, PH118c: A = PIN 4; B = PIN 5

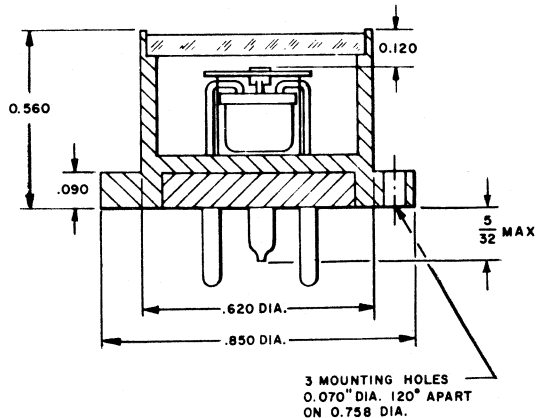
**PH119**



**PH120**



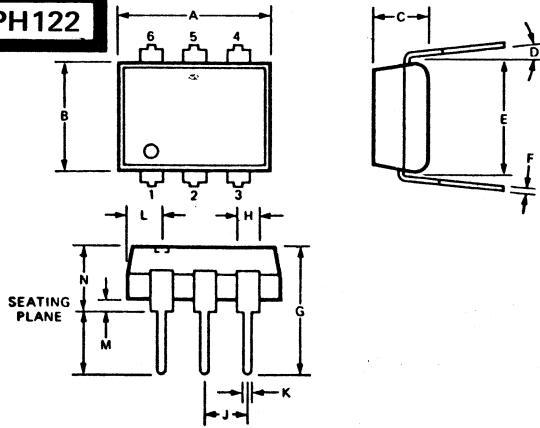
**PH121**



# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

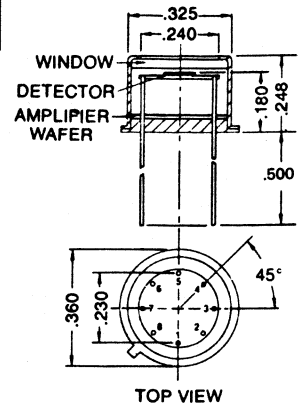
**PH122**



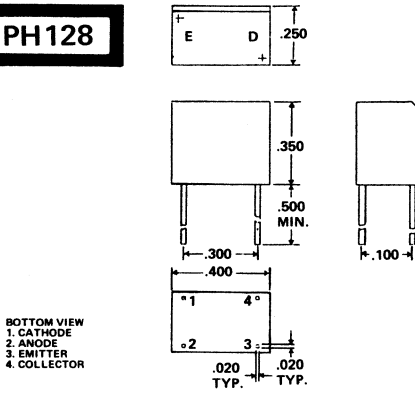
SYMBOL	INCHES MAX.	mm MAX.	NOTES
A	.365	9.27	
B	.270	6.73	
C	.130	3.18	
D	15°	15°	
E	300 Ref.	7.62 Ref.	1
F	.014	0.36	
G	.325	8.26	
H	.070	1.78	
J	.110	2.79	
K	.022	0.56	
L	.085	2.16	2
M			3
N	.175	4.45	4
P			3

NOTES  
1. INSTALLED POSITION OF LEAD CENTERS  
2. FOUR PLACES  
3. OVERALL INSTALLED POSITION  
4. THESE MEASUREMENTS ARE MADE FROM THE SEATING PLANE

**PH123**

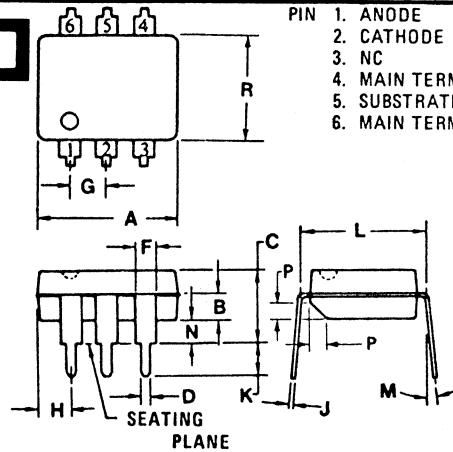


**PH128**



BOTTOM VIEW  
1. CATHODE  
2. ANODE  
3. EMITTER  
4. COLLECTOR

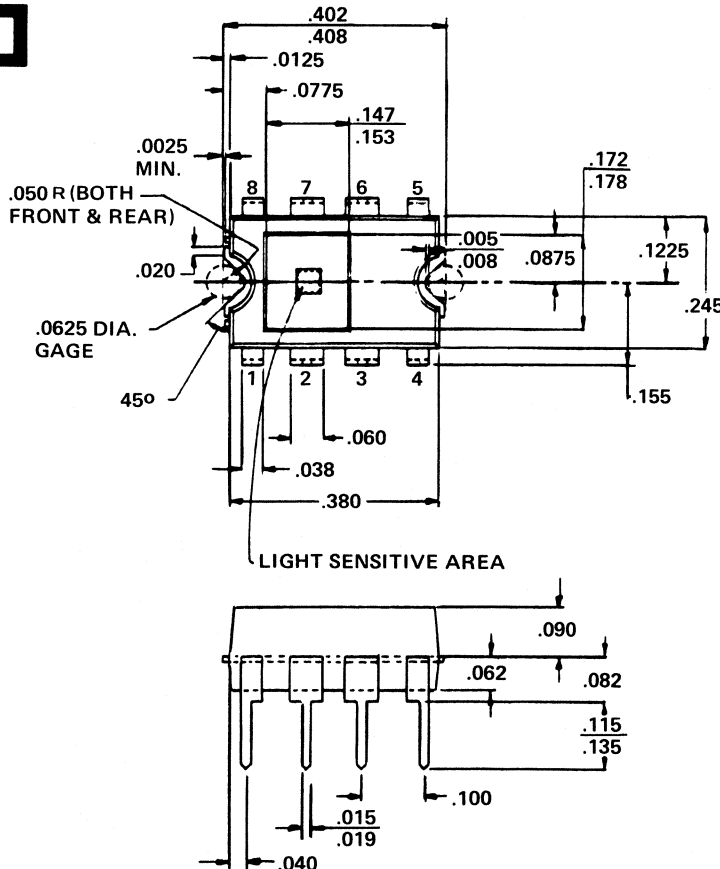
**PH129**



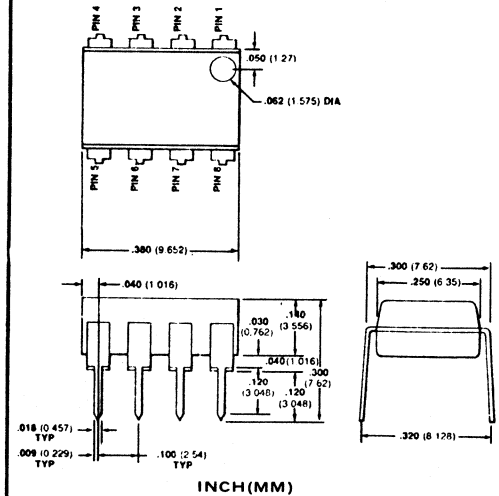
PIN 1. ANODE  
2. CATHODE  
3. NC  
4. MAIN TERMINAL  
5. SUBSTRATE  
6. MAIN TERMINAL

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	8.13	8.89	0.320	0.350
B	1.27	2.03	0.050	0.080
C	2.92	5.08	0.115	0.200
D	0.41	0.51	0.016	0.020
F	1.02	1.78	0.040	0.070
G	2.54	BSC	0.100	BSC
H	1.02	2.16	0.040	0.085
J	0.20	0.30	0.008	0.012
K	2.54	3.81	0.100	0.150
L	7.62	BSC	0.300	BSC
M	0°	15°	0°	15°
N	0.38	2.54	0.015	0.100
P	0.81	0.97	0.032	0.038
R	6.10	6.60	0.240	0.260

**PH130**



**PH131**

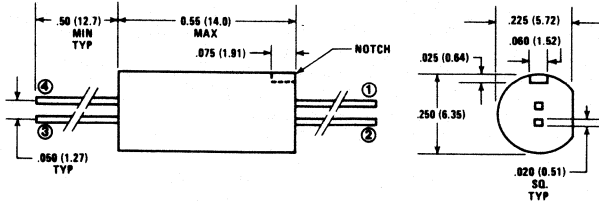




# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

**PH135**

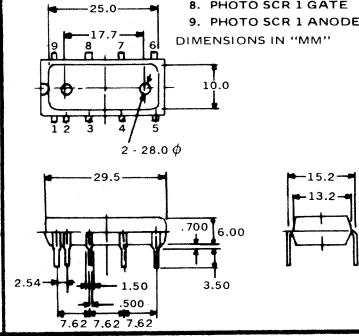


DIMENSIONS ARE IN INCHES (MILLIMETERS)  
 0.XX ± 0.01 0.X ± 0.25  
 0.XXX ± 0.005 0.XX ± 0.13

PIN 1 INDICATED BY NOTCH

**PH136**

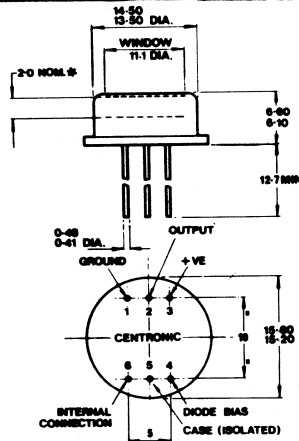
1. LED<sub>1</sub> ANODE
2. LED<sub>1</sub> CATHODE & LED<sub>2</sub> ANODE
3. LED<sub>2</sub> CATHODE
4. NO CONNECTION
5. NO CONNECTION
6. PHOTO SCR 1 CATHODE & SCR 2 ANODE
7. PHOTO SCR 2 GATE
8. PHOTO SCR 1 GATE
9. PHOTO SCR 1 ANODE & SCR 2 CATHODE



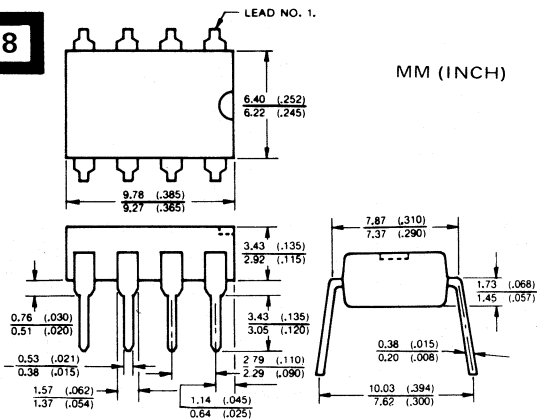
DIMENSIONS IN "MM"

**PH137**

(all dimensions in mm) Dimension\* refers to distance between window and active surface.

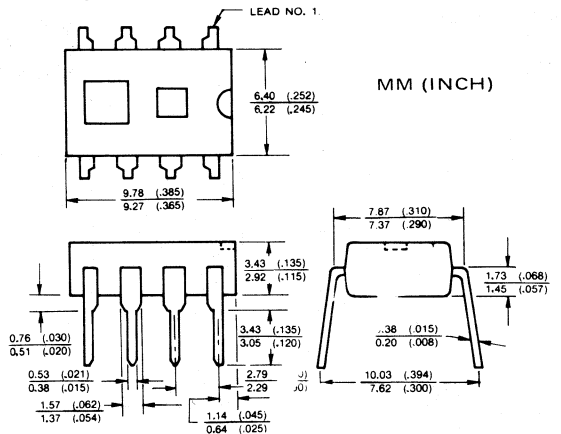


**PH138**



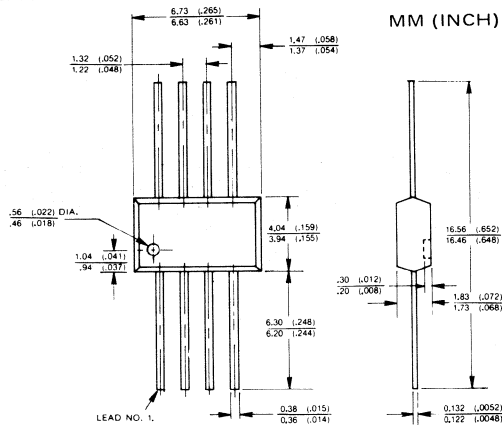
MM (INCH)

**PH139**



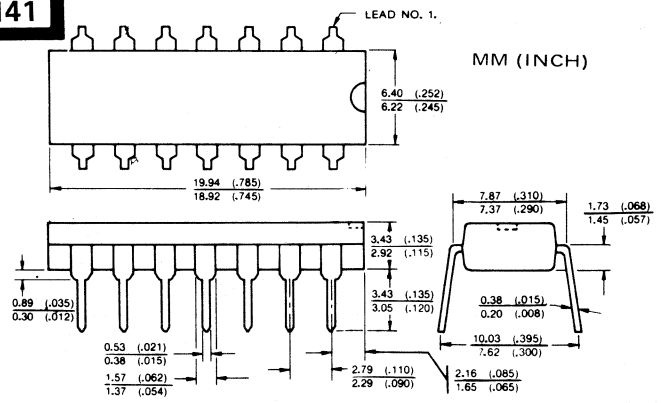
MM (INCH)

**PH140**



MM (INCH)

**PH141**

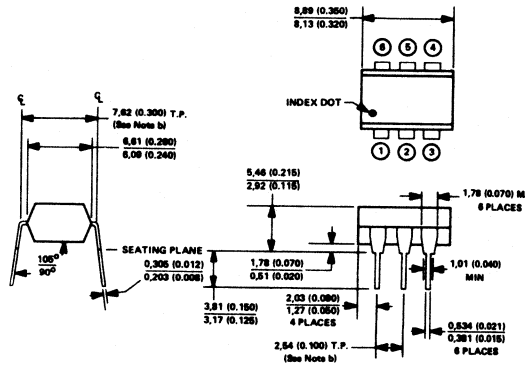


MM (INCH)

# 49. OUTLINE DRAWINGS

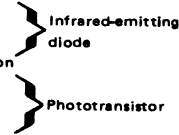
IN DRAWING NUMBER SEQUENCE

## PH142

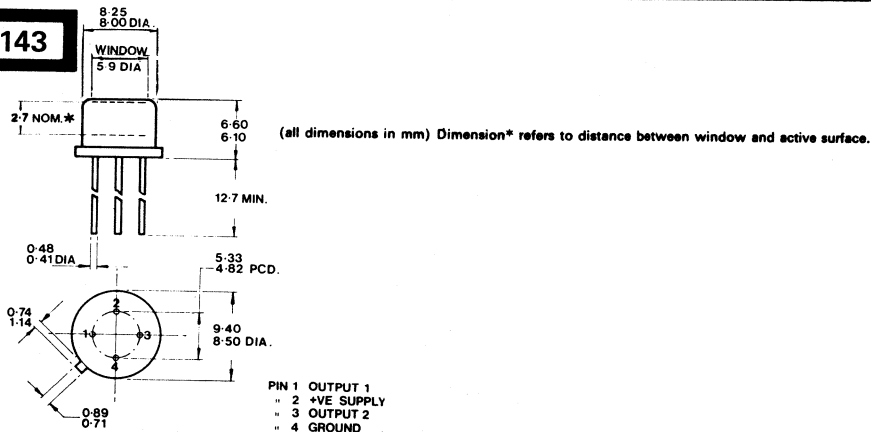


### NOTES:

- All linear dimensions are in millimeters, and parenthetically in inches.
- Leads are within 0.13 mm (0.005 inch) radius of true position (T.P.) with maximum material condition and unit installed.
- Pin 1 identified by index dot.
- Terminal connections:
  - 1. Anode
  - 2. Cathode
  - 3. No internal connection
  - 4. Emitter
  - 5. Collector
  - 6. Base PH142a N.C.

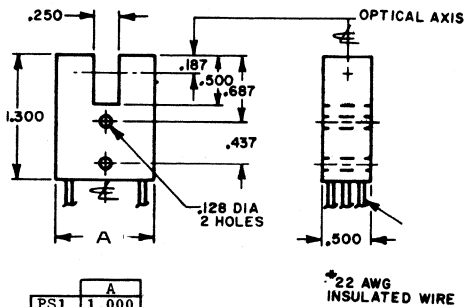


## PH143



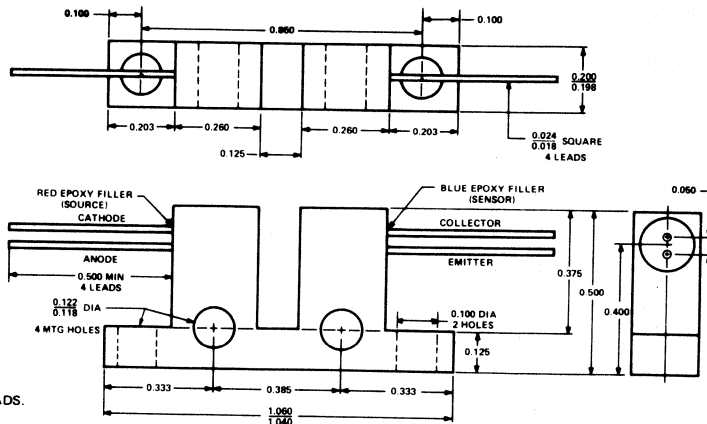
- PIN 1 OUTPUT 1  
 " 2 +VE SUPPLY  
 " 3 OUTPUT 2  
 " 4 GROUND

## PS1



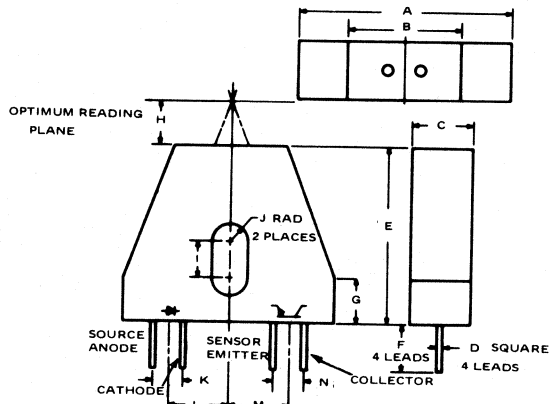
	A
PS1	1.000
PS1a	.950

## PS2



PS2a - HAS ROUND LEADS.

## PS3

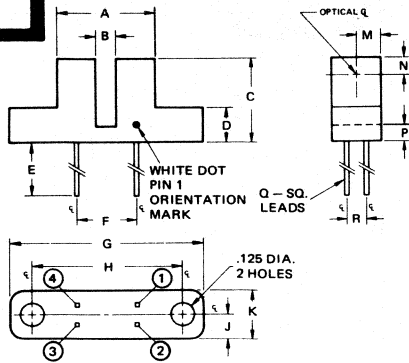


	A	B	C	D	E	F	G	H	I	J	K	L	M	N
PS3	.690	.375	.200	.018	.590	.150	.140	.100	.125	.060	.090	.200	.200	.090
	.710			.024	.610	MIN	.160	.200		.064	.110			.110
PS3a	.700	.375	.200	.020	.600	.150	.150	.150	.125	.062	.100	.200	.200	.100

# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

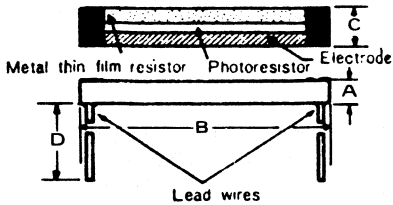
**PS4**



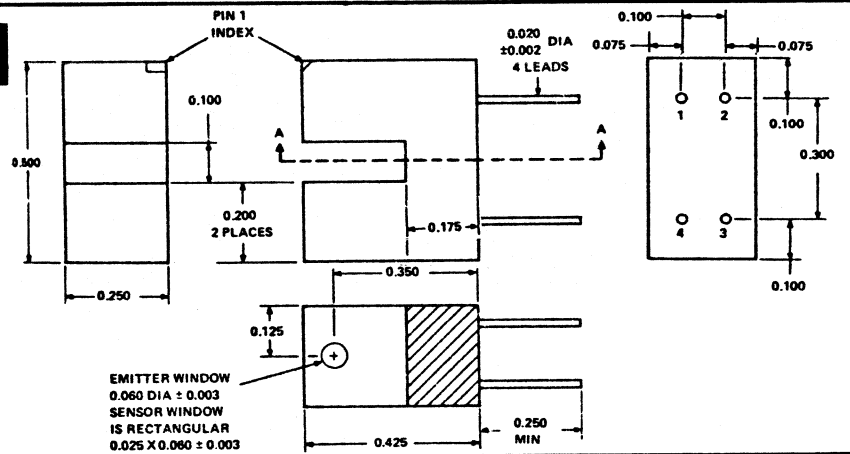
	A	B	C	D	E	F	G	H	J	K	M	N	P	Q	R
PS4	.500	.100	.425	.175	.500 MIN	.285 .315	1.000	.745 .755	.125	.250	.125	.075	.175	.017 .023	.100
PS4a	.480 .490	.120 .130	.420 .430	.095 .105	.295 .305	.215 .225	.955 .985	.745 .755	.120 NOM	.245 .255	.120 NOM	.110 NOM	.075 .085	.015 .025	.100 NOM
PS4b		.125	.500	.195	1.50	.300	1.05				.150				.100
PS4c	.496	.120 .139	.401	.106	.299	.216	.968	.751		.244	.120 .139				.100
PS4d		.098	.394	.138	.394	.295	.964	.748	.122	.244					.102
PS4e	.512	.118	.394	.098	.280 MIN	.280	.984	.748		.244		.094	.098	.018	.100

**PS5**

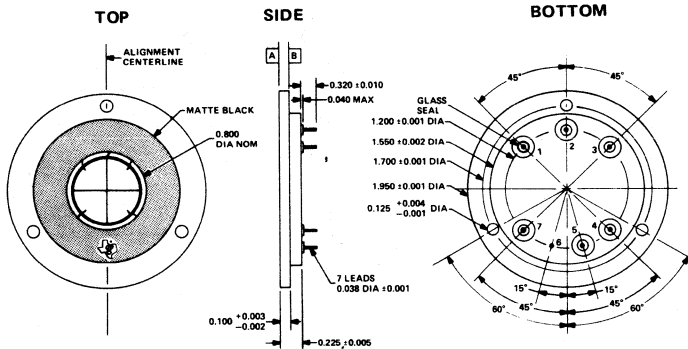
	A	B	C	D
PS5	.090	.980	.140	1.29
PS5a	.120	1.86	.390	1.29
PS5b	.120	3.92	.390	1.29



**PS6**



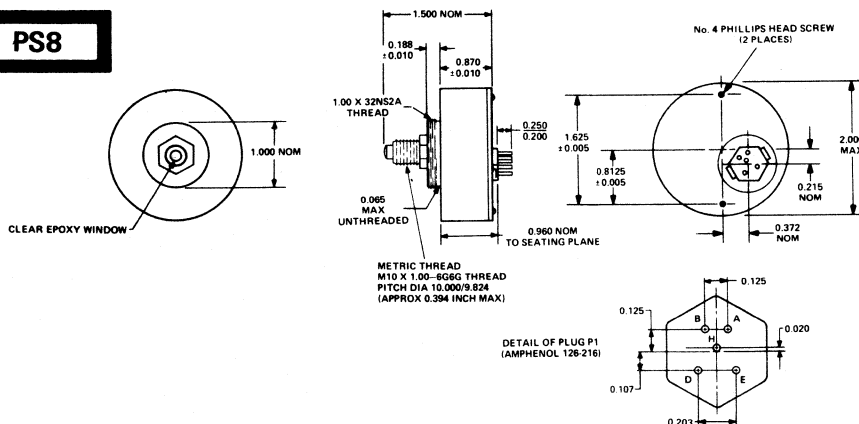
**PS7**



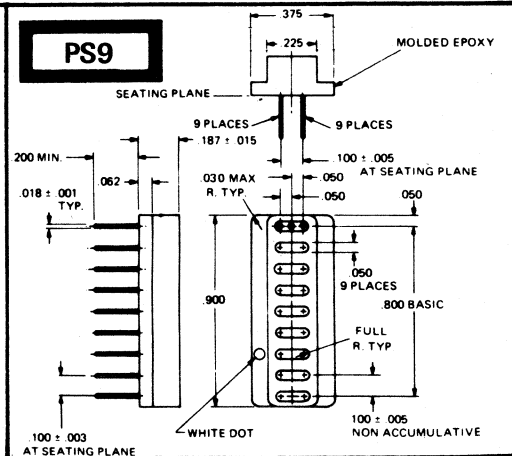
- 1 QUADRANT I CATHODE
- 2 GUARD RING CATHODE
- 3 QUADRANT II CATHODE
- 4 QUADRANT III CATHODE
- 5 COMMON ANODE
- 6 CASE
- 7 QUADRANT IV CATHODE

The active elements are electrically insulated from the case.

**PS8**



**PS9**

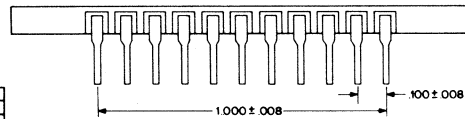
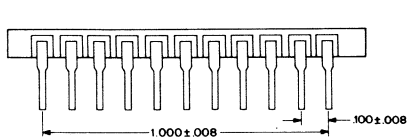
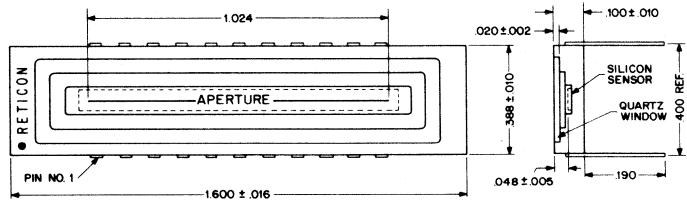
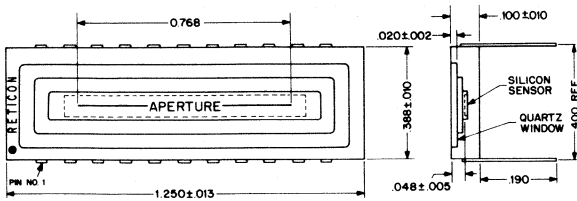
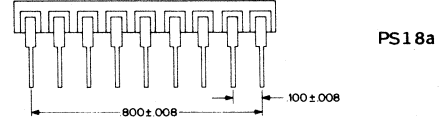
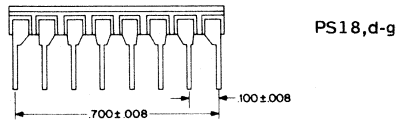
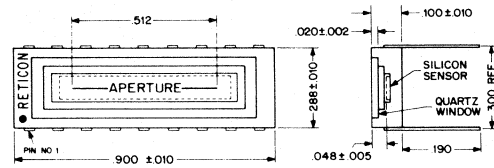
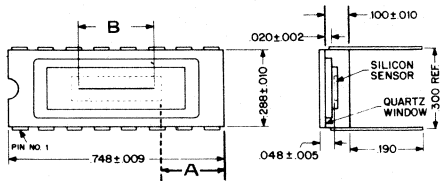




# 49. OUTLINE DRAWINGS

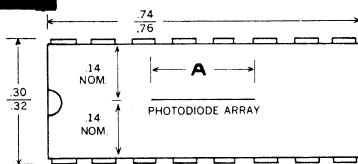
IN DRAWING NUMBER SEQUENCE

## PS18

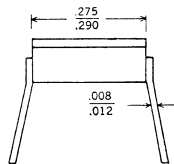
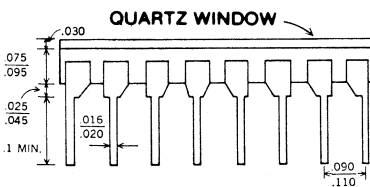


	A	B
PS18	.256	.256
PS18d	.277	
PS18e	.249	
PS18f	.177	
PS18g	.121	

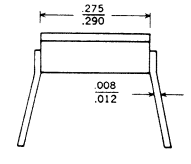
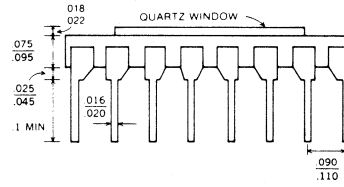
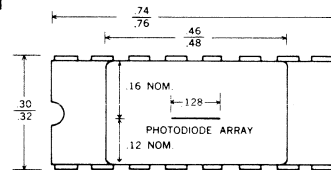
## PS19



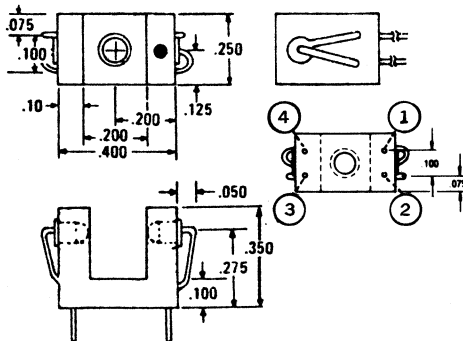
	A
PS19	.256
PS19a	.320



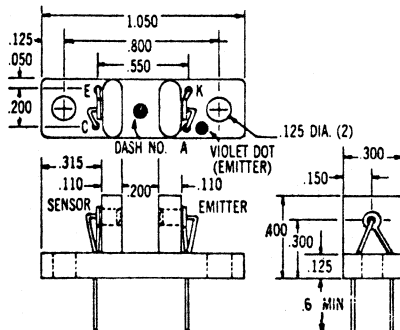
## PS20



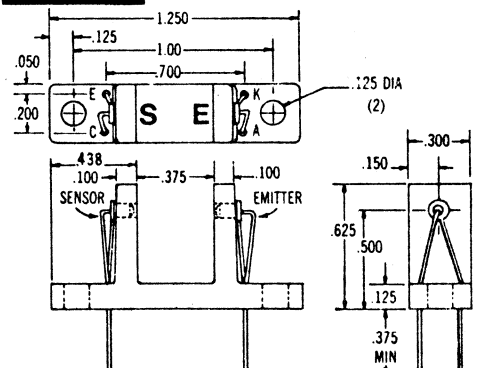
## PS21



## PS22



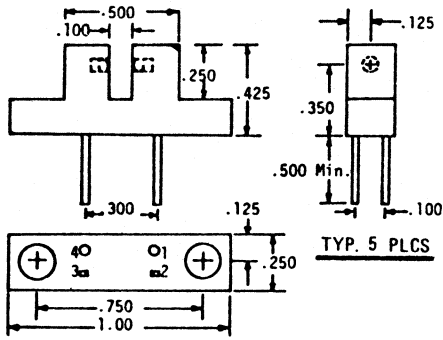
## PS23



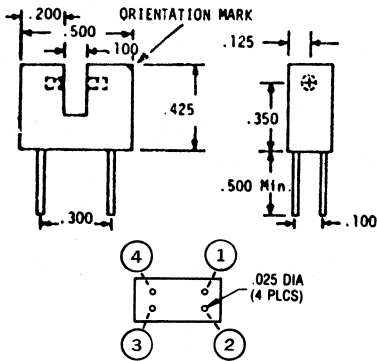
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

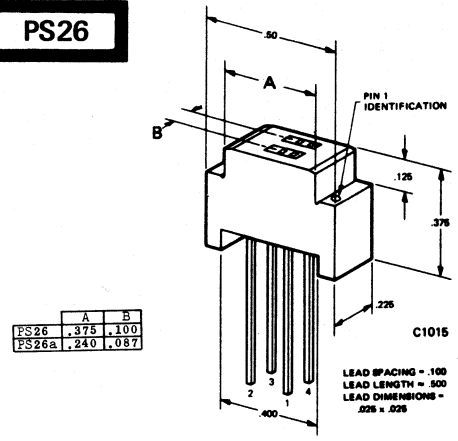
**PS24**



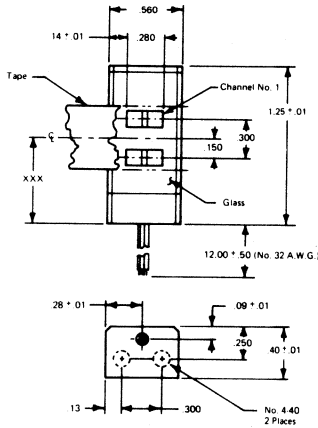
**PS25**



**PS26**

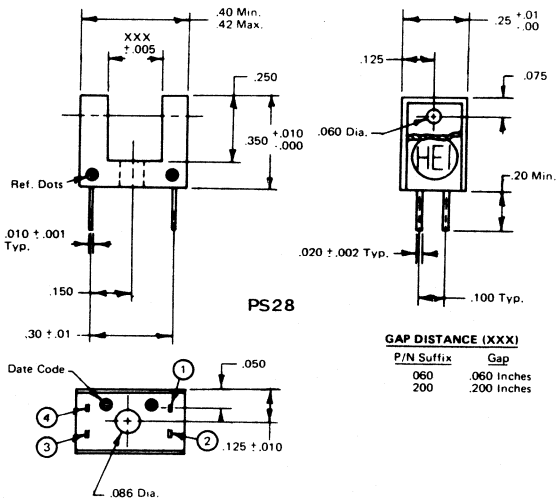


**PS27**



"XXX" - Variable from .590" to .950".  
 (1) "XXX" is the dimension to centerline of tape.  
 (2) For single channel "XXX" is the dimension to the centerline of the sensor.

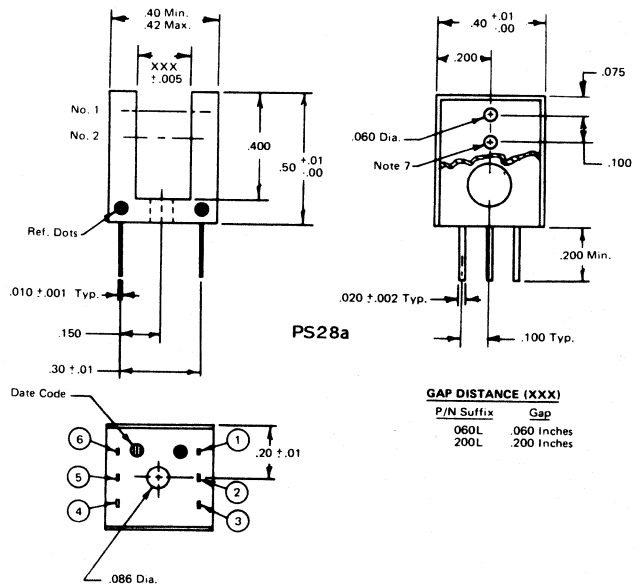
**PS28**



**GAP DISTANCE (XXX)**

P/N Suffix	Gap
060	.060 Inches
200	.200 Inches

P/N SUFFIX W HAS 12" LONG AWG NO. 28 WIRES



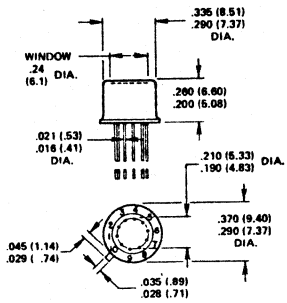
**GAP DISTANCE (XXX)**

P/N Suffix	Gap
060L	.060 Inches
200L	.200 Inches

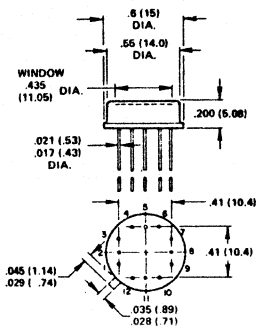
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

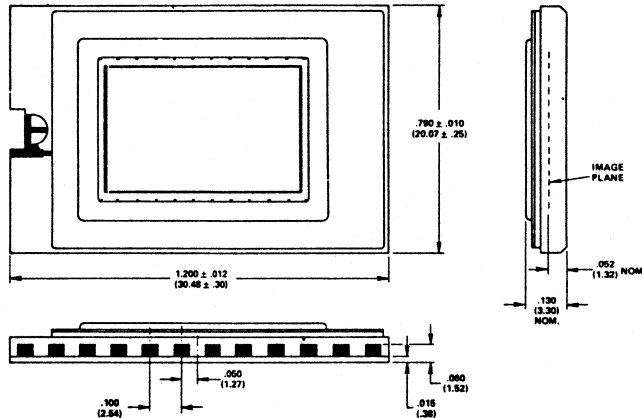
**PS29**



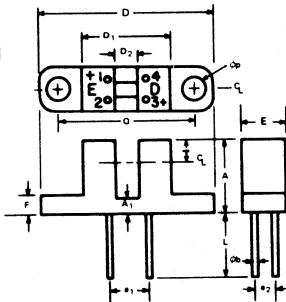
**PS30**



**PS31**



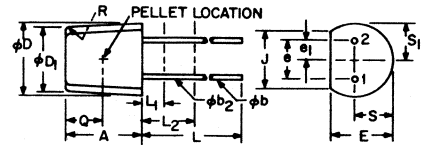
**PS32**



SYMBOL	INCHES		MILLIMETERS		NOTES
	MIN.	MAX.	MIN.	MAX.	
A	.390	.400	9.91	10.16	
A <sub>1</sub>	.075	.085	1.91	2.15	
φb	.016	.019	.407	.482	1
D	.954	.984	24.24	24.99	
D <sub>1</sub>	.475	.495	12.07	12.57	
D <sub>2</sub>	.120	.130	3.05	3.30	
e <sub>1</sub>	.206	.236	5.21	5.96	
e <sub>2</sub>	.090	.110	2.29	2.79	
E		.250		6.35	
F	.095	.105	2.42	2.66	
L	.300		7.62		1
φp	.120	.130	3.05	3.30	
Q	.745	.755	18.93	19.17	
T		.110 NOM.		2.79 NOM.	2

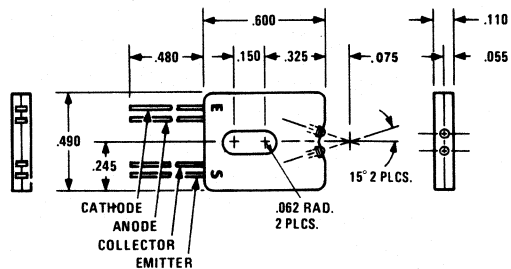
- NOTES:
- Four leads. Lead diameter controlled between .050" (1.27 MM) from the seating plane and the end of the leads.
  - The sensing area falls within a .060" (1.52 MM) square on this centerline.

**PS33**



- NOTES:
- (TWO LEADS) φb<sub>2</sub> APPLIES BETWEEN L<sub>1</sub> AND L<sub>2</sub>. φb APPLIES BETWEEN L<sub>2</sub> AND S<sup>1</sup> (12.70MM) FROM SEATING PLANE. DIAMETER IS UNCONTROLLED IN L<sub>1</sub> AND BEYOND .5" (12.70MM) FROM SEATING PLANE.
  - THE CENTER LINE OF THE ACTIVE ELEMENT IS LOCATED WITHIN ±.020" (.51 MM) OF THE POSITION SHOWN.
  - AS MEASURED WITHIN .050" (1.27MM) OF THE SEATING PLANE.

**PS34**



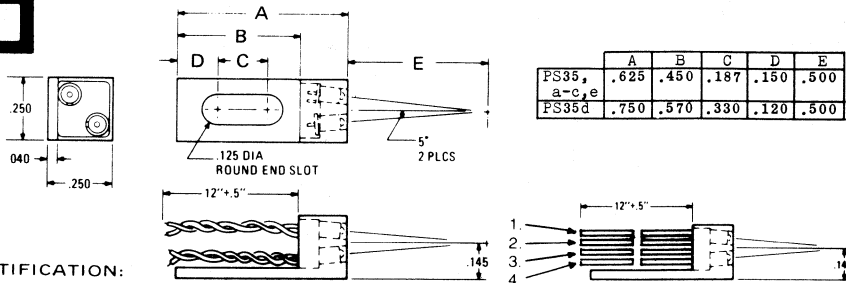
SYMBOL	INCHES		MILLIMETERS		NOTES
	MIN.	MAX.	MIN.	MAX.	
A	.170	.210	4.31	5.34	
φb	.016	.021	.406	.534	1
φb <sub>2</sub>	.016	.019	.406	.483	1
φD	.170	.200	4.31	5.08	
φD <sub>1</sub>	.160	.190	4.06	4.83	
E	.125	.155	3.17	3.94	
e	.095	.105	2.41	2.67	3
e <sub>1</sub>	.045	.055	1.14	1.40	3
J	.135	.170	3.42	4.32	
L	.500		12.70		
L <sub>1</sub>		.050		1.27	1
L <sub>2</sub>	.250		6.35		1
Q	.095	REF.	2.29	REF.	2
R	.055		.12		
S	.080	.105	2.03	2.67	
S <sub>1</sub>	.090	REF.	2.29	REF.	



# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

**PS35**



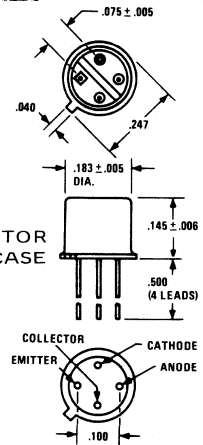
LEAD IDENTIFICATION:

- A. SENSOR FOR PS35; COLLECTOR, BROWN; EMITTER, BLACK
- B. SENSOR FOR PS35a; COLLECTOR, ORANGE; EMITTER, BLACK
- C. SENSOR FOR PS35b; COLLECTOR, YELLOW; EMITTER, BLACK
- D. LED: BLACK=(NEG.); RED=(POS.).

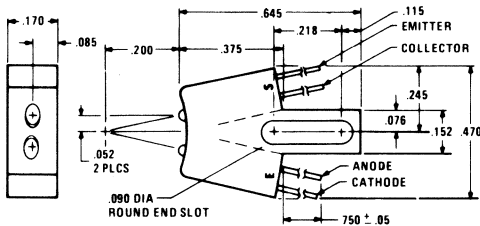
PS35e ONLY

1. LED CATHODE
2. LED ANODE
3. SENSOR COLLECTOR
4. SENSOR EMITTER

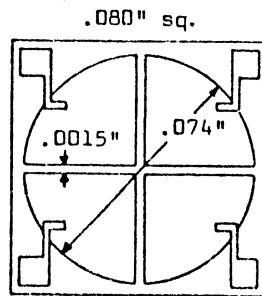
**PS36**



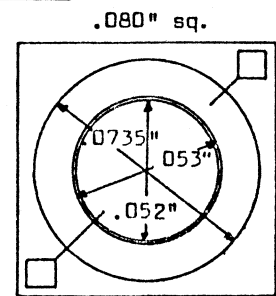
**PS37**



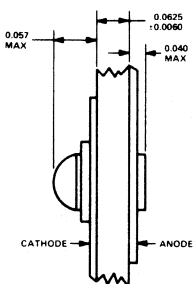
**PS38**



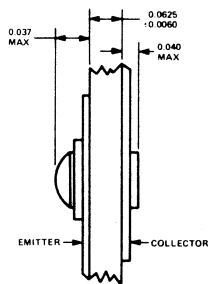
**PS39**



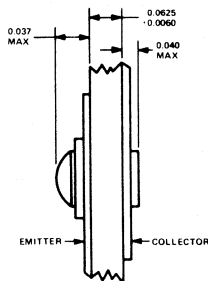
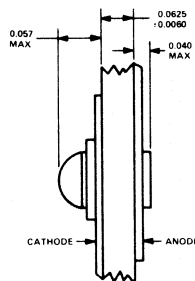
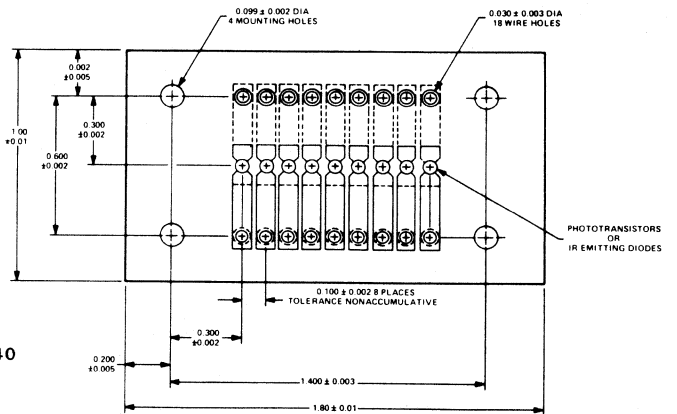
**PS40**



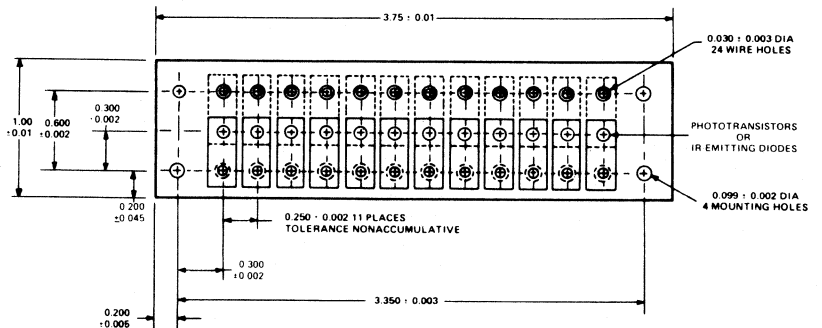
SIDE VIEWS OF ACTIVE ELEMENTS



PS40



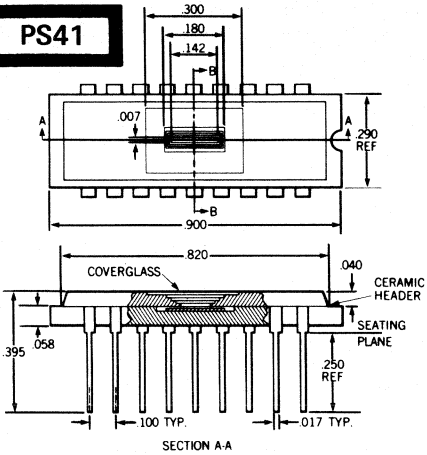
PS40a



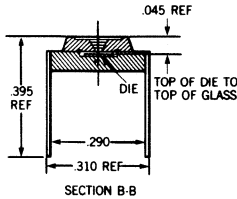
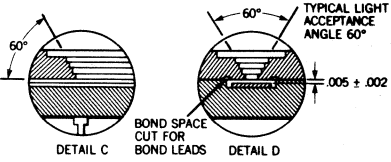
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

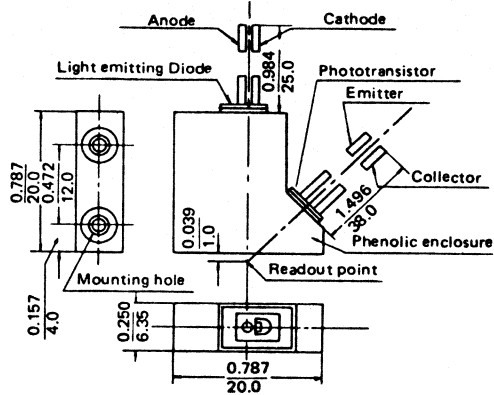
**PS41**



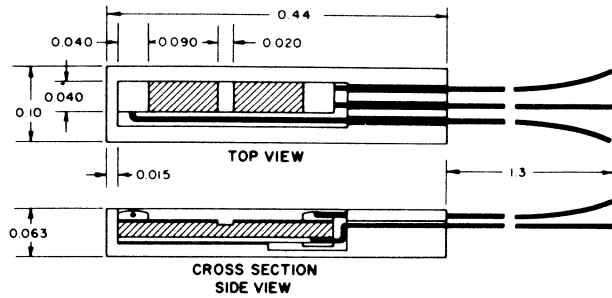
SECTION A-A



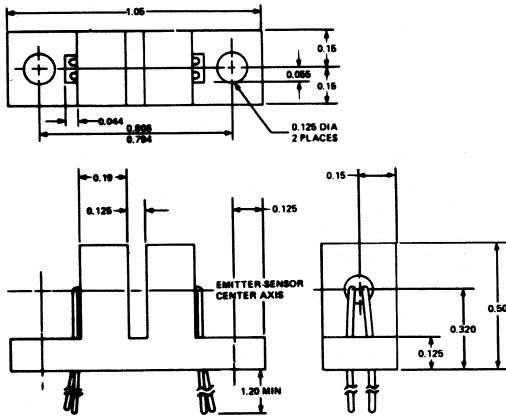
**PS44**



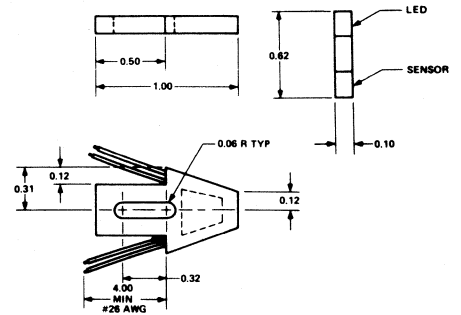
**PS45**



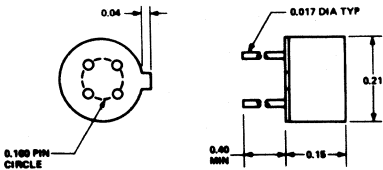
**PS46**



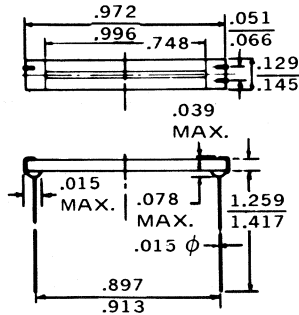
**PS47**



**PS48**



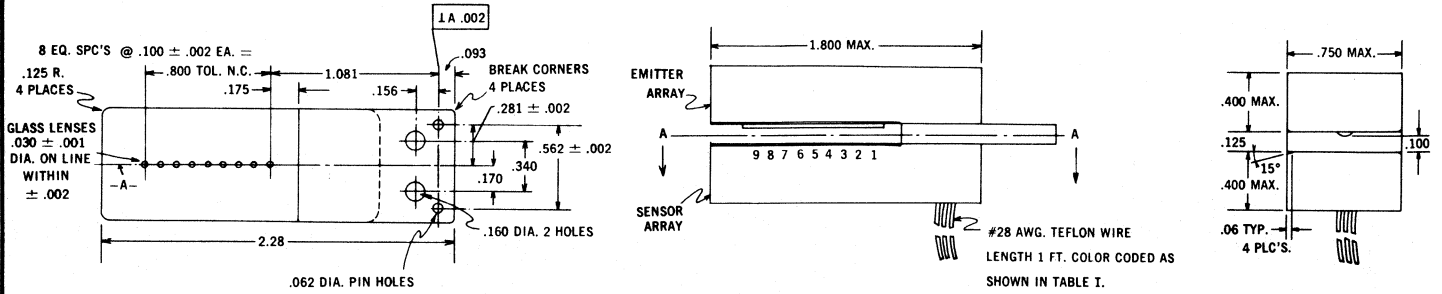
**PS49**



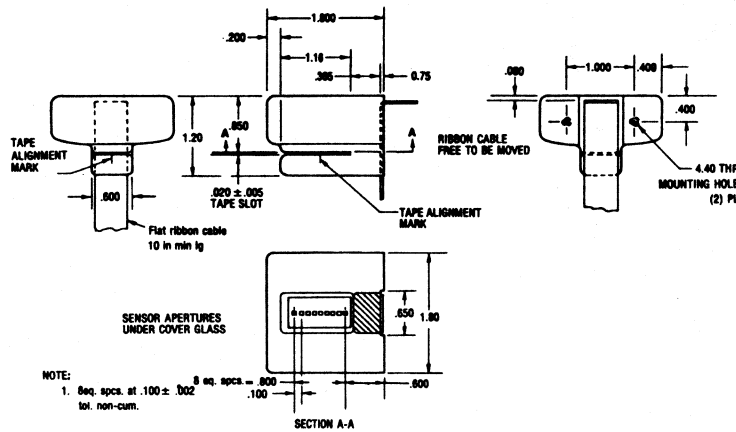
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

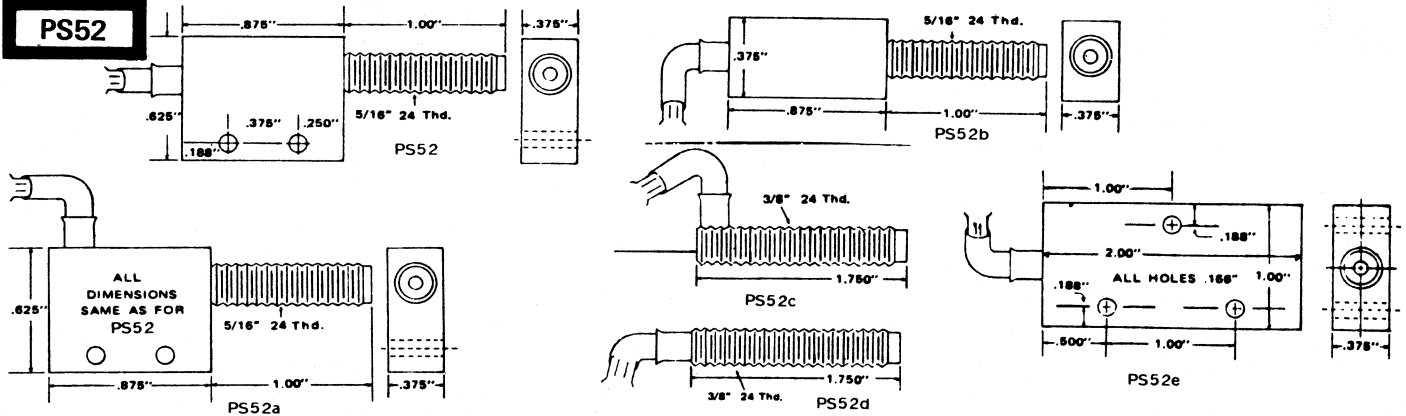
## PS50



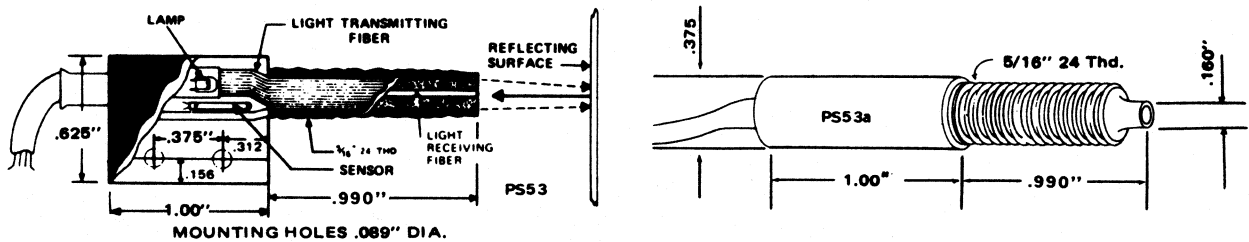
## PS51



## PS52



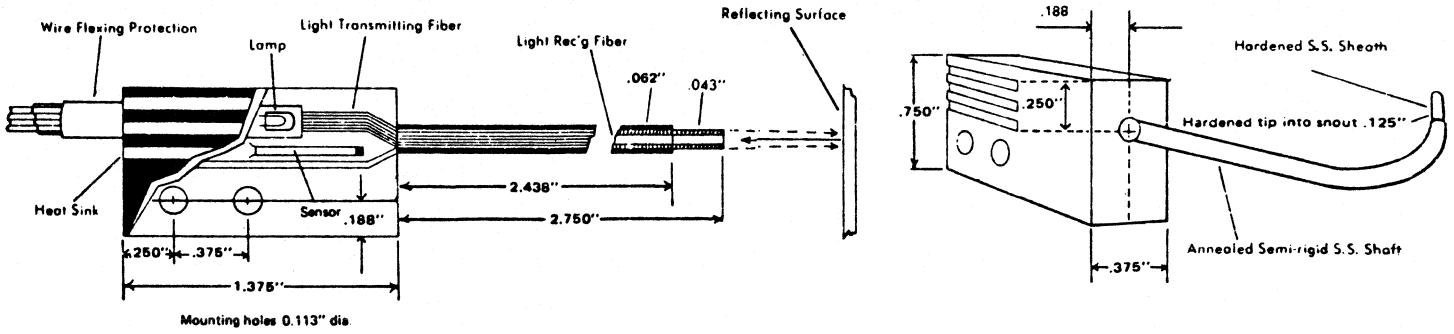
## PS53



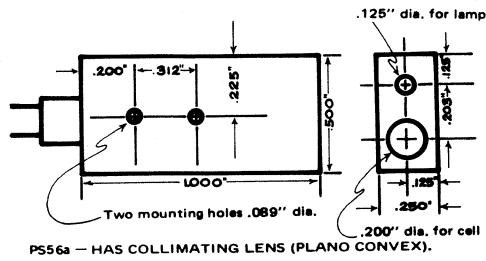
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

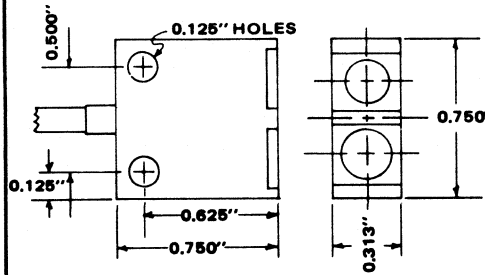
**PS54**



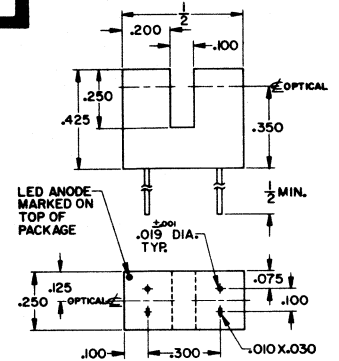
**PS56**



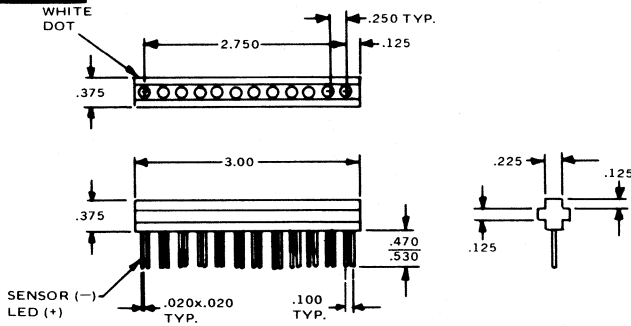
**PS57**



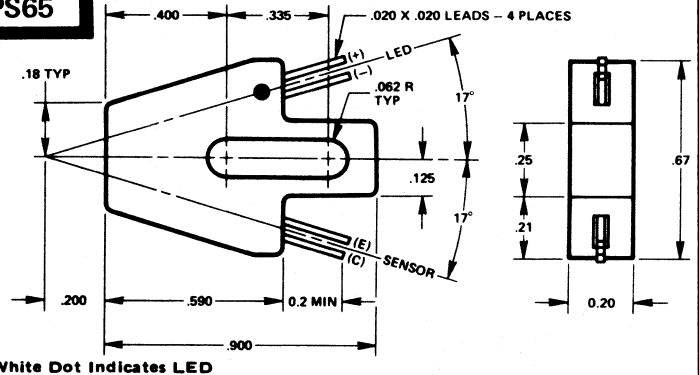
**PS58**



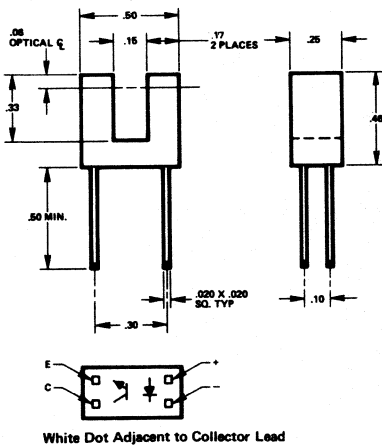
**PS63**



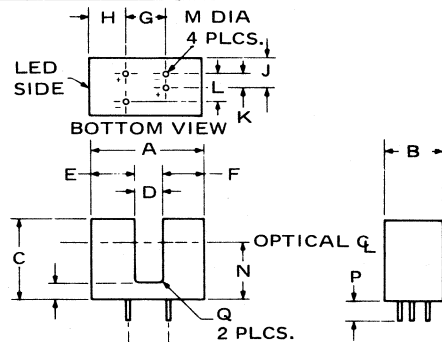
**PS65**



**PS68**



**PS69**

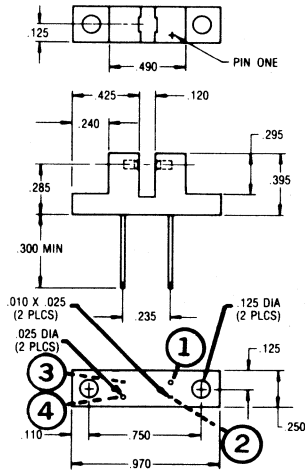


	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R
PS69	.820	.440	.600	.200	.310	.310	.300	.260	.220	.100	.200	.020 DIA	.420	.140 MIN	.03R	.120
PS69a	.500 MAX	.250	.425	.100	.200	.210	.300			.100	.100					

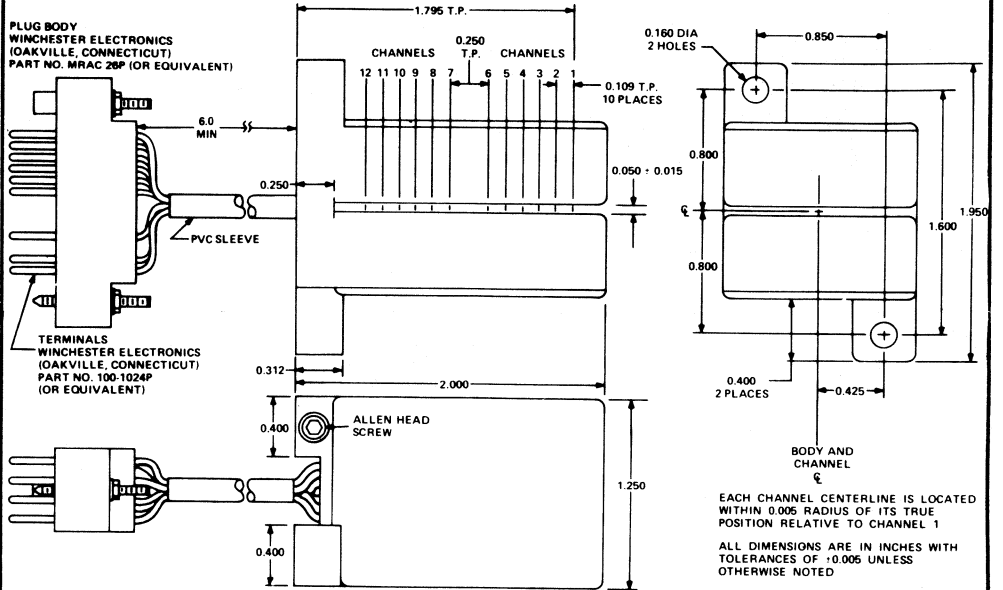
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

**PS73**



**PS74**

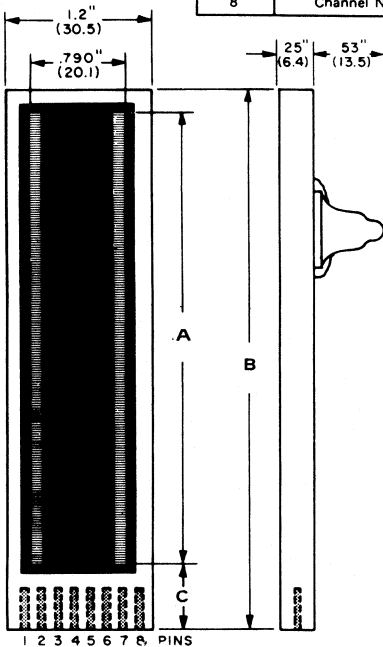


**PS75**

PIN CONNECTIONS

Pin	Connection
1	Channel No. 1 Anode
2	Phase 1 Cathode
3	Phase 3 Cathode
4	Reset Cathode
5	Keep Alive Anode
6	Keep Alive Cathode
7	Phase 2 Cathode
8	Channel No. 2 Anode

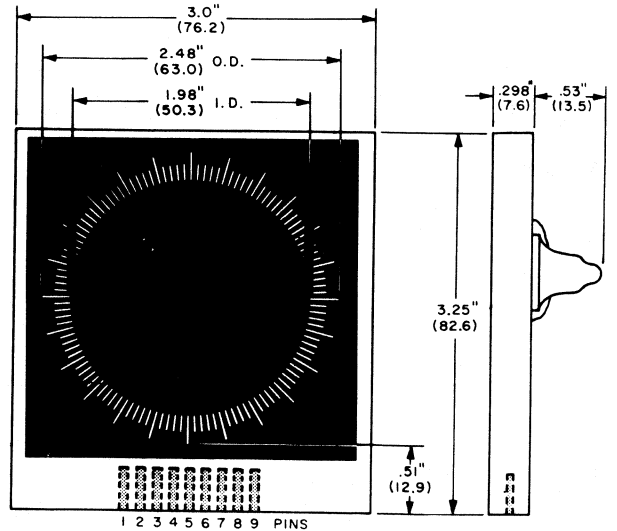
	A	B	C
PS75	4.000	4.600	3.80
PS75a	5.000	5.900	5.10



**PS77**

PIN CONNECTIONS

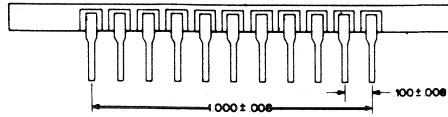
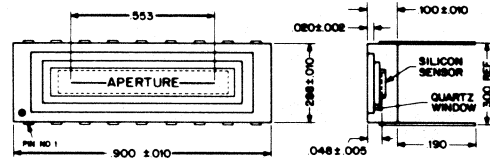
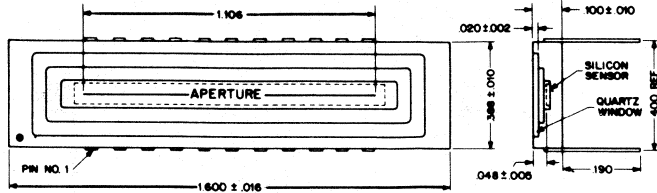
Pin	Connection
1	Phase 3 Cathode
2	Reset Cathode
3	Keep Alive Cathode
4	Keep Alive Anode
5	Phase 2 Cathode
6	Phase 4 Cathode
7	Phase 1 Cathode
8	Phase 5 Cathode
9	Anode



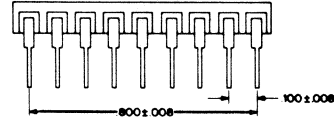
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

## PS78

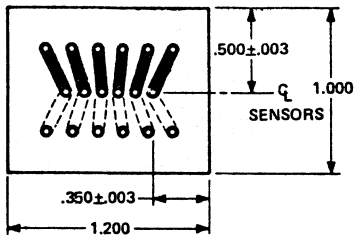


PS78

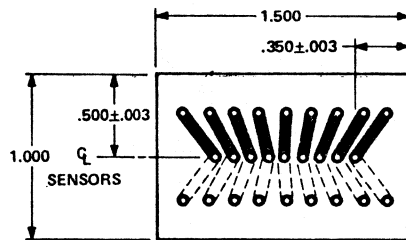


PS78a

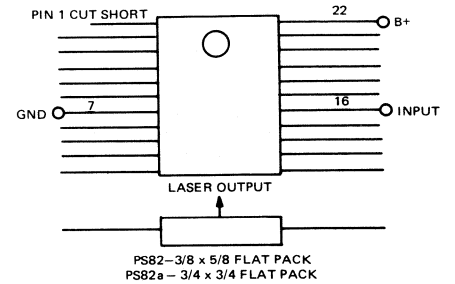
## PS79



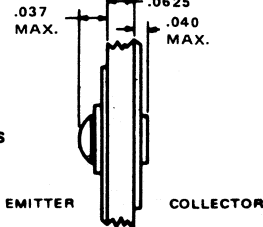
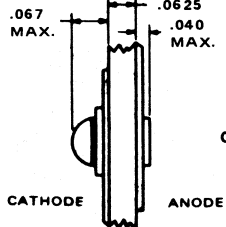
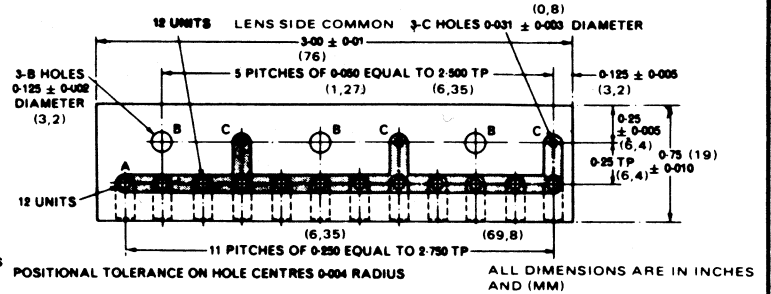
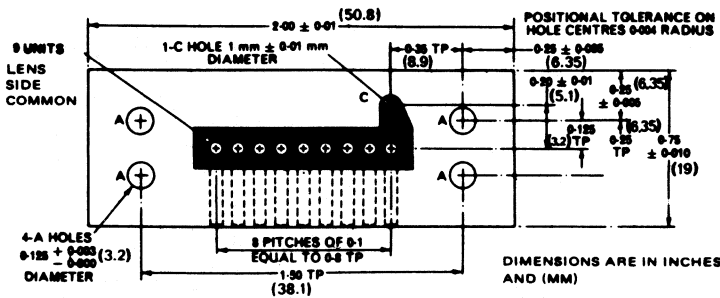
## PS80



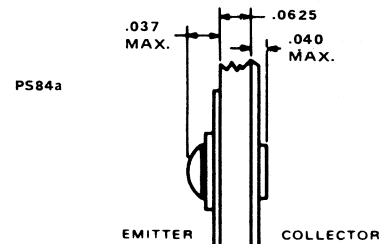
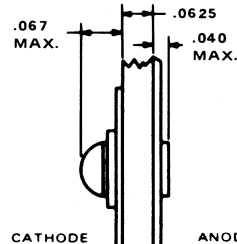
## PS82



## PS84



SIDE VIEWS OF ACTIVE ELEMENTS

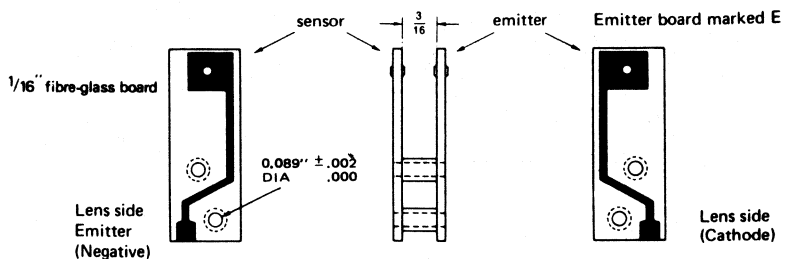
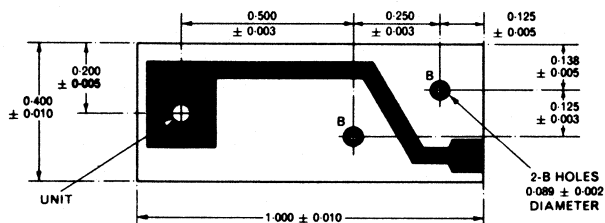


SIDE VIEWS OF ACTIVE ELEMENTS

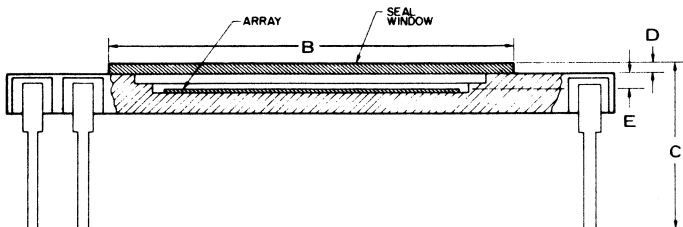
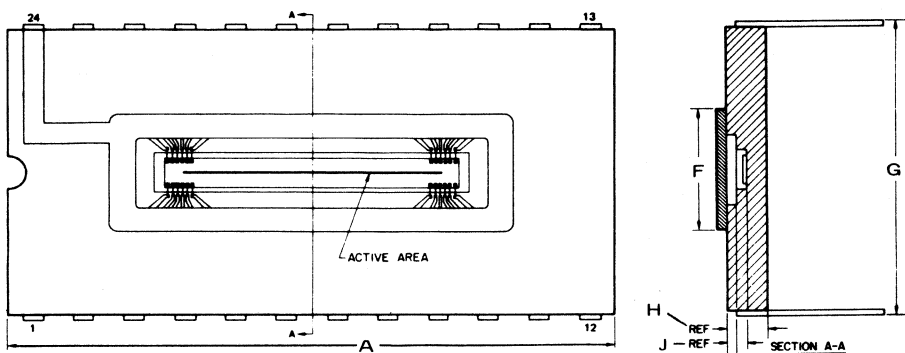
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

**PS85**

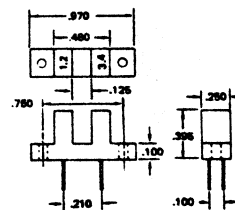


**PS86**

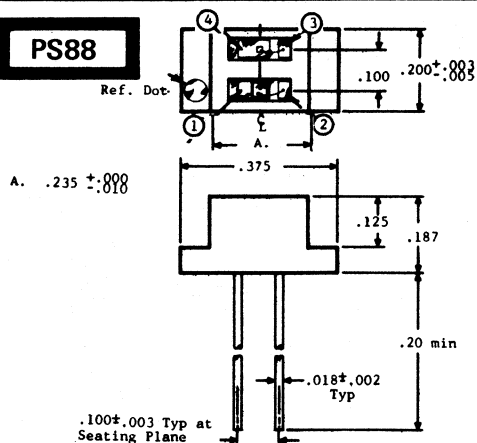


	A	B	C	D	E	F	G	H	I	J
PS86	1.200	.800	.340	.020	.032	.250	.600	.080	.040	.020
PS86a	1.200	1.080	.320	.020	.032	.270	.610	.080		

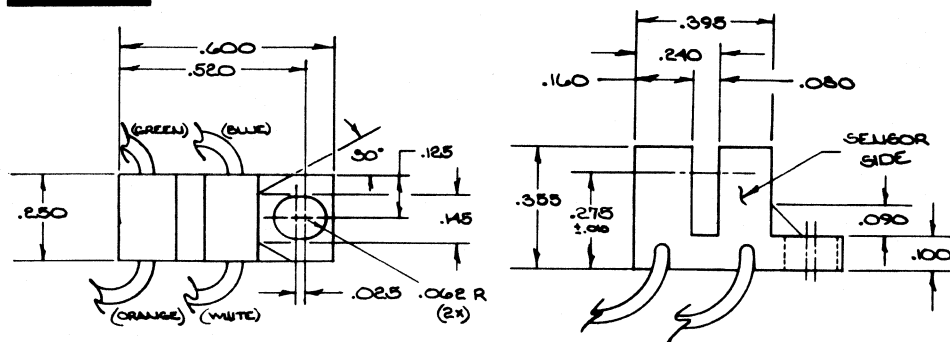
**PS87**



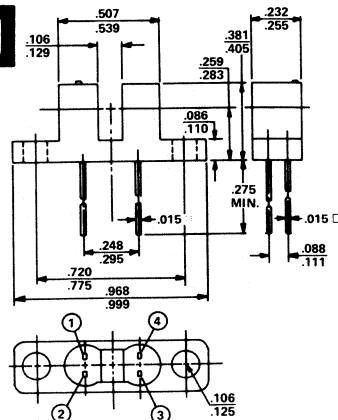
**PS88**



**PS89**



**PS92**

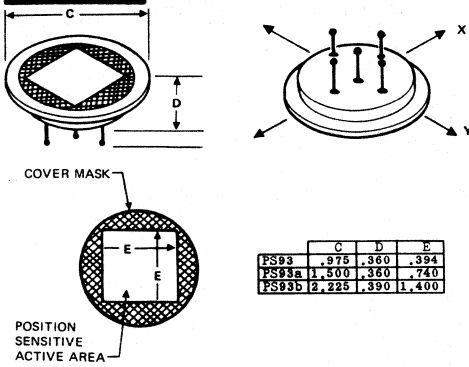




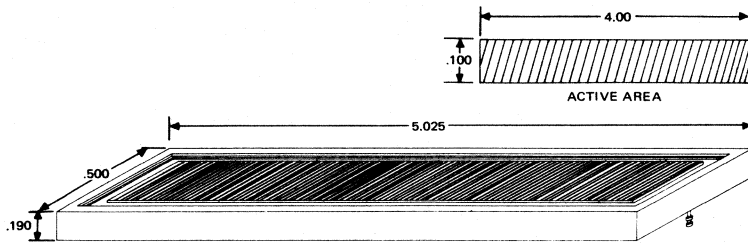
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

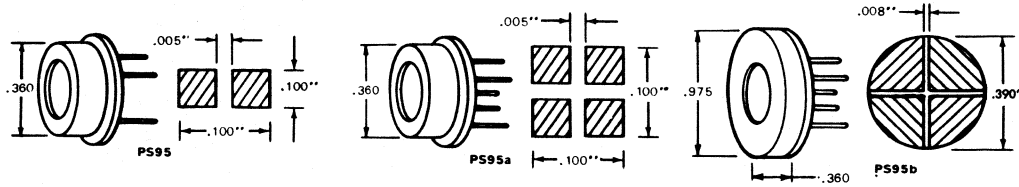
**PS93**



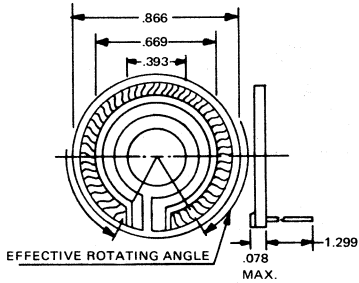
**PS94**



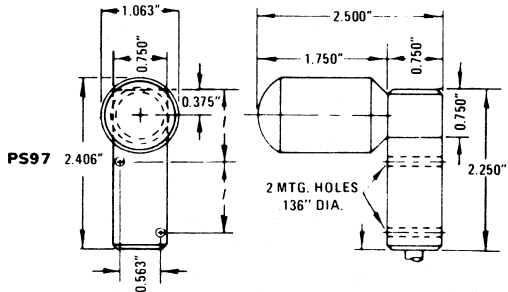
**PS95**



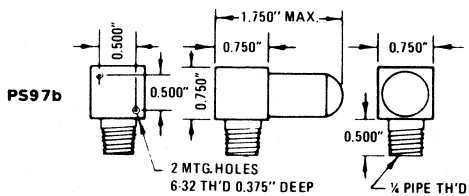
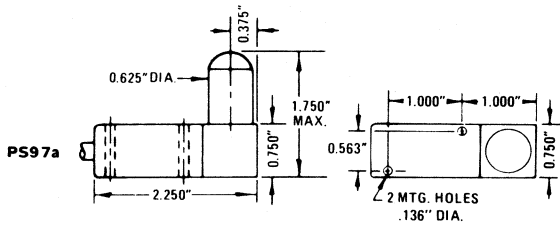
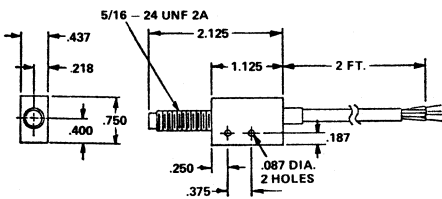
**PS96**



**PS97**

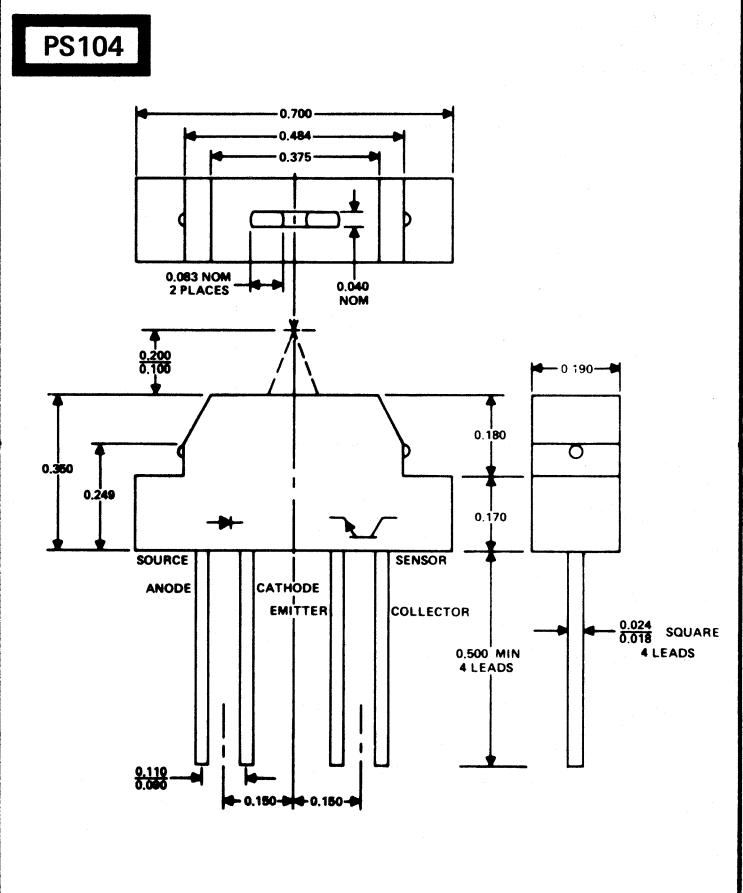
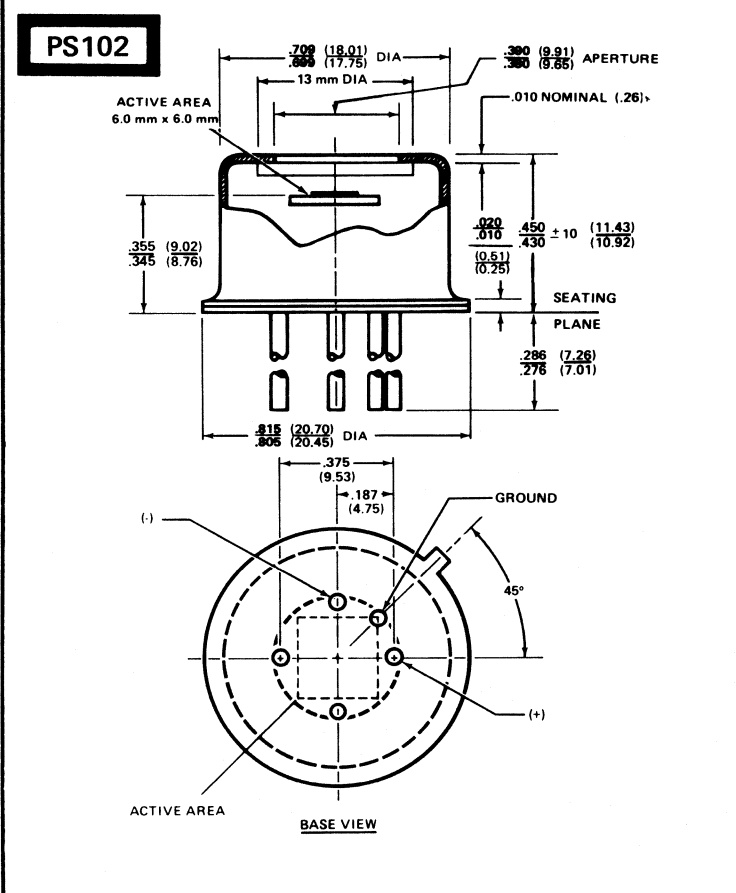
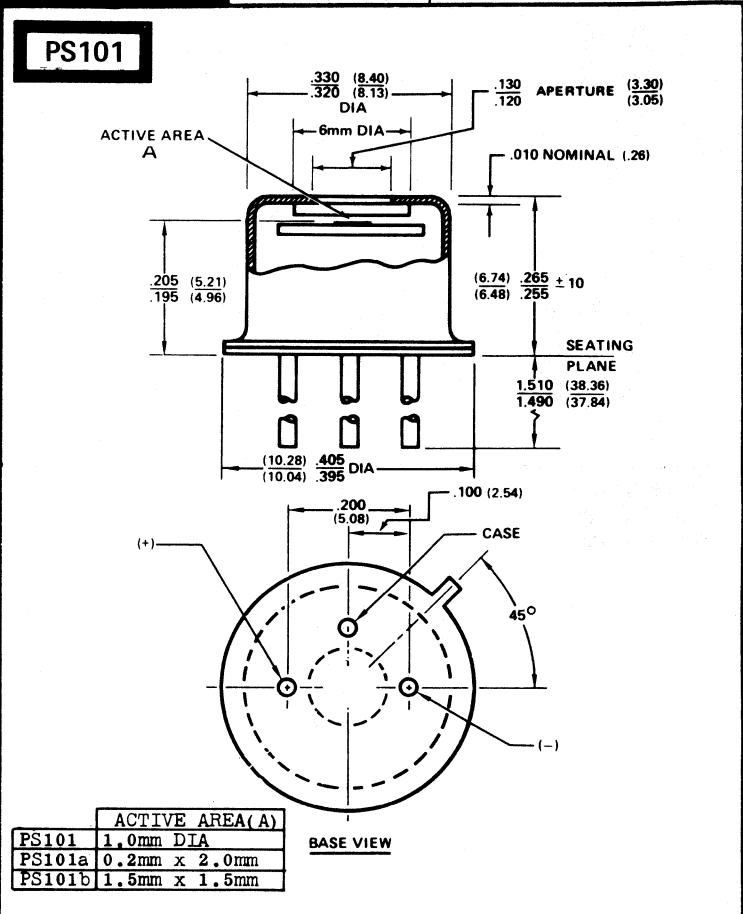
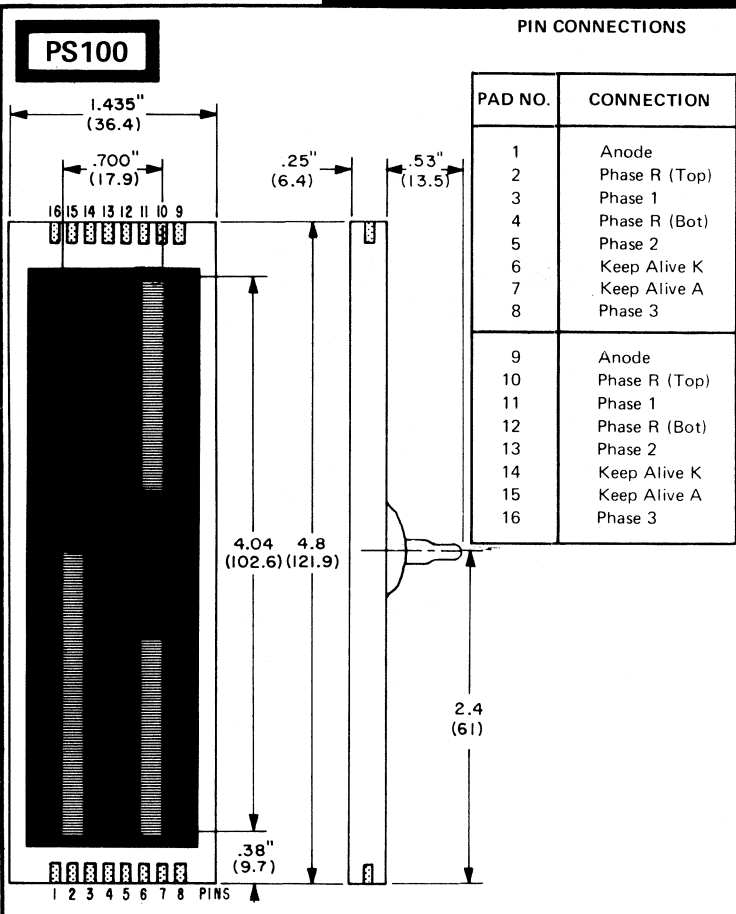


**PS99**



# 49. OUTLINE DRAWINGS

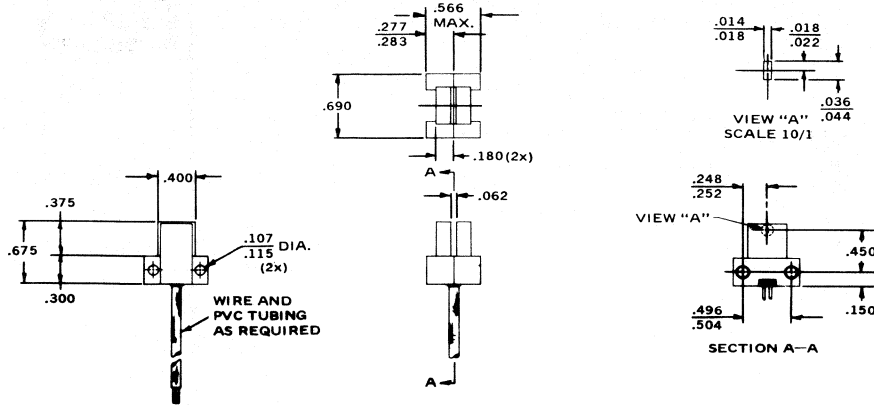
IN DRAWING NUMBER SEQUENCE



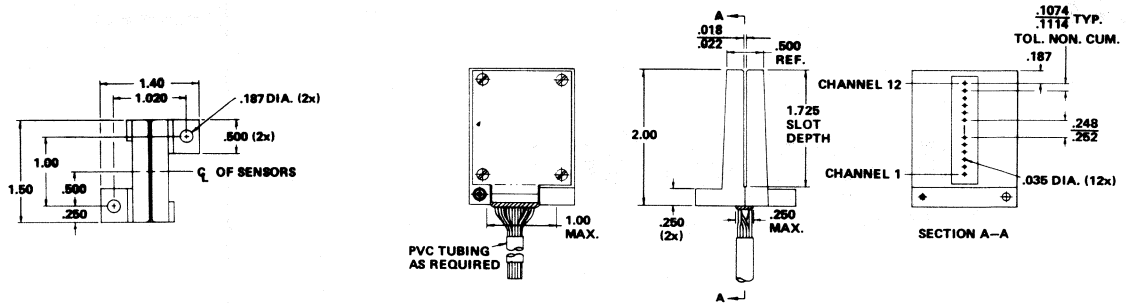
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

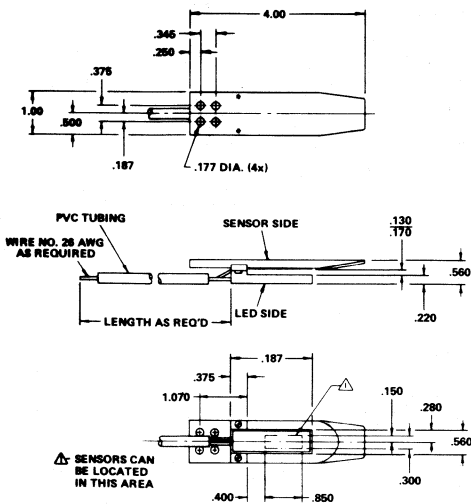
**PS105**



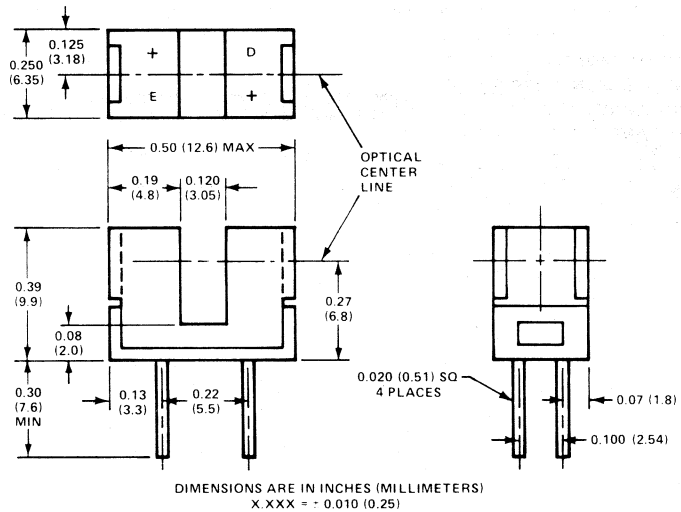
**PS106**



**PS107**



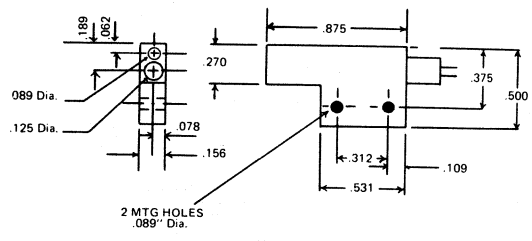
**PS108**



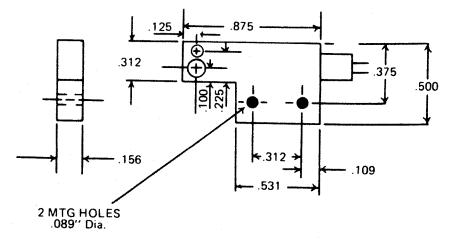
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

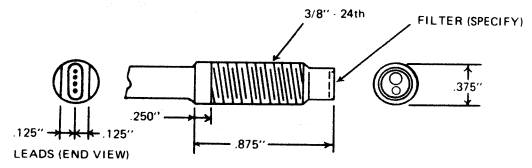
**PS110**



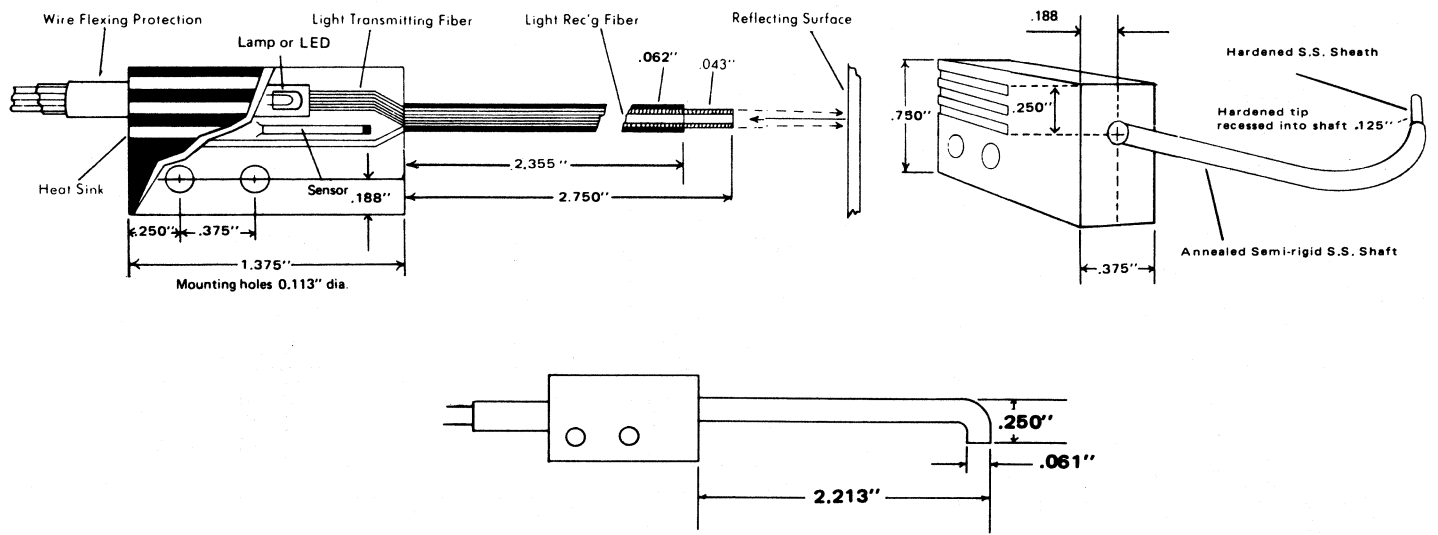
**PS111**



**PS112**



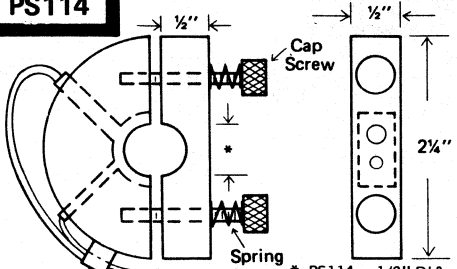
**PS113**



# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

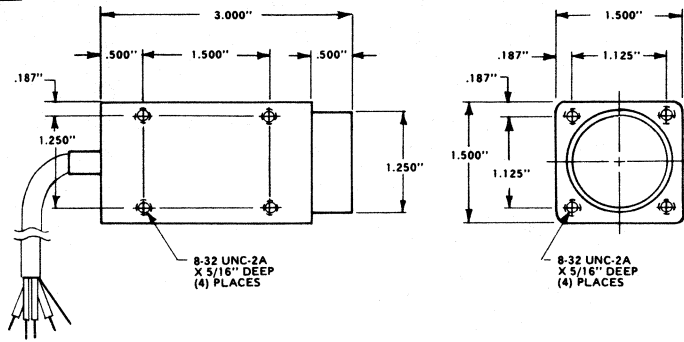
**PS114**



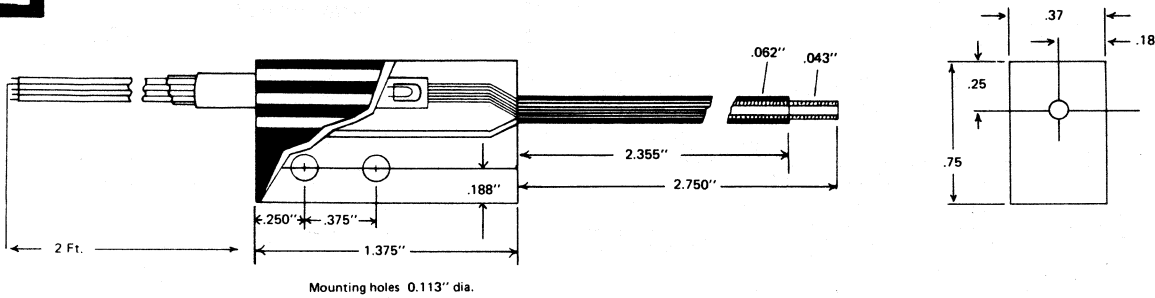
- \* PS114 - 1/2" DIA.
- PS114a - 5/8" DIA.
- PS114b - 3/4" DIA.
- PS114c - 1" DIA.
- PS114d - 1/2" DIA.
- PS114e - 3/8" DIA.

**Color Coding:**  
 Lamp - white and blue - no polarity  
 Sensor - red (+) black (-) twisted pair  
 w/ aluminum/kapton shield.

**PS115**

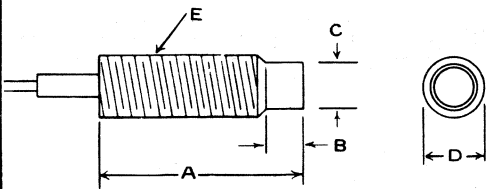


**PS116**



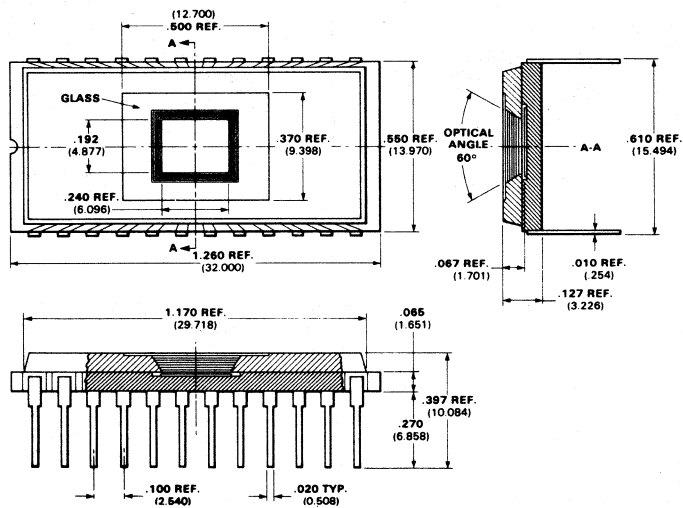
Mounting holes 0.113" dia.

**PS117**



	A	B	C	D	E (THD)
PS117	1.00	.100	.275	.375	3/8-24NF
PS117a	1.00	.120	.180		5/16-24
PS117b	.750	.250	.185	.250	1/4-28

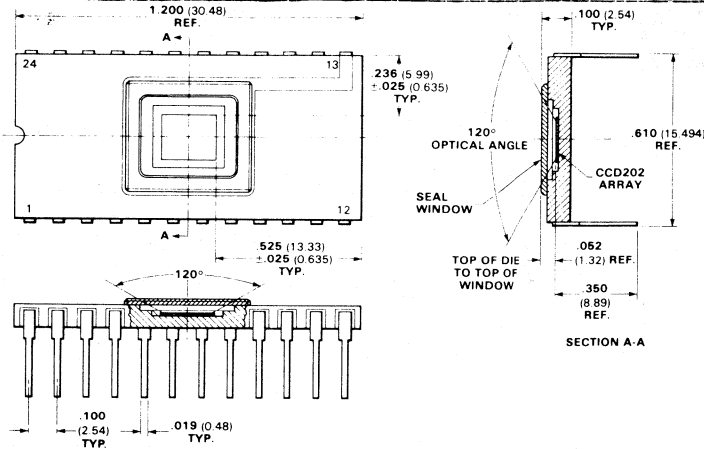
**PS118**



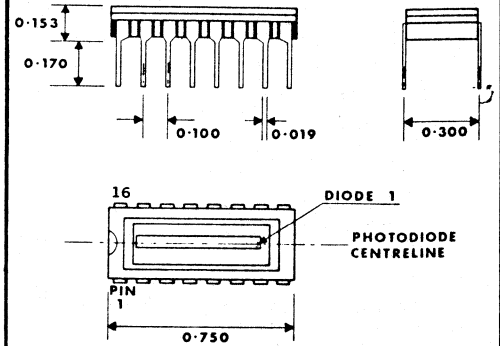
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

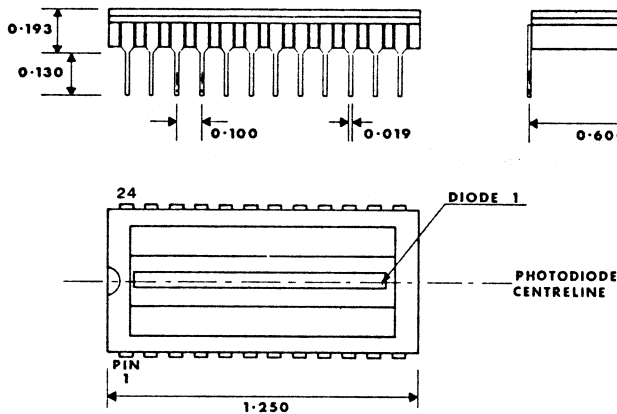
**PS119**



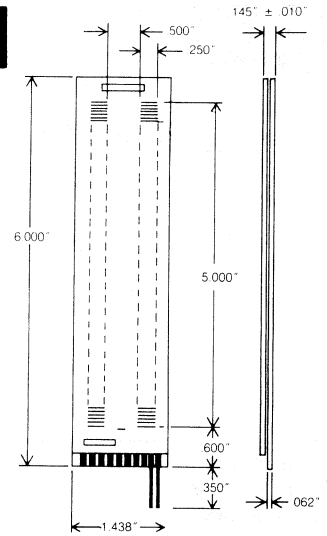
**PS120**



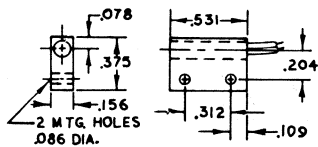
**PS121**



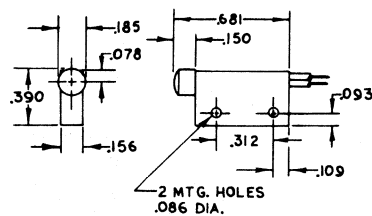
**PS122**



**PS123**



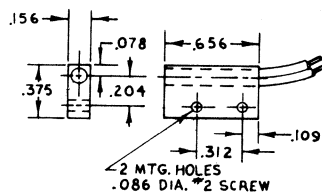
**PS124**



**Pin Number      Electrical Connection**

1	A1
2	01
3	02
4	03
5	04
6	KA
7	05
8	0R
9	Ka
10	A2

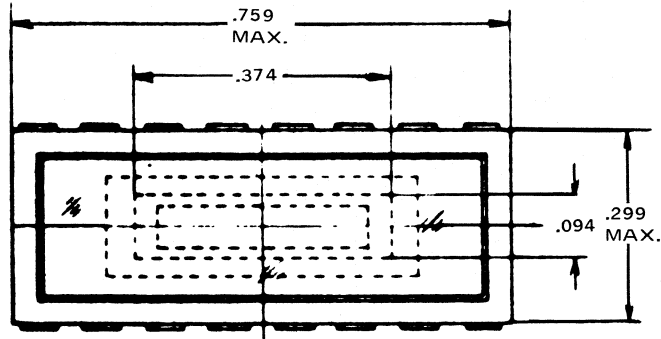
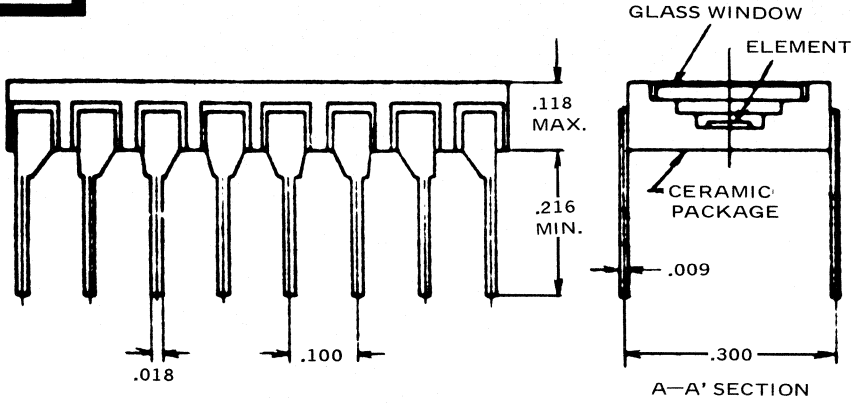
**PS125**



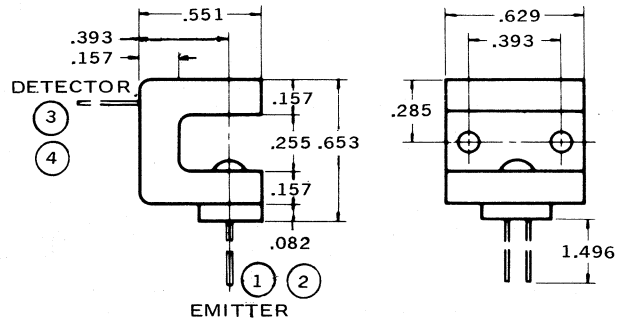
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

PS127



PS128

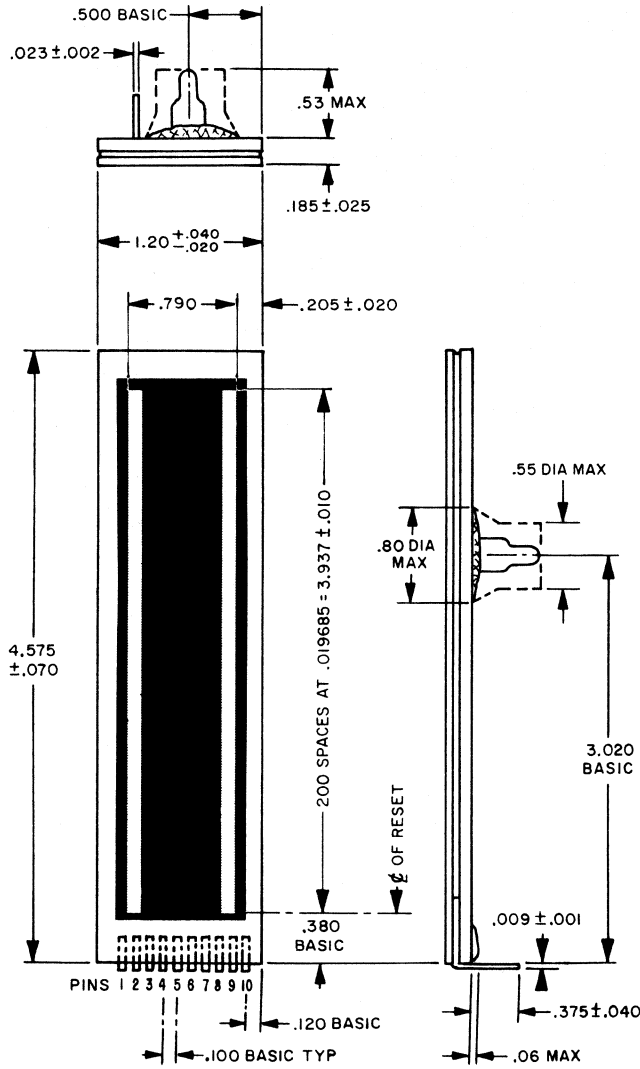




# 49. OUTLINE DRAWINGS

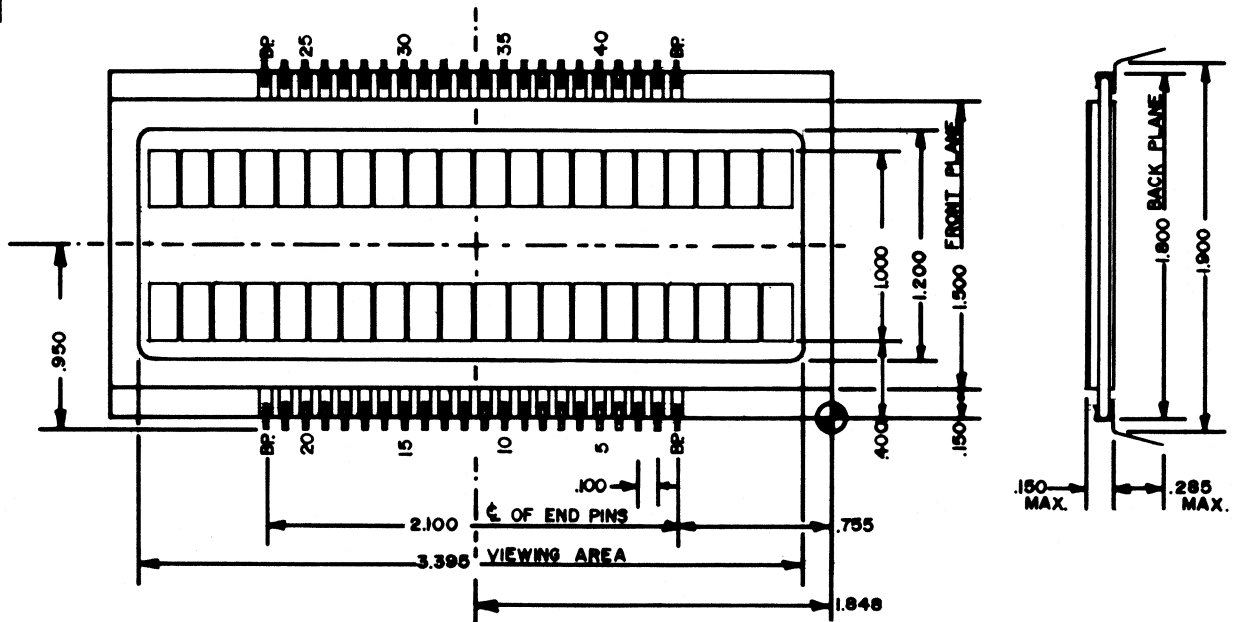
IN DRAWING NUMBER SEQUENCE

PS130



Pin	Connection
1	Channel No. 1 Anode
2	Phase 2 Cathode
3	Phase 1 Cathode
4	Reset Cathode
5	Keep-Alive Anode
6	Keep-Alive Cathode
7	Phase 4 Cathode
8	Phase 3 Cathode
9	Phase 5 Cathode
10	Channel No. 2 Anode

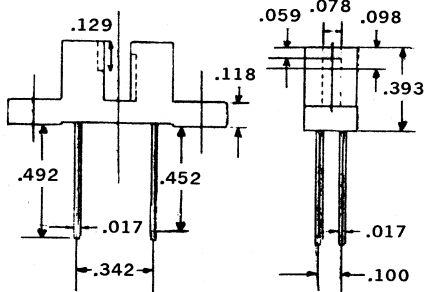
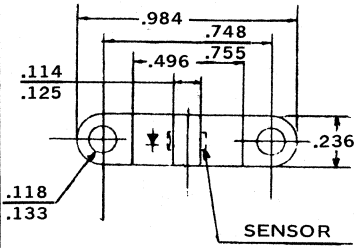
PS131



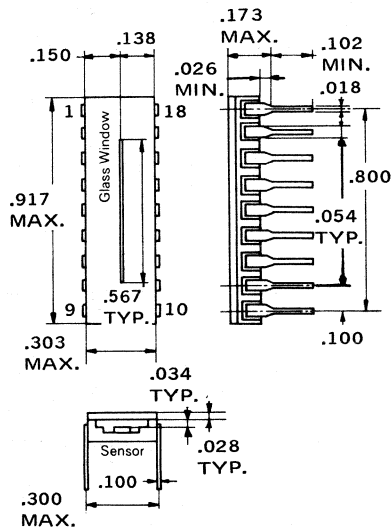
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

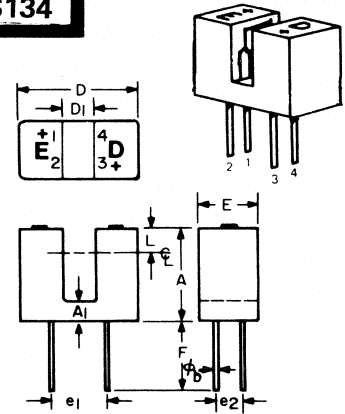
**PS132**



**PS133**



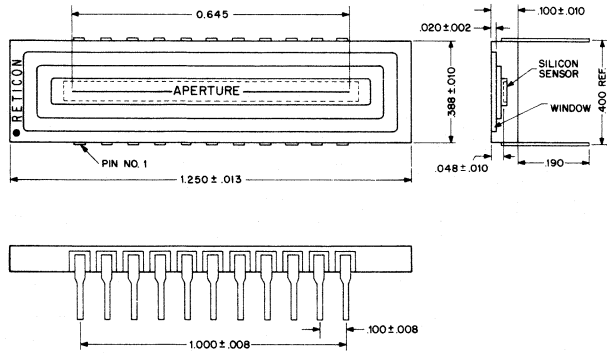
**PS134**



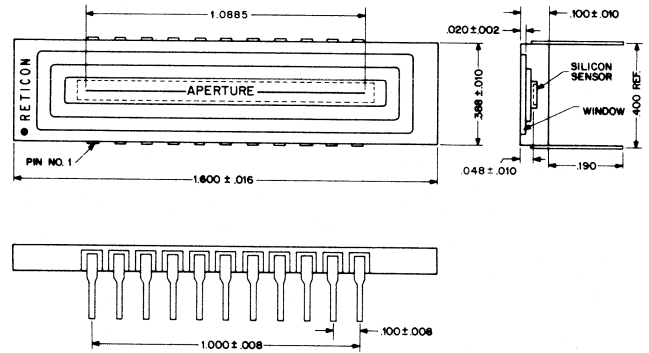
SYM	INCHES		MILLIMETERS		NOTES
	MIN	MAX	MIN	MAX	
A	.390	.400	.991	10.16	
A1	.075	.085	1.91	2.15	
φb	.016	.019	.407	.482	1
D	.475	.495	12.07	12.57	
Di	.120	.130	3.05	3.30	
e1	.205	.235	5.21	5.96	
e2	.090	.110	2.29	2.79	
E	—	.250	—	6.35	
F	.300	—	7.62	—	1
L	.110	NOM	2.79	NOM.	2

NOTES:  
 1. FOUR LEADS. LEAD DIAMETER CONTROLLED BETWEEN .050" (1.27 MM) FROM THE SEATING PLANE AND THE END OF THE LEADS.  
 2. THE SENSING AREA FALLS WITHIN A .060" (1.52 MM) SQUARE ON THIS CENTER LINE.

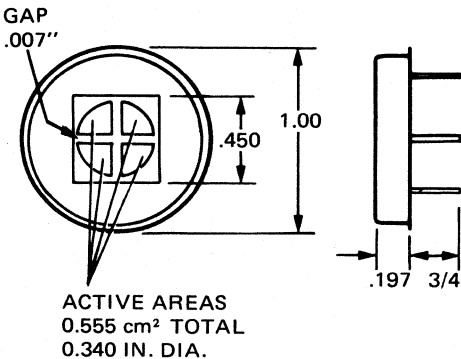
**PS135**



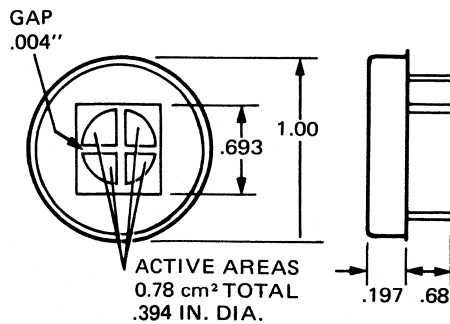
**PS136**



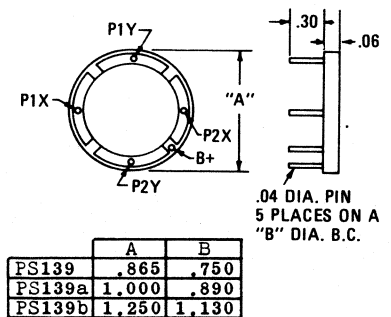
**PS137**



**PS138**



**PS139**

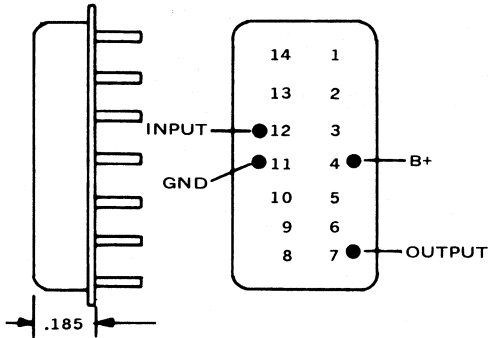


	A	B
PS139	.865	.750
PS139a	1.000	.890
PS139b	1.250	1.130

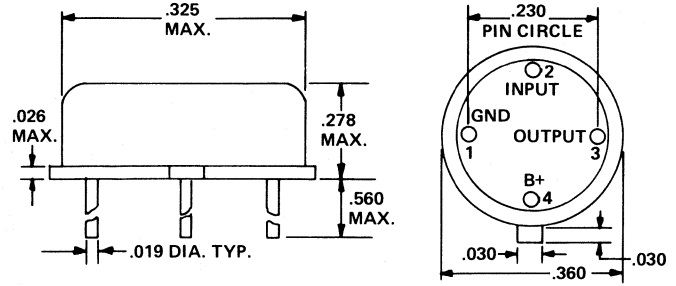
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

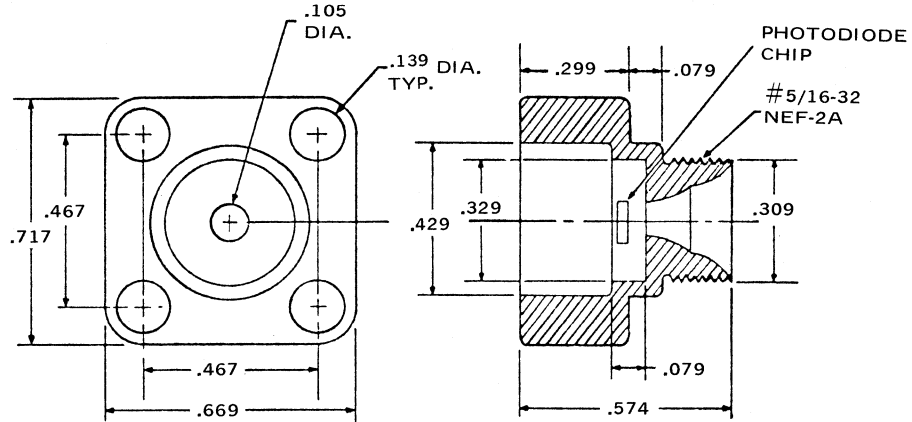
**PS140**



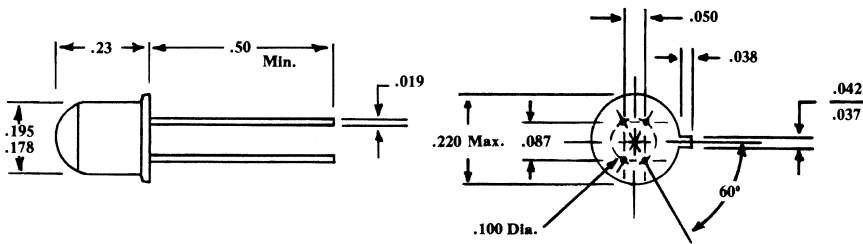
**PS141**



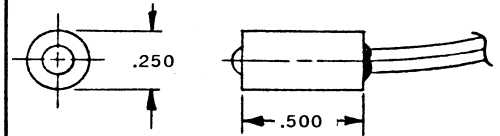
**PS142**



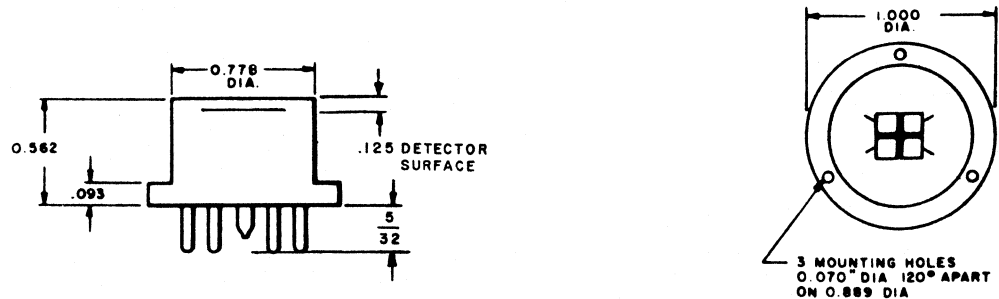
**PS143**



**PS144**



**PS146**

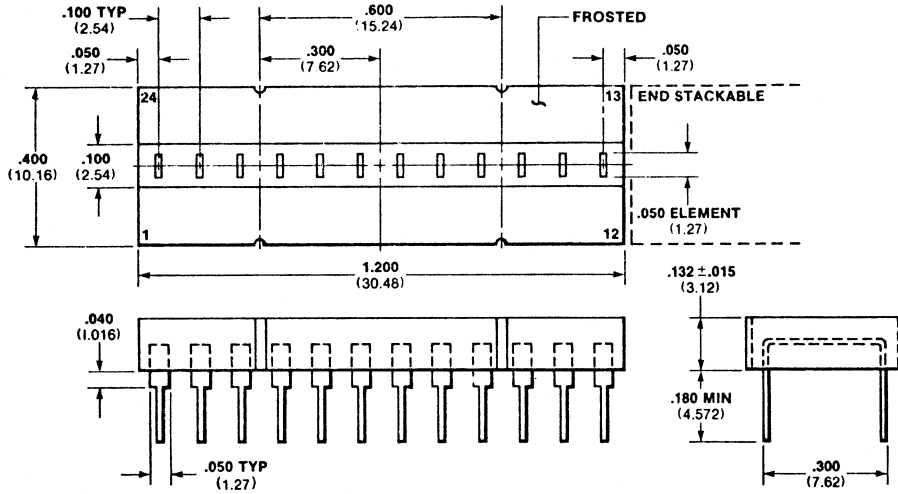




# 49. OUTLINE DRAWINGS

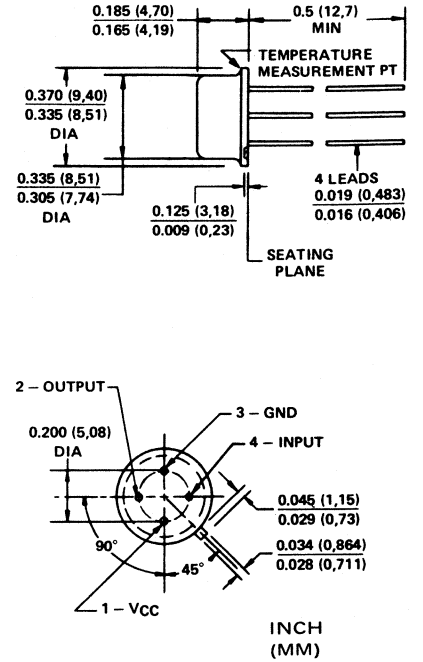
IN DRAWING NUMBER  
SEQUENCE

**PS151**

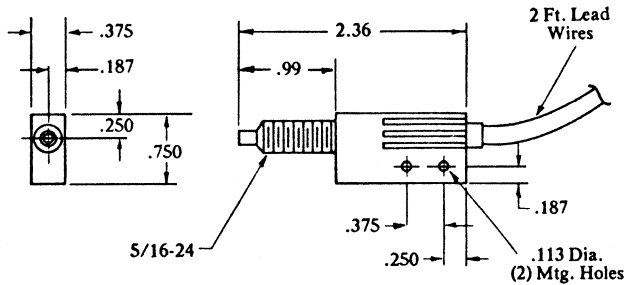


NOTE:  
All dimensions in inches (bold) and millimeters (parentheses)  
Tolerance ±.015

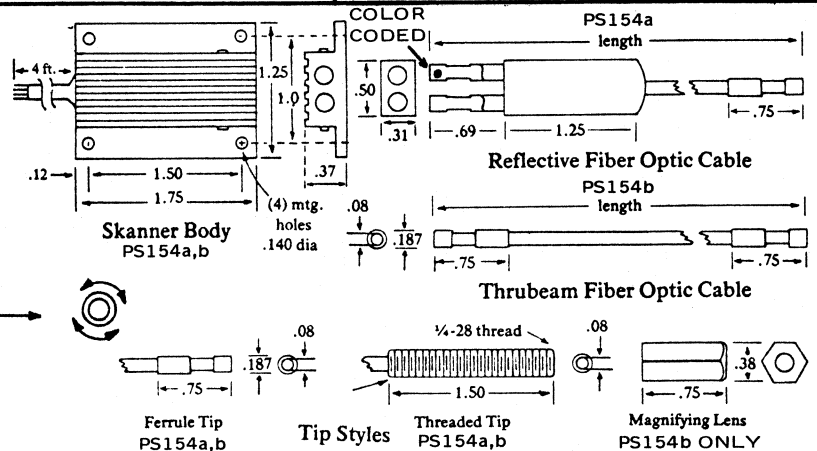
**PS152**



**PS153**



**PS154**

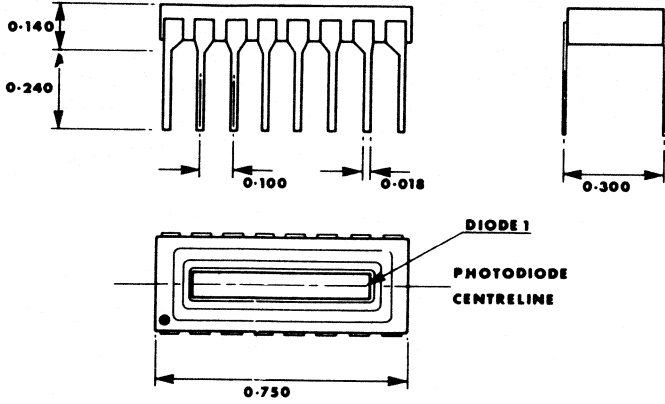


Caution: Fiber optic cables have a 1" bending radius but should NOT be twisted about their longitudinal axes.

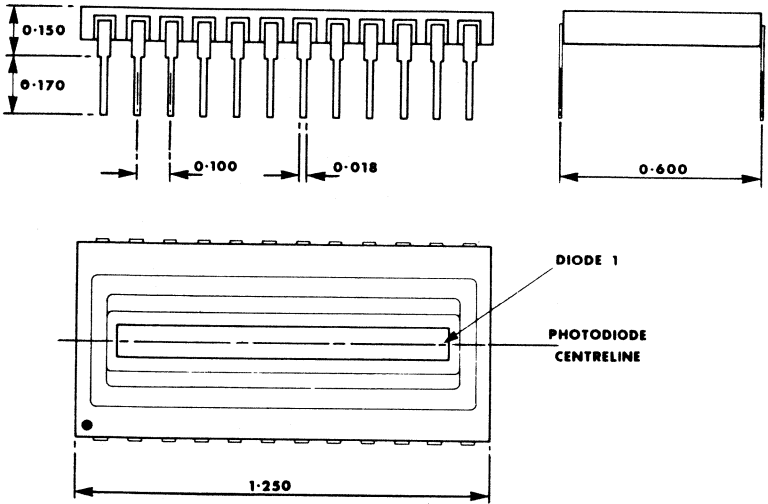
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

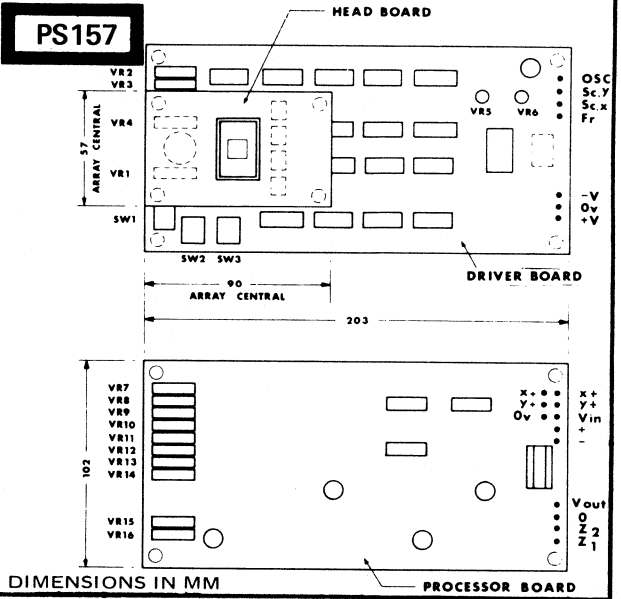
**PS155**



**PS156**

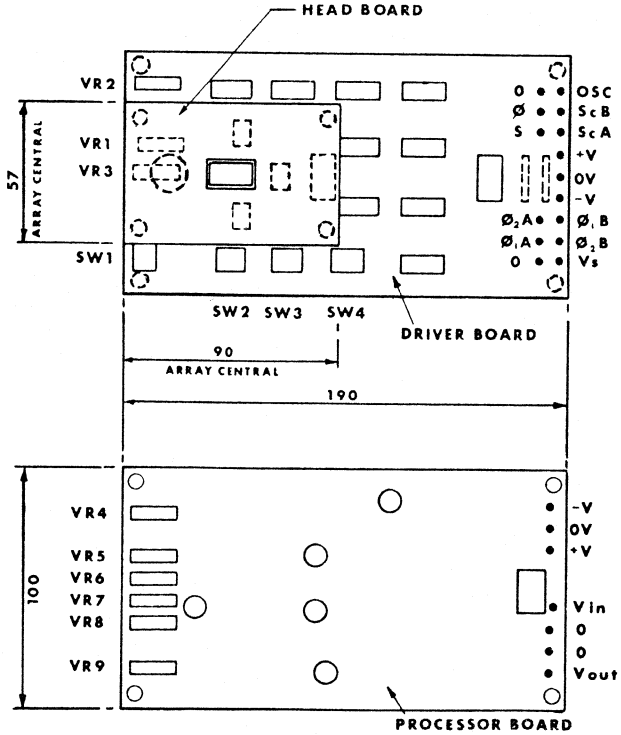


**PS157**



DIMENSIONS IN MM

**PS158**



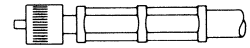
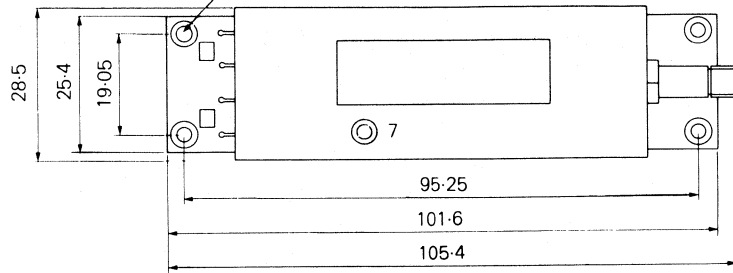
DIMENSIONS IN MM

# 49. OUTLINE DRAWINGS

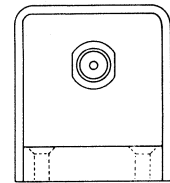
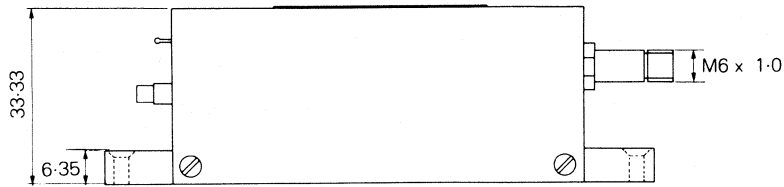
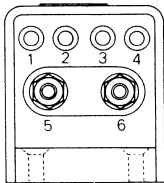
IN DRAWING NUMBER SEQUENCE

**PS159**

TRANSMITTER  
4 holes for 6 BA countersunk screws

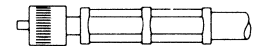
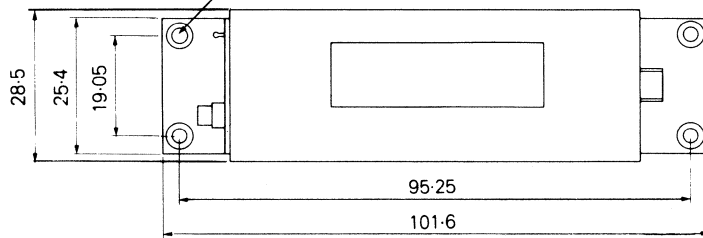


Cable end fibre connector.  
The cable should not be bent for a distance of 2.5 cm from the connector.

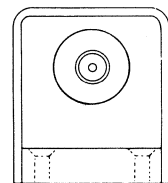
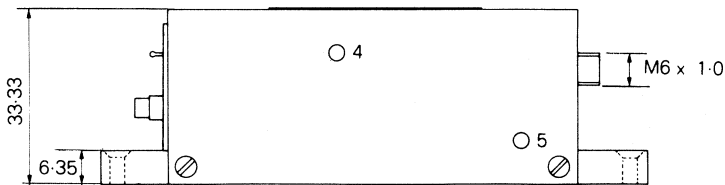
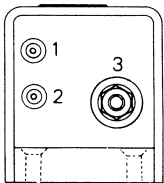


All dimensions are in mm

RECEIVER  
4 holes for 6 BA countersunk screws

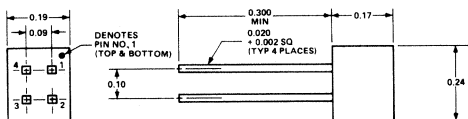


Cable end fibre connector.  
The cable should not be bent for a distance of 2.5 cm from the connector.

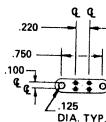
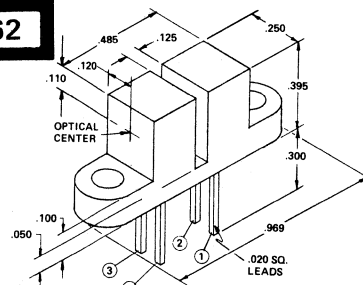


All dimensions are in mm.

**PS161**

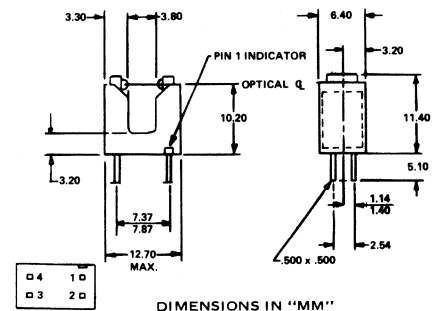


**PS162**



NOTE:  
1. SENSING AREA IS WITHIN A .060 INCH SQUARE AREA ON OPTICAL CENTERS.  
2. .125 DIM. GAP MEASURED WITH DEVICE MOUNTED ON FLAT SURFACE ONLY.

**PS163**



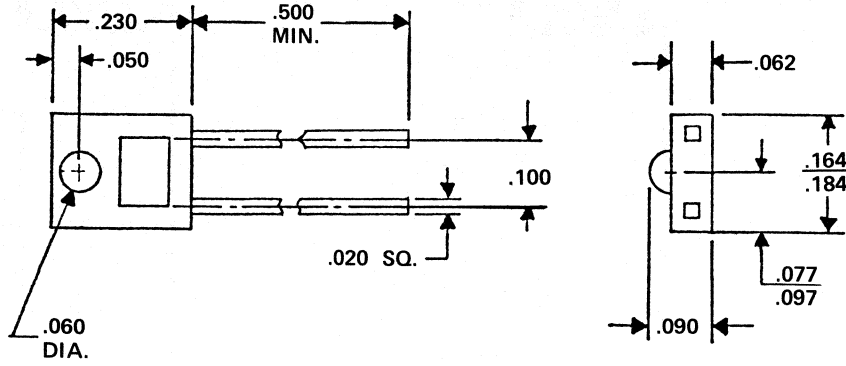
DIMENSIONS IN "MM"



# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

**PS164**

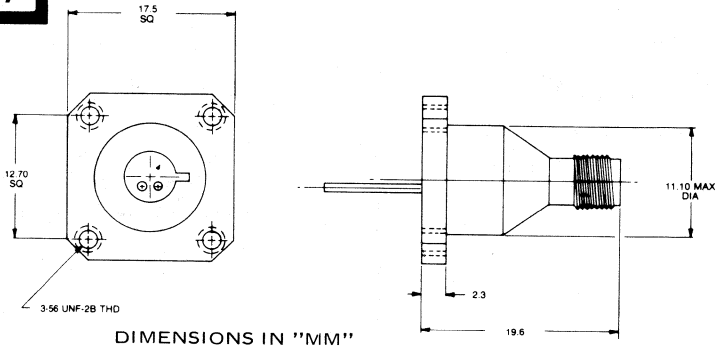


**PS165**

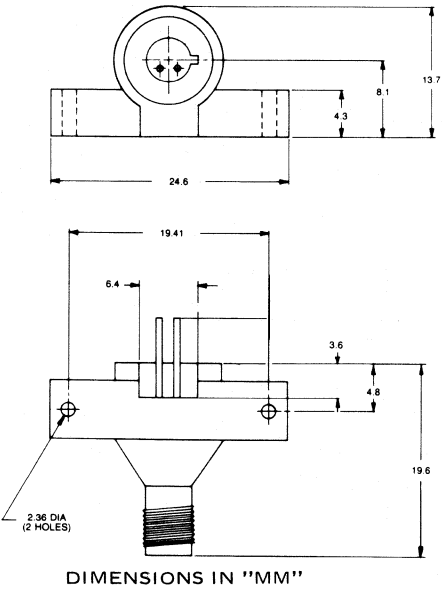
	Connector Type	Cable Length (meters)
PS165	905	30
PS165a	905	45
PS165b	905	60

Transmitter: 10.5Wx9.5Lx5.2H(cm)  
Receiver : 18.1Wx17.1Lx8.4H(cm)

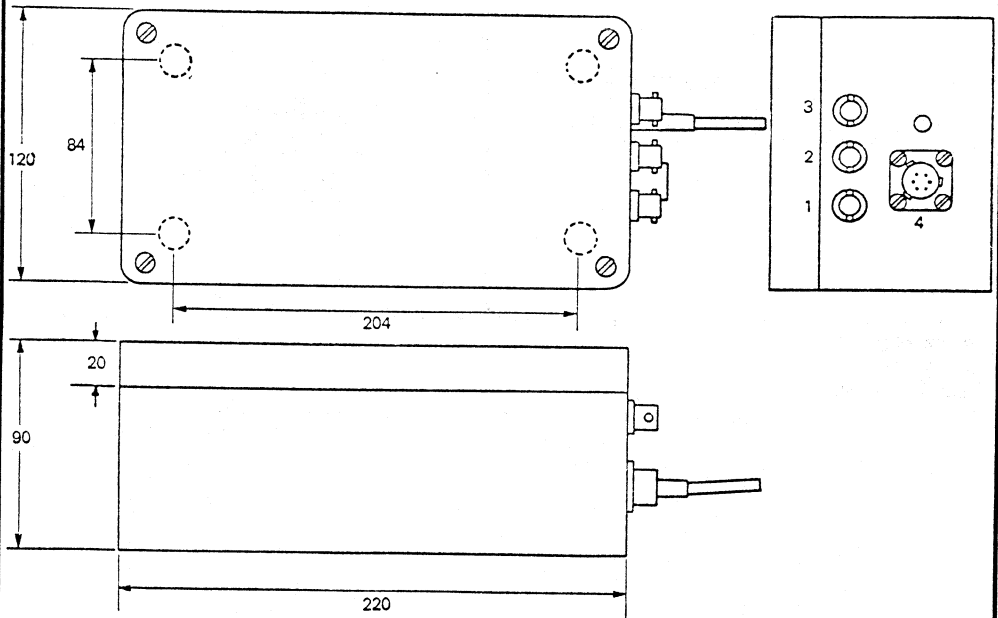
**PS167**



**PS168**



**PS169**

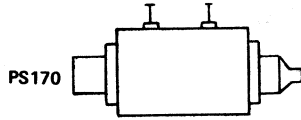


All dimensions are in mm.

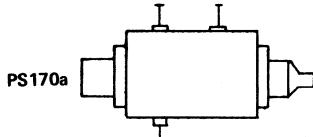
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

## PS170



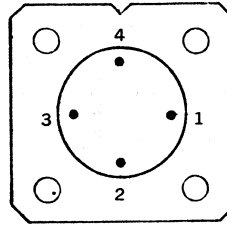
PS170



PS170a

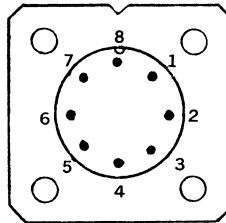
BOX DIMENSIONS: 38 x 29 mm  
ELECTRICAL INTERFACE: BNC  
OPTICAL INTERFACE: SMA

## PS171



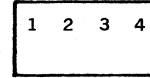
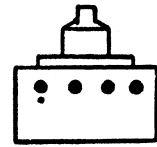
PS171

SMA FLANGE DIMENSION:  
17.5 x 17.5 mm

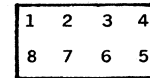
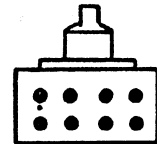


PS171a

## PS172



PS172



PS172a

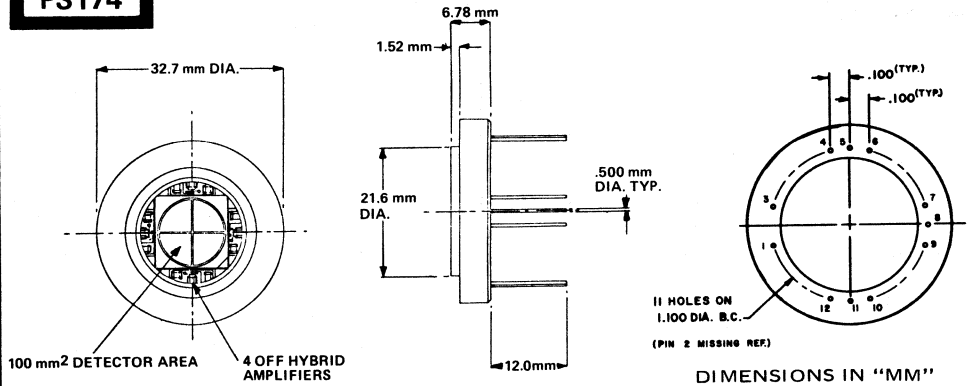
DIMENSION OF BASE OF SUPERDIP:  
25 x 10 mm  
PIN SPACING: STANDARD DUAL-IN-LINE.

## PS173

DIMENSIONS IN MM

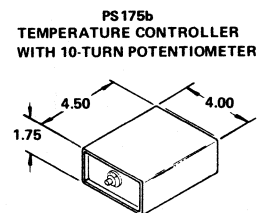
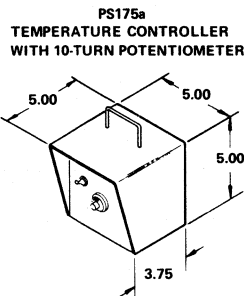
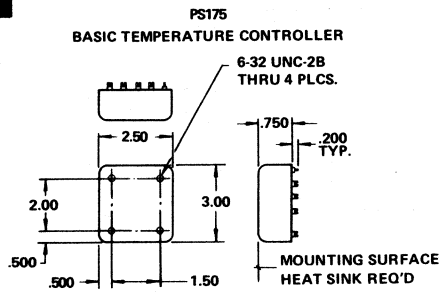
	Length	Width	Height	Connector Type
PS173	103	78	66	SMA/BNC
PS173a	29	35	57	SMA

## PS174



DIMENSIONS IN "MM"

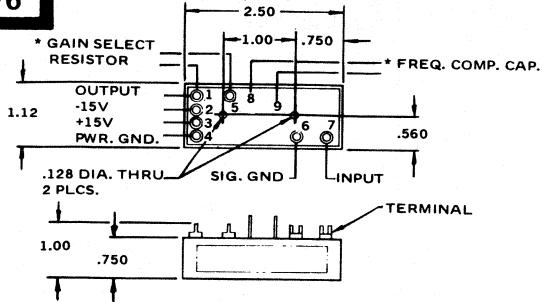
## PS175



# 49. OUTLINE DRAWINGS

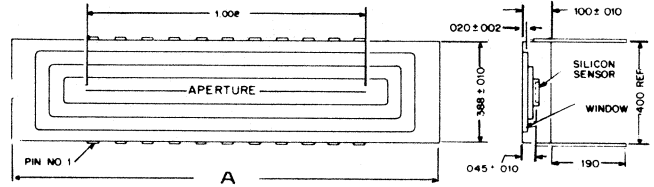
IN DRAWING NUMBER SEQUENCE

**PS176**



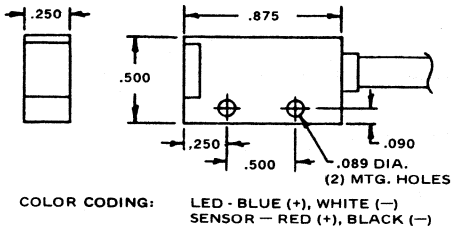
\* GAIN THE GAIN IS SELECTED BY THE RESISTANCE PLACED BETWEEN PIN 1 AND 5. MAXIMUM RECOMMENDED GAIN IS 1000.

**PS177**

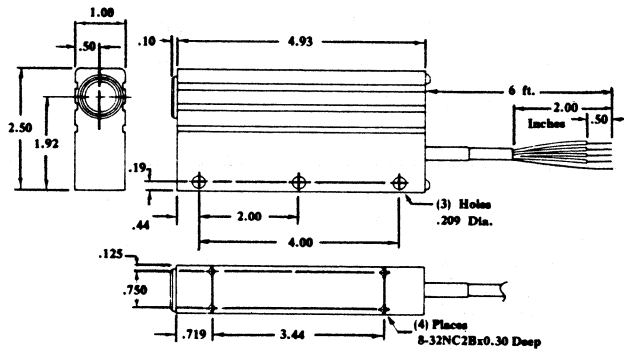


	A
PS177	1.10
PS177a	1.60

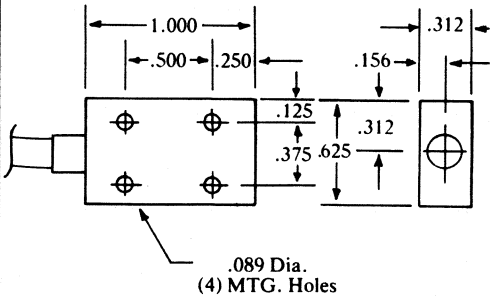
**PS178**



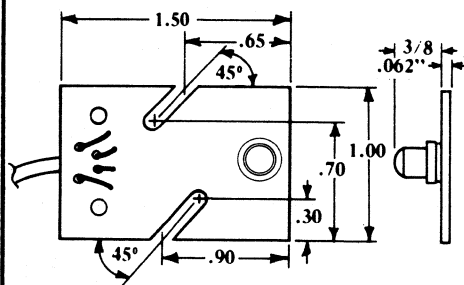
**PS179**



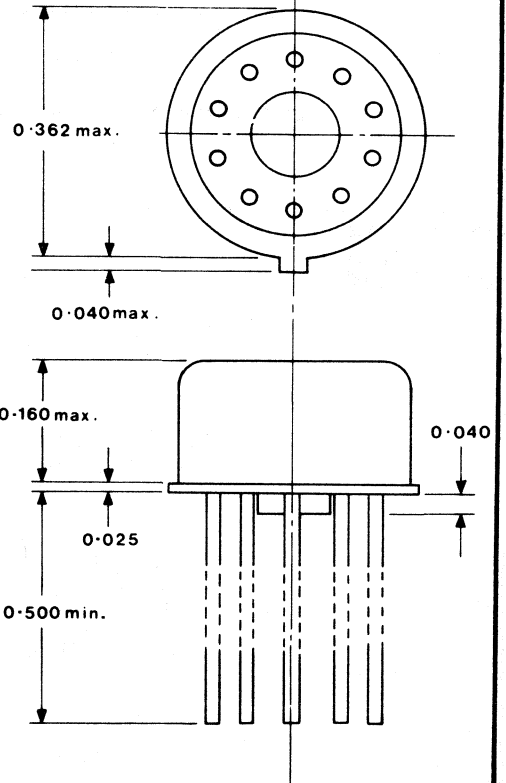
**PS180**



**PS181**

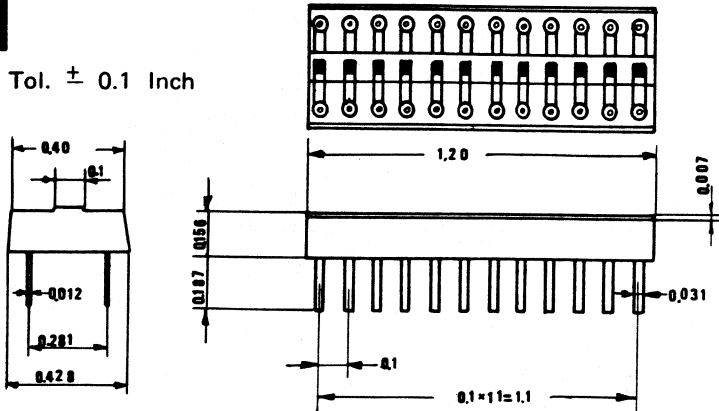


**PS182**



**PS183**

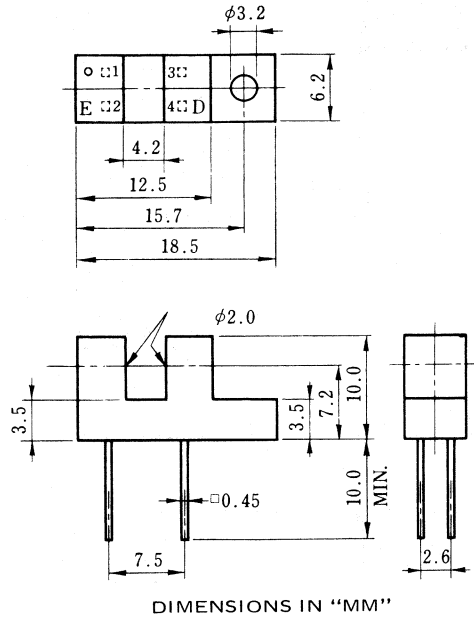
Tol. ± 0.1 Inch



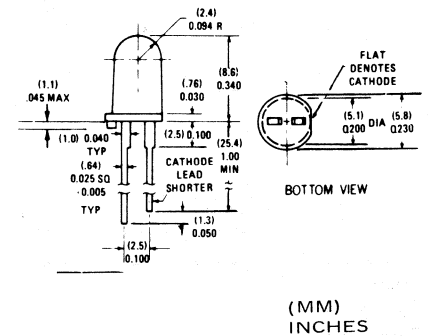
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

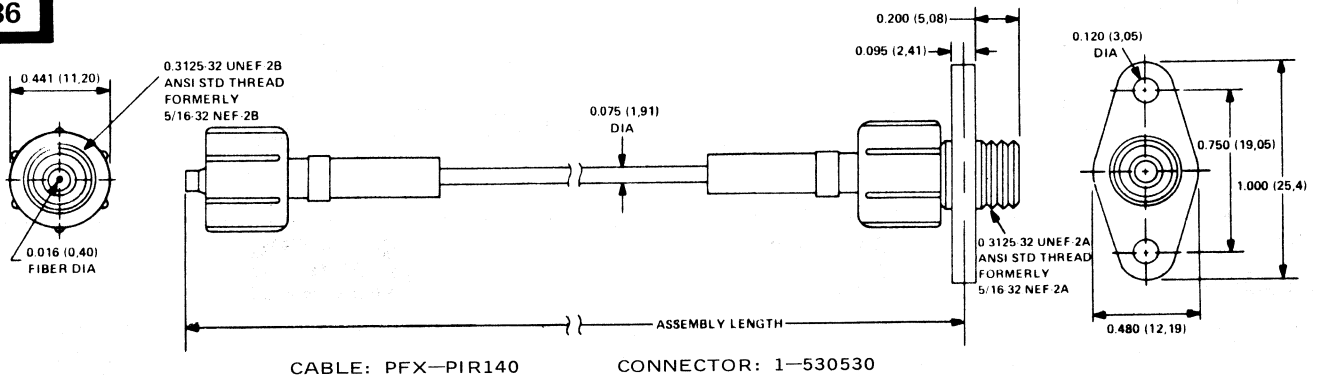
**PS184**



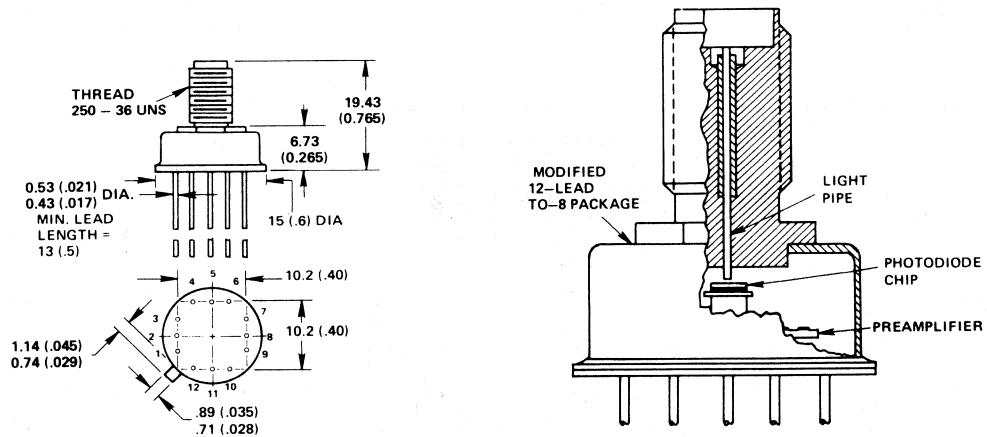
**PS185**



**PS186**



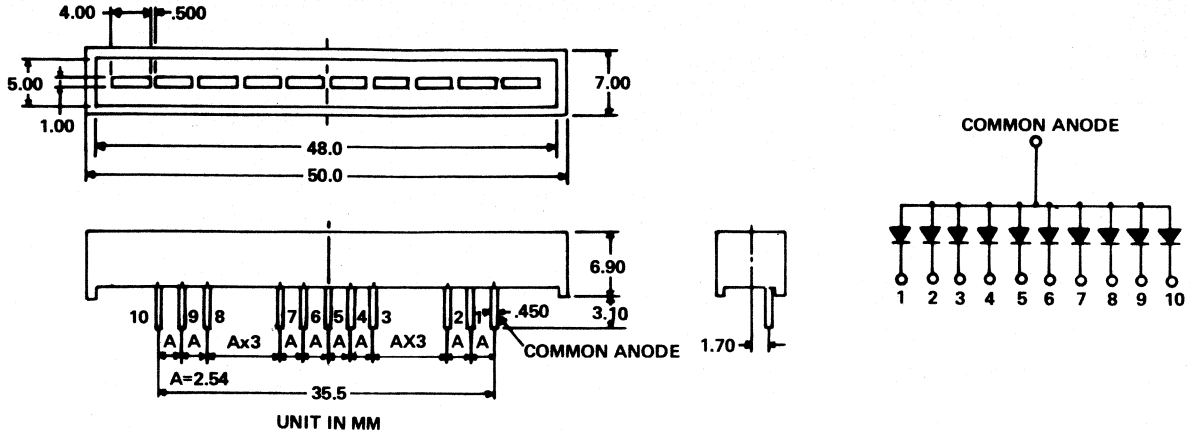
**PS187**



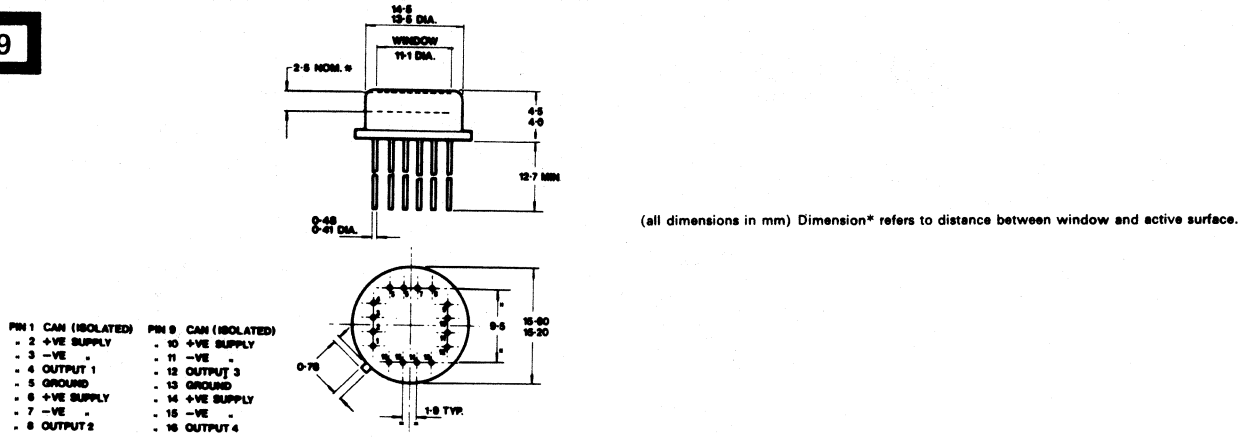
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

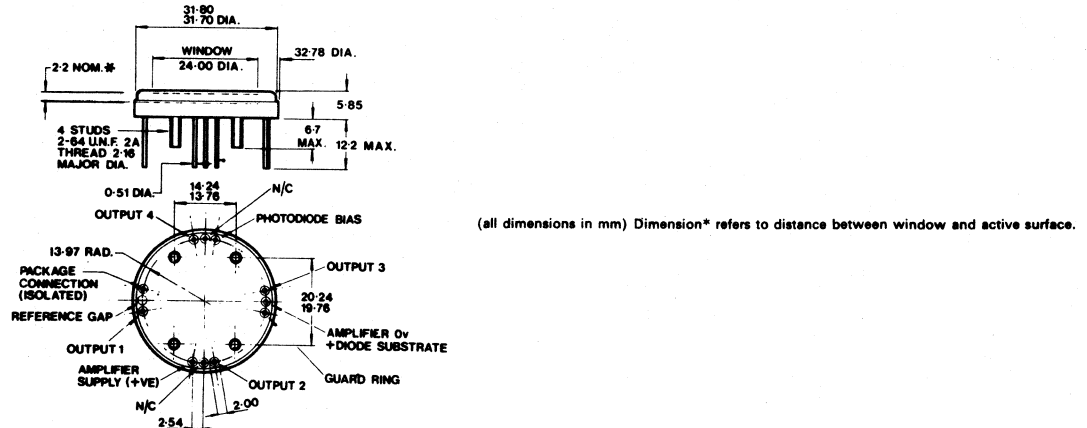
PS188



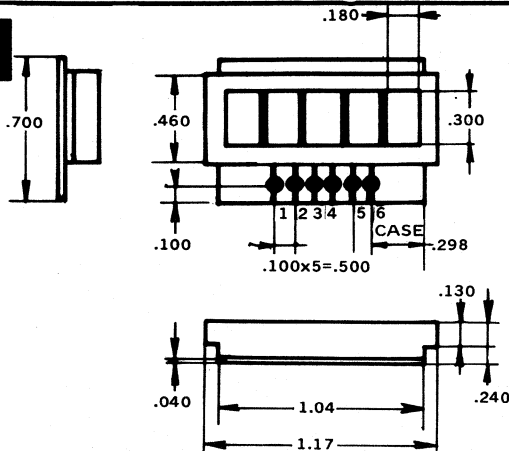
PS189



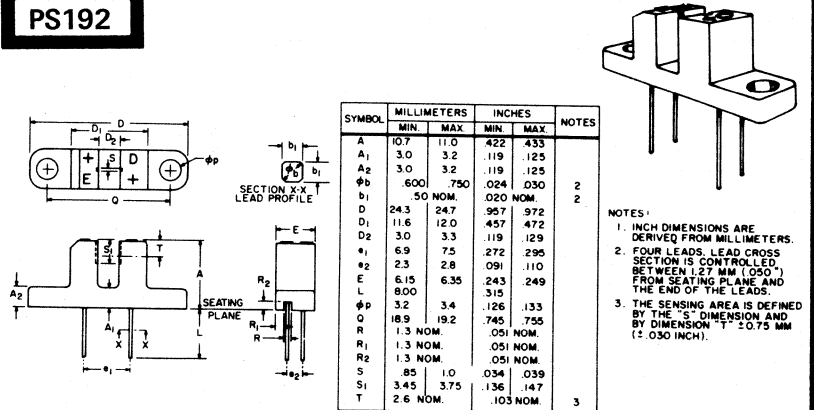
PS190



PS191



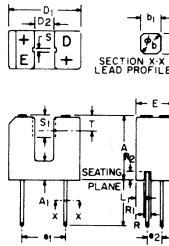
PS192



# 49. OUTLINE DRAWINGS

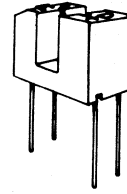
IN DRAWING NUMBER SEQUENCE

## PS193

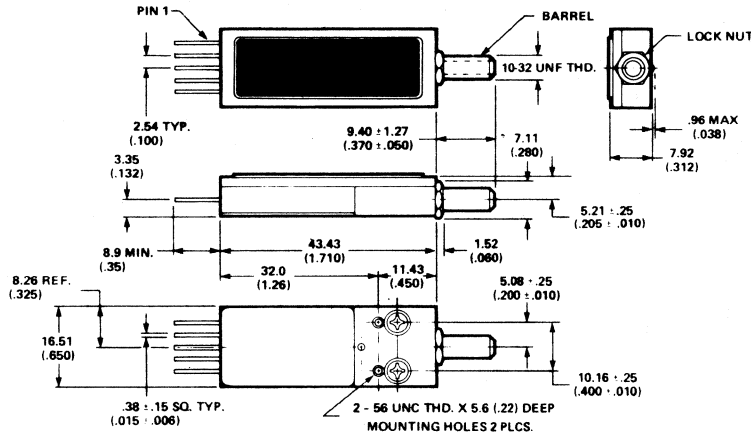


SYMBOL	MILLIMETERS		INCHES		NOTES
	MIN	MAX	MIN	MAX	
A	10.7	11.0	.422	.433	
A <sub>1</sub>	3.0	3.2	.119	.125	
φb	600	750	.024	.030	2
b <sub>1</sub>	50 NOM		.020 NOM		2
D <sub>1</sub>	11.6	12.0	.457	.472	
D <sub>2</sub>	3.0	3.3	.119	.129	
e <sub>1</sub>	6.9	7.5	.272	.295	
e <sub>2</sub>	2.3	2.8	.091	.110	
E	6.15	6.35	.243	.249	
L	8.00		.315		
R	1.3 NOM		.051 NOM		
R <sub>1</sub>	1.3 NOM		.051 NOM		
R <sub>2</sub>	1.3 NOM		.051 NOM		
S	.85	1.0	.034	.039	
S <sub>1</sub>	3.45	3.75	.136	.147	
T	2.6 NOM		.103 NOM		3

- NOTES:
1. INCH DIMENSIONS ARE DERIVED FROM MILLIMETERS.
  2. FOUR LEADS: LEAD CROSS SECTION IS CONTROLLED BETWEEN (.27 MM (.050")) FROM SEATING PLANE AND THE END OF THE LEADS.
  3. THE SENSING AREA IS DEFINED BY THE "S" DIMENSION AND BY DIMENSION T (.2075 MM (.0819 INCH)).



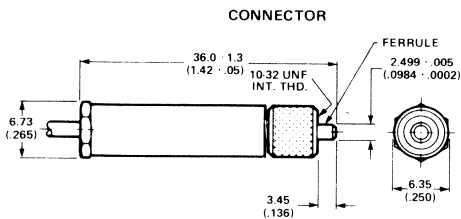
## PS194



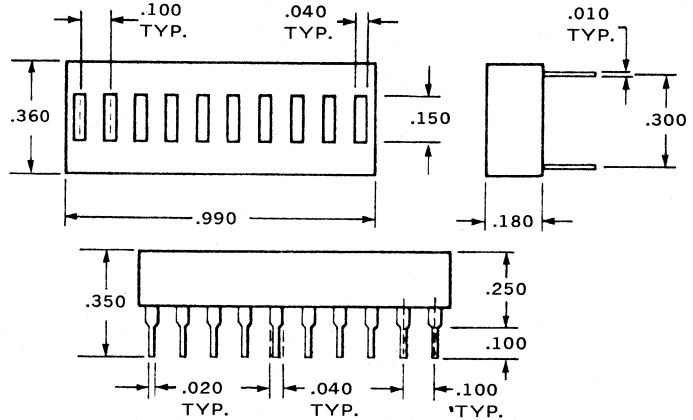
- NOTES:
1. DIMENSIONS IN mm (INCHES)
  2. UNLESS OTHERWISE SPECIFIED THE TOLERANCE ON ALL DIMENSIONS IS ±.38mm (±.015")

- WARNING:
1. LOCK NUT AND BARREL SHOULD NOT BE DISTURBED.
  2. SCREWS ENTERING THE 2-56 THREADED MOUNTING HOLES MUST NOT TOUCH BOTTOM.
  3. THE HFBR-3001 TO -3005 CONNECTOR SHOULD NOT BE TIGHTENED BEYOND THE LIMITS SPECIFIED IN THE HFBR-3001 TO -3005 DATA SHEET.

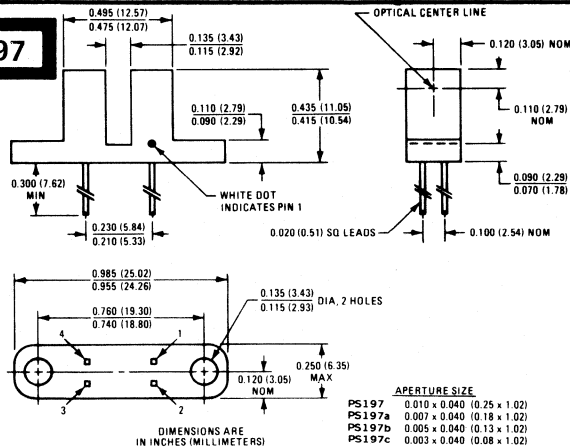
## PS195



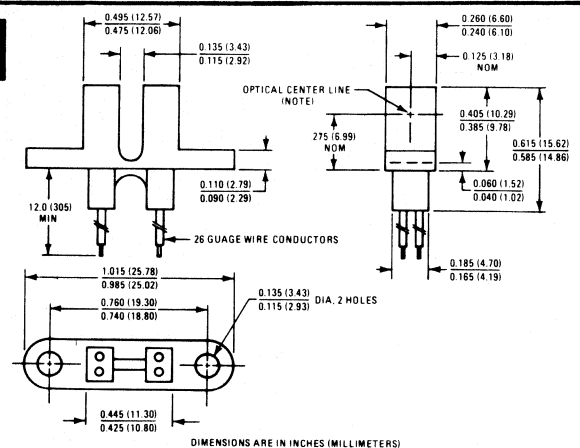
## PS196



## PS197



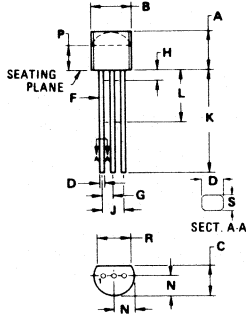
## PS198



# 49. OUTLINE DRAWINGS

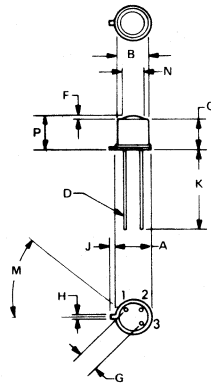
IN DRAWING NUMBER  
SEQUENCE

PT1



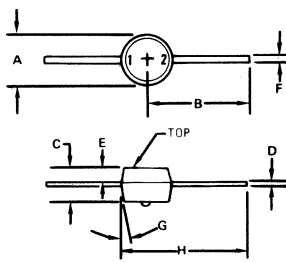
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	4.32	5.33	0.170	0.210
B	4.44	5.21	0.175	0.205
C	3.18	4.19	0.125	0.165
D	0.41	0.56	0.016	0.022
F	0.41	0.48	0.016	0.019
G	1.14	1.40	0.045	0.055
H	-	2.54	-	0.100
J	2.41	2.67	0.095	0.105
K	12.70	-	0.500	-
L	6.35	-	0.250	-
N	2.03	2.92	0.080	0.115
P	2.92	-	0.115	-
R	3.43	-	0.135	-
S	0.36	0.41	0.014	0.016

PT2



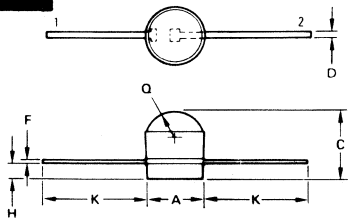
	A	B	C	D	F	G	H	J	K	N	P	
PT2	.209	.178	.180	.016	.020	.100	.039	.033	.500	45*	.132	.200
	.230	.195	.210	.019	.040	TP	.046	.048	MIN	MIN	.158	.250
PT2a	.209	.178	.200	.016	.020	.100	.039	.033	.500	45*	.132	.220
	.230	.195	.250	.019	.040	BSC	.046	.048	MIN	MIN	.158	.290
PT2b	.224	.188		.019		.100			.511		.157	.244
PT2c	.224	.188		.019		.100			.511		.157	.267
PT2d	.210	.179	.187	.019	.098	.039	.039	1.500	45*			
	.230	.190	.208									
PT2e	.212		.196			.100			.551			
PT2f	.207	.180		.016		.100	.036	.038	.500	45*	.120	.220
	.213	.188		.019			.046	.046	MIN			.260
PT2g	.209	.178		.016		.100	.036	.028	.500	45*		.225
	.230	.195		.019			.046	.048	MIN			.245
PT2h	.209	.178		.016		.100	.036	.036	.750	45*		.225
	.230	.195		.019			.046	.046	MIN			MAX
PT2j	.209	.178	.170	.016	.010	.100	.036	.028	.500	45*	.110	.180
	.230	.195	.210	.019	.020		.046	.048	MIN			.230
PT2k	.228	.188		.018		.099	.045	.046	.499	45*		.271
	MAX	MAX		MAX			MAX	MAX	MIN			MAX
PT2m	.209	.178	.180	.016	.020	.100	.039	.500			.137	
	.230	.195	.210	.019	.038		.046	MIN			.143	
PT2n	.209	.178	.170	.016		.100	.036	.028	.500	45*		
	.230	.195	.210	.019			.046	.048	MIN			
PT2p	.210	.185		.017			.088		.492			.212
	.216	MAX					.111		.570			.236
PT2q	.209	.178	.291	.016		.100			.500			
	.230	.195	TYF	.019					MIN			
PT2r	.230	.195	.270	.016		.090	.043	.043	1.500	42*	.195	
	MAX	MAX	MIN			.110	MAX	MAX	MIN	48*	MAX	
PT2s	.209	.178	.170	.016		.100	.036	.028	.500	45*	.120	.170
	.230	.195	.210	.019			.046	.048	MIN			.240
PT2t	.224	.185	.141	.017	.000	.098	.039	.039	.787	45*	.118	
	MAX											
PT2u	.224	.185	.177	.017	.090	.098	.039	.039	.787	45*	.185	.267
	MAX											

PT4



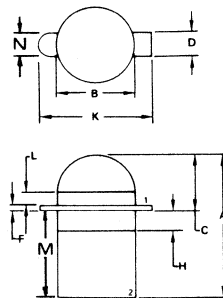
DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.078	0.092	1.98	2.34
B	0.160		4.06	
C	0.048	0.058	1.22	1.47
D	0.004	0.006	0.102	0.152
E	0.020	0.030	0.508	0.762
F	0.010	0.016	0.254	0.406
G	30	70	30	70
H	0.213 REF		5.41 REF	

PT5



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	3.56	4.06	0.140	0.160
C	4.57	5.33	0.180	0.210
D	0.33	0.48	0.013	0.019
F	0.23	0.28	0.009	0.011
H	1.02	1.27	0.040	0.050
K	6.35	-	0.250	-
Q	1.91 NOM		0.075 NOM	

PT6



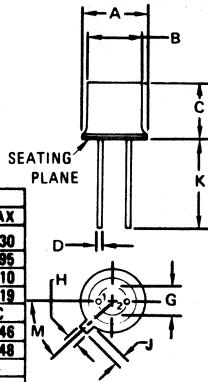
	A	B	C	D	F	H	K	L	M	N
PT6	.100	.058	.028	.016	.005	.019	.083	.008		
	.130	.062	.040	.024	.010	.021	.093	.012		
PT6a	.124	.058	.042	.016	.005	.019	.084			
	.135	.061	.047	.024	.010	.021	.092			
PT6b	.102	.058		.016	.005		.084			
	.116	.062		.024	.010		.094			
PT6c	.101	.062	.022	.015	.005	.018	.083			
	.114	MAX	.026	.023	.009	.020	.092			
PT6d	.109	.060			.007		.088		.085	.020
PT6e	.128	.060			.005		.088		.085	.020

# 49. OUTLINE DRAWINGS

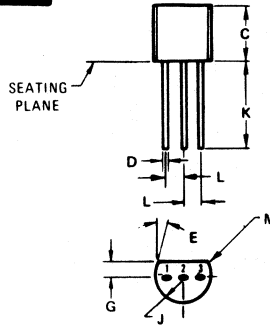
IN DRAWING NUMBER SEQUENCE

**PT7**

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	5.31	5.84	0.209	0.230
B	4.52	4.95	0.178	0.195
C	4.57	5.33	0.180	0.210
D	0.41	0.48	0.016	0.019
G	2.54 BSC		0.100 BSC	
H	0.99	1.17	0.039	0.046
J	0.84	1.22	0.033	0.048
K	12.70	—	0.500	—
M	45° BSC		45° BSC	

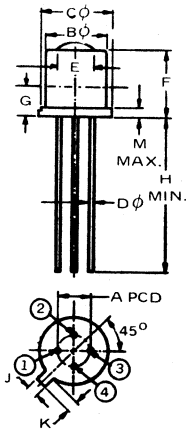


**PT8**



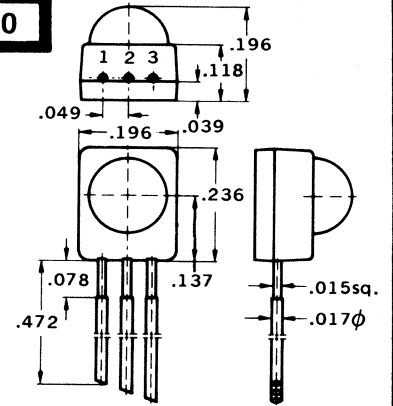
DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
C	0.175	0.185	4.450	4.700
D	0.016	0.019	0.407	0.482
E	50° NOM		50° NOM	
G	0.045	0.055	1.150	1.390
J	0.085	0.095	2.180	2.420
K	0.500	—	12.700	—
L	0.050 TP		1.270 TP	
M	0.003	0.013	0.076	0.330

**PT9**

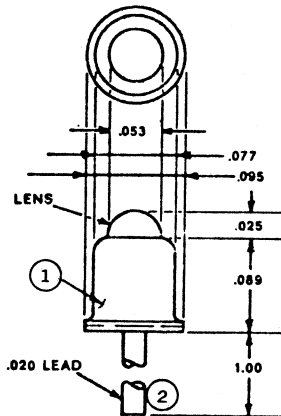


	A	B	C	D	E	F	G	H	J	K	M
PT9	.100	.188	.224	.019	.157	.267	.104	.511	—	—	—
PT9a	.098	.179	.210	.019	—	.169	—	1.496	.039	.039	.027
		.190	.230	—	—	.208	—	—	—	—	—
PT9b	.100	.178	.209	.016	—	.200	.500	.036	.028	.030	—
		.195	.230	.019	—	.225	MIN	.046	.048	MAX	—
PT9c	.090	.195	.230	.016	.195	.270	1.500	.043	.043	.015	—
	.110	MAX	MAX	.019	MAX	MAX	MIN	MAX	MAX	MAX	—

**PT10**

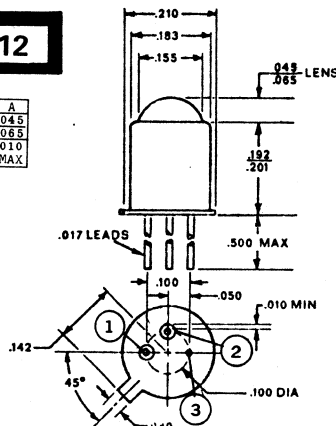


**PT11**

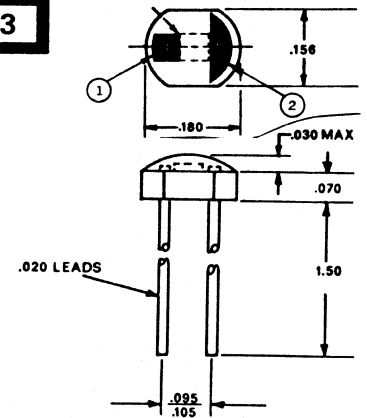


**PT12**

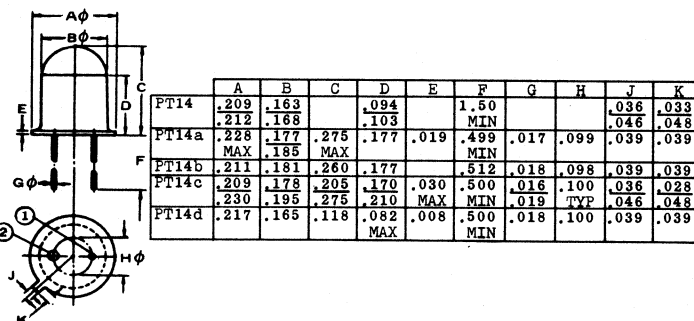
	A
PT12	.045
	.065
PT12a	.010
	MAX



**PT13**

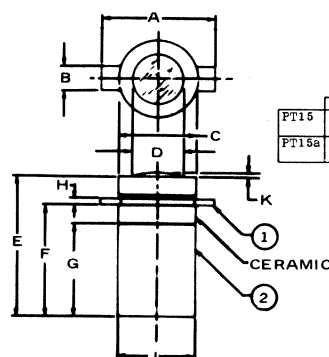


**PT14**



	A	B	C	D	E	F	G	H	J	K
PT14	.209	.163	—	.094	—	1.50	—	—	.036	.033
	.212	.168	—	.103	—	MIN	—	—	.046	.048
PT14a	MAX	.177	.275	.177	.019	.499	.017	.099	.039	.039
		MAX	MAX	—	—	MIN	—	—	—	—
PT14b	.211	.181	.260	.177	—	.512	.018	.098	.039	.039
PT14c	.209	.178	.205	.170	.030	.500	.016	.100	.036	.028
	.230	.195	.275	.210	MAX	MIN	.019	TYP	.046	.048
PT14d	.217	.165	.118	.082	.008	.500	.018	.100	.039	.039
			MAX	—	MIN	—	—	—	—	—

**PT15**



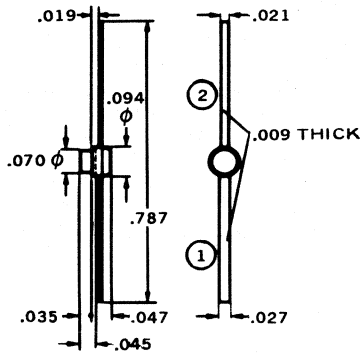
	A	B	C	D	E	F	G	H	J	K
PT15	.083	.020	.057	.035	.100	.083	.075	.005	.057	.005
	.093	—	.063	.045	.120	.097	—	—	.063	MAX
PT15a	.082	.015	.055	—	.122	.078	.059	—	.055	—
	.096	.023	.062	—	—	.090	.066	—	.062	—



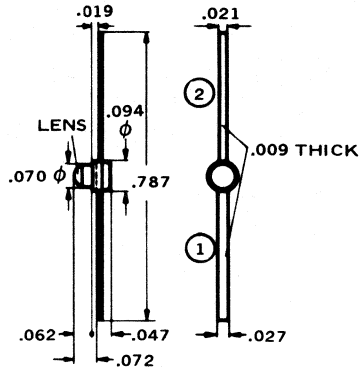
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

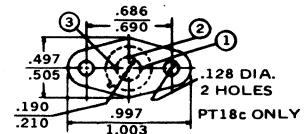
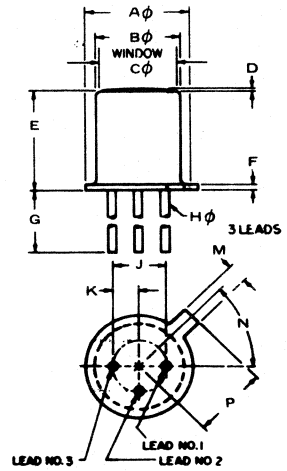
**PT16**



**PT17**

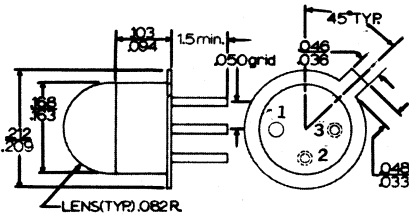


**PT18**

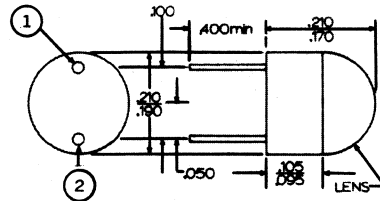


	A	B	C	D	E	F	G	H	J	K	M	N	P
PT18	.205	.176	.150	.010	.190	.025	.500	.016	.100	.050	.035	45°	.137
	.215	.190	.160	MAX.	.210	MAX	MIN	.019			.045		.147
PT18a	.207	.180	.155		.195	.018	.500	.016	.100	.050	.036	45°	.138
	.213	.188			.220	.024	MIN	.019			.046		.146
PT18b,c	.370	.335	.218		.240		1.500	.016	.190	.080	.027	42°	
	MAX	MAX			.260		MIN	.019	.210	.105	.035	48°	
PT18d	.209	.178			.170	.040	1.500	.016	.100	.050	.036	45°	
	.230	.195			MAX	MAX	MIN	.019			.046		
PT18e	.228	.188			.208		.499	.018	.099	.049	.045	45°	
	MAX	MAX			MAX		MAX				MAX		
PT18f	.210	.185			.192		.492	.017	.088				
	.218	MAX			.204		.570		.111				
PT18g	.210	.180			.195	.020	.500	.016	.090	.045	.038	40°	
	MAX	MAX			MAX	MAX	MAX	.019	.110	.055	.046	50°	
PT18h	.230	.195			.270	.015	1.500	.016	.090	.045	.043	42°	
	MAX	MAX			MAX	MAX	MIN	.019	.110	.055	MAX	48°	
PT18j	.209	.178			.170	.030	.500	.016	.100	.050	.036	45°	
	.230	.195			.210	MAX	MIN	.019			.046		
PT18k	.212	.185			.196		.551		.100				
PT18m	.209	.178			.170	.020	.500	.016	.090	.045	.036	40°	
	.230	.195			.210	MAX	MIN	.019	.110	.055	.046	50°	
PT18n	.211	.181			.177		.500	.018	.100		.039	42°	48°

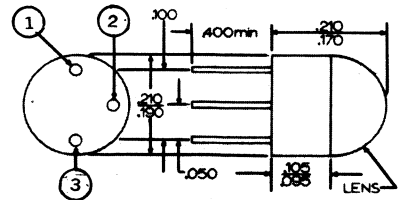
**PT19**



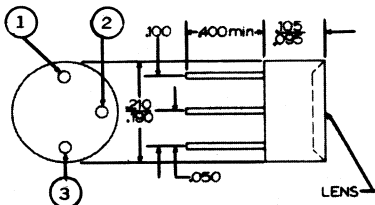
**PT20**



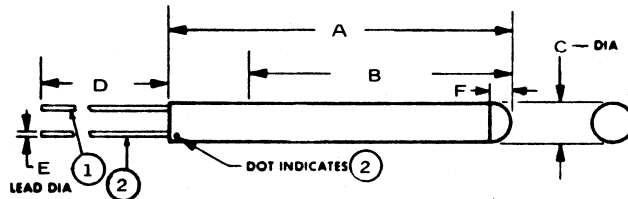
**PT21**



**PT22**



**PT23**

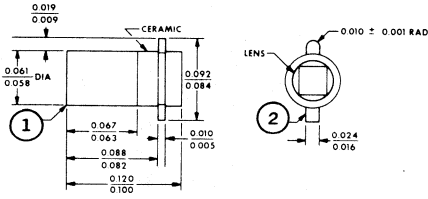


	A	B	C	D	E	F
PT23	.500	.400	.076	1.50	.009	
	.500		.085	MIN	.011	
PT23a	.500	.076	.076	1.50	.009	
	.600	.082	.085	MIN	.011	
PT23b	.354	.275	.070	.984	.015	.055
	.511	.314	.098	MIN		

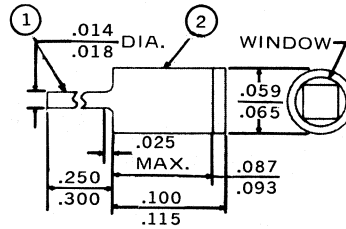
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

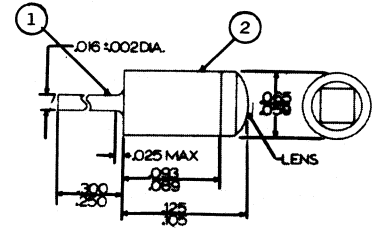
**PT24**



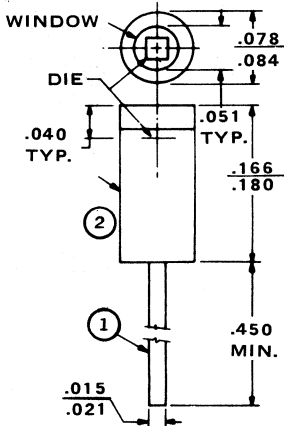
**PT25**



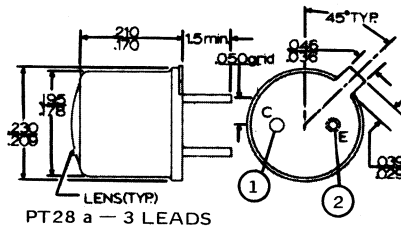
**PT26**



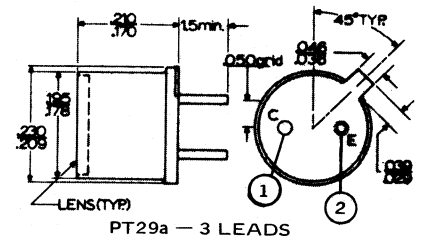
**PT27**



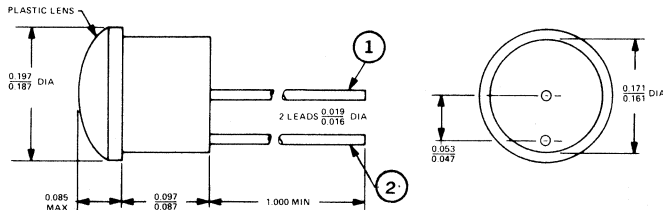
**PT28**



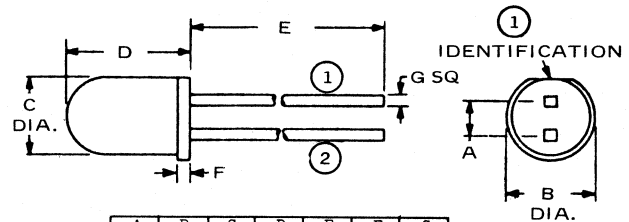
**PT29**



**PT30**



**PT31**

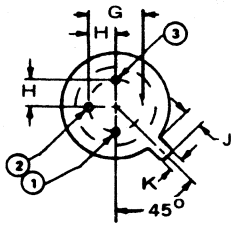
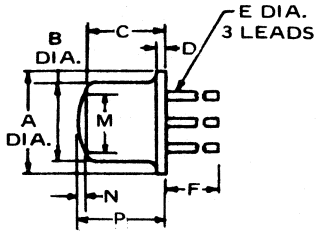


	A	B	C	D	E	F	G
PT31	.045	.140	.110	.180	.500	.020	.018
	.060	.160	.130	.210	MIN.	.040	.024
PT31a	.045	.140	.110	.180	.500	.020	.018
	.055	.160	.130	.210	MIN.	.040	.024
PT31b	.050	.155	.120	.215	.500	.025	.020
					MIN.		

# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

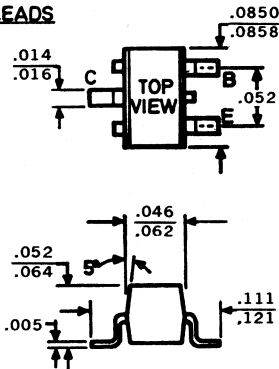
**PT32**



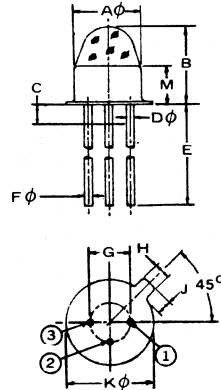
	A	B	C	D	E	F	G	H	J	K	M	N	P
PT32	.209	.178	.170	.030	.016	.500	.100	.050	.028	.036	.125	.070	
	.230	.195	.210	MAX	.019	MIN			.048	.046	MIN		
PT32a	.209	.178	.170	.030	.016	.500	.100	.050	.028	.036	.140	.010	
	.230	.195	.210	MAX	.019	MIN			.048	.046	MIN		
PT32b	.335	.305	.240		.016	1.50	.200	.100	.029	.028			
	.370	.335	.260		.019	MIN			.045	.034			
PT32c	.210	.180	.195	.020	.016	.500	.090	.045	.033	.038		.060	
	.225	.195	.205	MAX	.019	MIN	.110	.055	.046	.046			
PT32d	.205	.176	.190	.025	.016	.500	.100	.050		.035	.136	.030	
	.210	.190	.210	MAX	.019	MIN				.045	.168	.050	
PT32e	.209	.178	.170	.030	.016	.500	.100	.050	.028	.036			
	.230	.195	.210	MAX	.019	MIN			.048	.046			
PT32f	.210	.165				.551	.100						.078 MAX
PT32g	.212	.190	.202	.015	.018	.500	.100		.048	.045	.125	.040	
	.209	.180	.170	.030	.016	.500	.100	.050	.028	.036	.125	.070	
	.230	.190	.210	MAX	.019	MIN			.048	.046	MIN		
PT32j	.209	.180	.170	.030	.016	.500	.100	.050	.028	.036	.140	.010	
	.230	.190	.210	MAX	.019	MIN			.048	.046	MIN		
PT32k	.209	.178	.170	.030	.016	.500	.100	.050	.028	.036		.020	
	.230	.195	.210	MAX	.019	MIN			.048	.046			
PT32m	.209	.178	.170		.016		.100	.050	.028	.036	.150		
	.230	.195	.210		.019				.048	.046	.160		
PT32n	.224	.181	.177		.017	.787			.039	.039			.251
	MAX	.188											
PT32p	.209	.178	.170	.020	.016	.500	.090	.045	.028	.036		.060	
	.230	.195	.210	MAX	.019	MIN	.110	.055	.048	.046		MAX	
PT32q	.208	.177		.031	.016	.500	.098		.027	.035			.224
	.232	.196		MAX	.019	MIN			.047	.047			.255

**PT33**

3 LEADS

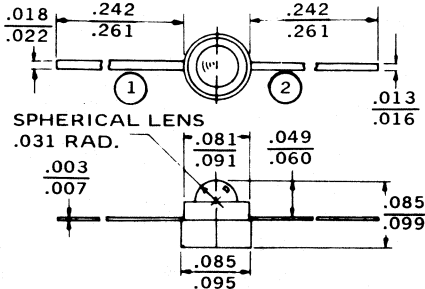


**PT34**



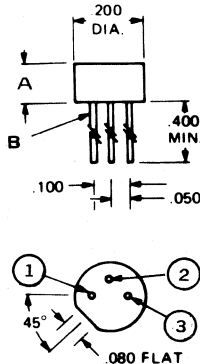
	A	B	C	D	E	F	G	H	J	K	M
PT34	.160	.196	.051	.039	.499	.017	.099	.039	.035	.200	
	.170	MAX	MAX	MAX	MIN	.021				.216	
PT34a	.161	.177			.499	.018	.099	.045	.046	.228	
	.173	MAX			MIN	MAX		MAX	MAX	MAX	
PT34b	.169	.157			.492	.017	.088			.210	.104
					.570		.111			.222	.110
PT34c	.185				.551		.100			.212	.196
	.185	MAX		.017	.499	.017	.098	.039	.039	.228	.177
PT34d	.177	.275			.500		.100			.200	.100
	.185	MAX			MIN						
PT34e	.165	.150			.500		.100				

**PT35**

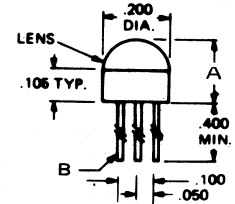


**PT36**

	A	B
PT36	.100	.016
	.128	.022
PT36a	.100	.016
	.136	.022
PT36b	.100	.018
	.125	.019
PT36c	.095	.017
	.115	.019



**PT37**

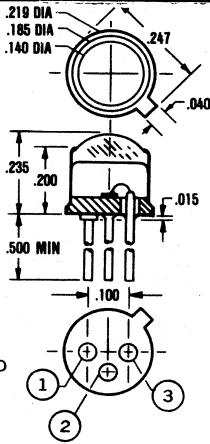


	A	B
PT37	.140	.016
	.210	.022
PT37a	.120	.016
	.220	.022
PT37b	.190	.016
	.210	.018
PT37c	.190	.016
	.210	.022

# 49. OUTLINE DRAWINGS

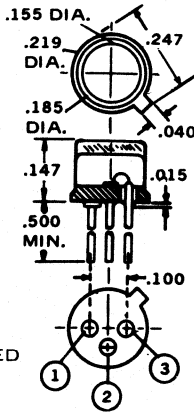
IN DRAWING NUMBER  
SEQUENCE

**PT38**



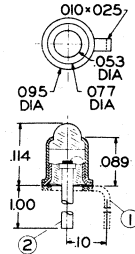
PT38a: PIN 2 NOT CONNECTED

**PT39**



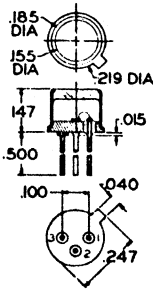
PT39a: PIN 2 NOT CONNECTED

**PT40**

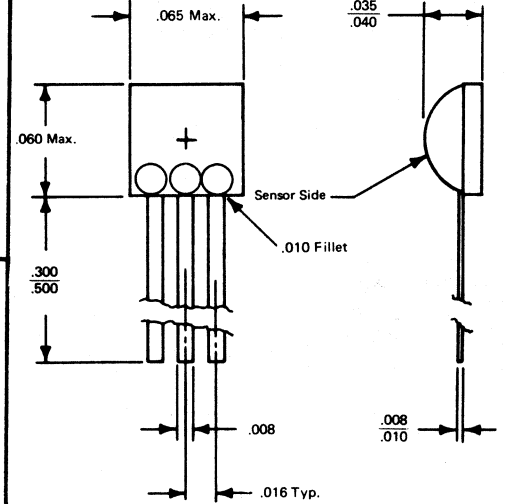


PT40a — WITHOUT TAB

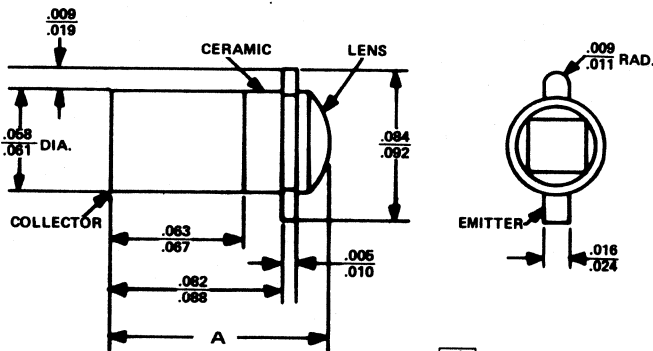
**PT41**



**PT42**

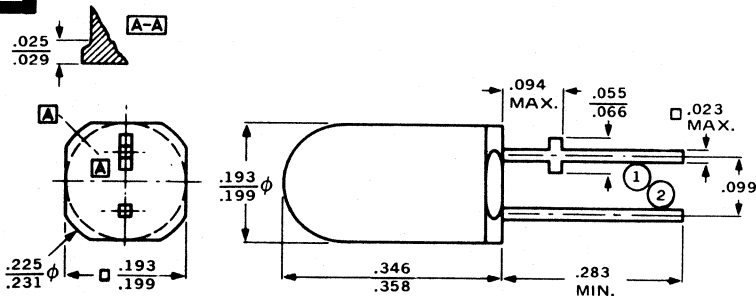


**PT43**

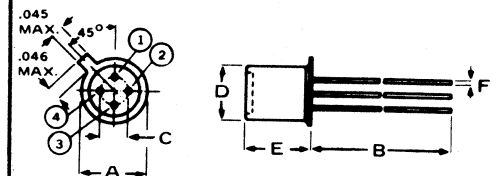


	A
PT43	.102
PT43a	.115

**PT45**



**PT46**

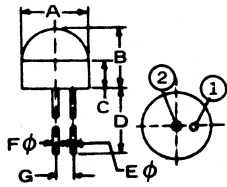


	A	B	C	D	E	F
PT46	.228	.499	.099	.188	.208	.018
PT46a	MAX	MIN	MAX	MAX	MAX	MAX
PT46a	.208	1.456	.099	.188	.208	.018
PT46a	MAX	MAX	MAX	MAX	MAX	MAX
PT46b	.230	1.500	.090	.195	.270	.018
PT46b	MAX	MIN	.110	MAX	MAX	.019

# 49. OUTLINE DRAWINGS

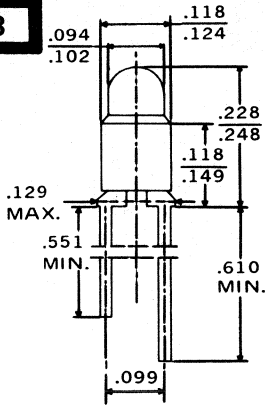
IN DRAWING NUMBER  
SEQUENCE

**PT47**

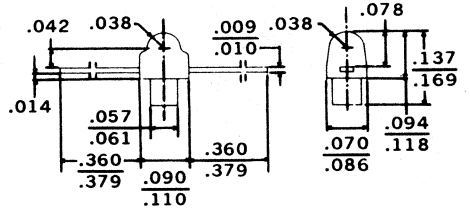


	A	B	C	D	E	F	G
PT47	.106 MAX	.157 MAX	.078 MIN	.433 MIN	.011	.017	.035
PT47a	.120	.161	.081	.531	.010	.020	.040
PT47b	.114 MAX	.137 MAX	.078	.547	.011	.017	.031

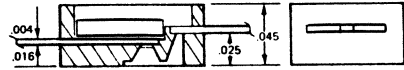
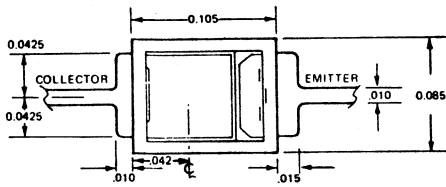
**PT48**



**PT49**

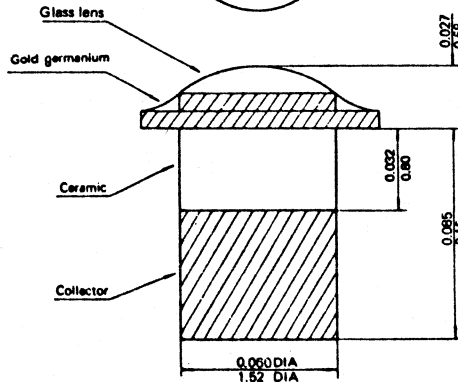
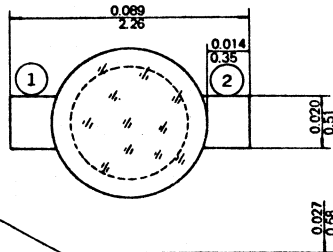


**PT50**

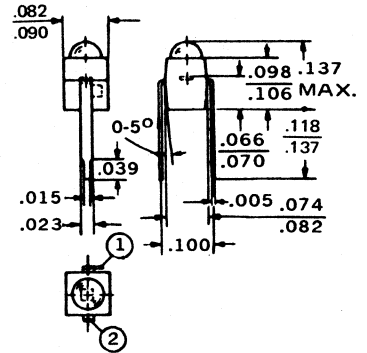


ALL TOLERANCES ± .001

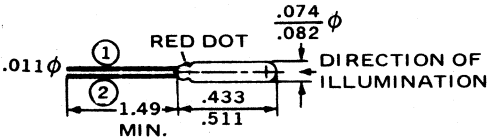
**PT51**



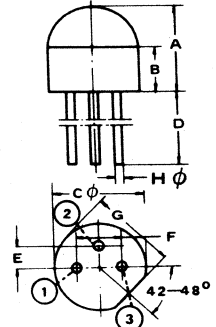
**PT54**



**PT55**

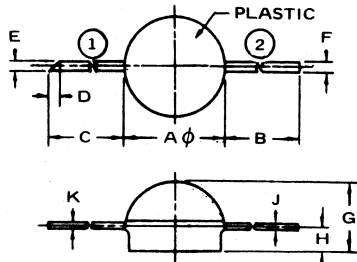


**PT56**



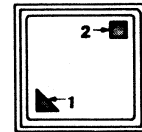
	A	B	C	D	E	F	G	H
PT56	.197 MAX	.100 MIN	.200	.500 MIN	.043 MIN	.092 MIN	.163 MIN	.010
PT56a	.125	.095	.192	.400	.047	.095		.010
PT56b	.200	.115	.203	.600 MIN	.052	.115		.020

**PT60**



	A	B	C	D	E	F	G	H	J	K
PT60	.149 MIN	.157 MIN	.157 MIN	.013	.020 MIN	.020 MIN	.129 MAX	.027	.003	.003
PT60a	.149	.177	.236 MIN	.013	.024	.024	.130 MAX	.028	.010	.010

**PT63**

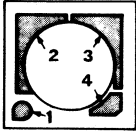


LEAD 3 - ON BOTTOM  
OF CHIP

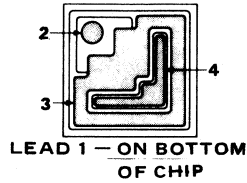
# 49. OUTLINE DRAWINGS

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SEQUENCE

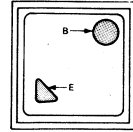
PT64



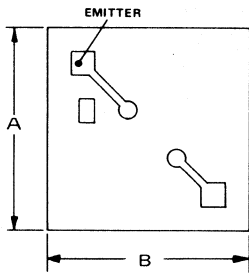
PT65



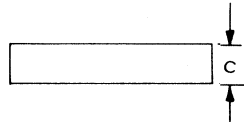
PT66



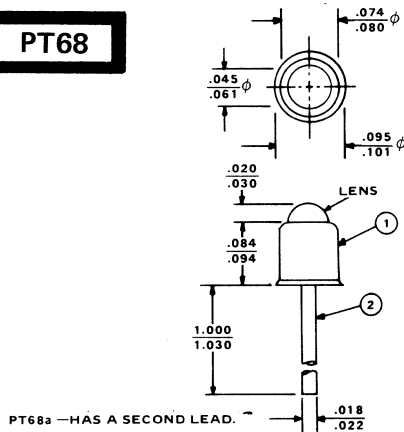
PT67



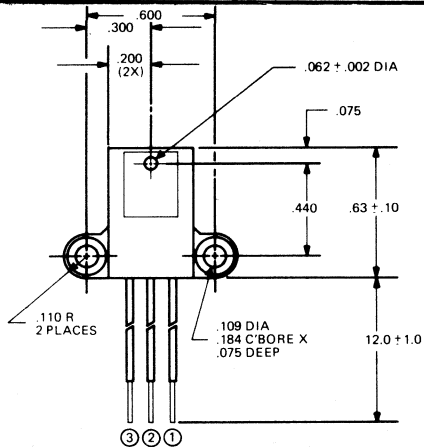
	A	E	C
PT67	.025	.025	.006 TYP
PT67a	.040	.040	.006 TYP



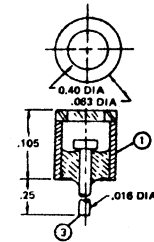
PT68



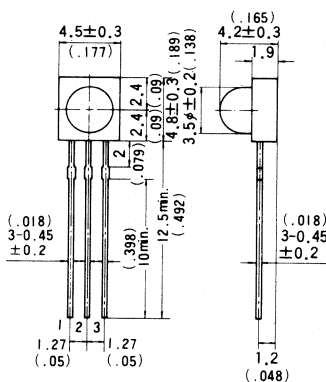
PT69



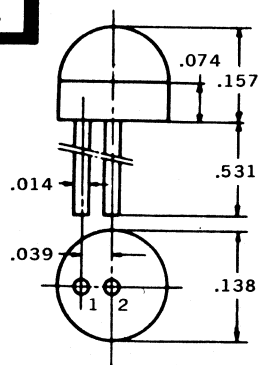
PT71



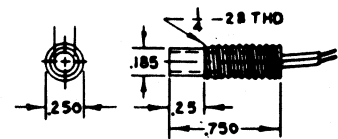
PT72



PT74



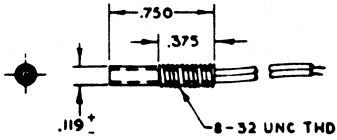
PT76



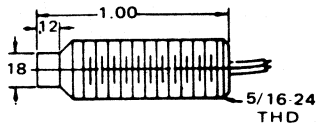
# 49. OUTLINE DRAWINGS

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SEQUENCE

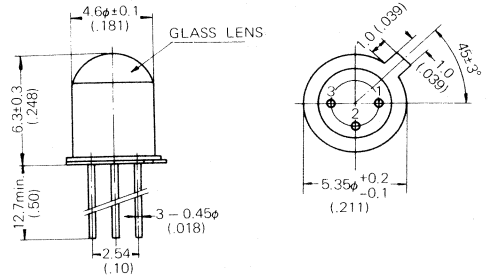
**PT77**



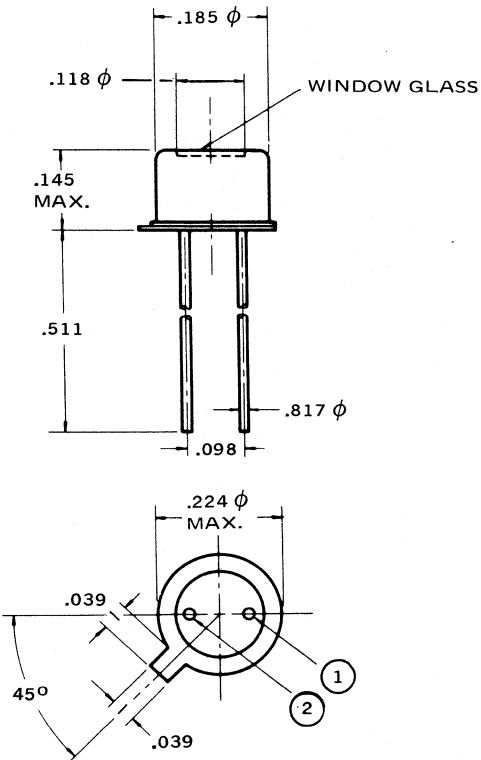
**PT78**



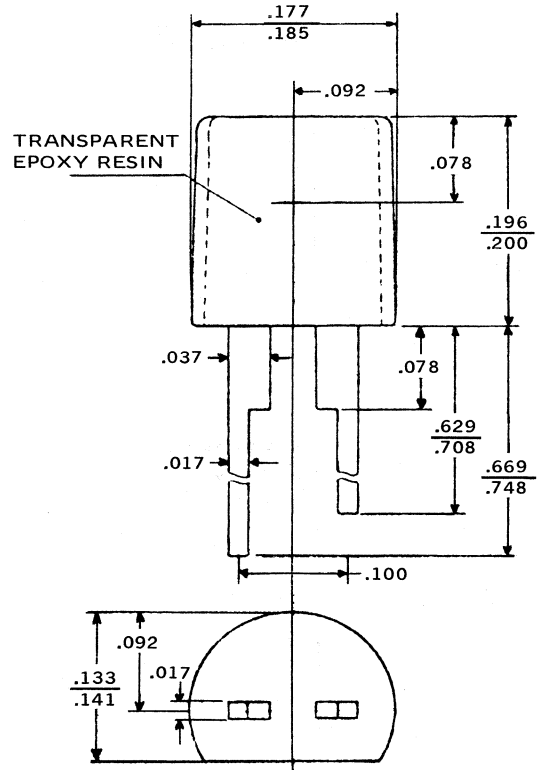
**PT79**



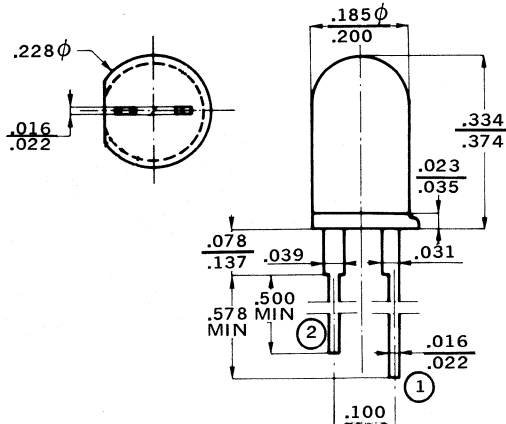
**PT81**



**PT82**



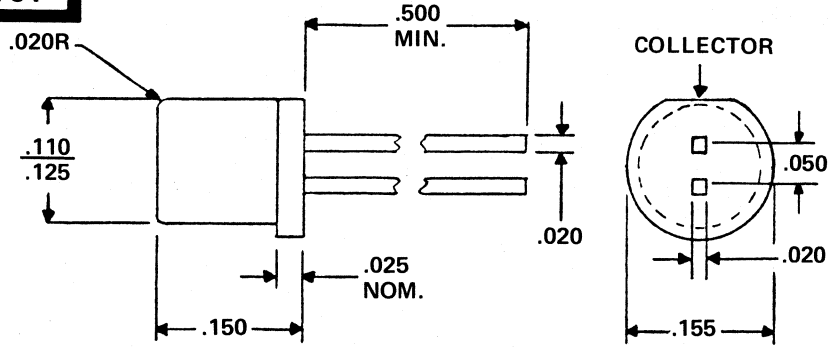
**PT83**



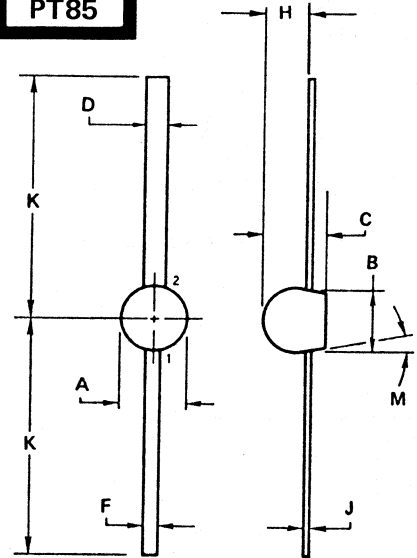
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

**PT84**

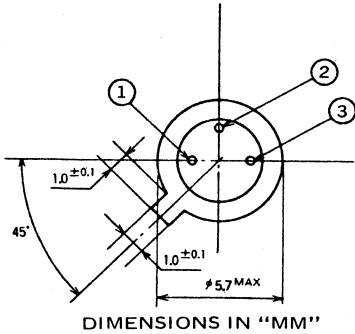
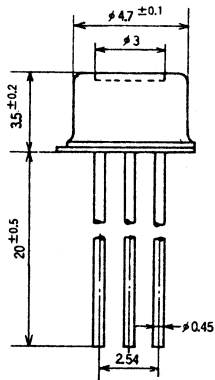


**PT85**

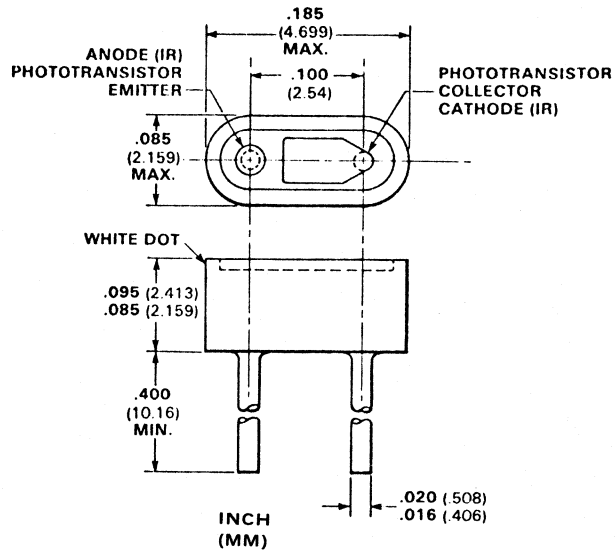


DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	2.34	2.59	0.092	0.102
B	2.11	2.36	0.083	0.093
C	2.39	2.64	0.094	0.104
D	0.64	0.74	0.025	0.029
F	0.46	0.56	0.018	0.022
H	1.57	1.83	0.062	0.072
J	0.20	0.30	0.008	0.012
K	9.65	-	0.380	-
M	9°	11°	9°	11°

**PT86**



**PT87**

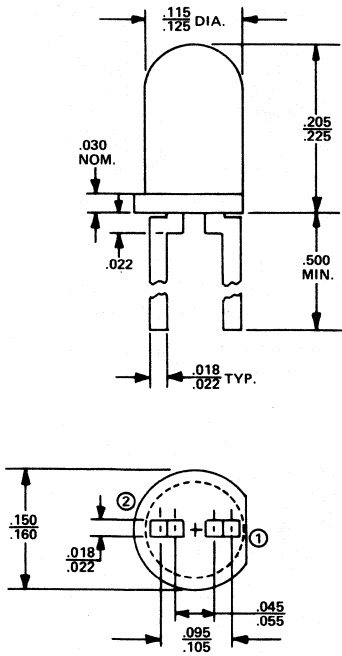




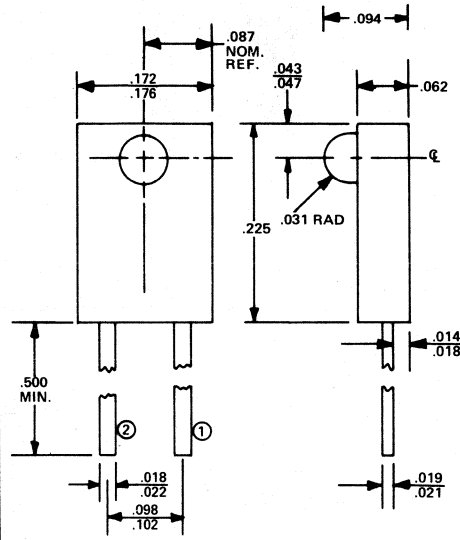
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

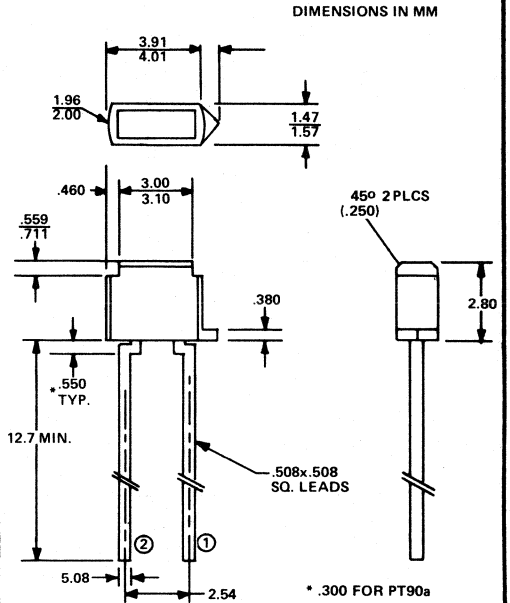
**PT88**



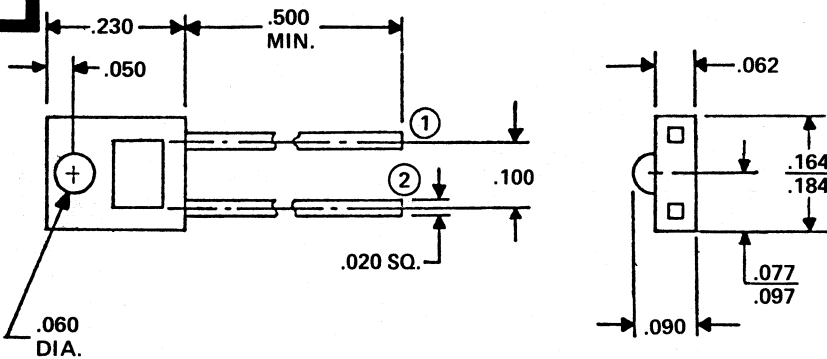
**PT89**



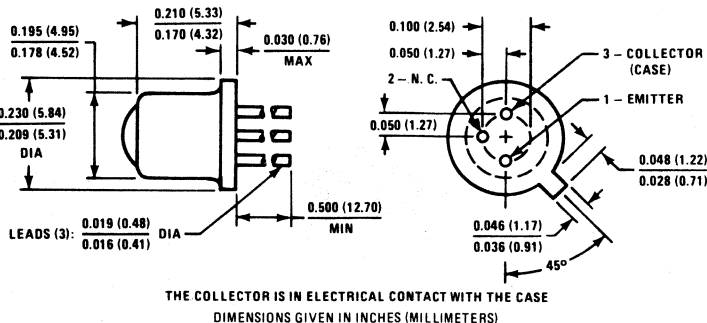
**PT90**



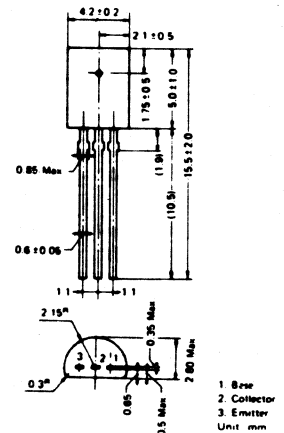
**PT91**



**PT92**



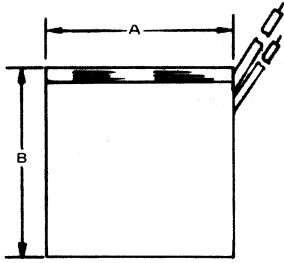
**PT93**



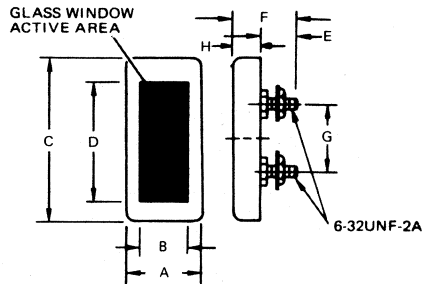
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

**PV1**

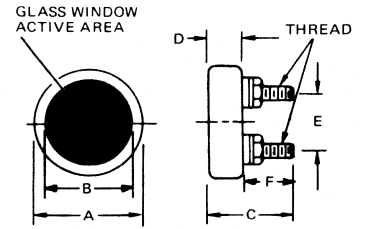


**PV2**



	A	B	C	D	E	F	G	H
PV2	1.120	.750	2.2	1.600	.400	.840	1.00	
PV2a	1.100	.700	2.2	1.600	.400		.600	.300

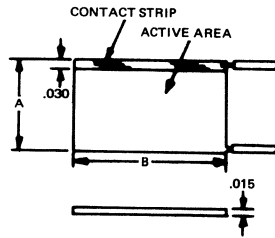
**PV3**



	A	B	C	D	E	F	THREAD
PV3	1.250		.875	.375	.625		6-32UNF2A
PV3a	1.200	1.100		.300	.600	.400	6-32
PV3b	1.900	1.700		.300	.600	.400	6-32

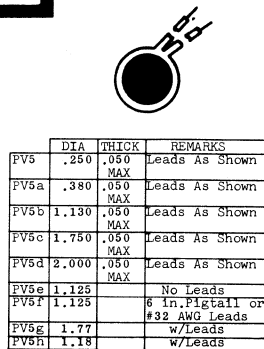
	A	B	THICK	REMARKS
PV1	.767	.770		No Leads
PV1a	.767	.770		6 in. Pigtail Leads
PV1b	.767	.770		.032 in. Wide, 3/8 in. Long Ribbon
PV1c	.767	1.140		No Leads
PV1d	.767	1.140		6 in. Pigtail Leads
PV1e	.767	1.140		.032 in. Wide, 3/8 in. Long Ribbon
PV1f	.767	1.834		No Leads
PV1g	.767	1.834		6 in. Pigtail Leads
PV1h	.767	1.834		.032 in. Wide, 3/8 in. Long Ribbon
PV1i	.807	1.880		
PV1j	.440	.720	.050	Pigtail Leads
PV1k	.540	.880	.050	Pigtail Leads
PV1l	.840	1.440	MAX	Pigtail Leads
PV1m	.840	1.440	.050	Pigtail Leads
PV1n	.880	1.690	MAX	Pigtail Leads
PV1p	.500	.600	.050	Pigtail Leads
PV1q	2.000	2.000	MAX	Pigtail Leads
PV1r	.200	.087		No Leads
PV1s	.200	.100		No Leads
PV1t	.200	.200		No Leads
PV1u	.400	.200		No Leads
PV1v	.800	.200		No Leads
PV1w	.400	.400		No Leads
PV1x	.800	.400		No Leads
PV1y	.800	.800		No Leads
PV1z	.200	.087		6 in. Pigtail Leads
PV1aa	.200	.100		6 in. Pigtail Leads
PV1ab	.200	.200		6 in. Pigtail Leads
PV1ac	.400	.200		6 in. Pigtail Leads
PV1ad	.800	.200		6 in. Pigtail Leads
PV1ae	.400	.400		6 in. Pigtail Leads
PV1af	.800	.400		6 in. Pigtail Leads
PV1ag	.800	.800		6 in. Pigtail Leads
PV1ah	.520	.400		No Leads
PV1ai	.800	.520		No Leads
PV1aj	1.120	.400		No Leads
PV1ak	1.120	.800		No Leads
PV1al	.840	.400		No Leads
PV1ap	.840	.800		No Leads
PV1aq	1.840	.400		No Leads
PV1ar	1.840	.800		No Leads
PV1as	.520	.400		6 in. Pigtail Leads
PV1at	.800	.520		6 in. Pigtail Leads
PV1au	1.120	.400		6 in. Pigtail Leads
PV1av	1.120	.800		6 in. Pigtail Leads
PV1aw	.540	.400		6 in. Pigtail Leads
PV1ax	.840	.800		6 in. Pigtail Leads
PV1ay	1.840	.400		6 in. Pigtail Leads
PV1az	1.840	.800		6 in. Pigtail Leads
PV1ba	.393	.787	.025	6 in. Leads
PV1bb	.393	.393	.025	6 in. Leads
PV1bc	.196	.196	.025	6 in. Leads
PV1bd	.196	.787	.025	6 in. Leads
PV1be	.196	.393	.025	6 in. Leads
PV1bf	.196	.196	.025	6 in. Leads
PV1bg	.196	.098	.025	6 in. Leads
PV1bh	.787	.787	.025	6 in. Leads
PV1bi	.196	.384	.025	6 in. Leads
PV1bk	.384	.384	.015	No Leads or 6 inch #32 AWG Leads
PV1bl	.404	.404	.035	No Leads or 6 inch #32 AWG Leads
PV1bm	.778	.187	.015	No Leads or 6 inch #32 AWG Leads
PV1bn	.778	.202	.035	No Leads or 6 inch #32 AWG Leads
PV1bo	.378	.187	.015	No Leads or 6 inch #32 AWG Leads
PV1bp	.398	.202	.035	No Leads or 6 inch #32 AWG Leads
PV1bq	.178	.187	.015	No Leads or 6 inch #32 AWG Leads
PV1br	.193	.202	.035	No Leads or 6 inch #32 AWG Leads
PV1bs	.083	.187	.015	No Leads or 6 inch #32 AWG Leads
PV1bt	.093	.202	.035	No Leads or 6 inch #32 AWG Leads
PV1bu	.788	.394		No Leads
PV1ba	1.576	.788	.013	No Leads or 6 inch #32 AWG Leads
PV1bt	2.364	.788	.013	No Leads or 6 inch #32 AWG Leads
PV1bu	.788	.394		No Leads or 6 inch #32 AWG Leads

**PV4**



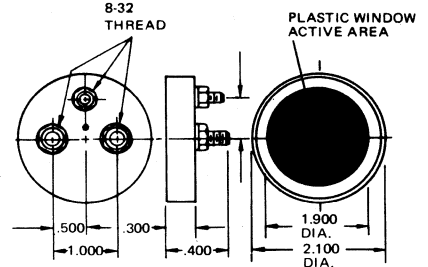
	A	B	REMARKS
PV4	.200	.200	Without Pigtail Leads
PV4a	.200	.400	Without Pigtail Leads
PV4b	.200	.800	Without Pigtail Leads
PV4c	.400	.200	Without Pigtail Leads
PV4d	.400	.400	Without Pigtail Leads
PV4e	.400	.800	Without Pigtail Leads
PV4f	.800	.200	Without Pigtail Leads
PV4g	.800	.400	Without Pigtail Leads
PV4h	.800	.800	Without Pigtail Leads
PV4i	.200	.200	As Shown
PV4j	.200	.400	As Shown
PV4k	.200	.800	As Shown
PV4l	.200	.800	As Shown
PV4m	.400	.200	As Shown
PV4n	.400	.400	As Shown
PV4o	.400	.800	As Shown
PV4p	.800	.200	As Shown
PV4q	.800	.400	As Shown
PV4r	.800	.800	As Shown
PV4s	.800	.400	As Shown
PV4t	.800	.800	As Shown
PV4u	.200	.200	6 inch Pigtail Leads Blue Lead Positive
PV4v	.100	.200	6 inch Pigtail Leads Blue Lead Positive
PV4w	.390	.390	6 inch Pigtail Leads Blue Lead Positive
PV4x	.390	.785	6 inch Pigtail Leads Blue Lead Positive

**PV5**

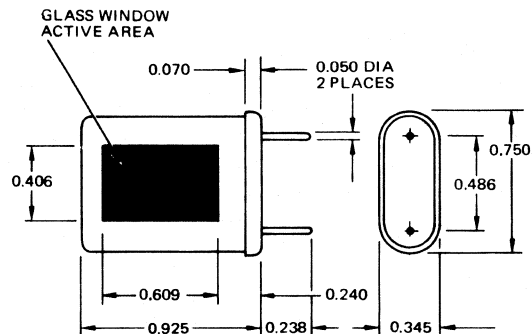


	DIA	THICK	REMARKS
PV5	.250	.050	Leads As Shown
PV5a	.380	.050	Leads As Shown
PV5b	1.130	.050	Leads As Shown
PV5c	1.750	.050	Leads As Shown
PV5d	2.000	.050	Leads As Shown
PV5e	1.125		No Leads
PV5f	1.125		6 in. Pigtail or #32 AWG Leads
PV5g	1.77		w/Leads
PV5h	1.18		w/Leads

**PV6**



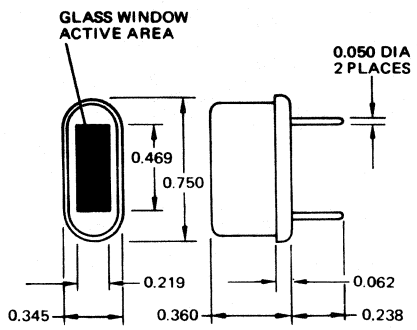
**PV7**



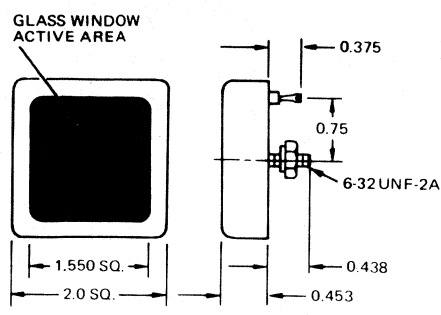
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

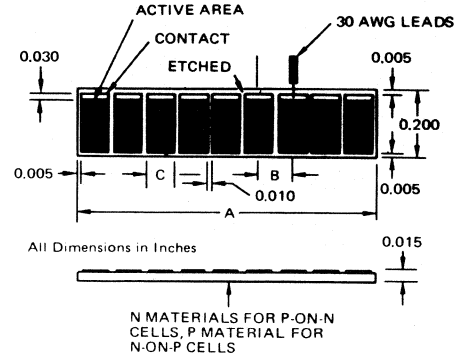
**PV8**



**PV9**

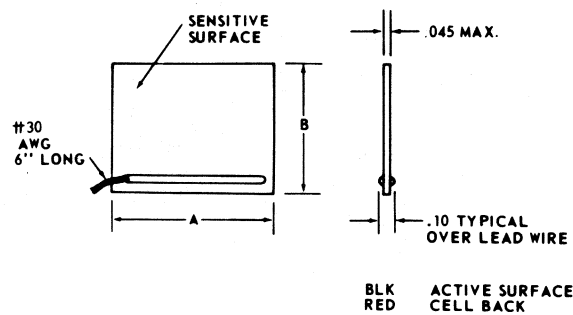


**PV10**



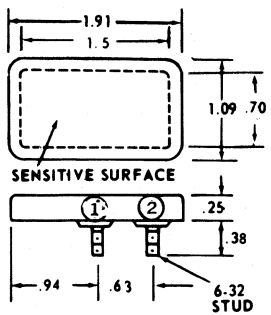
**PV11**

	A	B
PV11	.250	.484
PV11a	.440	.730
PV11b	.625	.765
PV11c	1.118	.822
PV11d	1.160	.654
PV11e	.875	.525
PV11f	.875	.843
PV11g	.875	.875
PV11h	1.459	.640
PV11i	1.118	.890
PV11k	1.500	1.500
PV11m	1.931	1.431
PV11n	.281	.875
PV11p	4.188	.250
PV11q	5.859	.500
PV11r	6.000	.437
PV11s	1.859	.858
PV11t	6.000	.250

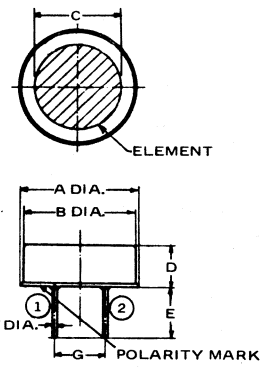


	A	B	C	REMARKS
PV10	.087	.087	.077	With Baseplate
PV10a	.174	.087	.077	With Baseplate
PV10b	.261	.087	.077	With Baseplate
PV10c	.348	.087	.077	With Baseplate
PV10d	.435	.087	.077	With Baseplate
PV10e	.522	.087	.077	With Baseplate
PV10f	.609	.087	.077	With Baseplate
PV10g	.696	.087	.077	With Baseplate
PV10h	.783	.087	.077	With Baseplate
PV10j	.870	.087	.077	With Baseplate
PV10k	1.00	.100	.090	With Baseplate
PV10m	.200	.100	.090	With Baseplate
PV10n	.300	.100	.090	With Baseplate
PV10p	.400	.100	.090	With Baseplate
PV10q	.500	.100	.090	With Baseplate
PV10r	.600	.100	.090	With Baseplate
PV10s	.700	.100	.090	With Baseplate
PV10t	.800	.100	.090	With Baseplate
PV10u	.900	.100	.090	With Baseplate
PV10v	1.000	.100	.090	With Baseplate
PV10w	.087	.087	.077	With Baseplate and Pigtail Lead
PV10x	.174	.087	.077	With Baseplate and Pigtail Lead
PV10y	.261	.087	.077	With Baseplate and Pigtail Lead
PV10z	.348	.087	.077	With Baseplate and Pigtail Lead
PV10aa	.435	.087	.077	With Baseplate and Pigtail Lead
PV10ab	.522	.087	.077	With Baseplate and Pigtail Lead
PV10ac	.609	.087	.077	With Baseplate and Pigtail Lead
PV10ad	.696	.087	.077	With Baseplate and Pigtail Lead
PV10ae	.783	.087	.077	With Baseplate and Pigtail Lead
PV10af	.870	.087	.077	With Baseplate and Pigtail Lead
PV10ag	1.00	.100	.090	With Baseplate and Pigtail Lead
PV10ah	.200	.100	.090	With Baseplate and Pigtail Lead
PV10ai	.300	.100	.090	With Baseplate and Pigtail Lead
PV10aj	.400	.100	.090	With Baseplate and Pigtail Lead
PV10ak	.500	.100	.090	With Baseplate and Pigtail Lead
PV10am	.600	.100	.090	With Baseplate and Pigtail Lead
PV10an	.700	.100	.090	With Baseplate and Pigtail Lead
PV10ap	.800	.100	.090	With Baseplate and Pigtail Lead
PV10aq	.900	.100	.090	With Baseplate and Pigtail Lead
PV10ar	1.000	.100	.090	With Baseplate and Pigtail Lead
PV10as	1.000	.100	.090	With Baseplate and Pigtail Lead
PV10at	.087	.087	.077	With Pigtail Lead
PV10au	.174	.087	.077	With Pigtail Lead
PV10av	.261	.087	.077	With Pigtail Lead
PV10au	.348	.087	.077	With Pigtail Lead
PV10ax	.435	.087	.077	With Pigtail Lead
PV10ay	.522	.087	.077	With Pigtail Lead
PV10az	.609	.087	.077	With Pigtail Lead
PV10ba	.696	.087	.077	With Pigtail Lead
PV10bb	.783	.087	.077	With Pigtail Lead
PV10bc	.870	.087	.077	With Pigtail Lead
PV10bd	1.00	.100	.090	With Pigtail Lead
PV10be	1.200	.100	.090	With Pigtail Lead
PV10bf	1.300	.100	.090	With Pigtail Lead
PV10bg	1.400	.100	.090	With Pigtail Lead
PV10bh	1.500	.100	.090	With Pigtail Lead
PV10bi	1.600	.100	.090	With Pigtail Lead
PV10bj	1.700	.100	.090	With Pigtail Lead
PV10bk	1.800	.100	.090	With Pigtail Lead
PV10bm	1.800	.100	.090	With Pigtail Lead
PV10bn	1.900	.100	.090	With Pigtail Lead
PV10bp	1.000	.100	.090	With Pigtail Lead

**PV12**

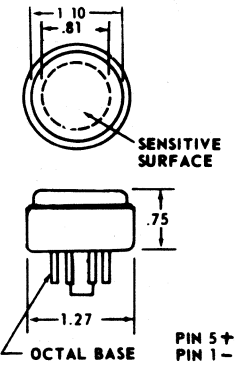


**PV13**

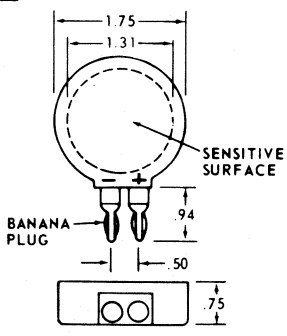


	A	B	C	D	E	F	G
PV13	1.270	1.100	.810	.260	.500	.040	.750
PV13a	1.083	1.024		.394	1.472	.039	1.472

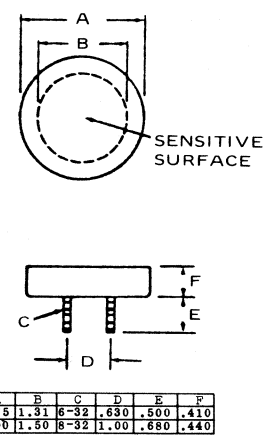
**PV14**



**PV15**



**PV16**

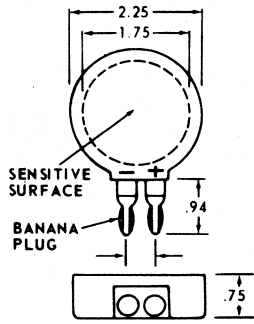


	A	B	C	D	E	F
PV16	1.75	1.31	8-32	.630	.500	.410
PV16a	2.00	1.50	8-32	1.00	.680	.440

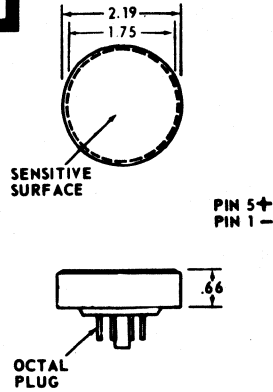
# 49. OUTLINE DRAWINGS

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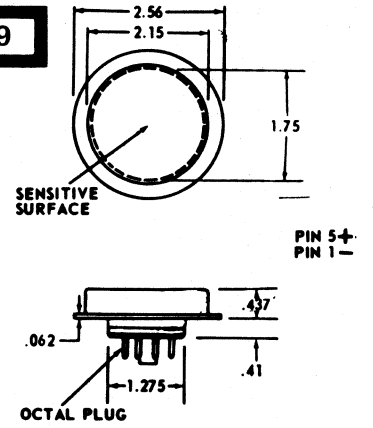
**PV17**



**PV18**

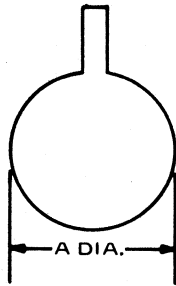


**PV19**

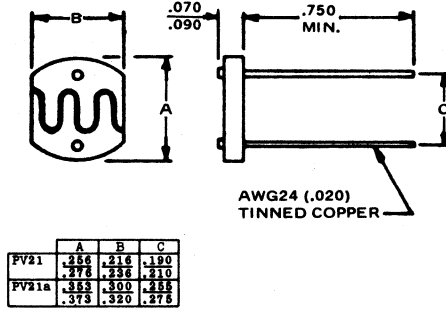


**PV20**

	A
PV20	.250
PV20a	.375
PV20b	.500
PV20c	1.000
PV20d	1.130
PV20e	1.375
PV20f	1.500
PV20g	1.770
PV20h	2.000

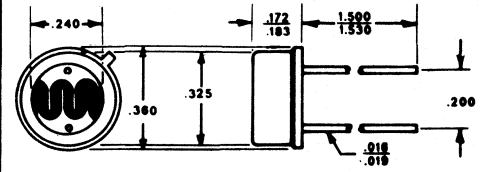


**PV21**

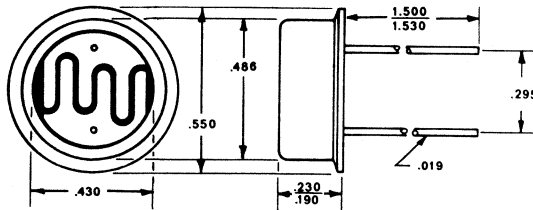


	A	B	C
PV21	.266	.216	.190
	.278	.236	.210
PV21a	.353	.300	.288
	.375	.320	.278

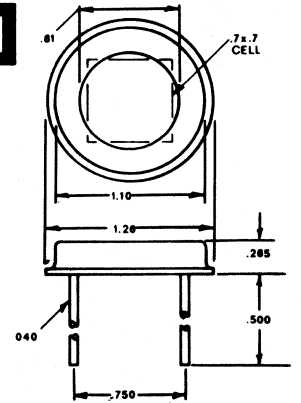
**PV22**



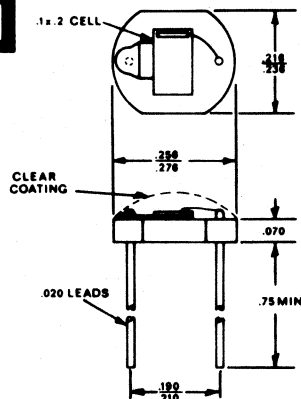
**PV23**



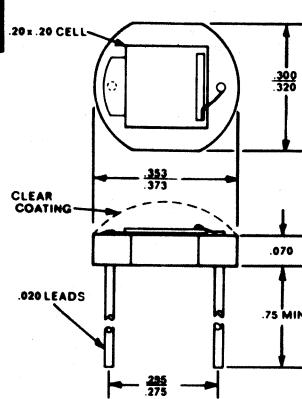
**PV24**



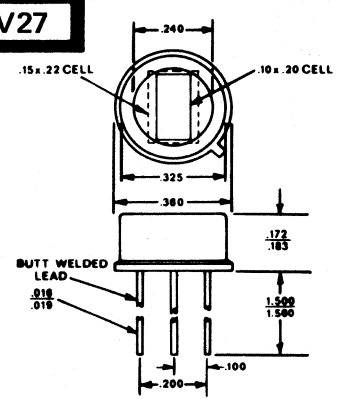
**PV25**



**PV26**



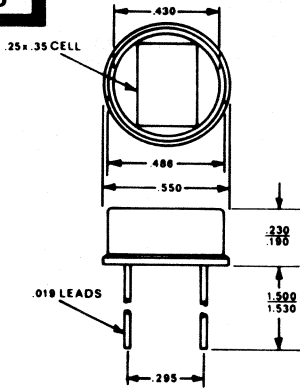
**PV27**



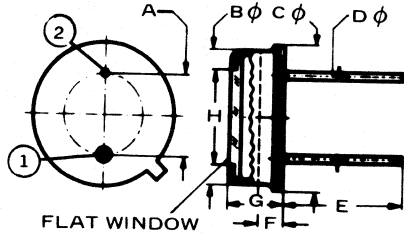
# 49. OUTLINE DRAWINGS

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**PV28**

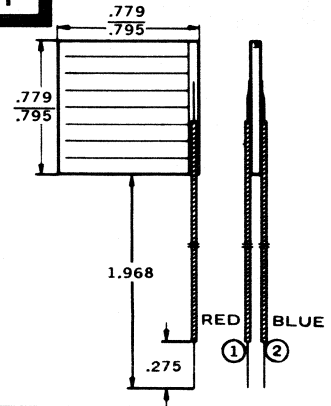


**PV29**

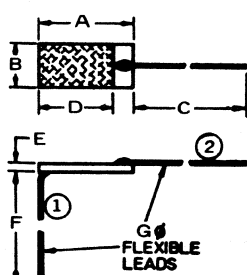


	A	B	C	D	E	F	G	H
PV29	.200	.322	.362	.019	.511	.064	.137	.236
PV29a	.100	.188	.224	.019	.511	.104	.220	.167
PV29b	.200	.313	.357	.017	.500		.173	
		.324	.369	.020			.204	
PV29c	.200	.313	.357	.017	.500		.243	
		.324	.368	.020			.278	

**PV31**

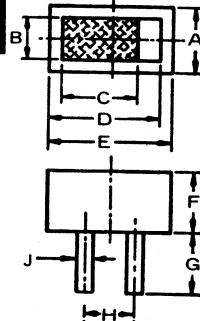


**PV33**



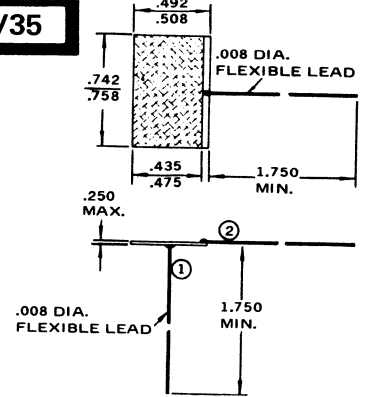
	A	B	C	D	E	F	G
PV33	.176	.076	1.750	.130	.025	1.750	.008
	.192	.092	MIN	.170	MAX		
PV33a	.242	.742	1.750	.185	.025	1.750	.008
	.258	.758	MIN	.225	MAX		
PV33b	.242	.992	1.750	.185	.025	1.750	.008
	.258	1.008	MIN	.225	MAX		

**PV34**

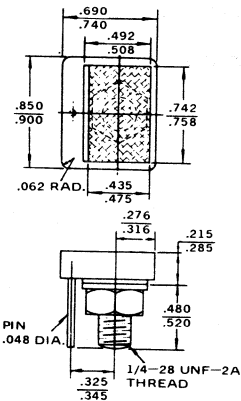


	A	B	C	D	E	F	G	H	J
PV34	.129	.076	.130	.176	.239	.117	.118	.097	.034
	.141	.092	.170	.192	.251	.133	.135	.103	MAX
PV34a	.070	.040	.080	.124	.169	.117	.118	.097	.034
	.080	.056	.120	.140	.181	.133	.135	.103	MAX

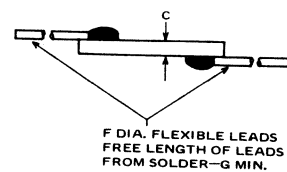
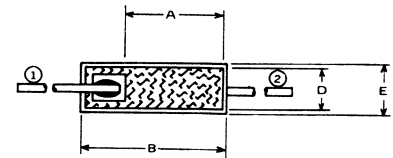
**PV35**



**PV36**

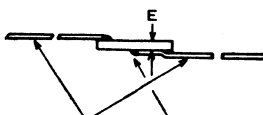
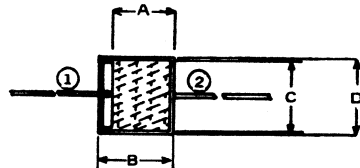


**PV37**



**PV38**

	A	B	C	D	E	F	G
PV38	.187	.242	.242	.242	.025	.007	1.732
	.217	.257		.257			
PV38a	.187	.244	.492	.492	.025	.007	1.732
	.217	.255		.507			
PV38b	.180	.240	.240	.240	.025	.007	1.732
	.219	.255					
PV38c	.332	.393	.393	.393	.025	.007	1.732
	.371	.408					



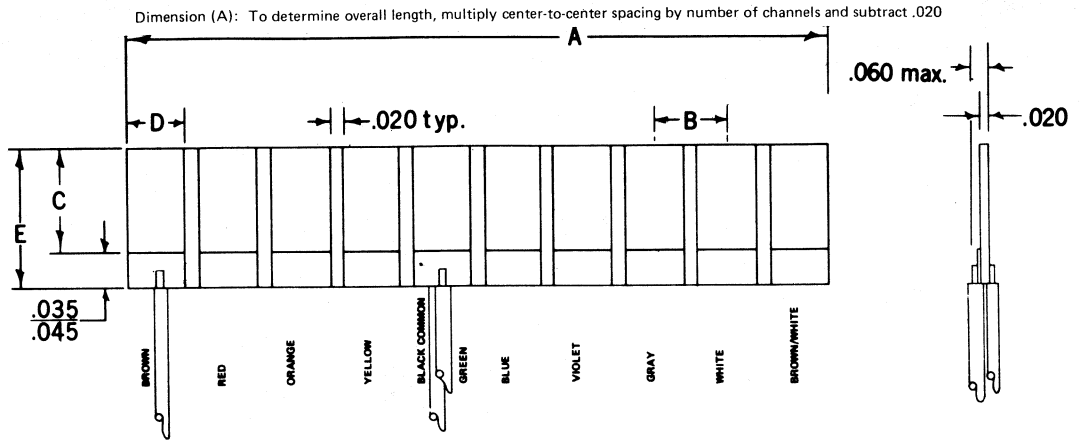
F DIA. FLEXIBLE LEADS FREE LENGTH OF LEADS FROM SOLDER-G MIN. SOLDERED IN APPROX. CENTRAL POSITION.

	A	B	C	D	E	F	G
PV37	.403	.449	.026	.064	.079	.007	1.732
PV37a	.083	.117	.025	.038	.037	.007	1.732
	.103	.133			.052		
PV37b	.086	.125	.010	.037	.043	.005	1.181
		.137			.055		
PV37c	.137	.173	.010	.070	.074	.005	1.181
		.188			.086		

# 49. OUTLINE DRAWINGS

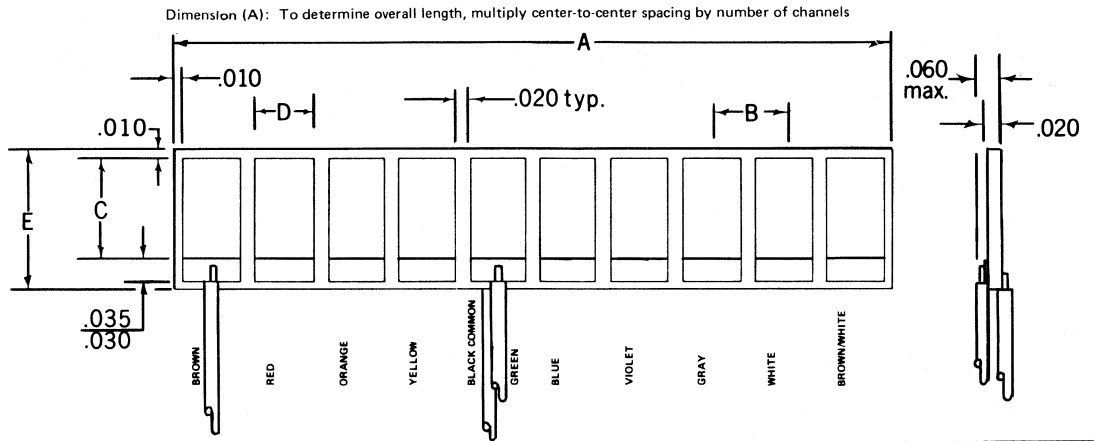
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**PV39**

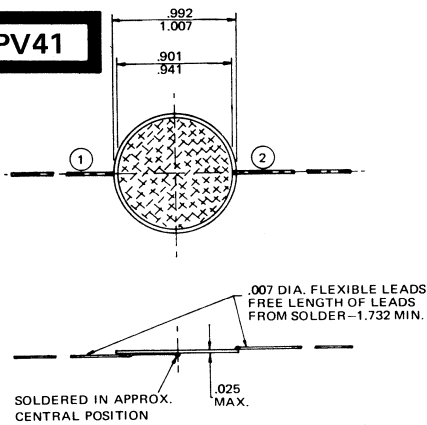


**PV40**

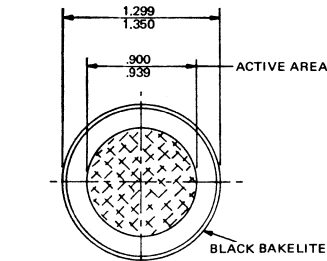
	B	C	D	E
PV40	.087	.145	.067	.200
PV40a	.100	.145	.080	.200
PV40b	.109	.145	.089	.200
PV40c	.087	.070	.067	.125
PV40d	.100	.070	.080	.125
PV40e	.109	.070	.089	.125



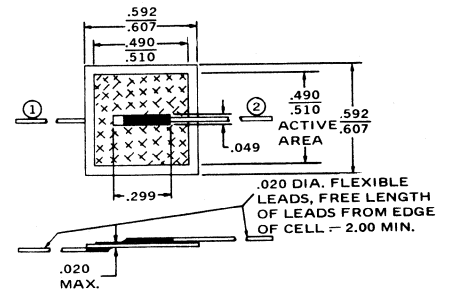
**PV41**



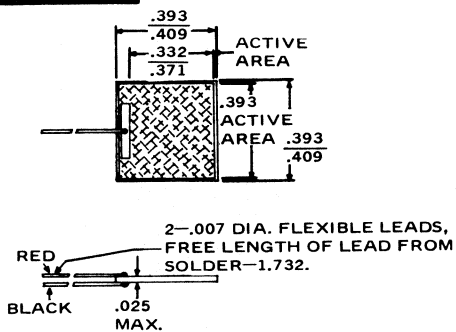
**PV42**



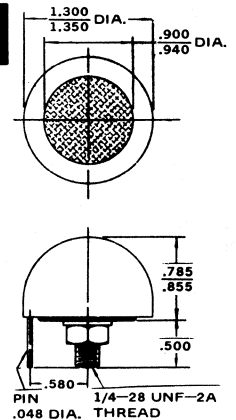
**PV43**



**PV44**



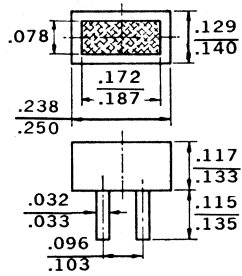
**PV45**



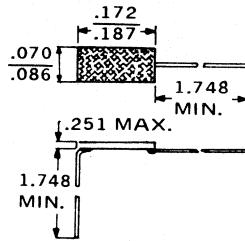
# 49. OUTLINE DRAWINGS

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SEQUENCE

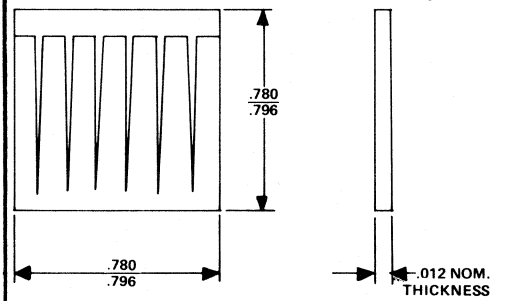
**PV46**



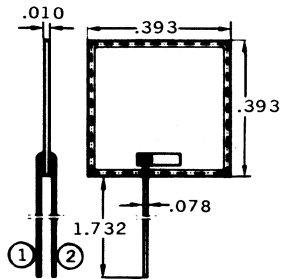
**PV47**



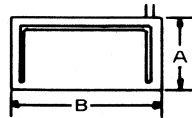
**PV48**



**PV50**

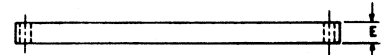
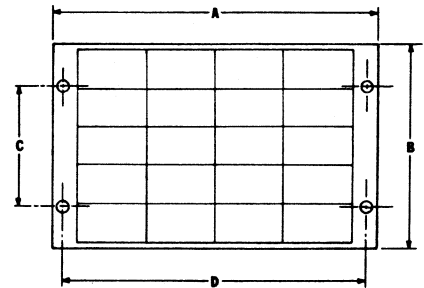


**PV51**



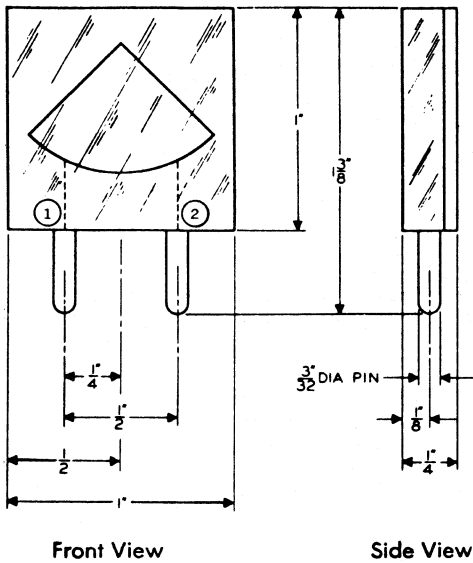
	A	B
PV51	.710	1.60
PV51a	1.02	.532
PV51b	1.14	1.48

**PV52**

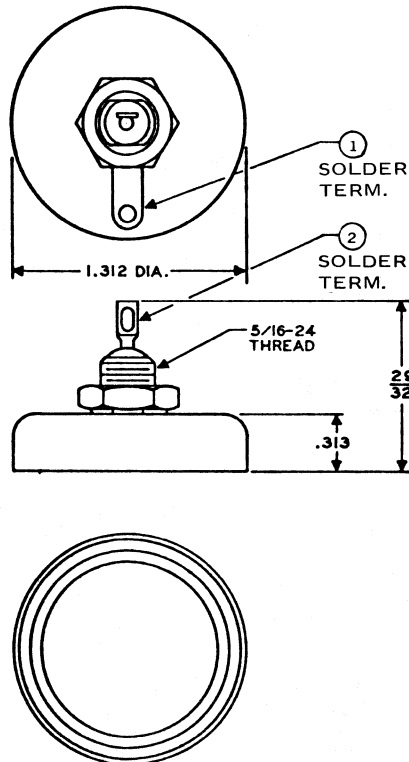


	A	B	C	D	E
PV52	5.750	4.820	2.820	5.150	.440
PV52a	7.710	4.820	2.820	7.250	.440
PV52b	8.000	7.000	4.000	7.400	.440
PV52c	14.50	3.60	2.75	13.00	.440

**PV53**



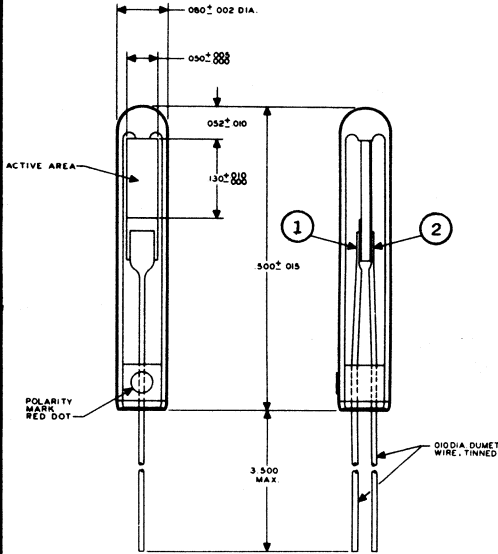
**PV54**



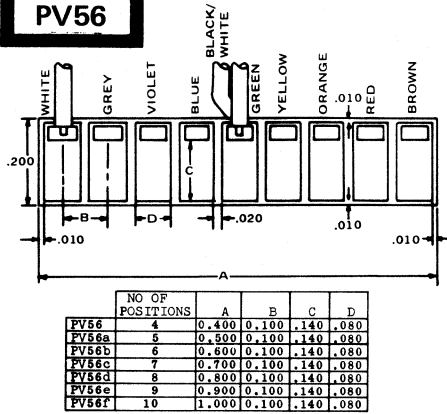
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

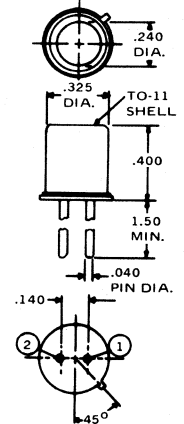
**PV55**



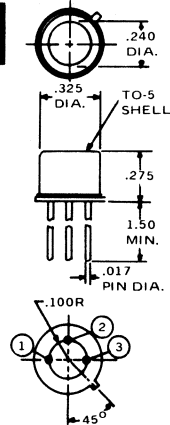
**PV56**



**PV57**



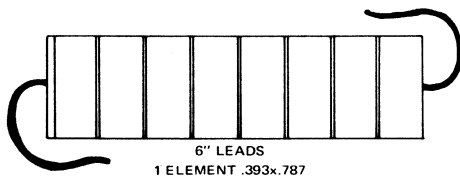
**PV58**



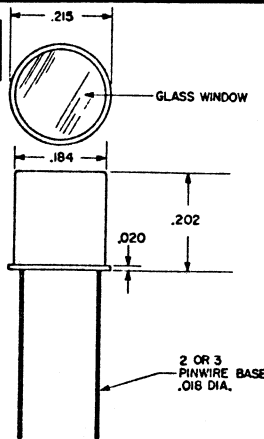
**PV60**



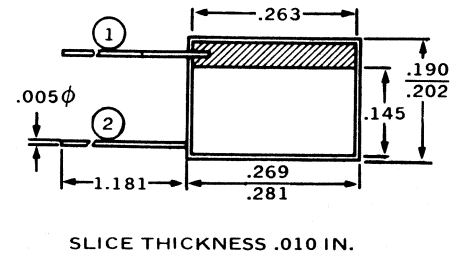
**PV61**



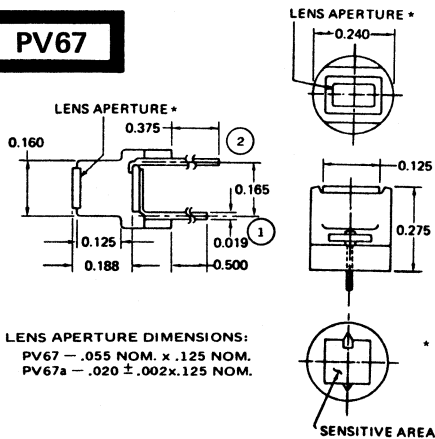
**PV62**



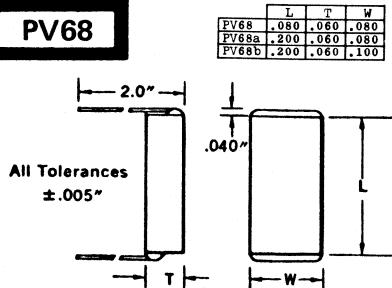
**PV63**



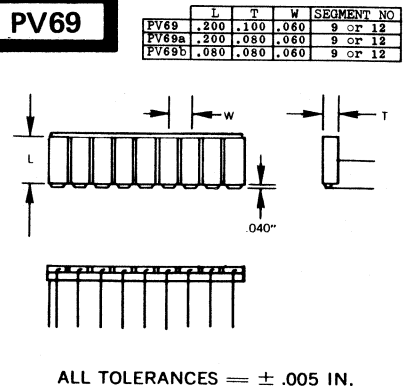
**PV67**



**PV68**



**PV69**

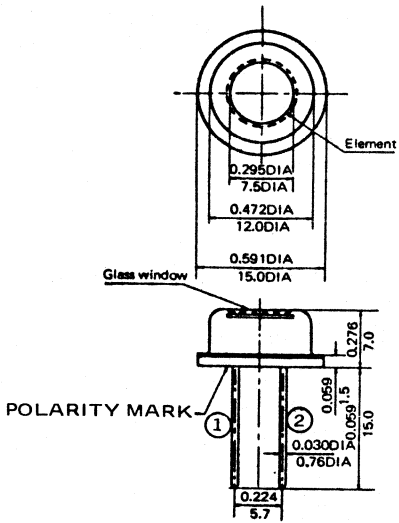




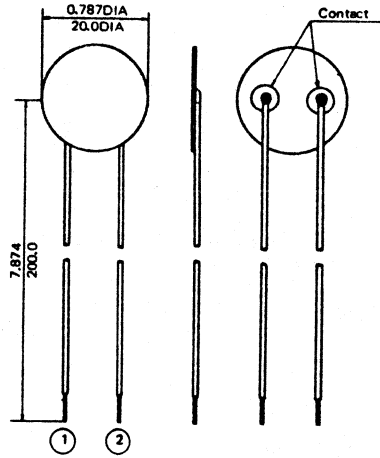
# 49. OUTLINE DRAWINGS

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SEQUENCE

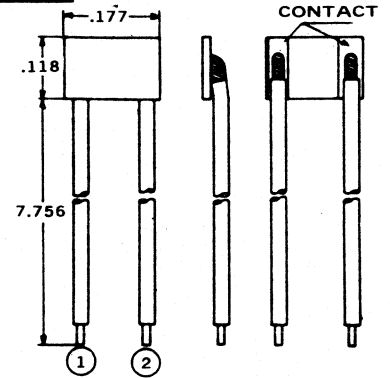
**PV70**



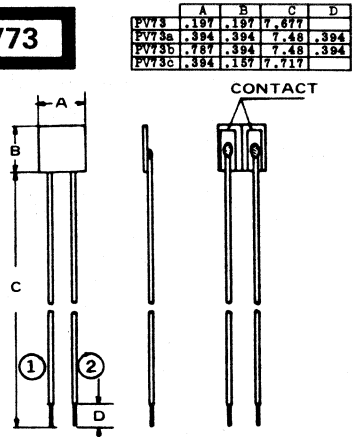
**PV71**



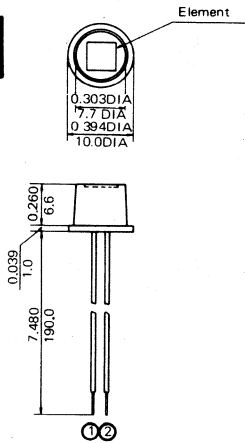
**PV72**



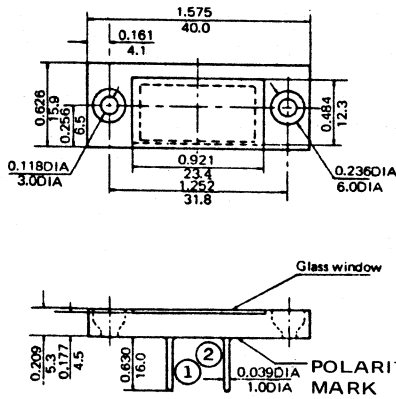
**PV73**



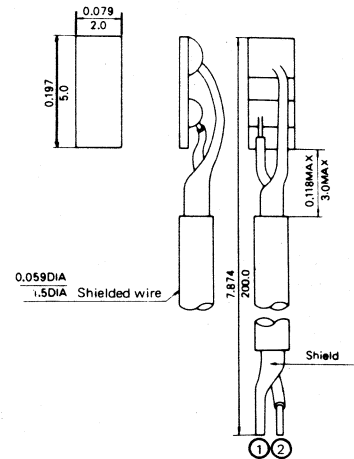
**PV74**



**PV75**



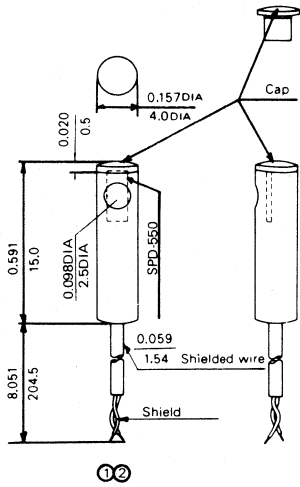
**PV76**



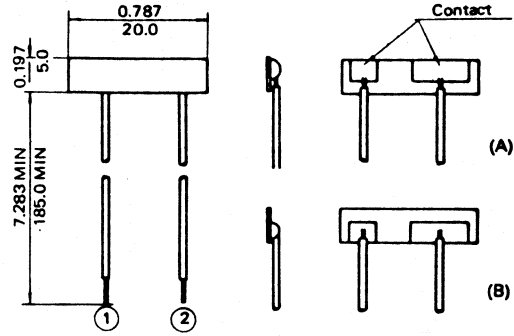
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

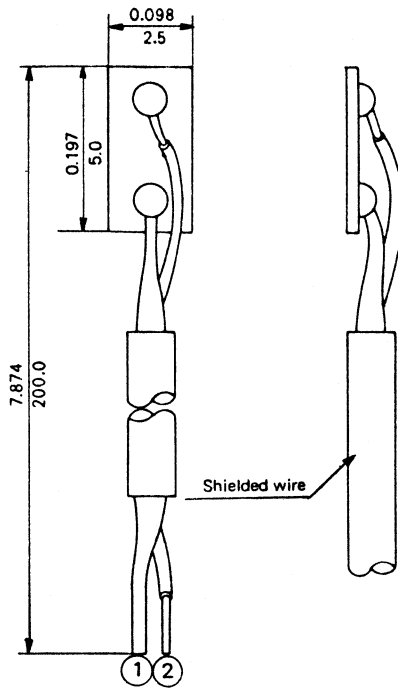
**PV77**



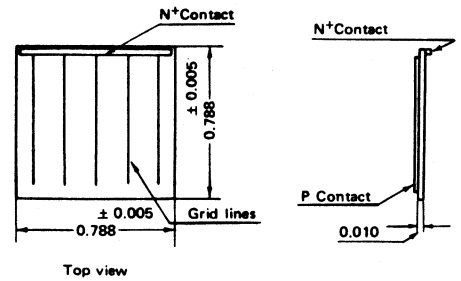
**PV78**



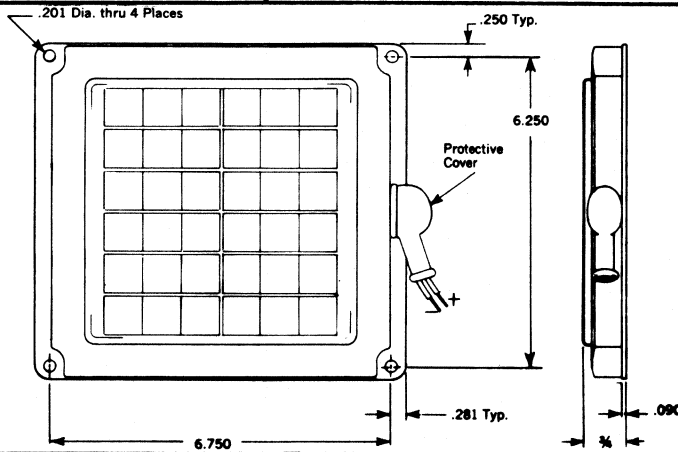
**PV79**



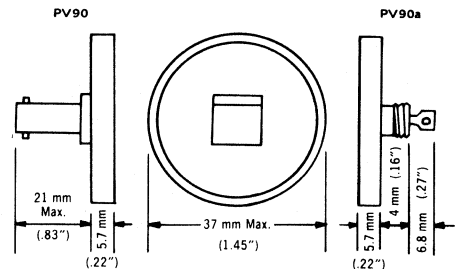
**PV86**



**PV89**



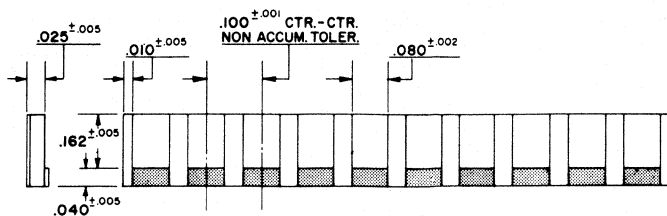
**PV90**



# 49. OUTLINE DRAWINGS

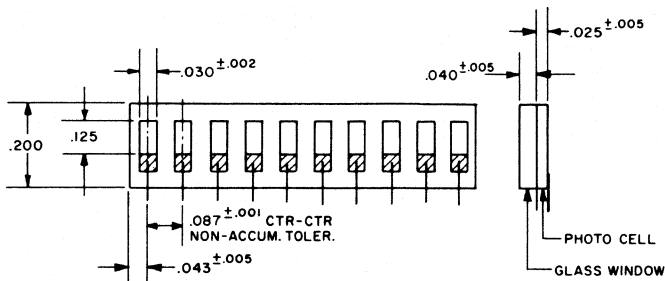
IN DRAWING NUMBER SEQUENCE

**PV91**



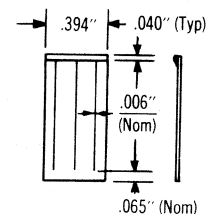
NOTE: HAS 6 INCH NO. 32 AWG LEADS

**PV92**



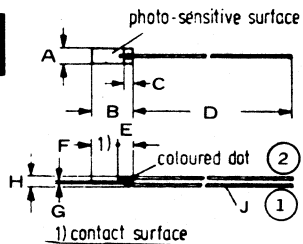
NOTE: HAS 4 INCH LONG, .006 INCH DIA. LEADS

**PV93**



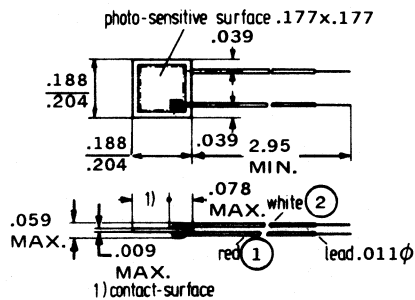
PV93a — HAS 6 INCH NO. 32 AWG LEADS

**PV94**

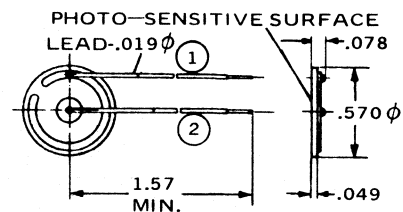


	A	B	C	D	E	F	G	H	J
PV94	.066	.173	.039	1.18	.066	.106	.011	.059	
	-.082	.188	MAX			.106	.019	MAX	
PV94a	.779	.385	.039	1.57	.098	.287	.011	.059	.011
	.795	.401	MAX			.287	.019	MAX	
PV94b	.488	.236	.039	2.95	.098	.137	.011	.059	.011
	.503	.251	MAX			.137	.019	MAX	
PV94c	.385	.385	.039	2.16	.098	.287	.011	.059	.011
	.401	.401	MAX			.287	.019	MAX	
PV94d	.236	.236	.039	2.95	.098	.137	.011	.059	.011
	.251	.251	MAX			.137	.019	MAX	
PV94e	.703	.385	.039	1.574	.098	.287	.011	.059	.011
	.866	.401	MAX			.287	.019	MAX	

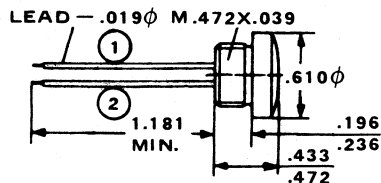
**PV95**



**PV98**



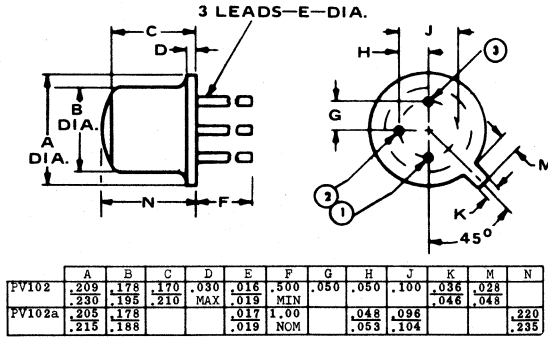
**PV99**



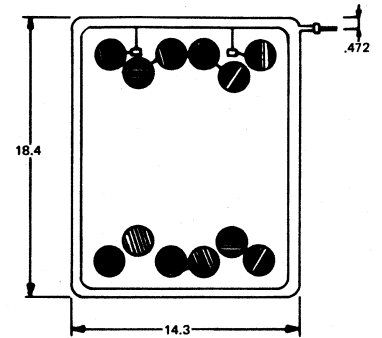
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

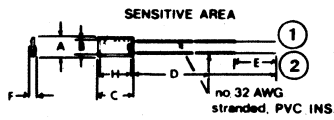
**PV102**



**PV104**

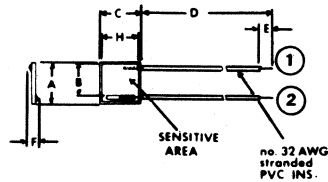


**PV105**



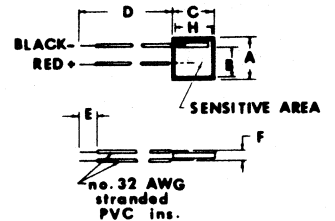
	A	B	C	D	E	F	H	LEAD1	LEAD2
PV105	.085	.080	.195	6.00	.150	.030	.150	Red(+)	Black(-)
	.105	.090	.205	NOM	.300	.060	.160		
PV105a	.190	.150	.990	6.00	.156	.030	.975	Black(-)	Red(+)
	.210	.160	1.01	NOM	.218	.050	.995		
PV105b	.090	.080	.990	6.00	.156	.030	.975	Black(-)	Red(+)
	.110	.060	1.01	NOM	.218	.050	.995		

**PV106**



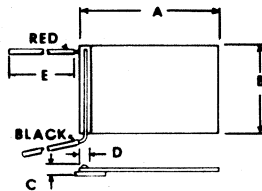
	A	B	C	D	E	F	H	LEAD1	LEAD2
PV106	.185	.145	.185	6.00	.150	.030	.170	Red(+)	Black(-)
	.195	.155	.195	NOM	.250	.050	.180		
PV106a	.195	.152	.390	6.00	.150	.030	.375	Black(-)	Red(-)
	.205	.162	.410	NOM	.250	.050	.390		

**PV107**



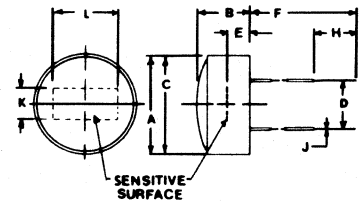
Dims.	Inches		Millimeters	
	Ref.	Min. Max.	Min.	Max.
A		.390 .410	10.0	10.4
B		.334 .364	8.4	9.2
C		.390 .410	10.0	10.4
D		6.0 Nom.	152. Nom.	
E		.19 Nom.	4.9 Nom.	
F		.040 .050	1.02	1.28
H		.375 .385	9.4	9.8

**PV108**



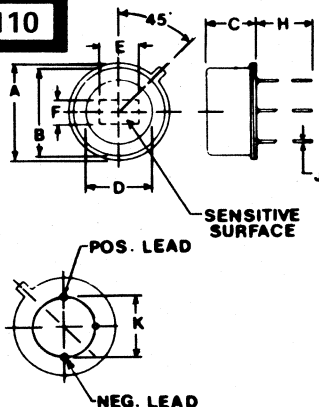
Dims.	Inches		Millimeters	
	Ref.	Min. Max.	Min.	Max.
A		.750 .770	19.02	19.72
B		.349 .359	9.85	9.18
C		.050 .060	1.21	1.41
D		.040 .050	1.01	1.21
E		6.0 Min. (Leads)	152. Min. (Leads)	

**PV109**



Dims.	Inches		Millimeters	
	Ref.	Min. Max.	Min.	Max.
A		.497 .512	12.8	13.0
B		.270 .290	6.85	7.38
C		.460 .470	11.75	12.00
D		.285 .305	7.22	7.75
E		.130 .150	3.32	3.8
F		6.0 Nom.	152.0 Nom.	
H		.19 Nom.	5. Nom.	
J		No. 32 AWG 7 Strand PVC		
K		.180 .200	4.58	5.08
L		.380 .400	9.88	10.25

**PV110**

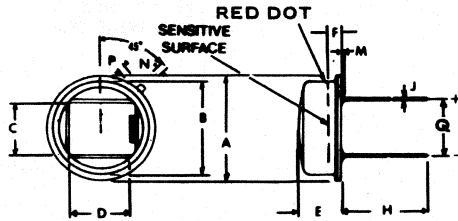


Dims.	Inches		Millimeters	
	Ref.	Min. Max.	Min.	Max.
A		.355 .365	9.20	9.28
B		.320 .330	8.13	8.38
C		.180 .190	4.58	4.82
D		.235 .245	5.98	6.22
E		.145 .155	3.69	3.92
F		.085 .095	2.15	2.41
H		1.50 1.60	38.	40.8
J		.016 .019	.41	.48
K		.235 .245	5.98	6.22

# 49. OUTLINE DRAWINGS

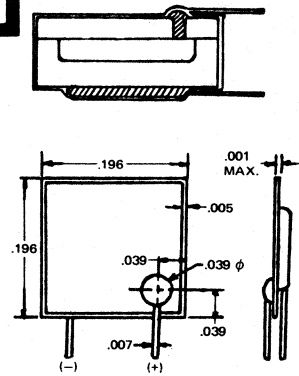
IN DRAWING NUMBER SEQUENCE

**PV111**

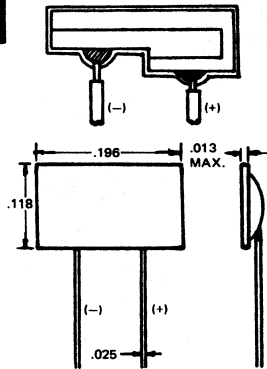


	A	B	C	D	E	F	H	J	Q	M	N	P
PV111	.355	.320	.130	.160	.180	.085	1.50	.016	.195	.025	.026	.035
	.365	.330	.140	.160	.190	.095	1.60	.019	.205		.037	.045
PV111a	.545	.481	.185	.145	.200	.031	1.50	.016	.290	.025		
	.555	.491	.195	.155	.226	.101	1.60	.019	.300			
PV111b	.545	.481	.245	.245	.200	.091	1.50	.016	.290	.025		
	.555	.491	.255	.255	.226	.101	1.60	.019	.300			

**PV112**



**PV113**



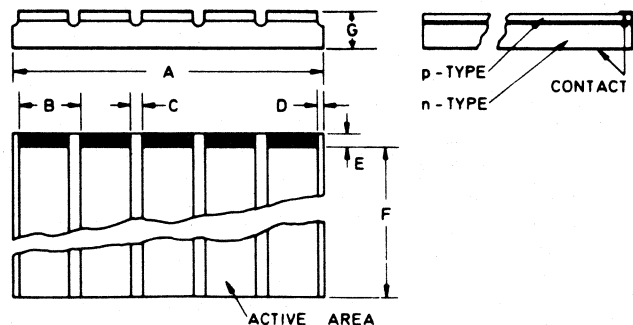
**PV114**

DWG. NO.	OUTLINE	ACTIVE AREA	DWG. NO.	OUTLINE	ACTIVE AREA
PV114		0.150 x 0.08 (±0.01)	PV114d		0.150 x 0.027
PV114a		10mm x 9mm	PV114e		0.150 x 0.042
PV114b		0.834 x 0.120	PV114f		0.085 x 0.048
PV114c		0.12 x 0.107	PV114g		4mm x 2.2mm 0.157 x 0.087
			PV114h		0.257 x 0.217

**PV115**

DWG. NO.	OUTLINE	ACTIVE AREA	DWG. NO.	OUTLINE	ACTIVE AREA
PV115		0.150 x 0.080 (0.10 PITCH)	PV115e		0.1 x 0.1
PV115a		0.050 x 0.080	PV115f		0.06 x 0.043
PV115b		0.06 x 0.065	PV115g		0.043 x 0.06 (0.063 PITCH)
PV115c		0.024 x 0.070 (0.039 PITCH)	PV115h		4mm x 1.3mm
PV115d		0.051 x 0.21 (0.071 PITCH)			

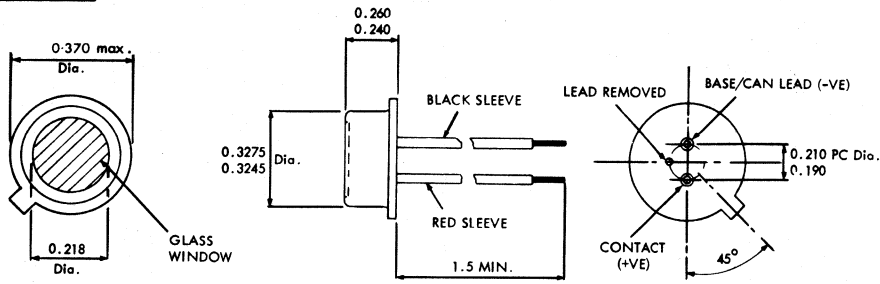
Dimension	Min.	Max.	Tol.
A Overall width of array	0.07	0.9	±0.010
B Pitch	0.035	—	±0.002*
C Cell separation	0.01	0.06	±0.002
D Shoulder	½C (Nominal)		
E Contact length	0.01	0.04	±0.005
F Length of active area	0.06	0.9	±0.010
G Thickness	0.015 ± 0.002 (typical)		



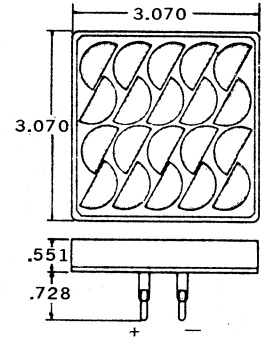
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

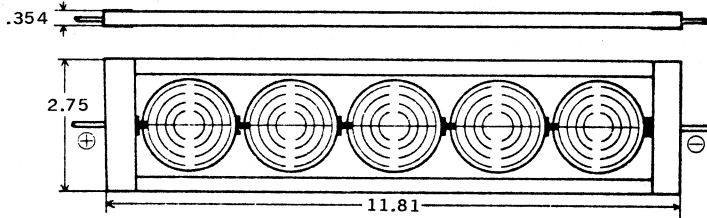
**PV116**



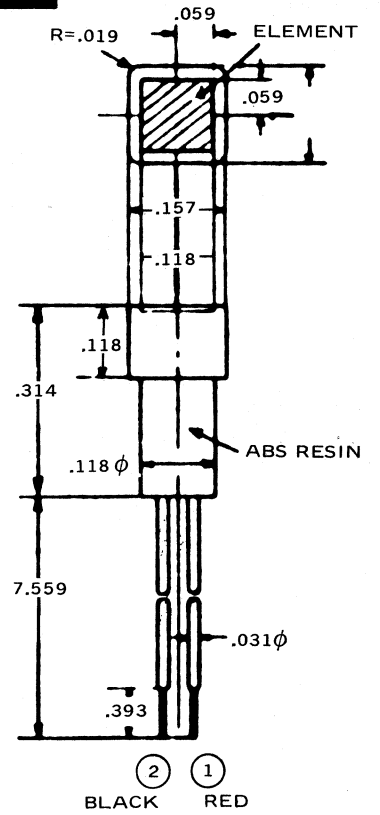
**PV122**



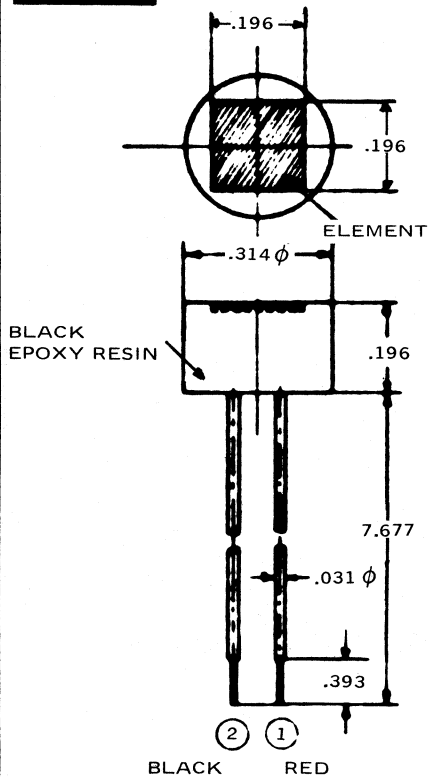
**PV123**



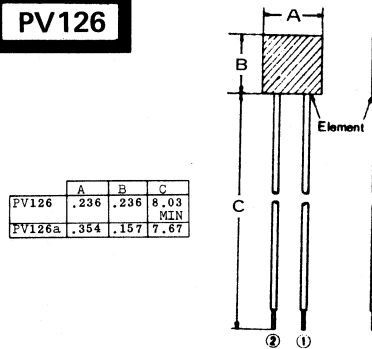
**PV124**



**PV125**



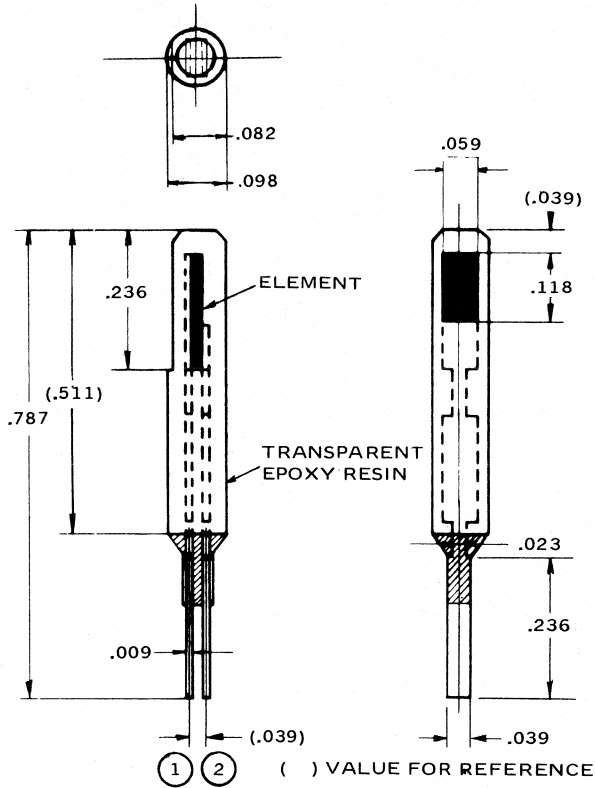
**PV126**



# 49. OUTLINE DRAWINGS

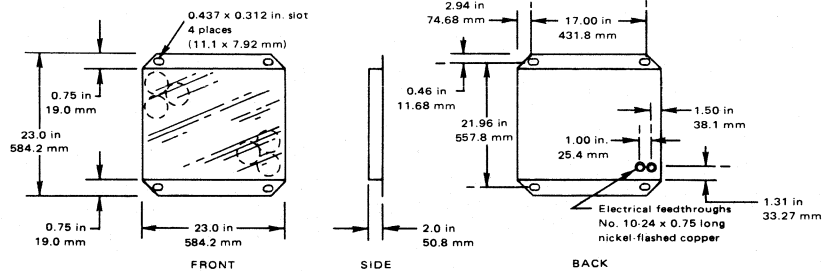
IN DRAWING NUMBER  
SEQUENCE

PV133



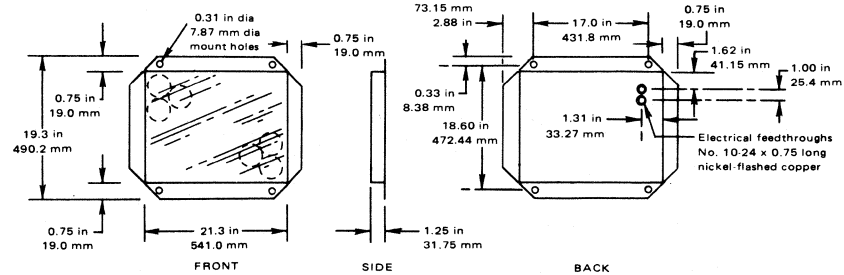
PV134

48 CELL MODULES



PV135

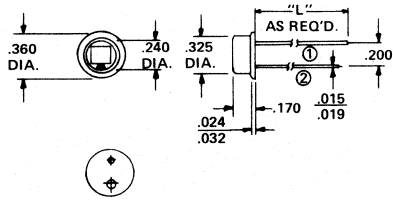
36 CELL MODULES



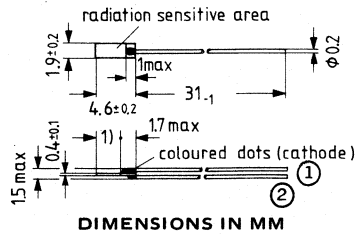
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

**PV136**

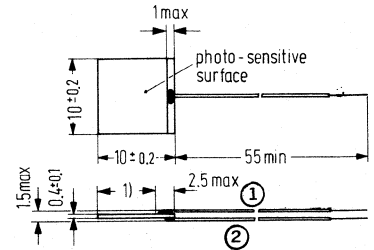


**PV137**



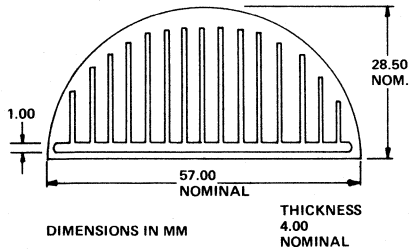
DIMENSIONS IN MM

**PV138**



DIMENSIONS IN MM

**PV139**

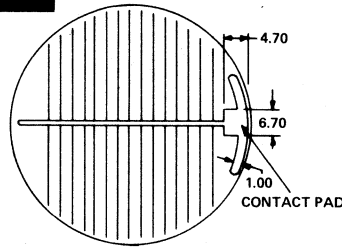


DIMENSIONS IN MM

THICKNESS  
4.00  
NOMINAL

**PV140**

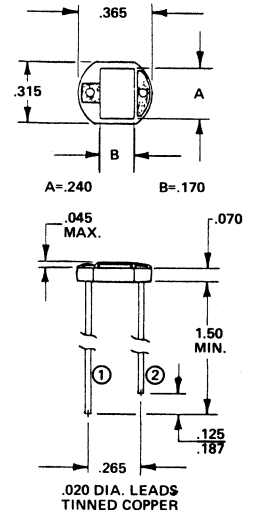
(DIMENSIONS IN MM)



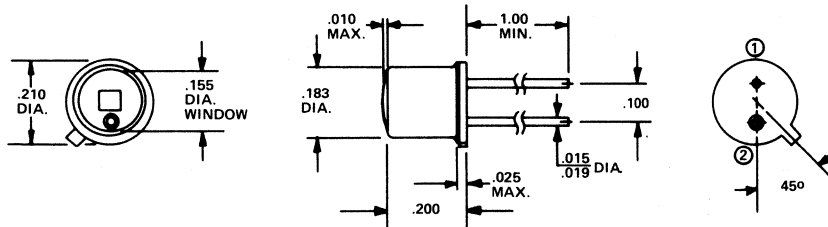
DIAMETER: 55.5 mm THICKNESS: .230 - .330 mm (NOT INCLUDING CONTACTS)  
57.0

(CELLS MAY BE PROVIDED WITH CONTACT PADS AT BOTH SIDES WHERE REQUIRED.)

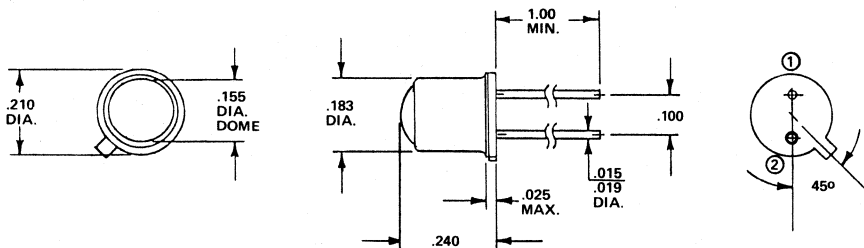
**PV141**



**PV142**



**PV143**

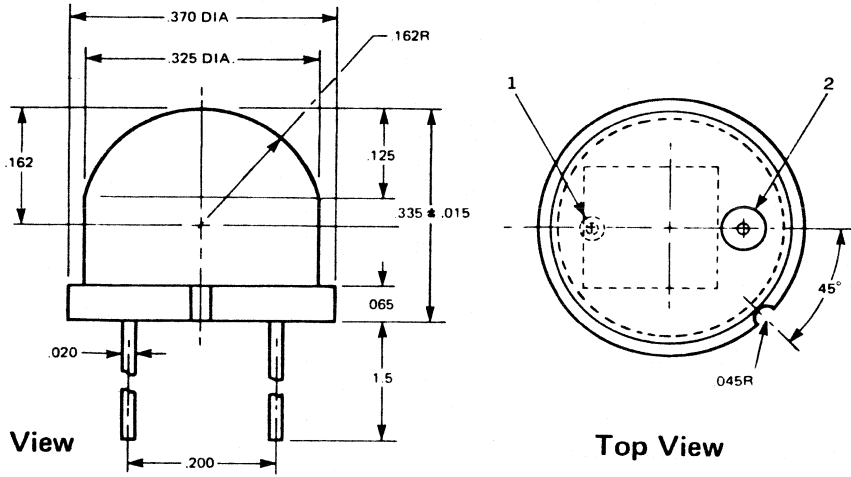




# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

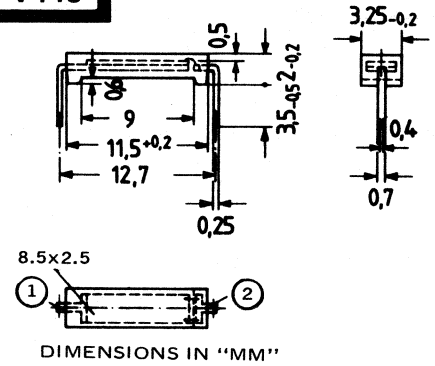
**PV144**



Front View

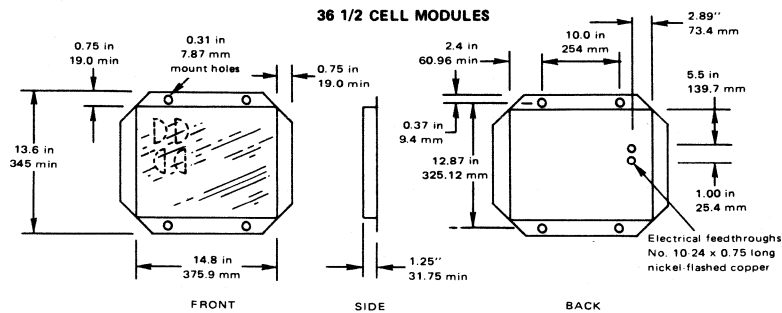
Top View

**PV145**



DIMENSIONS IN "MM"

**PV146**

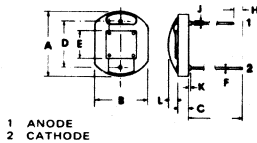


FRONT

SIDE

BACK

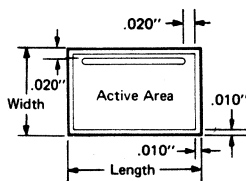
**PV147**



1 ANODE  
2 CATHODE

Ref.	INCHES		MILLIMETERS	
	MIN.	MAX.	MIN.	MAX.
A	.357	.357	9.05	9.32
B	.303	.313	7.70	7.94
C	.065	.075	1.66	1.92
D	.260	.270	6.61	6.86
E	.195	.205	4.90	5.22
F	.019	.021	.049	.053
H	.124	.188	3.17	4.78
J	.035	.045	.09	.12
K	.010	.020	.026	.051
L		.045		.115

**PV148**



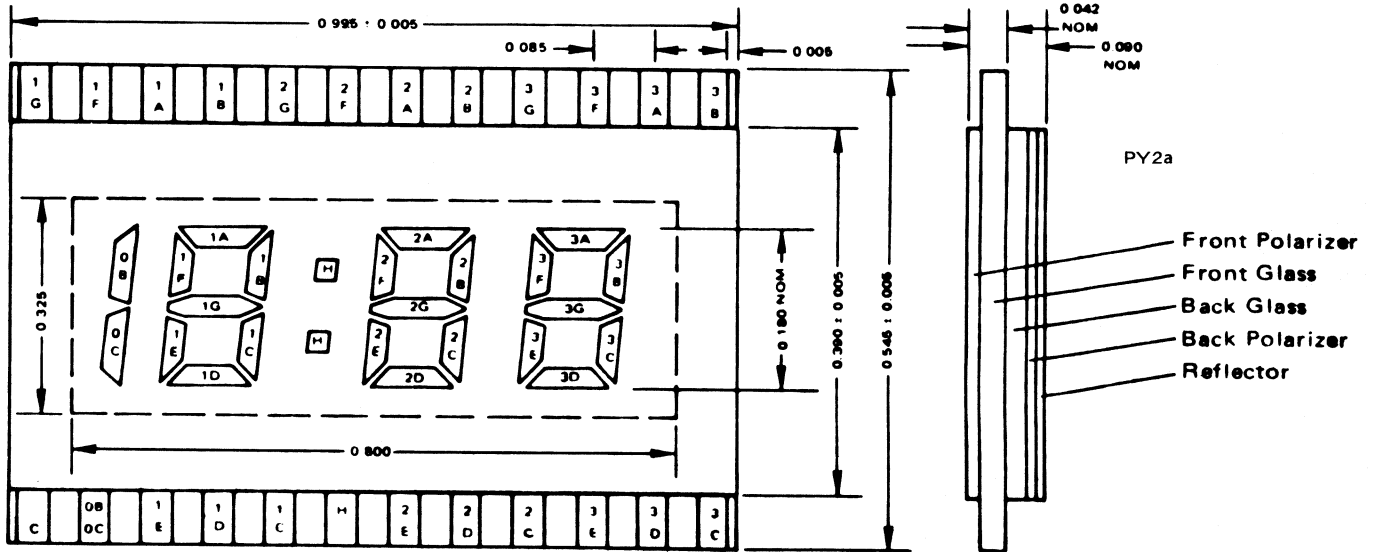
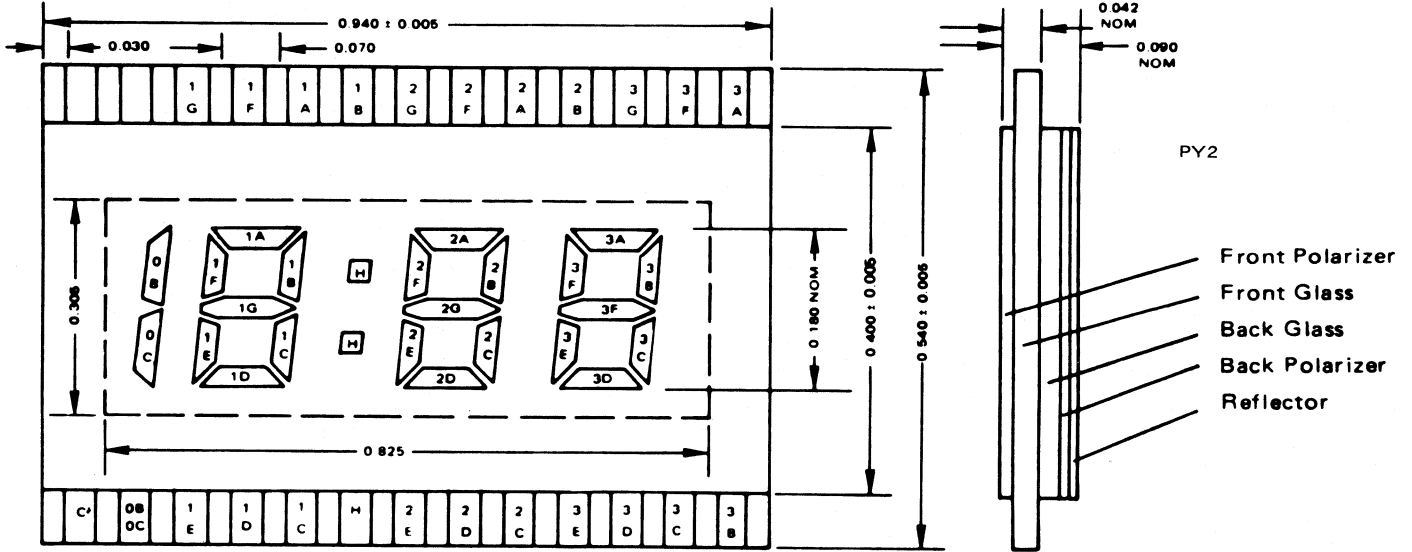
Nominal Overall Dimensions

	Thickness	
	.064 centimeters	.025 inches
	centimeters	inches
PV148	.5 x .224	.197 x .088
PV148a	.5 x .478	.197 x .188
PV148b	.5 x .986	.197 x .388
PV148c	.5 x 2.0	.197 x .788
PV148d	1.0 x 1.0	.394 x .394

# 49. OUTLINE DRAWINGS

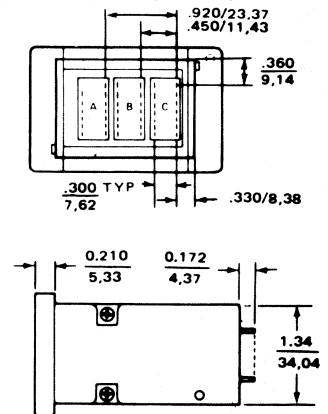
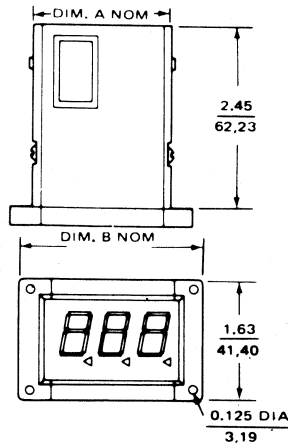
IN DRAWING NUMBER SEQUENCE

## PY2



## PY9

DWG. NO.	Description	
	Digit Pos.	Digits
PY9	2	1½
PY9a	2	2
PY9b	3	3
PY9c	3	2½
PY9	2	1½
PY9a	2	2
PY9b	3	3
PY9c	3	2½



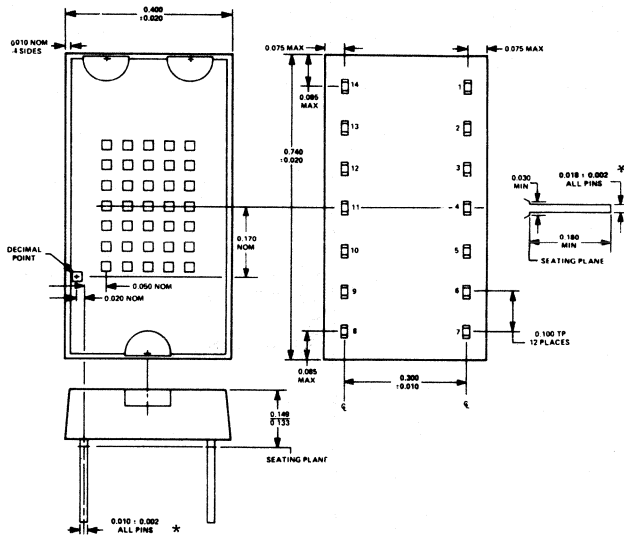




# 49. OUTLINE DRAWINGS

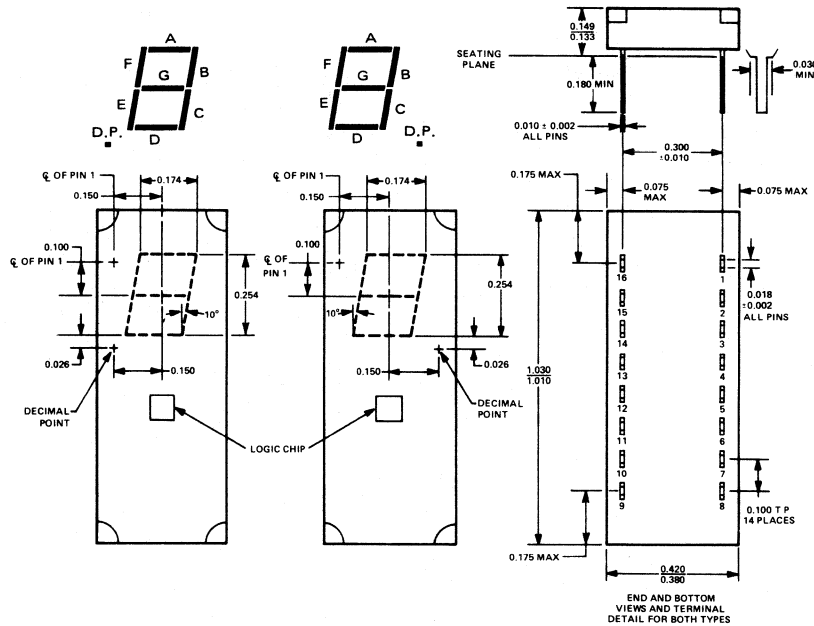
IN DRAWING NUMBER  
SEQUENCE

PY26



\* PY26a: OPTIONAL .108 .002 PINS MAY BE SUBSTITUTED FOR LEAD FRAME SHOWN.

PY27

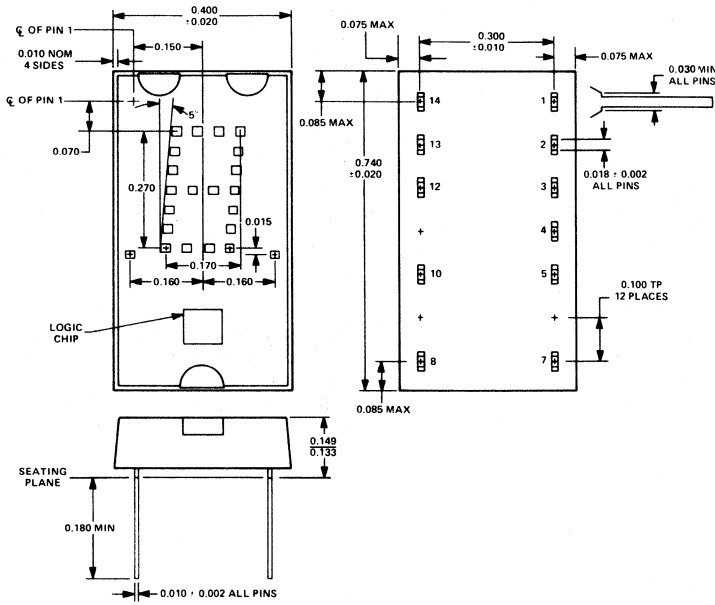


- NOTES:
- A. The true-position pin spacing is 0.100 between centerlines. Each pin centerline is located within 0.010 of its true longitudinal position relative to pins 1 and 16.
  - B. Centerlines of character segments and decimal points are shown as dashed lines. Associated dimensions are nominal.
  - C. Lead dimensions are not controlled above the seating plane.

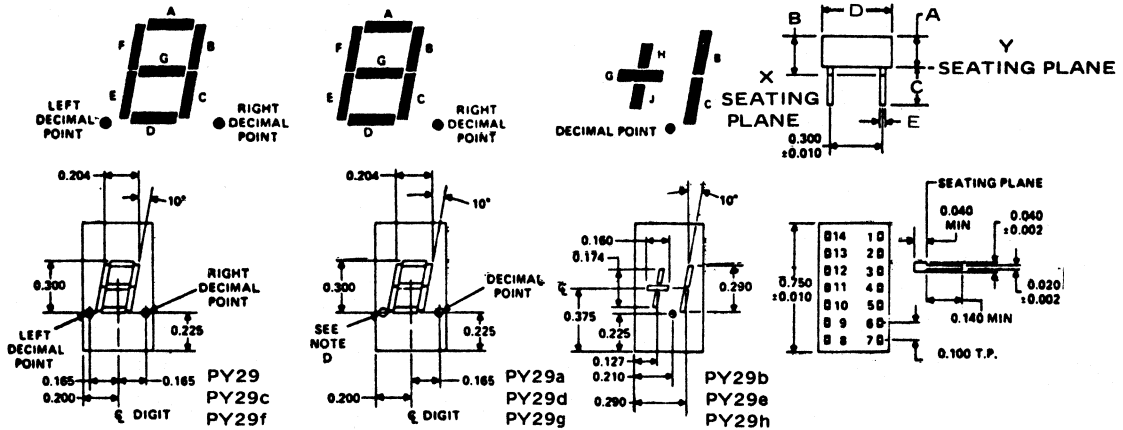
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

**PY28**

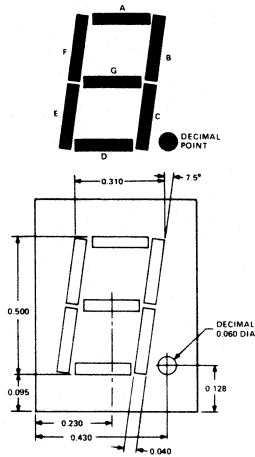


**PY29**

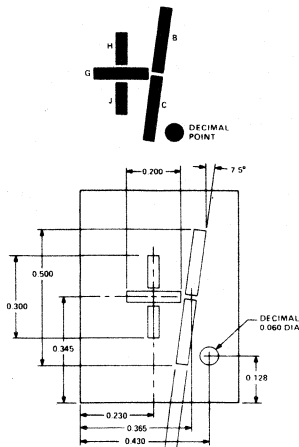


	A	B	C	D	E	SEATING PLANE
PY29	.100	.215 .240		.390 .410	.008 .012	X
PY29a	.100	.215 .240		.390 .410	.008 .012	X
PY29b	.100	.215 .240		.390 .410	.008 .012	X
PY29c	.215 .240		.140 MIN	.390 .410	.008 .012	Y
PY29d	.215 .240		.140 MIN	.390 .410	.008 .012	Y
PY29e	.215 .240		.140 MIN	.390 .410	.008 .012	Y
PY29f	.215 .245		.140 MIN	.400 .420	.018 .022	Y
PY29g	.215 .245		.140 MIN	.400 .420	.018 .022	Y
PY29h	.215 .245		.140 MIN	.400 .420	.018 .022	Y
PY29j	.175 .185	.215 .240		.400 .420	.008 .012	

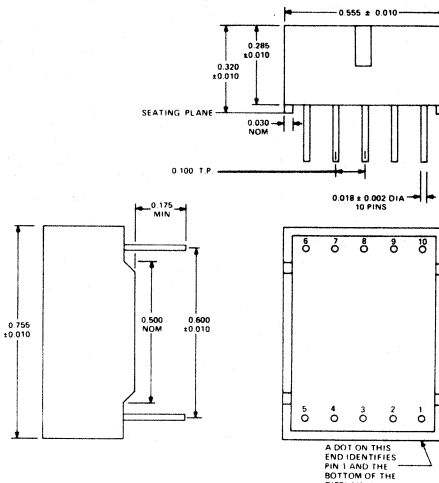
## PY30



PY30,a



PY30a



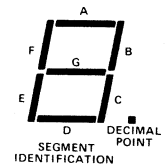
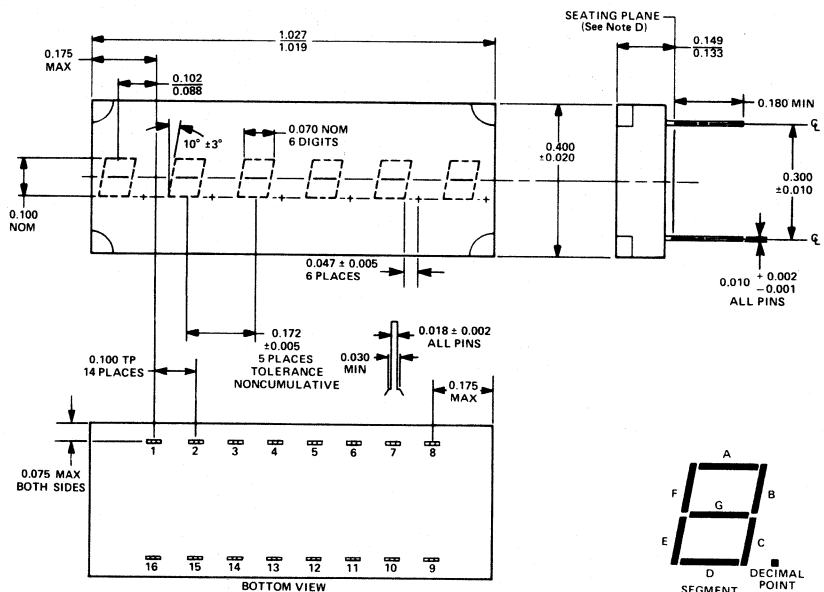
PY30b

- PY30**
- PIN 1 CATHODE E
  - PIN 2 CATHODE D
  - PIN 3 ANODE: DIGIT & DECIMAL
  - PIN 4 CATHODE C
  - PIN 5 CATHODE DECIMAL
  - PIN 6 CATHODE B
  - PIN 7 CATHODE A
  - PIN 8 ANODE: DIGIT & DECIMAL
  - PIN 9 CATHODE F
  - PIN 10 CATHODE G

- PY30a**
- PIN 1 ANODE E
  - PIN 2 ANODE D
  - PIN 3 CATHODE: DIGIT & DECIMAL
  - PIN 4 ANODE C
  - PIN 5 ANODE DECIMAL
  - PIN 6 ANODE B
  - PIN 7 ANODE A
  - PIN 8 CATHODE: DIGIT & DECIMAL
  - PIN 9 ANODE F
  - PIN 10 ANODE G

- PY30b**
- PIN 1 CATHODE J
  - PIN 2 NO INTERNAL CONNECTION
  - PIN 3 ANODE: PLUS/MINUS ONE & DECIMAL
  - PIN 4 CATHODE C
  - PIN 5 CATHODE DECIMAL
  - PIN 6 CATHODE B
  - PIN 7 NO INTERNAL CONNECTION
  - PIN 8 ANODE: PLUS/MINUS ONE & DECIMAL
  - PIN 9 CATHODE H
  - PIN 10 CATHODE G

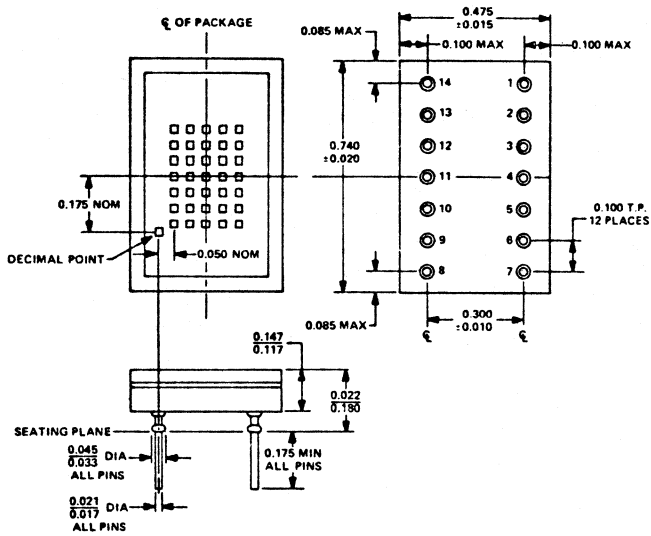
## PY31



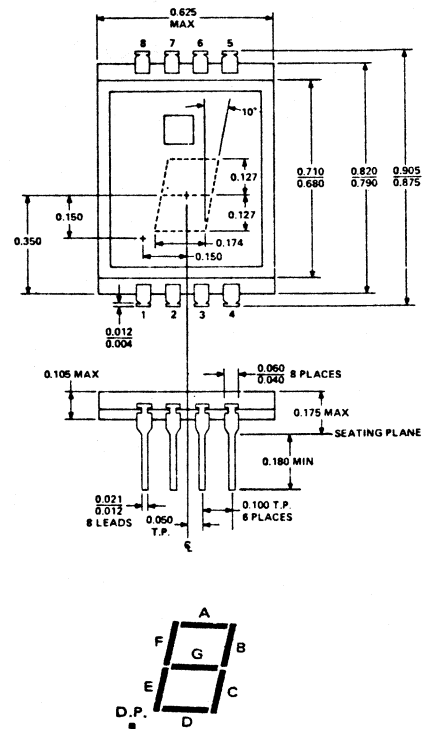
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

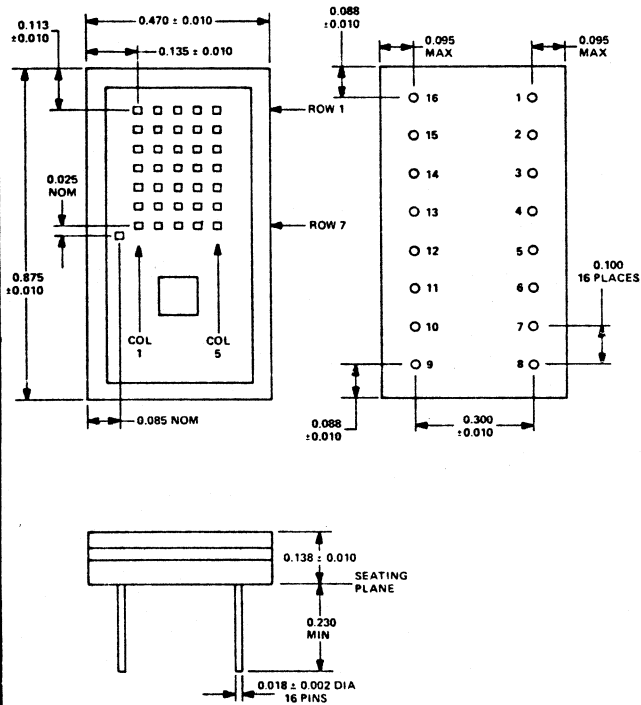
**PY36**



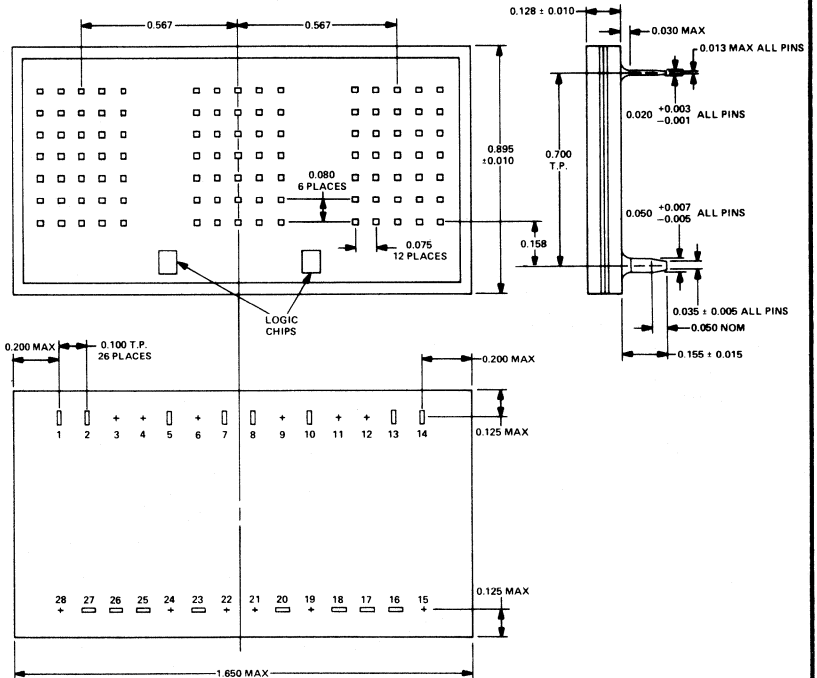
**PY38**



**PY39**



**PY41**

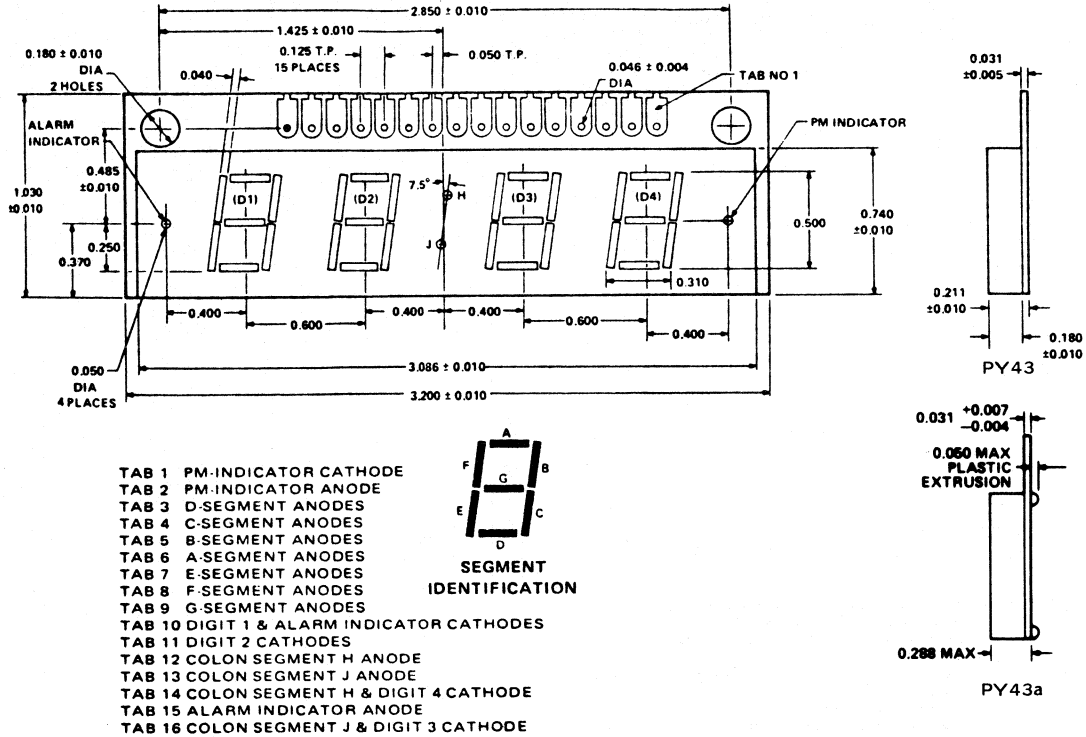




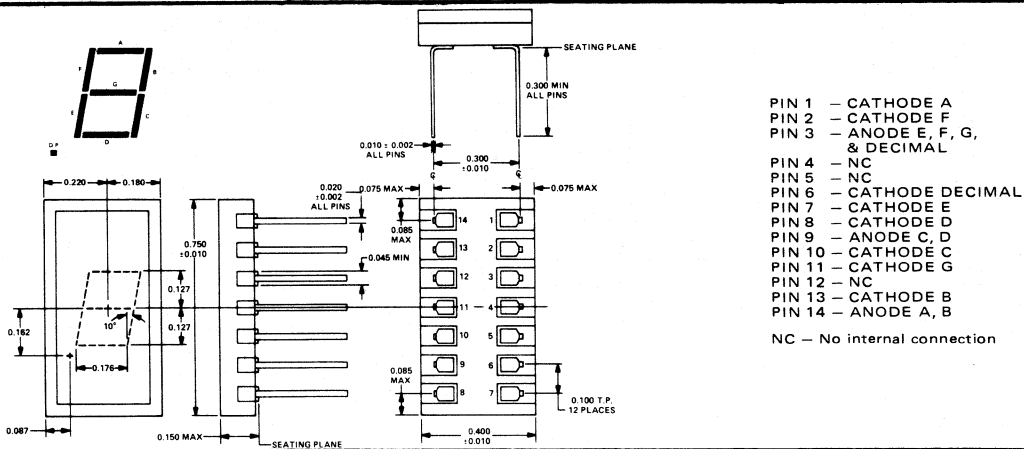
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

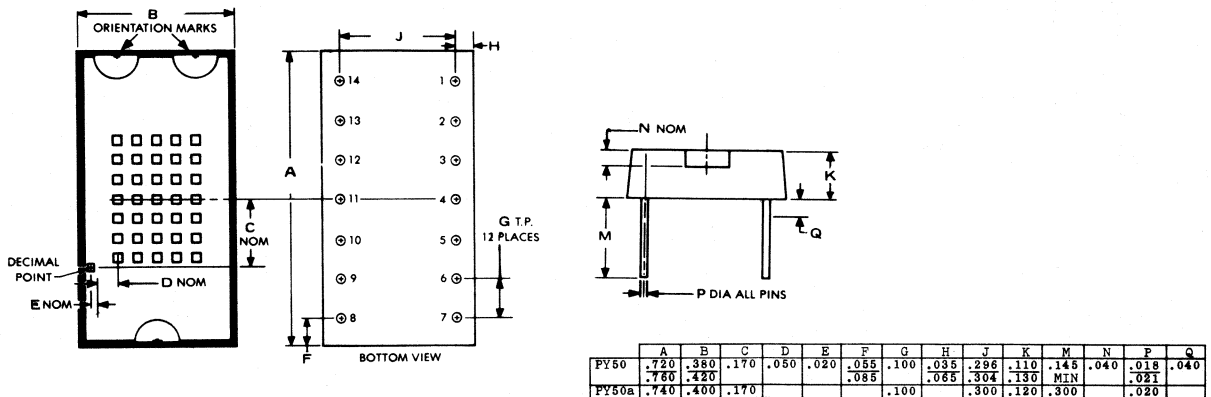
**PY43**



**PY44**



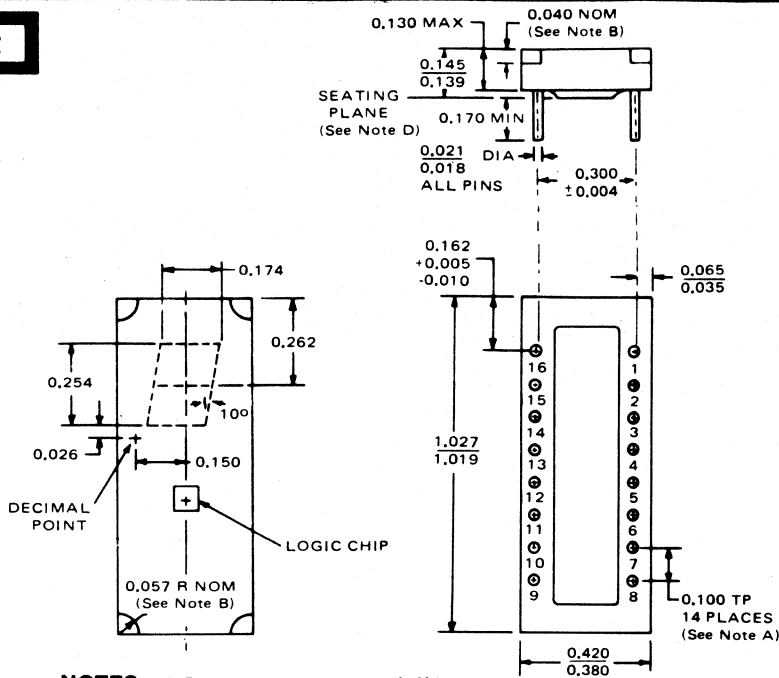
**PY50**



# 49. OUTLINE DRAWINGS

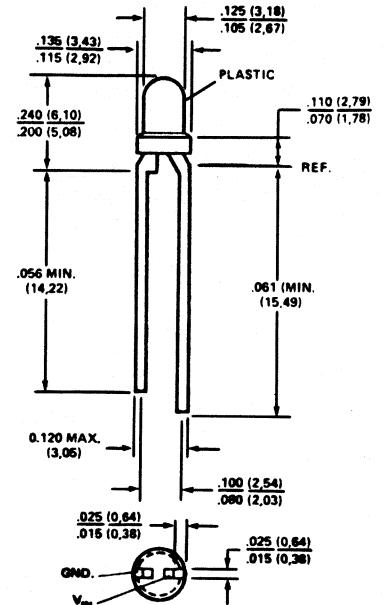
IN DRAWING NUMBER  
SEQUENCE

**PY52**

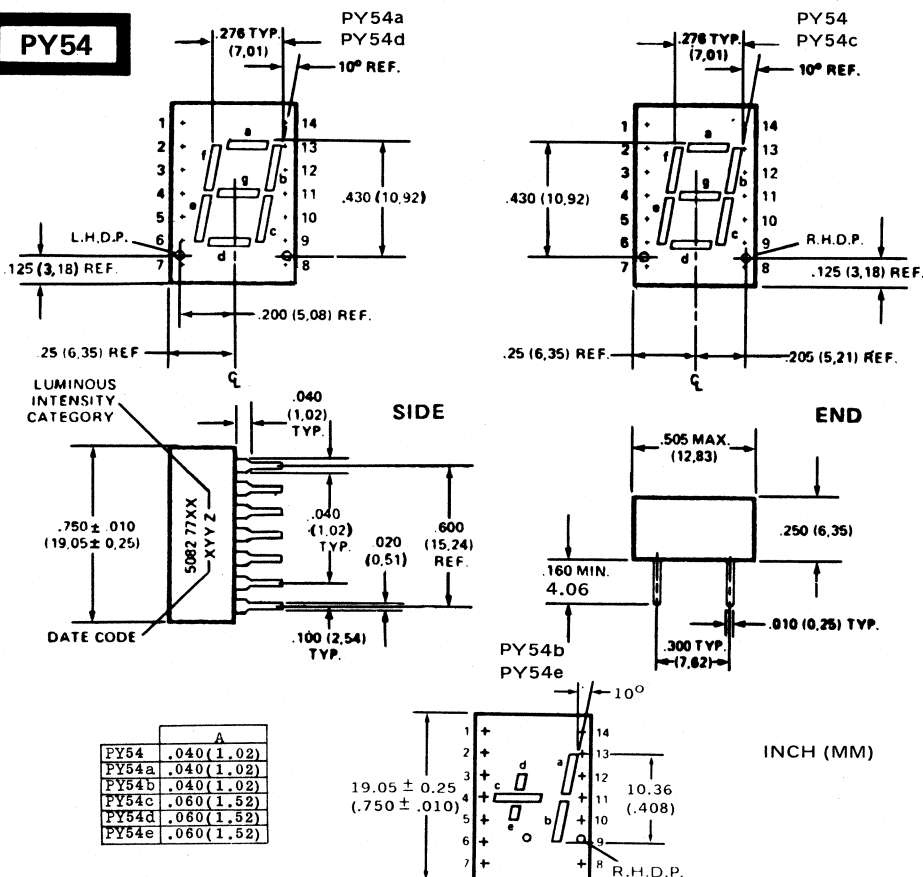


- NOTES:**
- A. The true-position pin spacing is 0.100 between centerlines. Each pin centerline is located within 0.010 of its true longitudinal position relative to pins 2 and 15.
  - B. Nominal dimensions of all four corner notches are the same.
  - C. Centerlines of character segments and decimal points are shown as dashed lines. Associated dimensions are nominal.
  - D. Lead diameter is not controlled above the seating plane.
  - E. All dimensions are in inches unless otherwise specified.

**PY53**

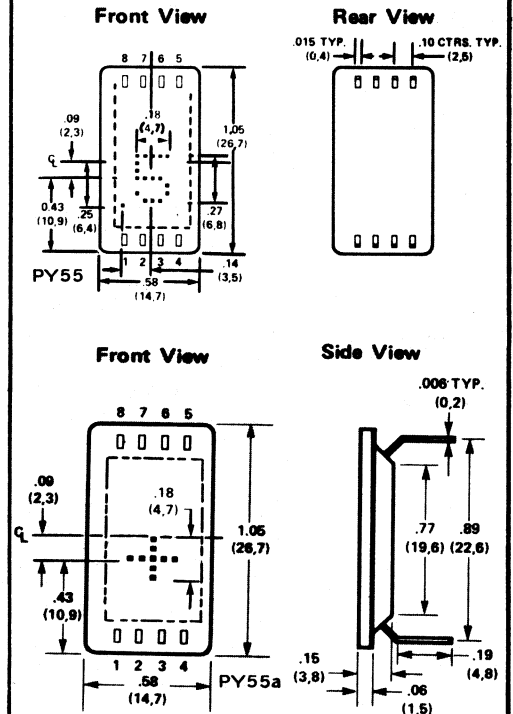


**PY54**



	A
PY54	.040 (1.02)
PY54a	.040 (1.02)
PY54b	.040 (1.02)
PY54c	.060 (1.52)
PY54d	.060 (1.52)
PY54e	.060 (1.52)

**PY55**

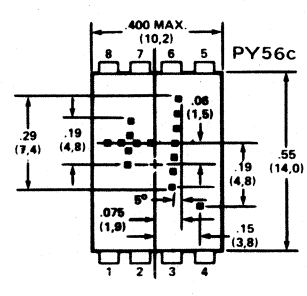
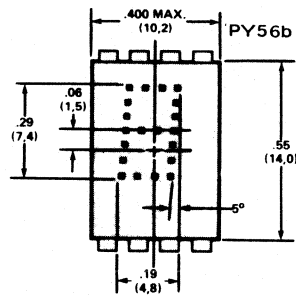
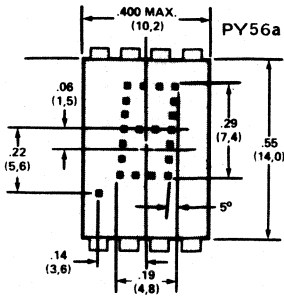
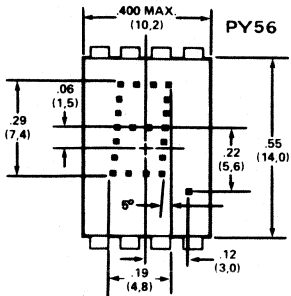


# 49. OUTLINE DRAWINGS

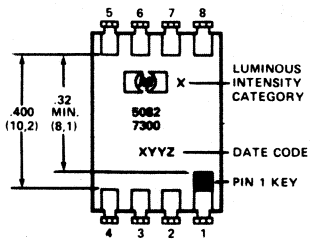
IN DRAWING NUMBER  
SEQUENCE

**PY56**

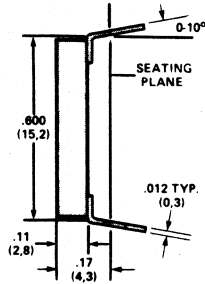
FRONT VIEW



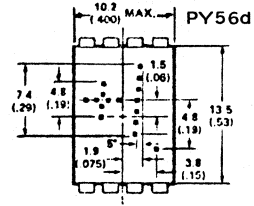
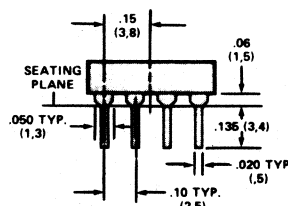
REAR VIEW



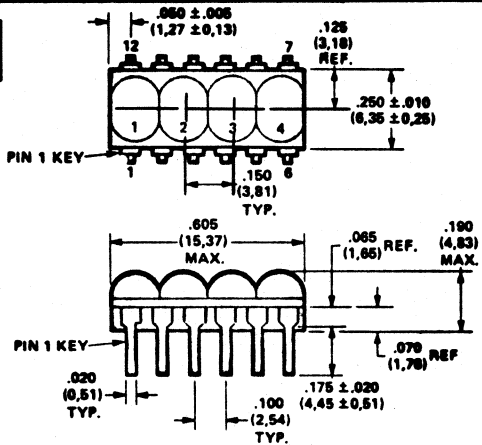
SIDE VIEW



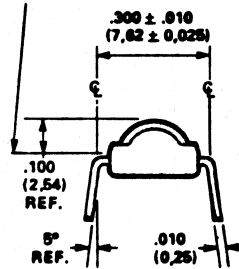
END VIEW



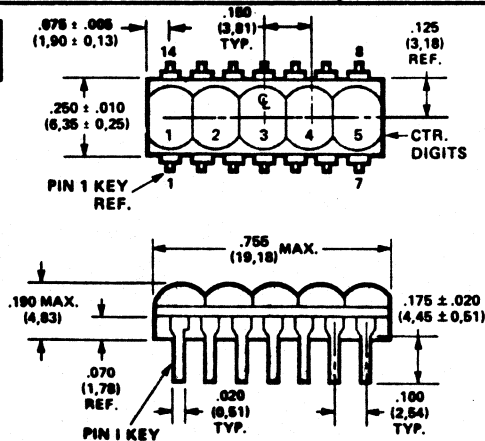
**PY57**



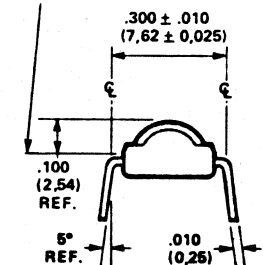
LED SURFACE PLANE



**PY58**



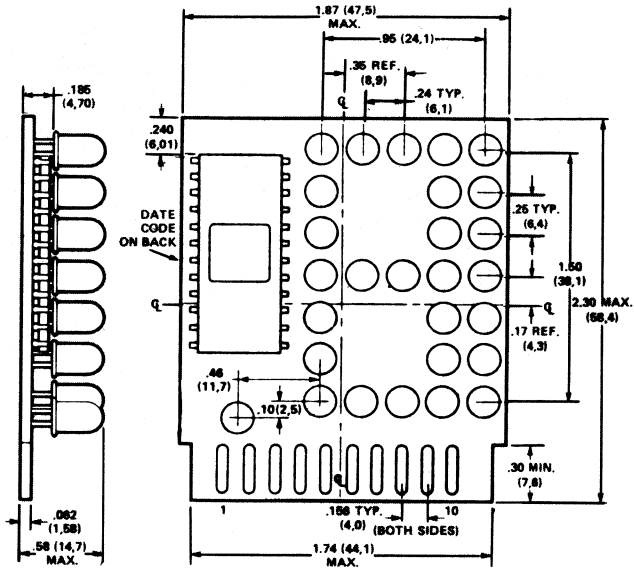
LED SURFACE PLANE



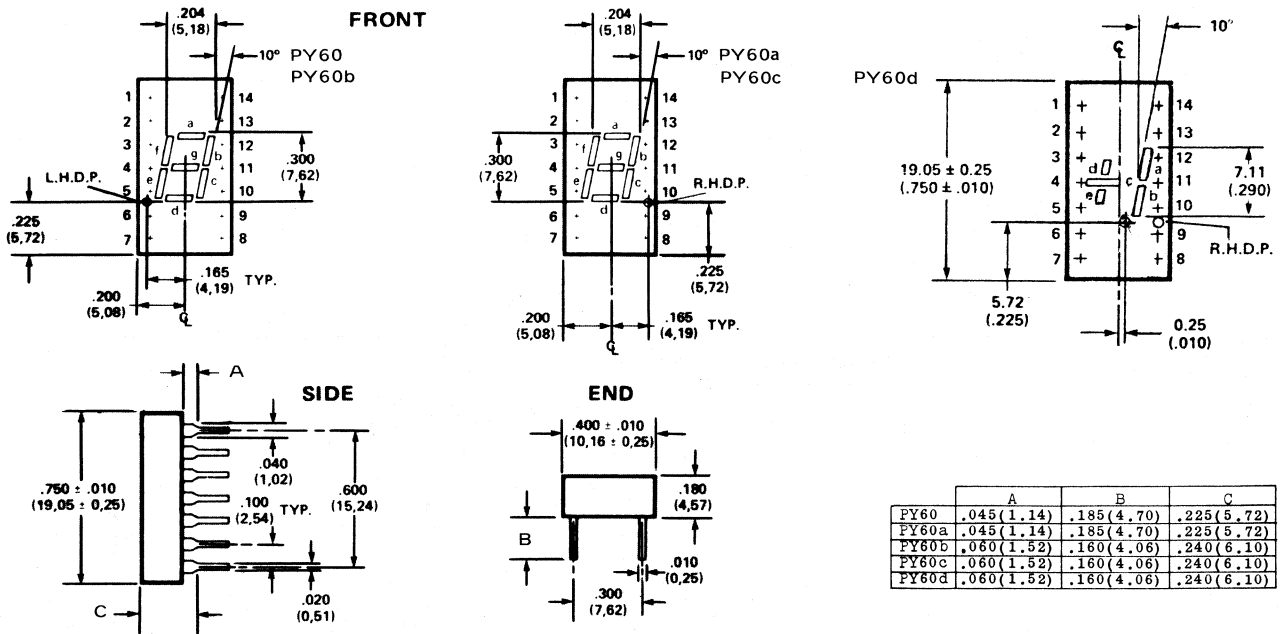
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

**PY59**



**PY60**

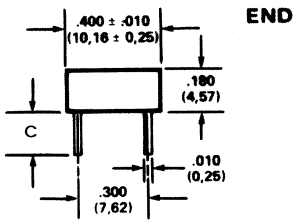
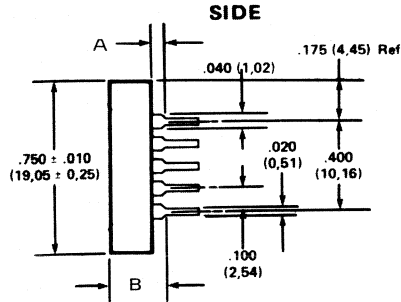
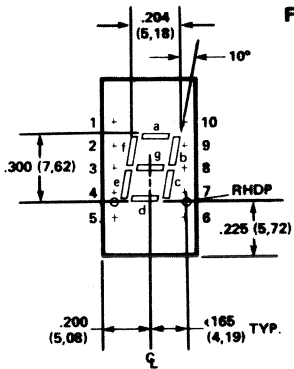


INCHES (MM)

# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

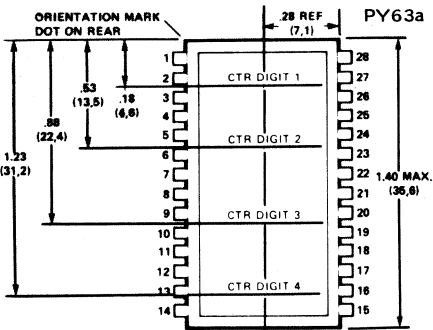
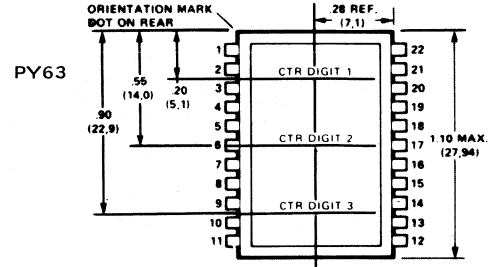
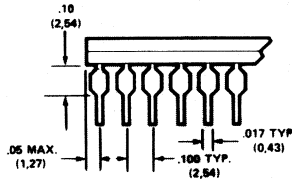
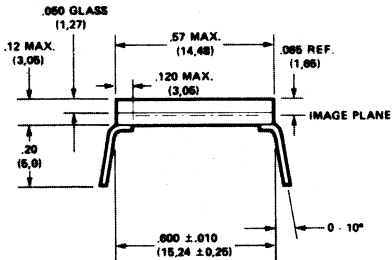
**PY61**



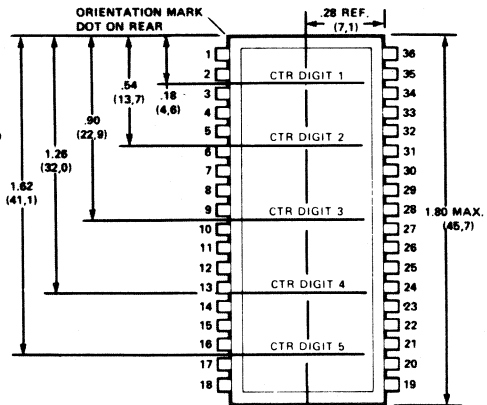
	A	B	C
PY61	.045 (1,14)	.225 (5,72)	.185 (4,70)
PY61a	.060 (1,52)	.240 (6,10)	.160 (4,06) MIN

INCH (MM)

**PY63**



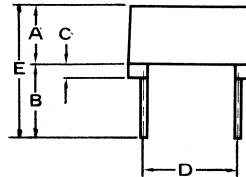
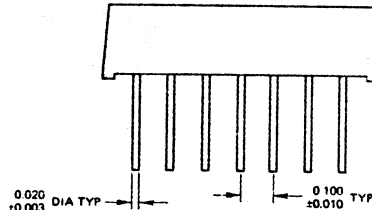
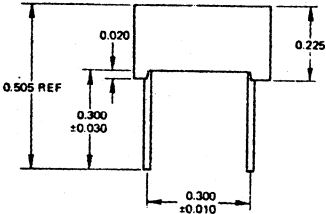
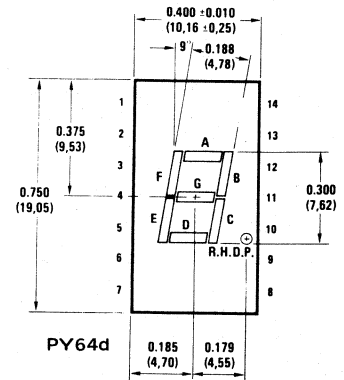
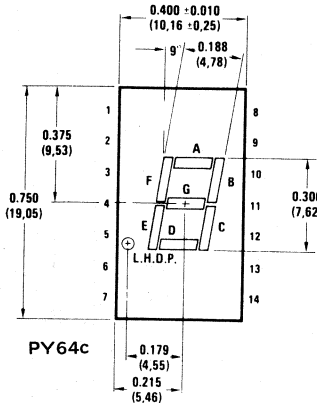
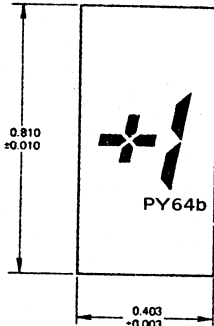
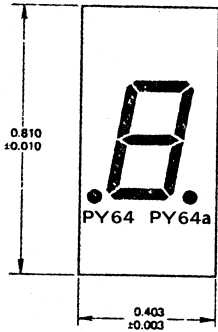
**PY63b**



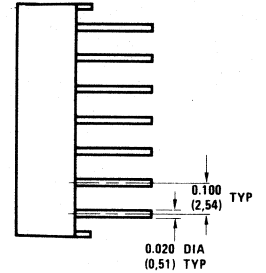
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

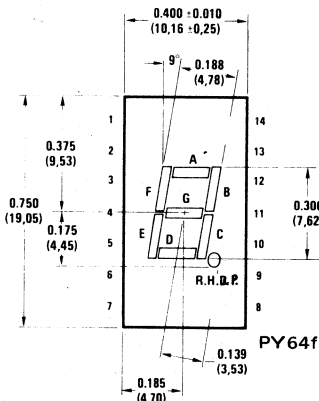
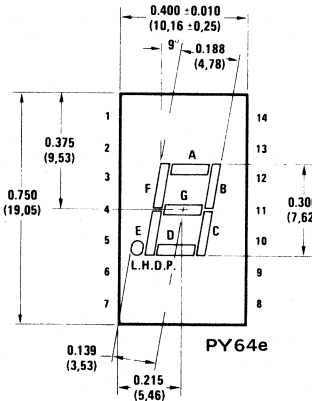
## PY64



- PIN FUNCTION
- 1 ANODE F
  - 2 ANODE G
  - 3 NO PIN
  - 4 ANODE E
  - 5 NO PIN
  - 6 CATHODE DP
  - 7 ANODE DP
  - 8 ANODE D
  - 9 ANODE C
  - 10 NO PIN
  - 11 CATHODE COMMON
  - 12 NO PIN
  - 13 ANODE B
  - 14 ANODE A

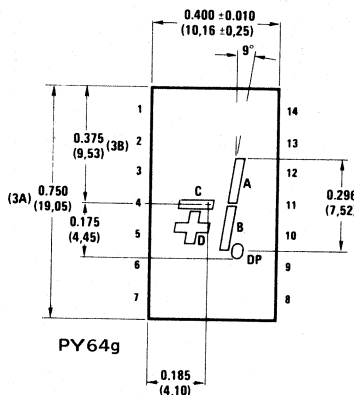


PY64c,d



- PIN FUNCTION
- 1 CATHODE A
  - 2 CATHODE F
  - 3 ANODE\*
  - 4 NO PIN
  - 5 NO PIN
  - 6 CATHODE DP
  - 7 CATHODE E
  - 8 CATHODE D
  - 9 ANODE\*
  - 10 CATHODE C
  - 11 CATHODE G
  - 12 NO PIN
  - 13 CATHODE B
  - 14 ANODE\*

\*Common redundant anodes  
PY64e,f



- PIN FUNCTION
- 1 ANODE C, D\*
  - 2 NO PIN
  - 3 ANODE C, D\*
  - 4 NO PIN
  - 5 NO PIN
  - 6 NO PIN
  - 7 CATHODE D
  - 8 CATHODE C
  - 9 CATHODE D. P.
  - 10 CATHODE B
  - 11 CATHODE A
  - 12 NO PIN
  - 13 NO PIN
  - 14 ANODE A, B, DP

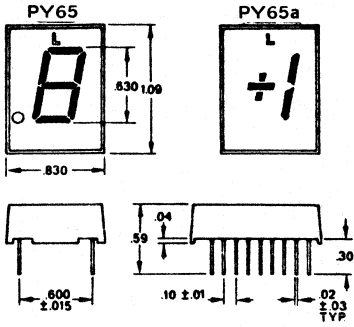
\*Common redundant anodes.  
PY64g

	A	B	C	D	E
PY64, a,b			.020	.290	.506
PY64, c-g	.188	.240	.047	.300	

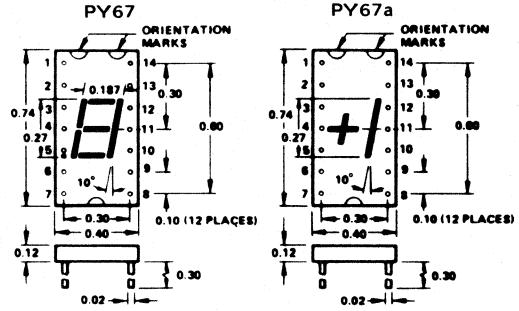
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

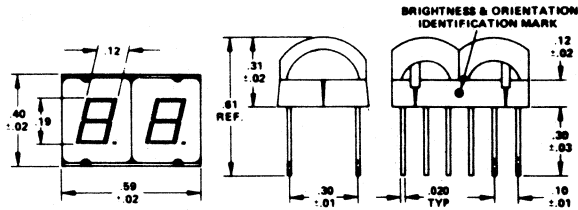
**PY65**



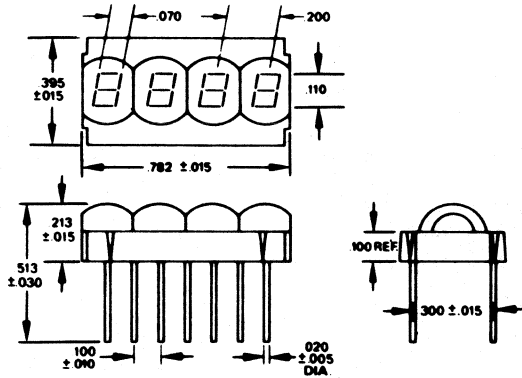
**PY67**



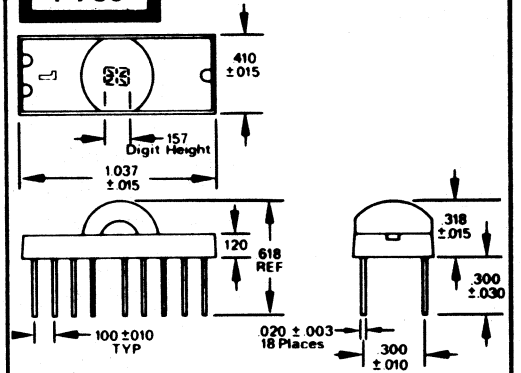
**PY70**



**PY79**



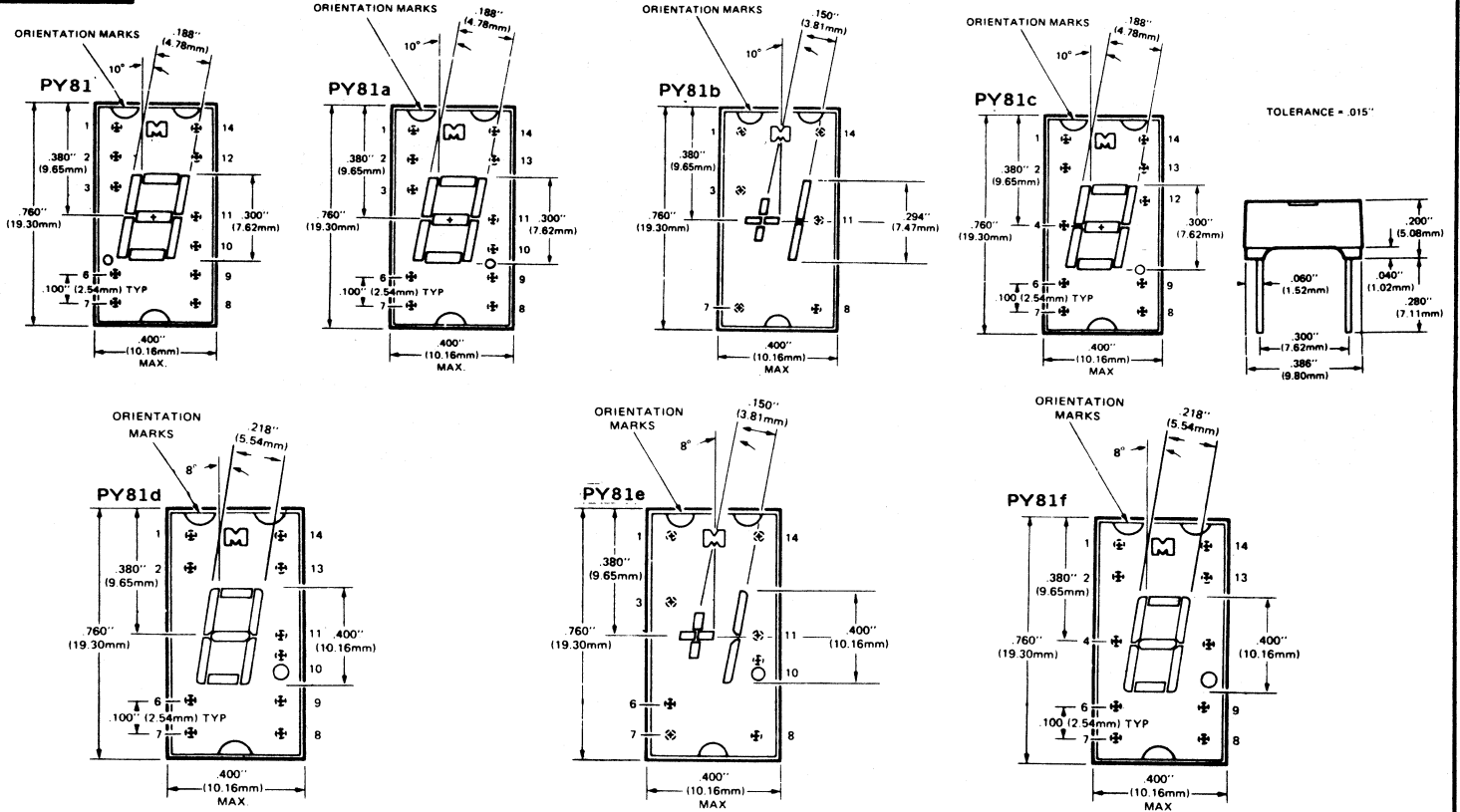
**PY80**



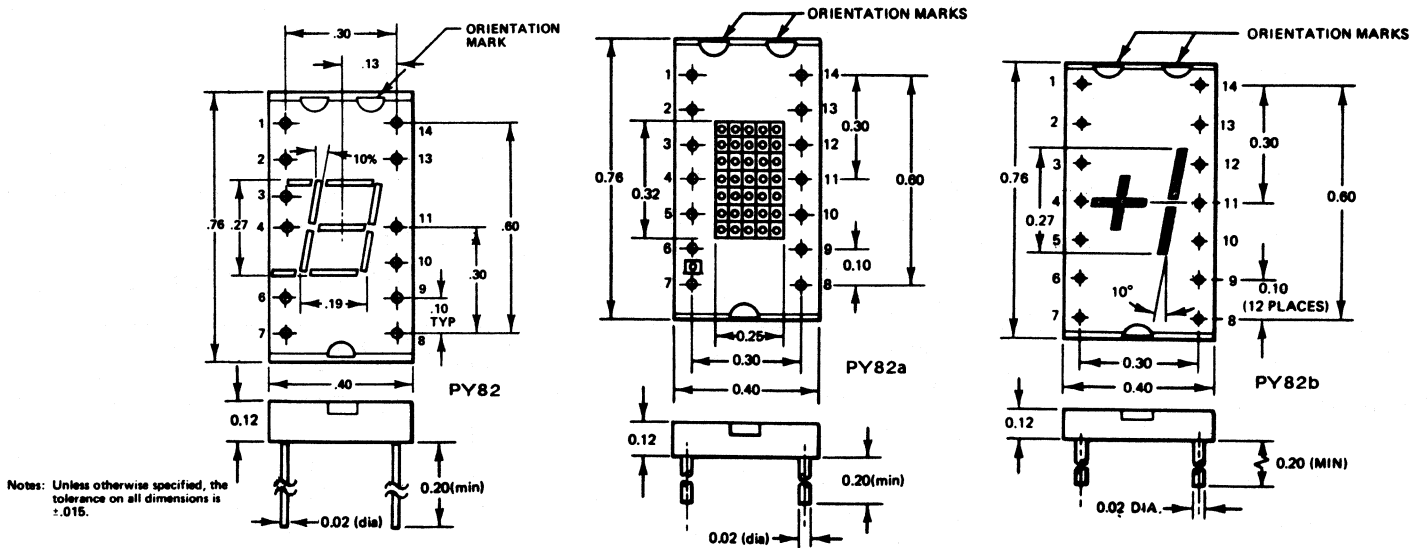
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

## PY81



## PY82

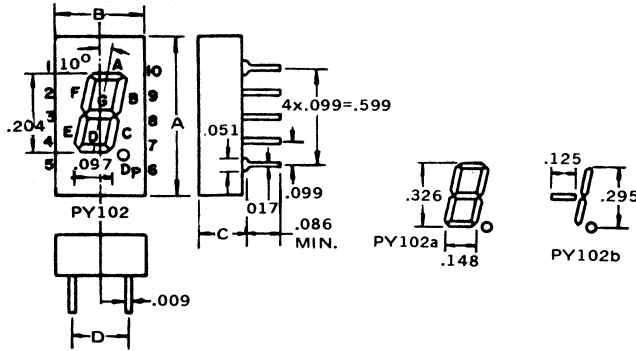




# 49. OUTLINE DRAWINGS

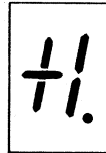
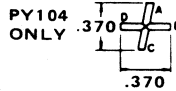
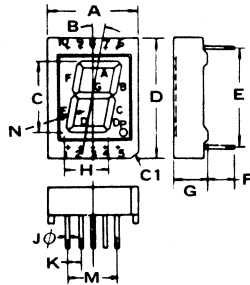
IN DRAWING NUMBER  
SEQUENCE

## PY102



	A	B	C	D
FY102	.551	.238	.177	.125
FY102a,b	.649	.354	.216	.224

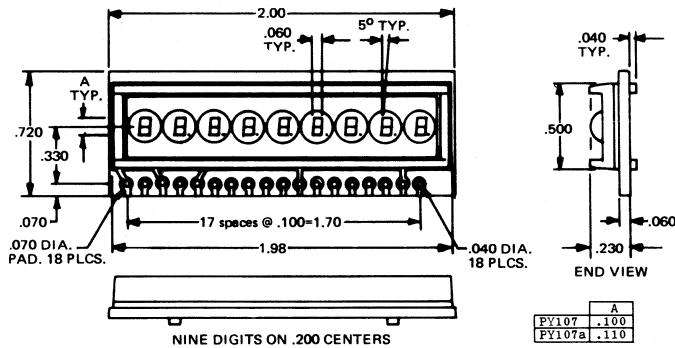
## PY104



PY104b ORIENTATION

	A	B	C	D	E	F	G	H	J	K	M	N
FY104	.708	10*	.590	.984	.787	.086 MIN	.322	.354	.017	.099	.399	
FY104a	.721		.600	.996	.787	.142	.331	.354		.100	.400	.047
FY104b	.700 .720		.600	.975 .995	.787	.100	.331 MAX		.020	.100	.400	

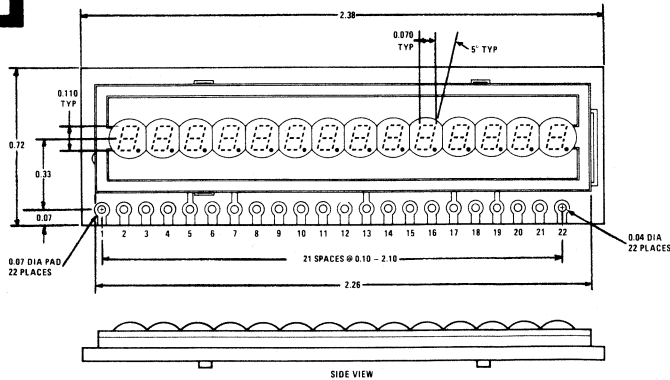
## PY107



PIN	NC
1	NC
2	DIGIT 1 CATHODE
3	SEGMENT C ANODE
4	DIGIT 2 CATHODE
5	SEGMENT DP ANODE
6	DIGIT 3 CATHODE
7	SEGMENT A ANODE
8	DIGIT 4 CATHODE
9	SEGMENT E ANODE
10	DIGIT 5 CATHODE
11	SEGMENT D ANODE
12	DIGIT 6 CATHODE
13	SEGMENT G ANODE
14	DIGIT 7 CATHODE
15	SEGMENT B ANODE
16	DIGIT 8 CATHODE
17	SEGMENT F ANODE
18	DIGIT 9 CATHODE

	A
FY107	.100
FY107a	.110

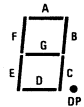
## PY108



### Pin Connections

- PIN 1 DIGIT 1 CATHODE
- PIN 2 DIGIT 2 CATHODE
- PIN 3 DIGIT 3 CATHODE
- PIN 4 DIGIT 4 CATHODE
- PIN 5 SEGMENT C ANODE
- PIN 6 DIGIT 5 CATHODE
- PIN 7 SEGMENT DP ANODE
- PIN 8 DIGIT 6 CATHODE
- PIN 9 SEGMENT A ANODE
- PIN 10 DIGIT 7 CATHODE
- PIN 11 SEGMENT E ANODE
- PIN 12 DIGIT 8 CATHODE
- PIN 13 SEGMENT D ANODE
- PIN 14 DIGIT 9 CATHODE
- PIN 15 SEGMENT G ANODE
- PIN 16 DIGIT 10 CATHODE
- PIN 17 SEGMENT B ANODE
- PIN 18 DIGIT 11 CATHODE
- PIN 19 SEGMENT F ANODE
- PIN 20 DIGIT 12 CATHODE
- PIN 21 DIGIT 13 CATHODE
- PIN 22 DIGIT 14 CATHODE

### Segment Designation

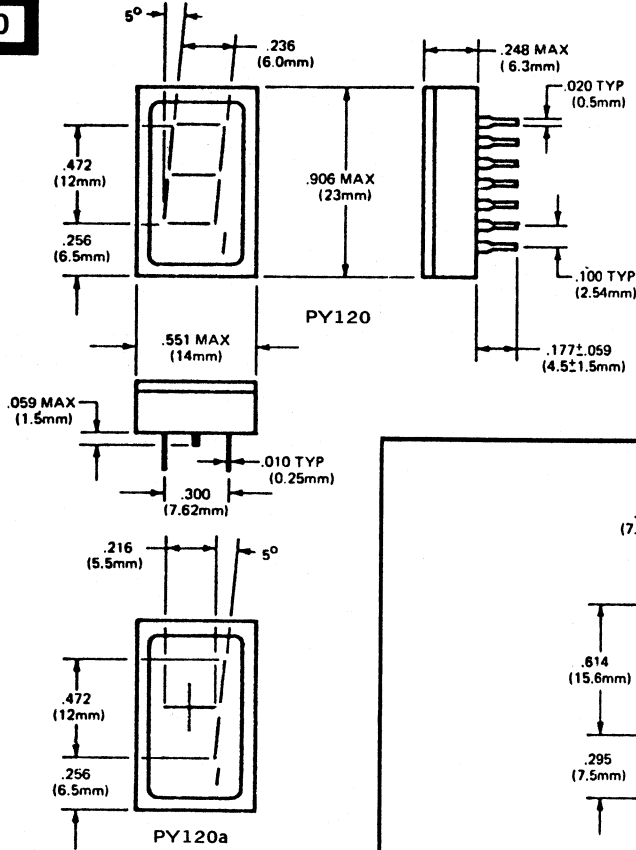


ALL DIGITS ON 0.150 INCH CENTERS

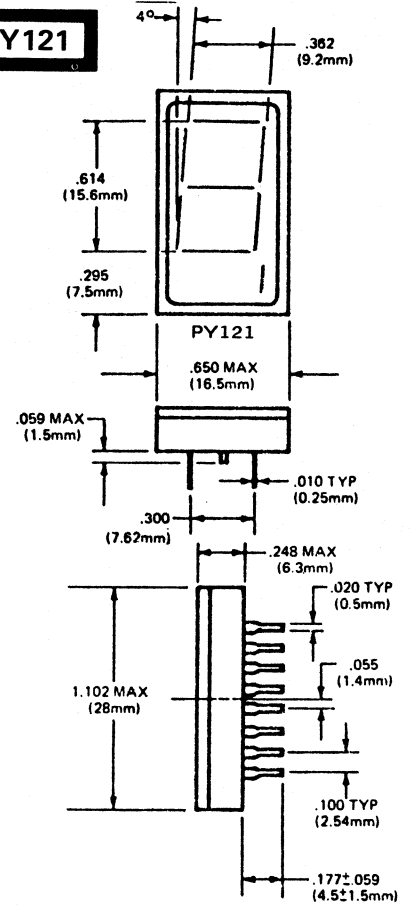
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

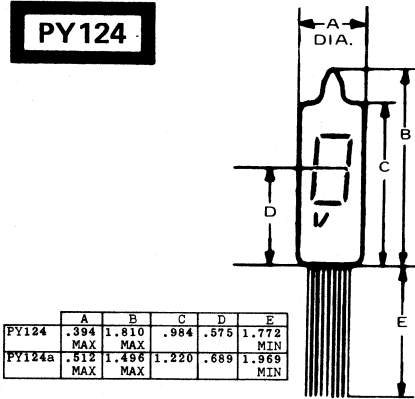
**PY120**



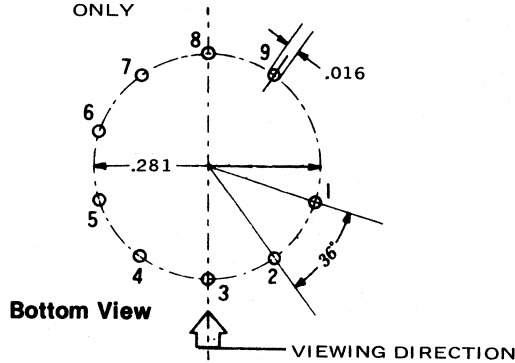
**PY121**



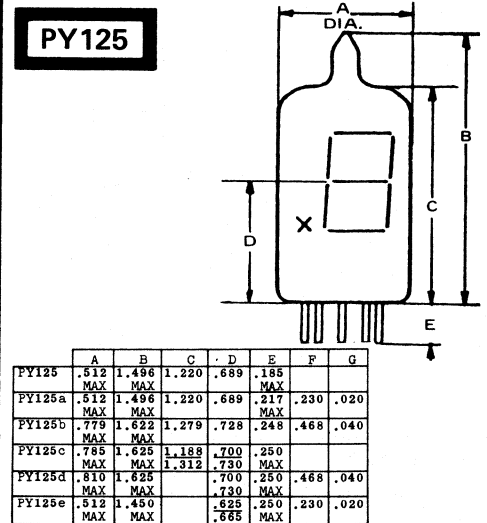
**PY124**



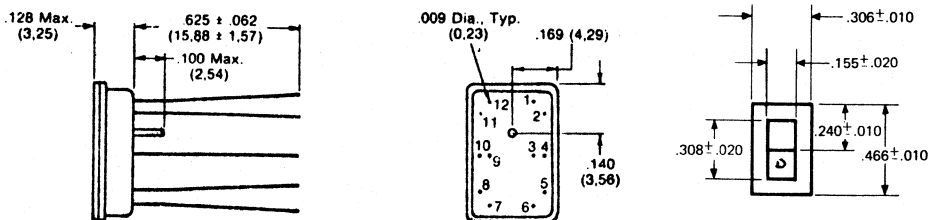
PY124a ONLY



**PY125**



**PY126**



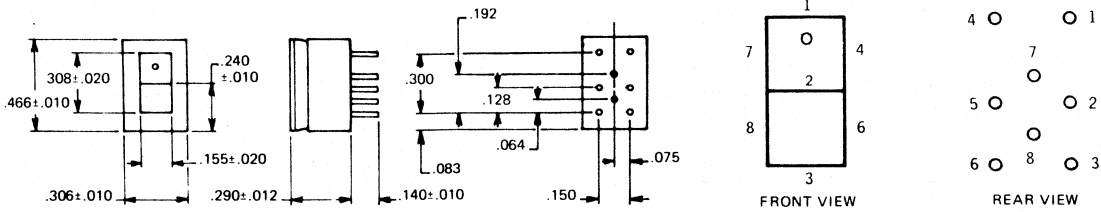
Bottom Views



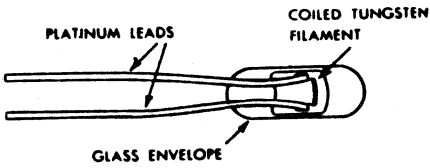
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

## PY127



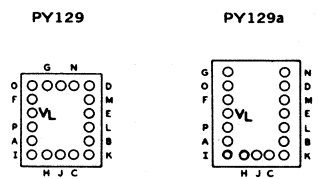
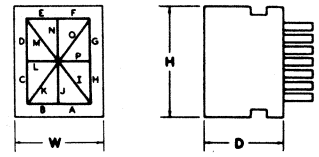
## PY128



**LENS LAMP**

## PY129

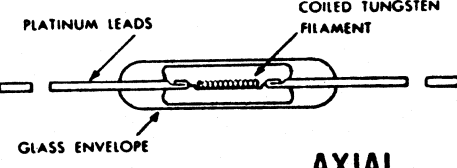
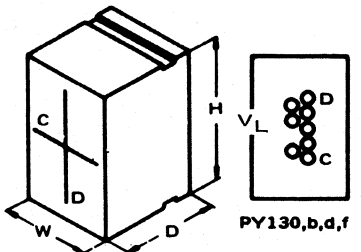
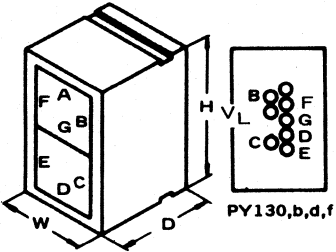
	H HEIGHT	W WIDTH	D DEPTH
PY129	.375	.335	.312
PY129a	.465	.375	.312



## PY130

**DIGIT**

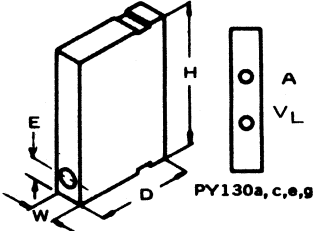
**PLUS/MINUS  
(PM)**



**AXIAL**

	BULB LENGTH	BULB DIA	LEAD DIA
PY128	.080	.030	.004
PY128a	.070	.015	.003
PY128b	.125	.030	.005
PY128c	.250	.040	.005

**DECIMAL POINT\*  
(DP)**



	H	W	D	E
PY130	.305	.225	.312	
PY130a	.305	.075	.312	.085
PY130b	.375	.275	.312	
PY130c	.375	.075	.312	.065
PY130d	.468	.306	.312	
PY130e	.465	.100	.312	.085
PY130f	.625	.425	.312	
PY130g	.625	.100	.312	.085

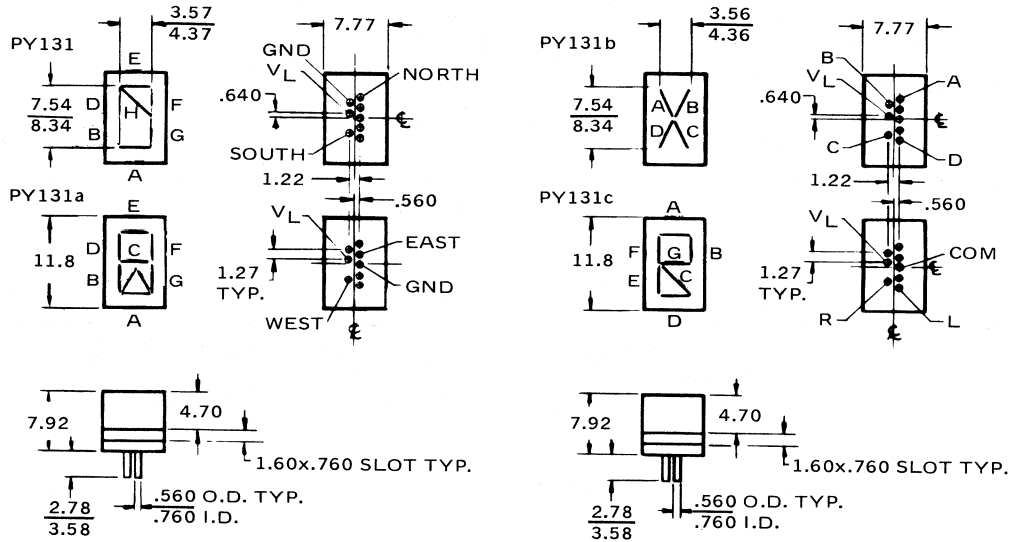
\*NOTE: COLON ALSO AVAILABLE



# 49. OUTLINE DRAWINGS

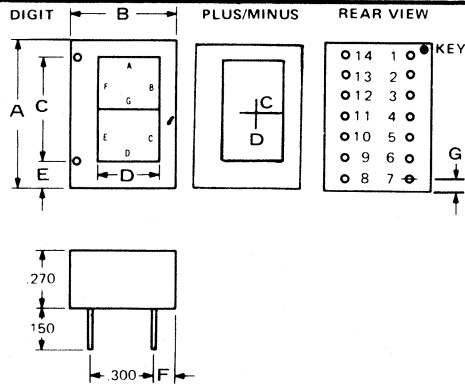
IN DRAWING NUMBER SEQUENCE

## PY131



DIMENSIONS IN mm TOLERANCE  $\pm .127$

## PY132



### PIN CONNECTIONS

#### DIGITAL DISPLAYS

- Pin 1 A Segment
- Pin 2 F Segment
- Pin 3 Lamp VL
- Pin 4 Lamp R
- Pin 5 NC
- Pin 6 Lamp L
- Pin 7 E Segment
- Pin 8 D Segment
- Pin 9 NC
- Pin 10 C Segment
- Pin 11 G Segment
- Pin 12 NC
- Pin 13 B Segment
- Pin 14 NC

NOTE: IN PY132a PINS 9 AND 14 ARE OMITTED.

	A	B	C	D	E	F	G
PY132	.740	.400	.312	.156	.219	.050	.070
PY132a	.700	.500	.453	.250	.166	.100	.025

#### PLUS/MINUS DISPLAYS

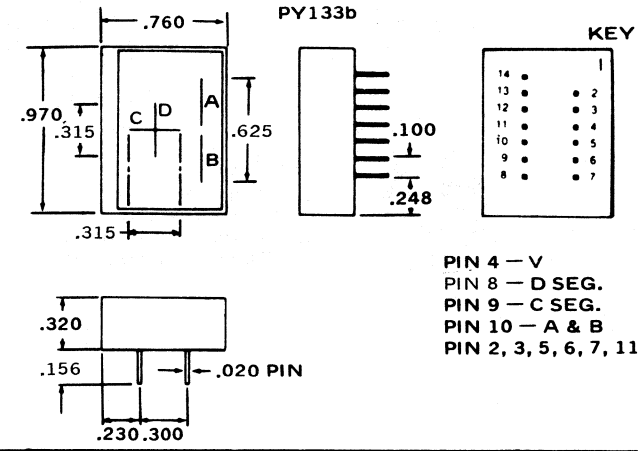
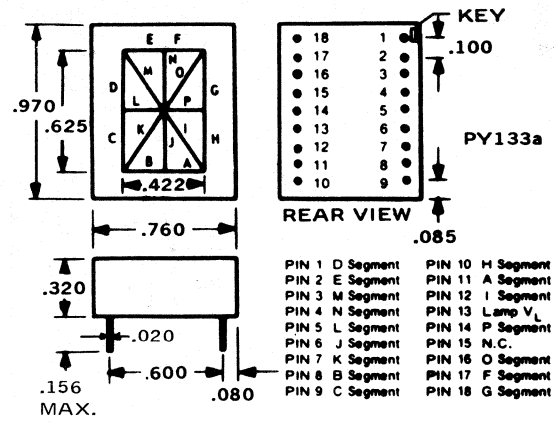
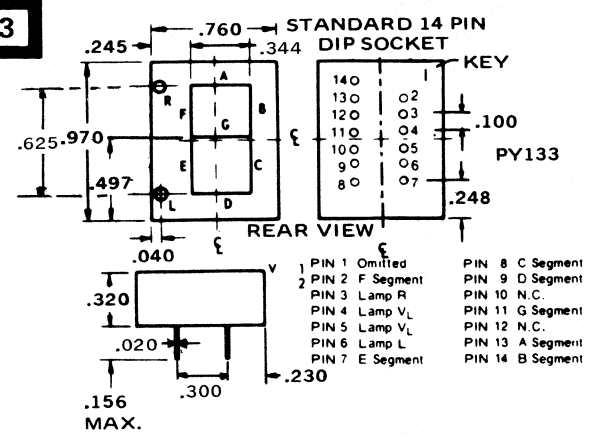
- Pin 3  $V_L$
- Pin 10 D Segment
- Pin 11 C Segment
- Pins 1, 2, 4, 5, 6, 7, 8, 9, 12, 13 & 14 - NC

Pin Spacing - 100 in.  
Pin Dia. - .020 in.

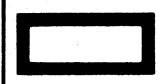
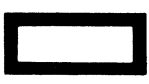
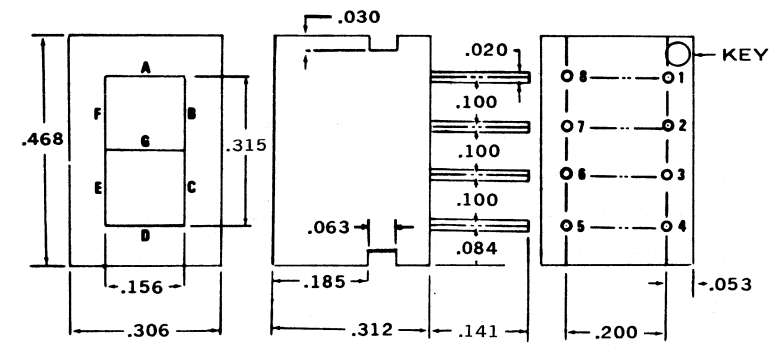
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

**PY133**



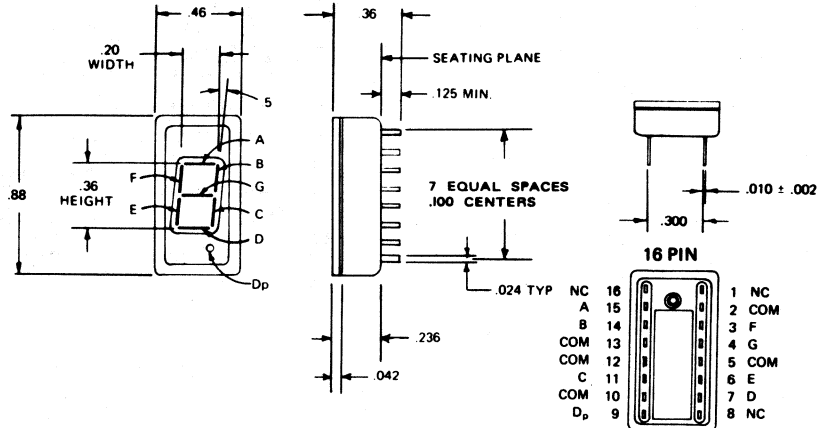
**PY134**



# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

**PY135**



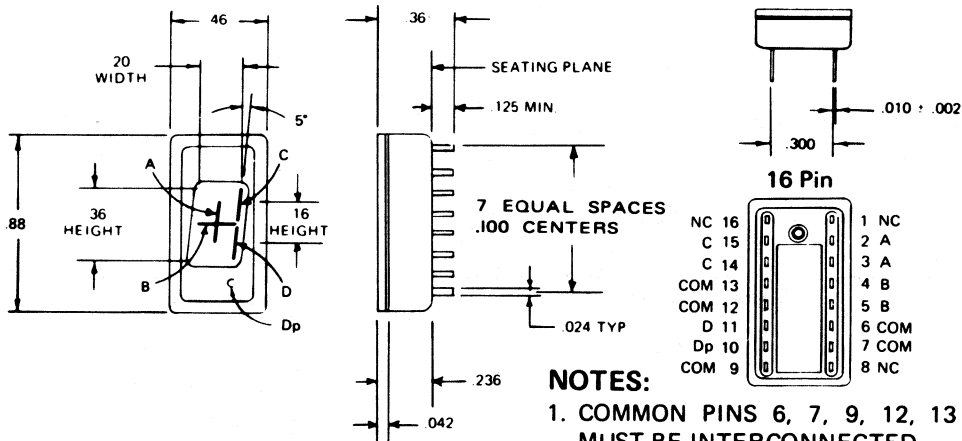
PY135a - HAS NO METAL MASK OR DECIMAL.



**NOTES:**

1. COMMON PINS 2, 5, 10, 12, 13 MUST BE INTERCONNECTED.
2. MOUNTS IN 16 PIN DIP SOCKET OR SOLDER TO PRINTED CIRCUIT BOARD

**PY136**

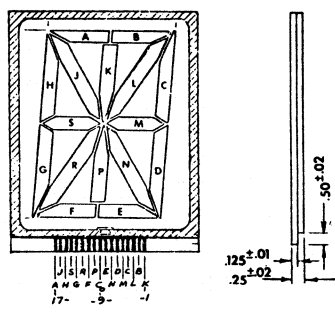
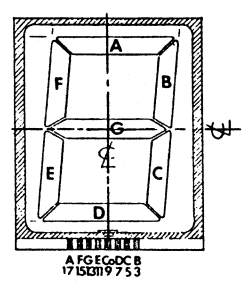
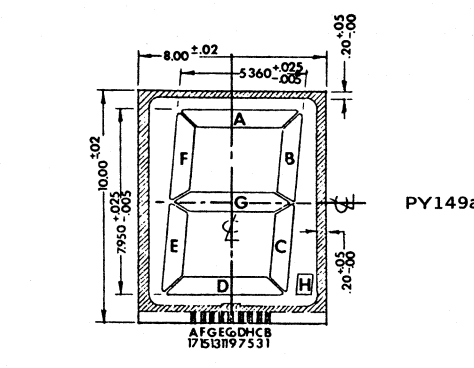
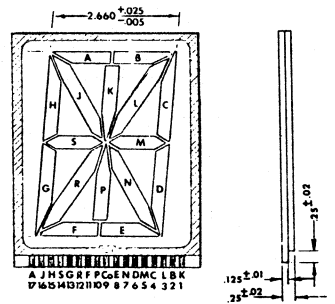
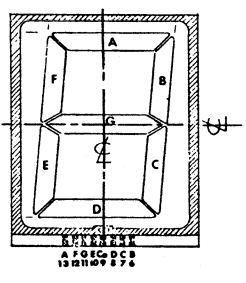
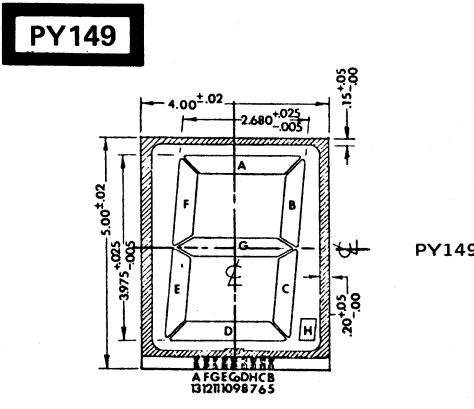
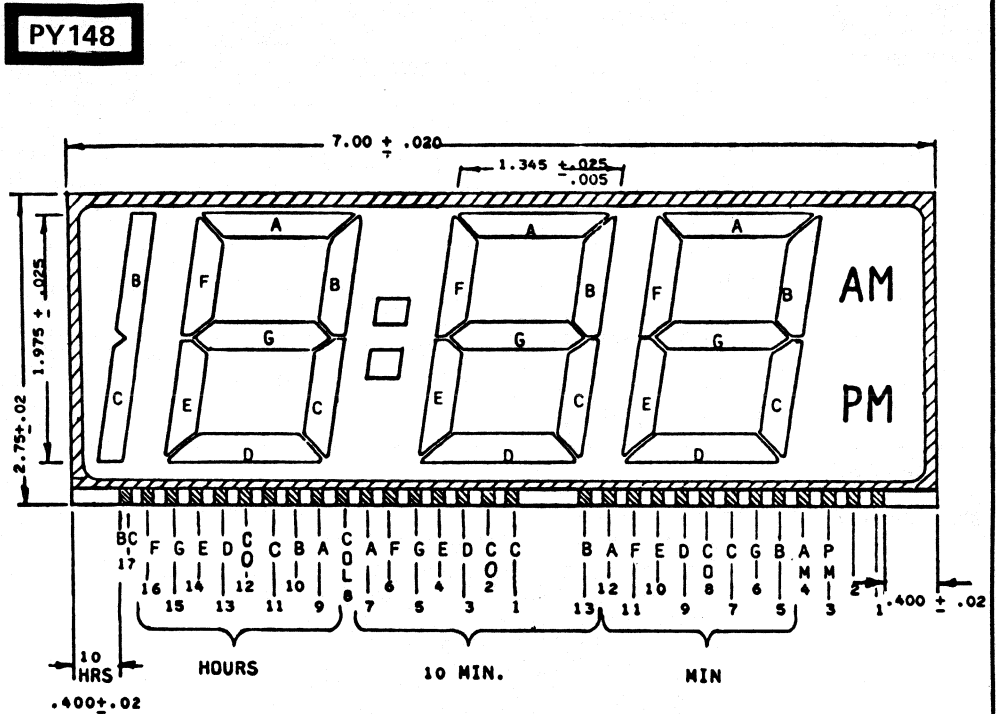
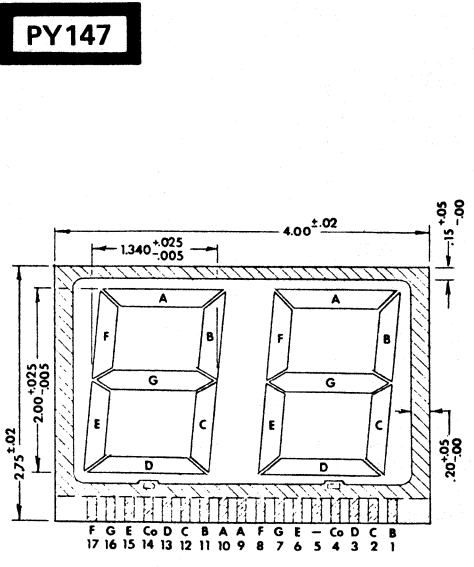


**NOTES:**

1. COMMON PINS 6, 7, 9, 12, 13 MUST BE INTERCONNECTED

# 49. OUTLINE DRAWINGS

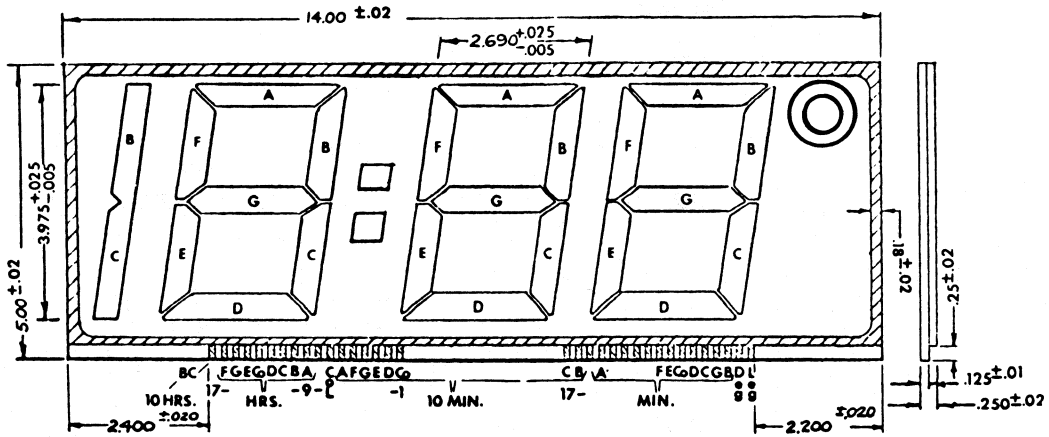
IN DRAWING NUMBER  
SEQUENCE



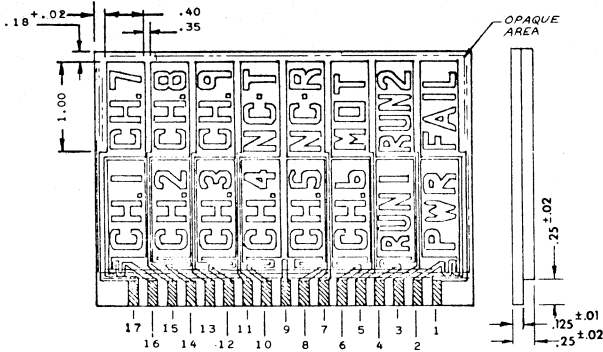
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

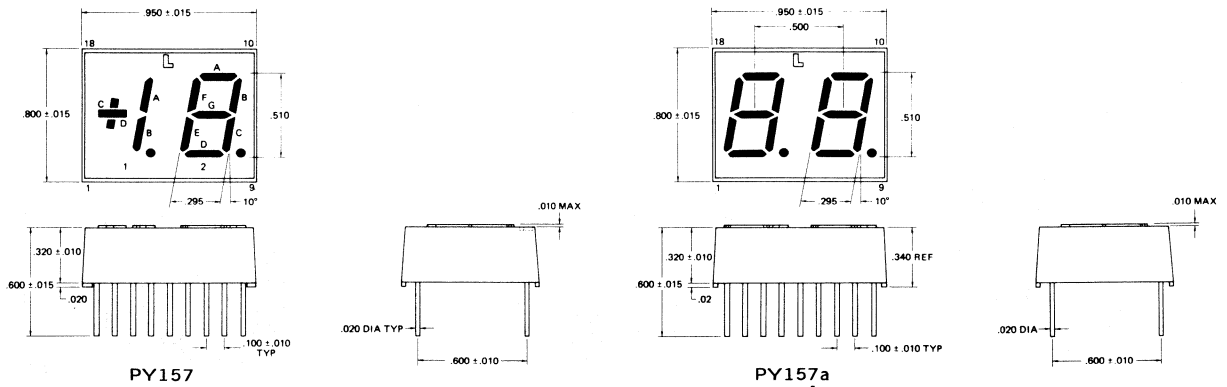
**PY150**



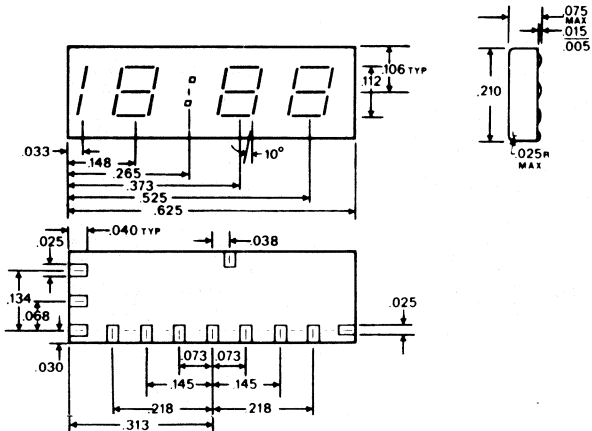
**PY151**



**PY157**



**PY160**

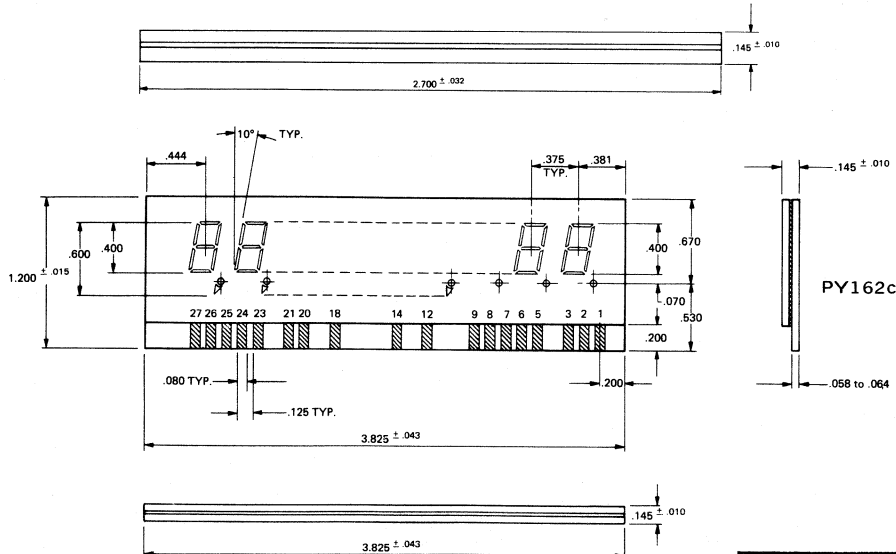
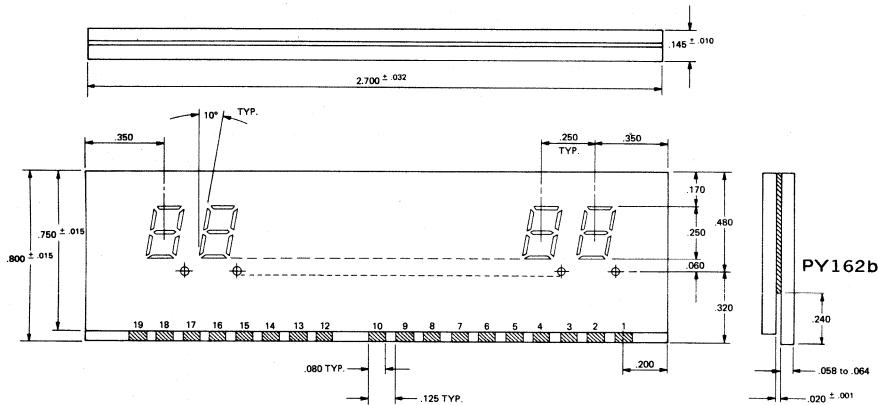
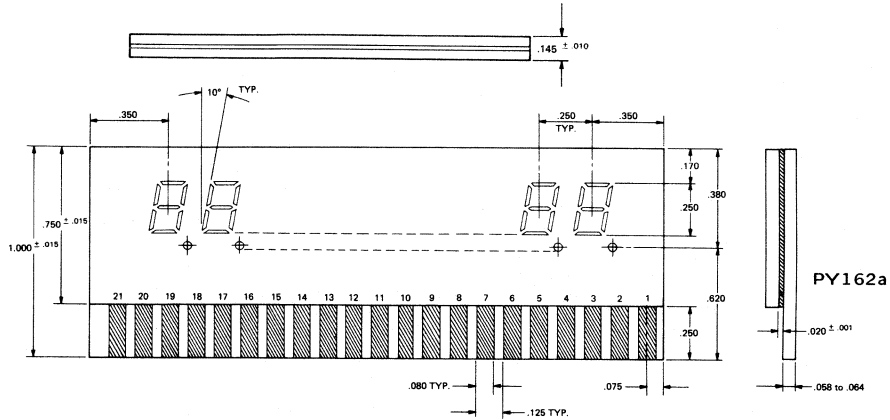
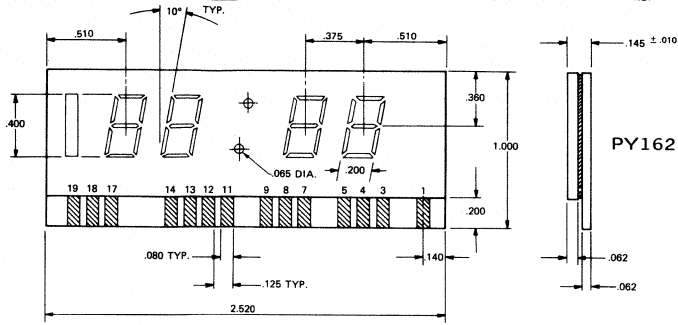




# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

PY162

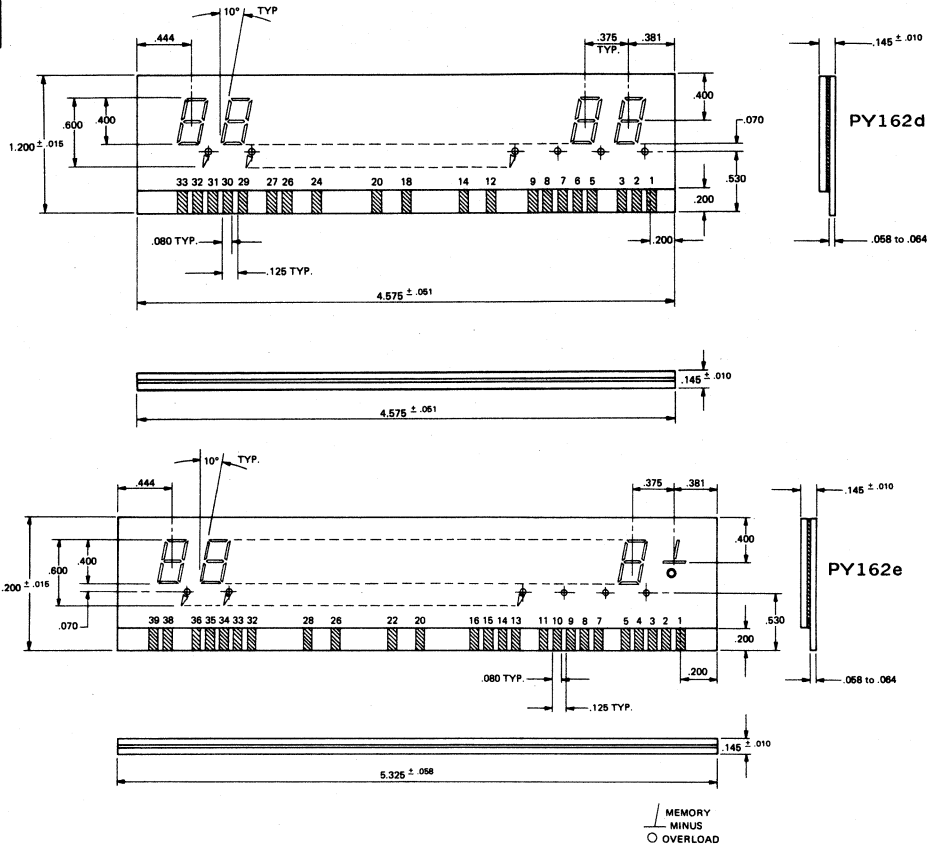


PY162 Cont'd on next page

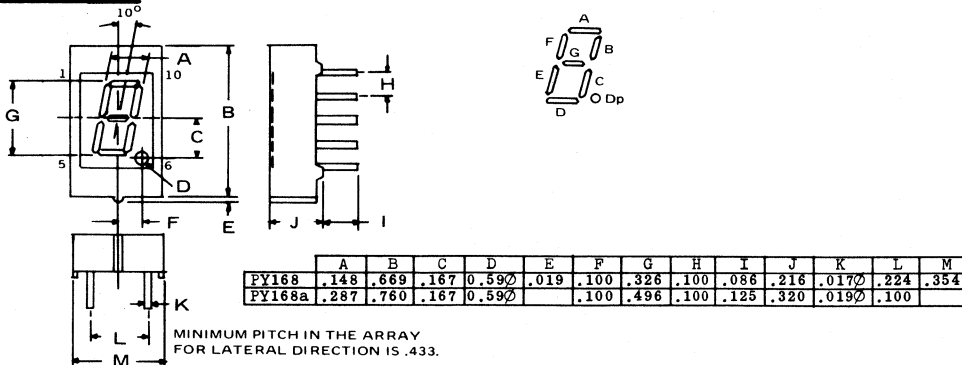
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

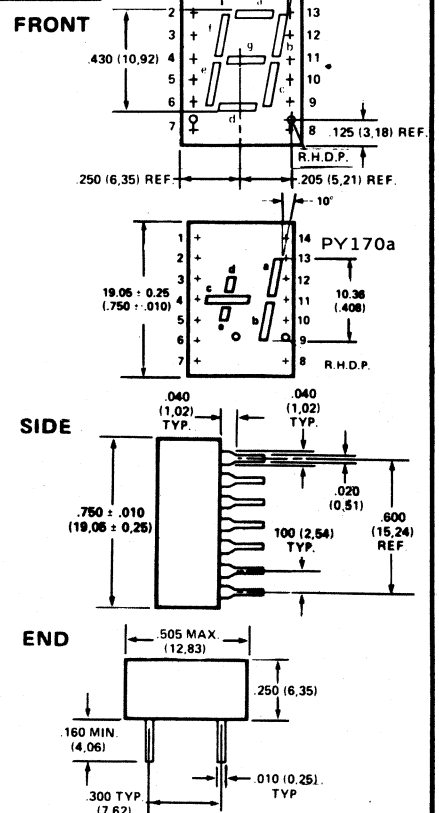
## PY162 Cont'd



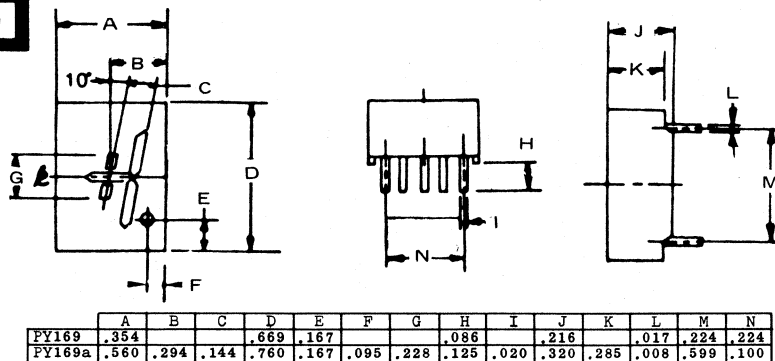
## PY168



## PY170



## PY169

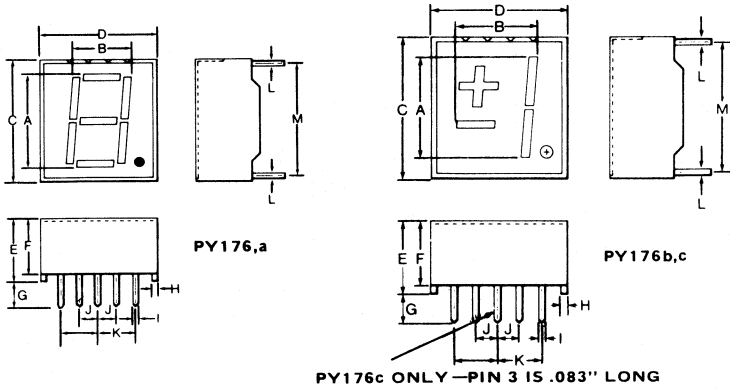




# 49. OUTLINE DRAWINGS

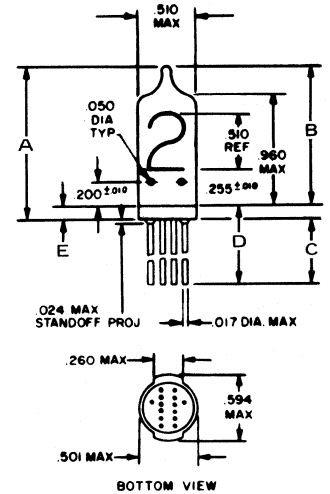
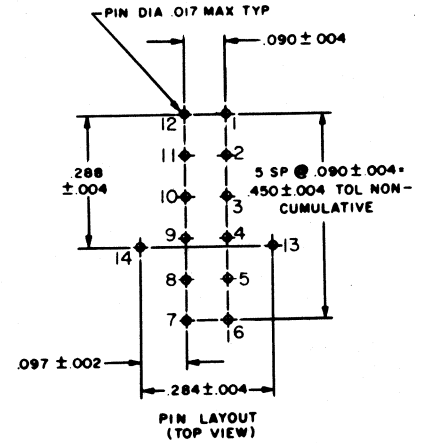
IN DRAWING NUMBER  
SEQUENCE

## PY176



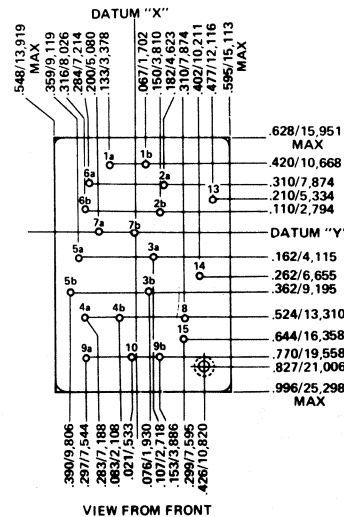
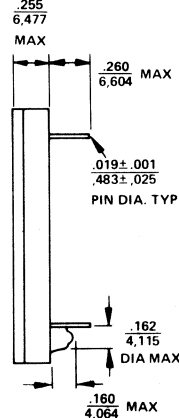
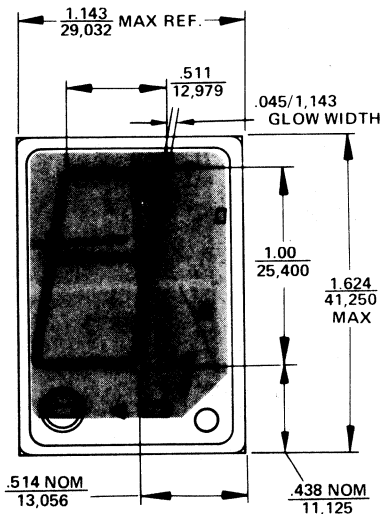
	A	B	C	D	E	F	G	H	I	J	K	L	M
PY176	.500	.299	.653	.599	.338	.315	.122	.019	.019	.100	.200	.009	.600
PY176a	.500	.300	.645	.590	.330	.295	.170	.020	.018	.090	.190	.010	.600
			.655	.600	.340	.305			.019	.110	.210		
PY176b	.500	.370	.645	.590	.330	.295	.170	.020	.016	.090	.190	.010	.600
c			.655	.600	.340	.305			.019	.110	.210		

## PY186



	A	B	C	D	E
PY186		1.200		2.00	
		MAX		MIN	
PY186a	1.329		.190		.129
	MAX		MAX		MAX
PY186b	1.424		.190		.224
	MAX		MAX		MAX

## PY190



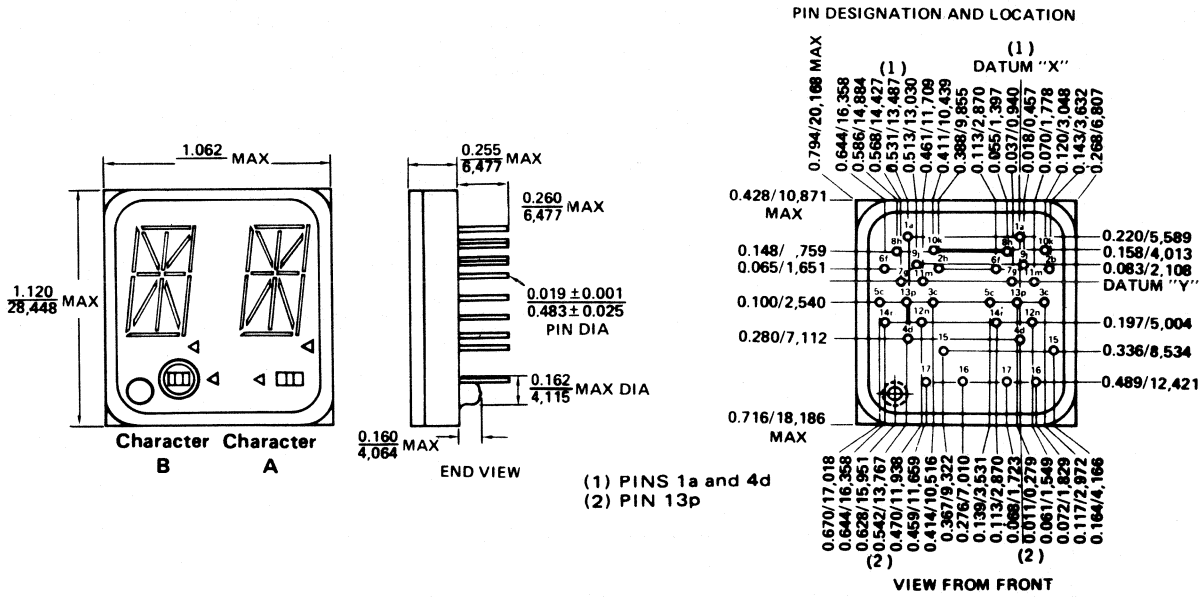
VIEW FROM FRONT

VIEW FROM FRONT

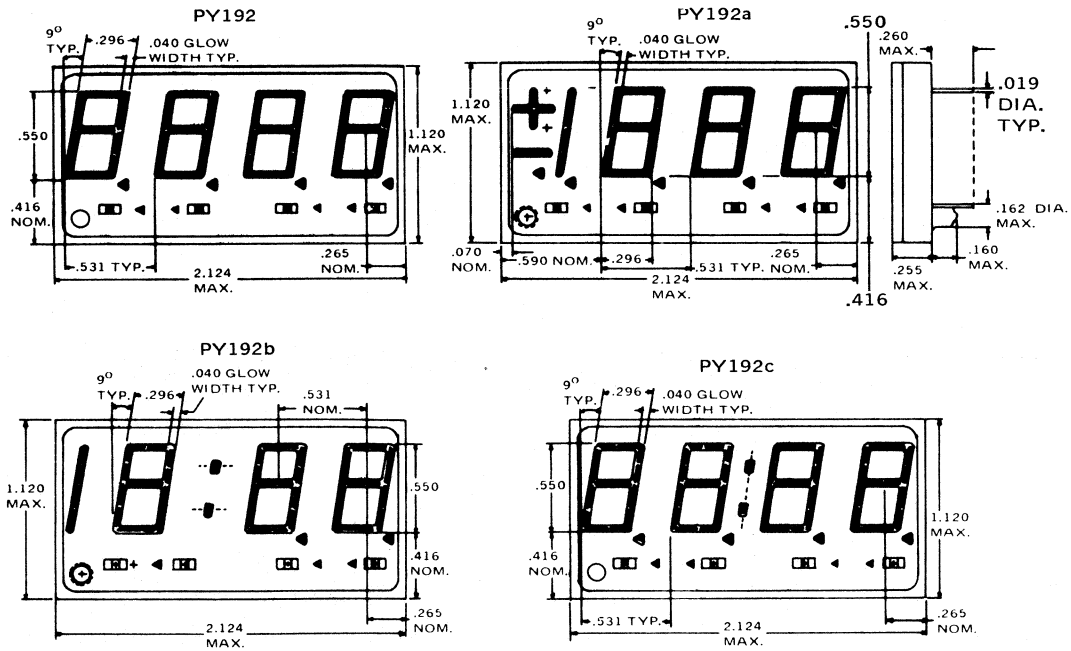
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

PY191



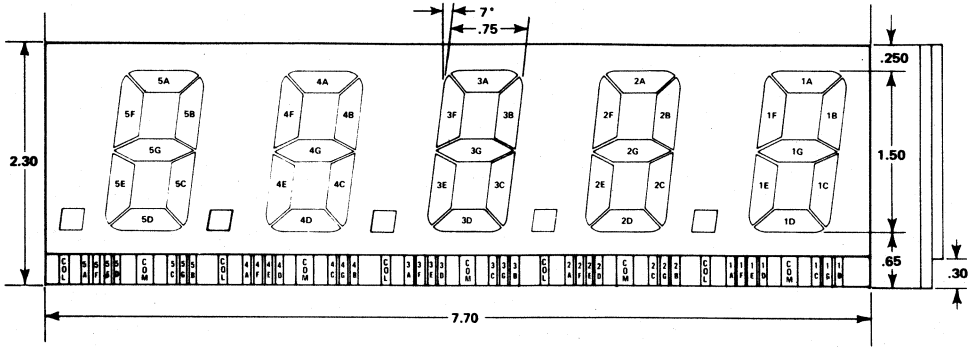
PY192



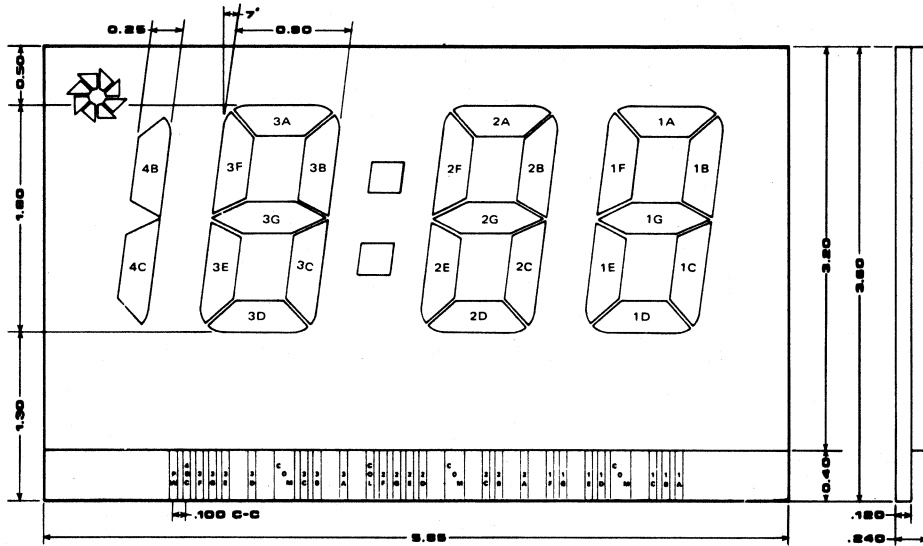
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

**PY196**



**PY197**

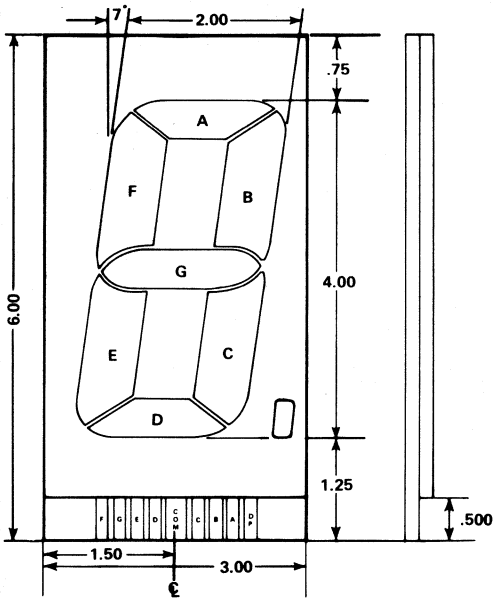




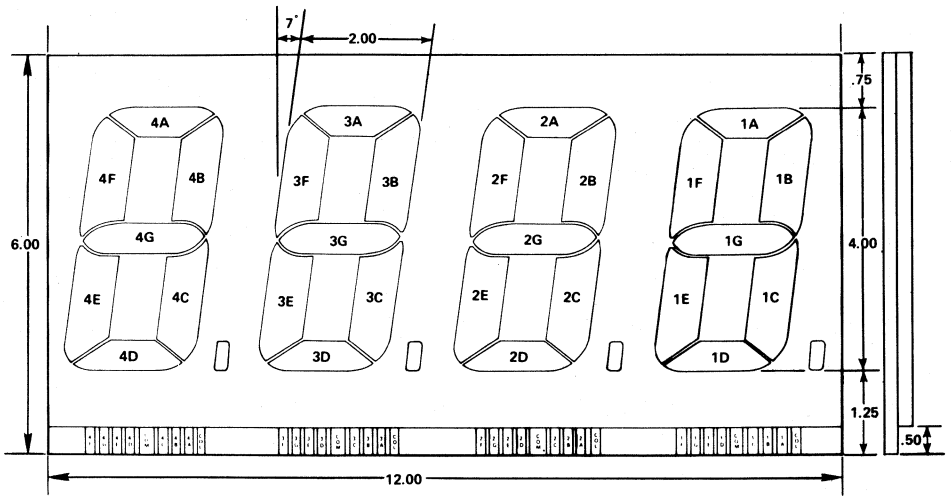
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

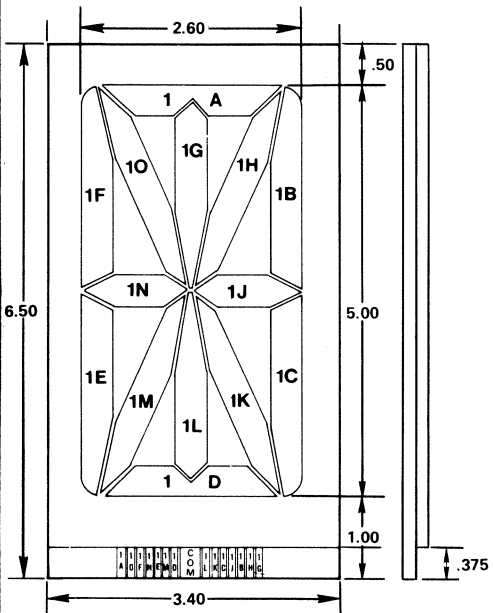
**PY200**



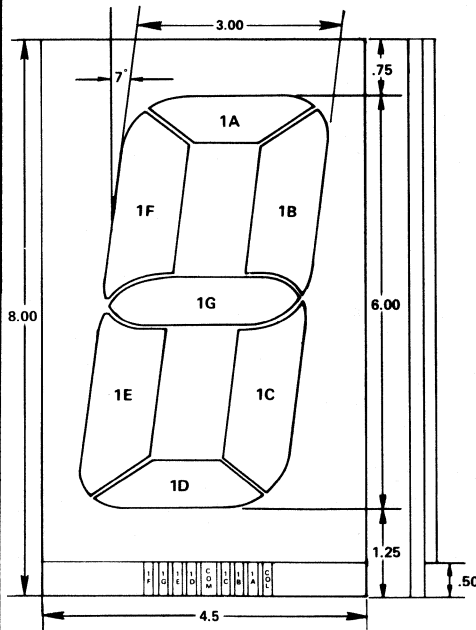
**PY201**



**PY202**



**PY203**

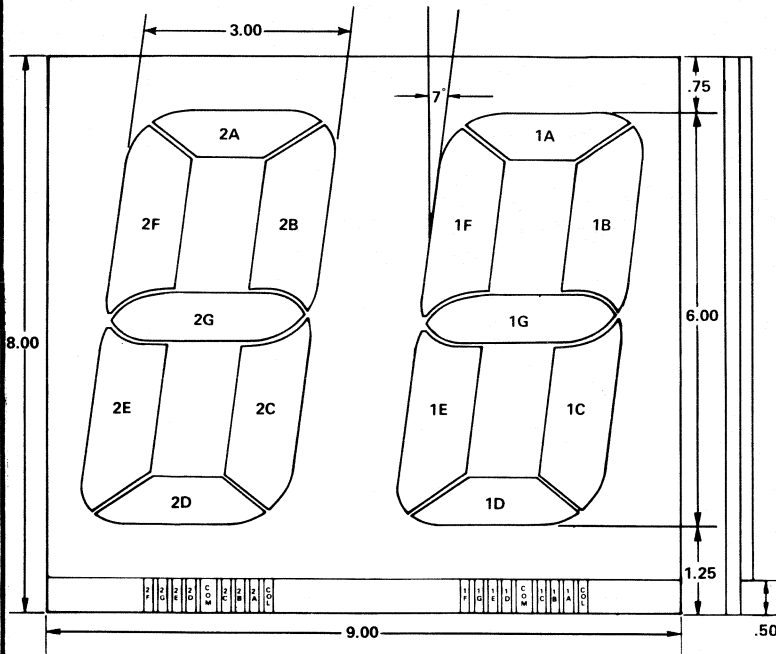




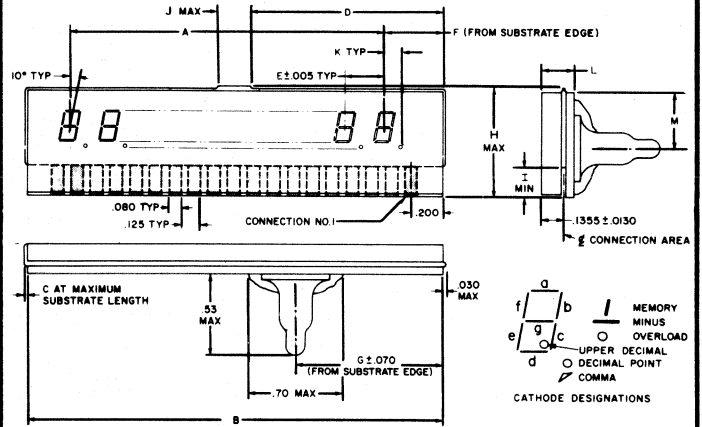
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

**PY204**



**PY205**



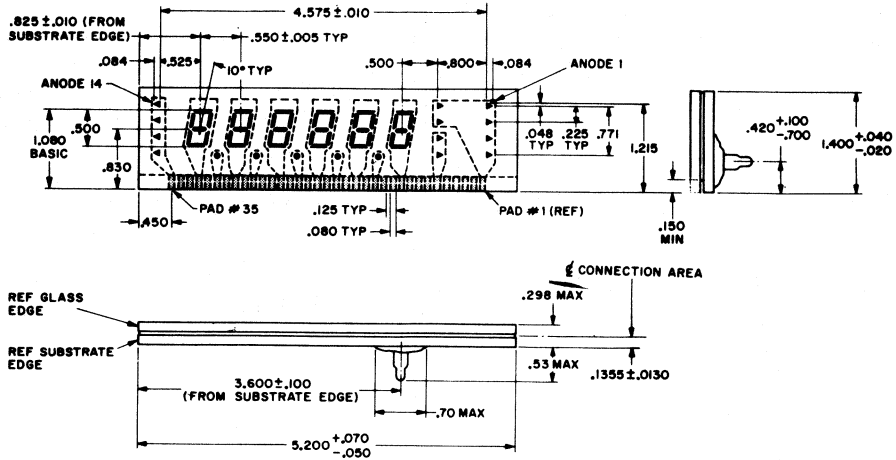
**DIMENSIONS**

	A	B	C	D	E	F	G	H	I	J	K	L	M
PY205	2.000 ±.005	2.650 ±.032	.030 max	1.210 ±.200	.250	.355 ±.006	.728 ±.070	.780 max	.142	.200 max	.114 typ	.197 ±.019	.260 ±.040
PY205a	2.250 ±.005	2.900 ±.034	.030 max	1.330 ±.200	.250	.355 ±.006	.728 ±.070	.780 max	.142	.200 max	.114 typ	.197 ±.019	.260 ±.040
PY205b	2.000 ±.005	2.650 ±.032	.030 max	1.295 ±.020	.250	.325 ±.005	.885 ±.070	.950 max	.150	.600 max	.145 typ	.197 ±.019	.525 +0.030 -0.070
PY205c	2.750 ±.005	3.400 ±.039	.030 max	1.670 ±.020	.250	.325 ±.005	1.385 ±.070	.950 max	.150	.600 max	.145 typ	.197 ±.019	.525 +0.030 -0.070
PY205d	2.600 ±.005	3.400 ±.039	.030 max	1.400 Ref.	.325	.400 ±.005	1.385 ±.070	.950 max	.150	.600 max	.153 typ	.197 ±.019	.525 +0.030 -0.070
PY205e	2.660 ±.005	3.400 ±.039	.030 max	1.400 Ref.	.266	.350 ±.005	1.385 ±.070	.950 max	.150	.600 max	.118 typ	.197 ±.019	.525 +0.030 -0.070
PY205f	2.750 ±.005	3.650 ±.042	.030 max	1.740 ±.200	.250	.575 ±.010	1.385 ±.070	.950 max	.150	.200 max		.197 ±.019	.525 +0.030 -0.070
PY205g	3.750 ±.005	4.400 ±.049	.030 max	2.120 ±.200	.250	.325 ±.005	1.635 ±.070	.950 max	.150	.200 max	.105 typ	.197 ±.019	.525 +0.030 -0.070
PY205h	3.724 ±.005	4.400 ±.049	.030 max	2.120 ±.200	.266	.325 ±.005	1.635 ±.070	.950 max	.150	.200 max		.197 ±.019	.525 +0.030 -0.070
PY205j	3.000 ±.005	3.825 ±.043	.030 max	1.760 ±.200	.375	.400 ±.010	1.550 ±.070	1.250 max	.150	.250 max	.170 typ	.247 ±.022	.700 ±.070
PY205k	2.625 ±.005	3.825 ±.043	.030 max	1.760 ±.200	.375	.775 ±.010	1.550 ±.070	1.250 max	.150	.250 max	.170 typ	.247 ±.022	.700 ±.070
PY205m	3.750 ±.005	4.575 ±.051	.022 max	2.130 ±.200	.375	.400 ±.010	1.550 ±.070	1.250 max	.150	.250 max	.170 typ	.247 ±.022	.700 ±.070
PY205n	4.125 ±.005	5.325 ±.058	.015 max	2.510 ±.200	.375	.775 ±.010	1.550 ±.070	1.250 max	.150	.250 max		.247 ±.022	.700 ±.070
PY205p	5.625 ±.005	6.450 ±.070	.005 max	3.070 ±.200	.375	.400 ±.010	1.550 ±.070	1.250 max	.150	.250 max	.170 typ	.247 ±.022	.700 ±.070

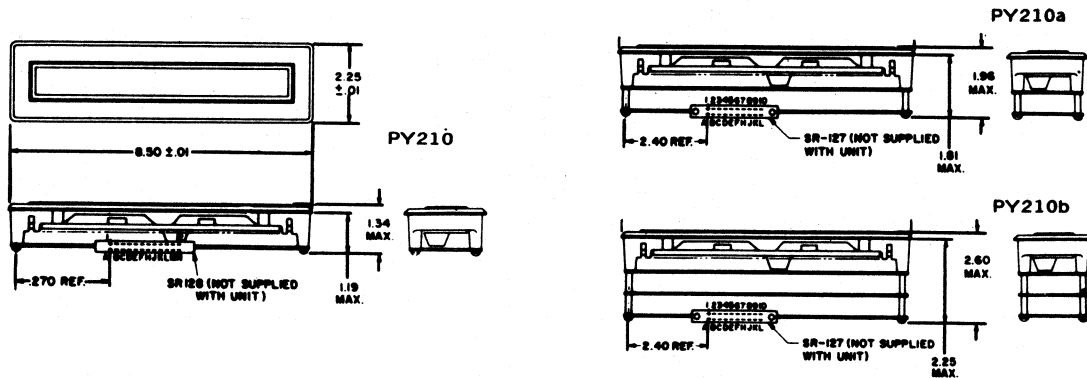
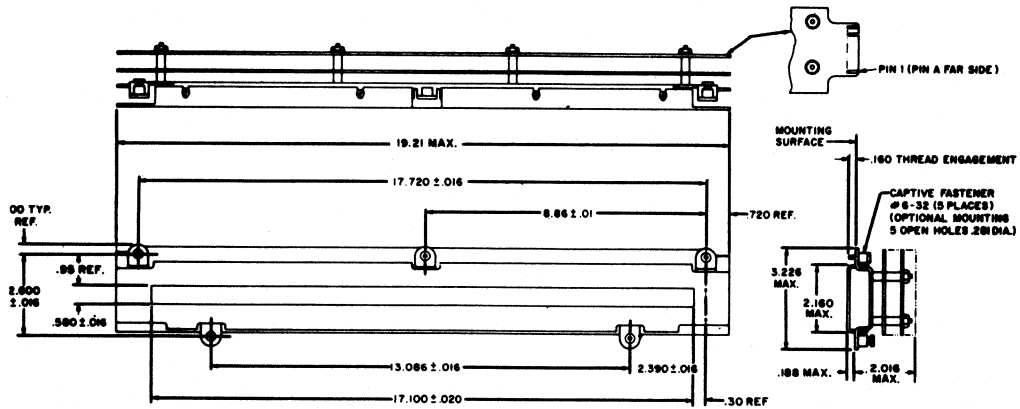
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

PY206



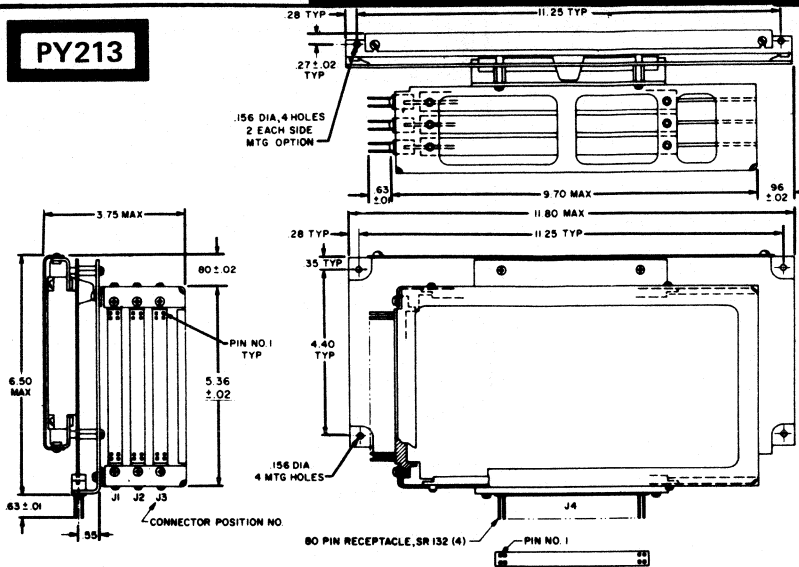
PY210



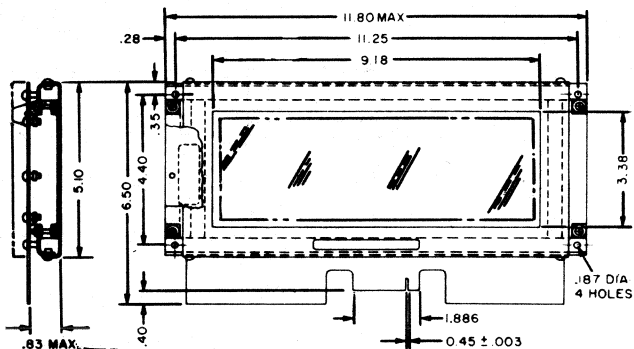
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

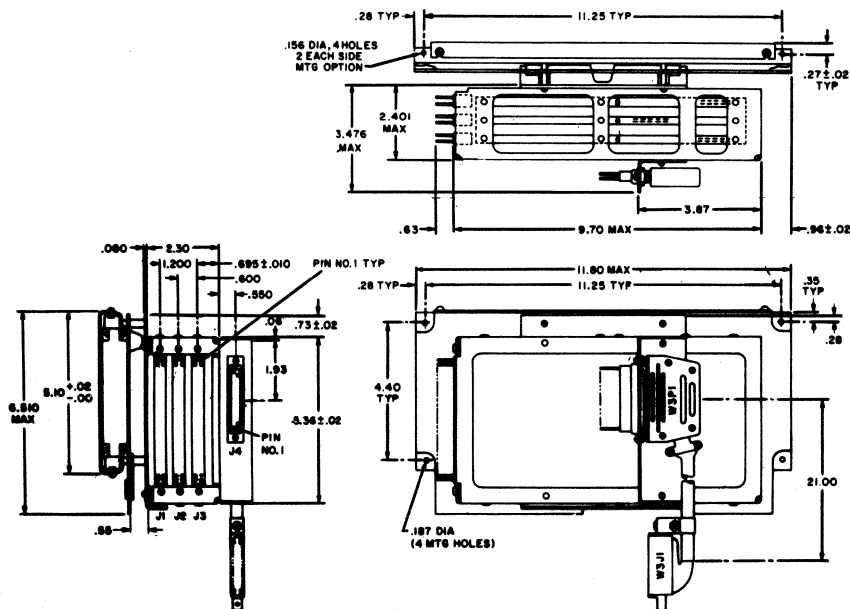
**PY213**



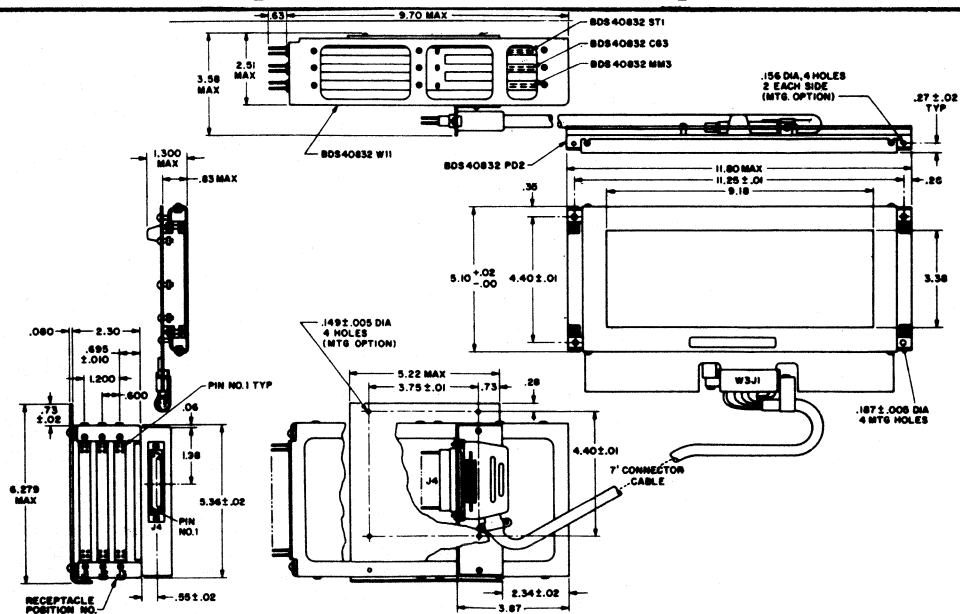
**PY214**



**PY215**



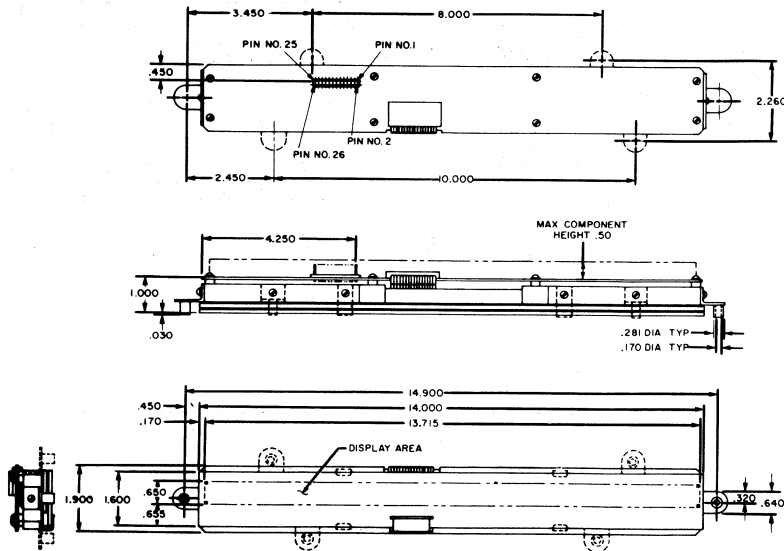
**PY216**



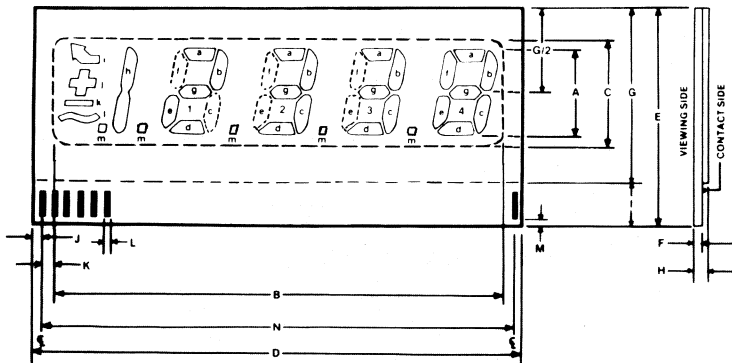
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

**PY217**



**PY224**



\*Vertical Height: Characters on 10° Slant  
 \*\*Within I dimension ±.010  
 \*\*\*Last pad position available, not necessarily last pad used

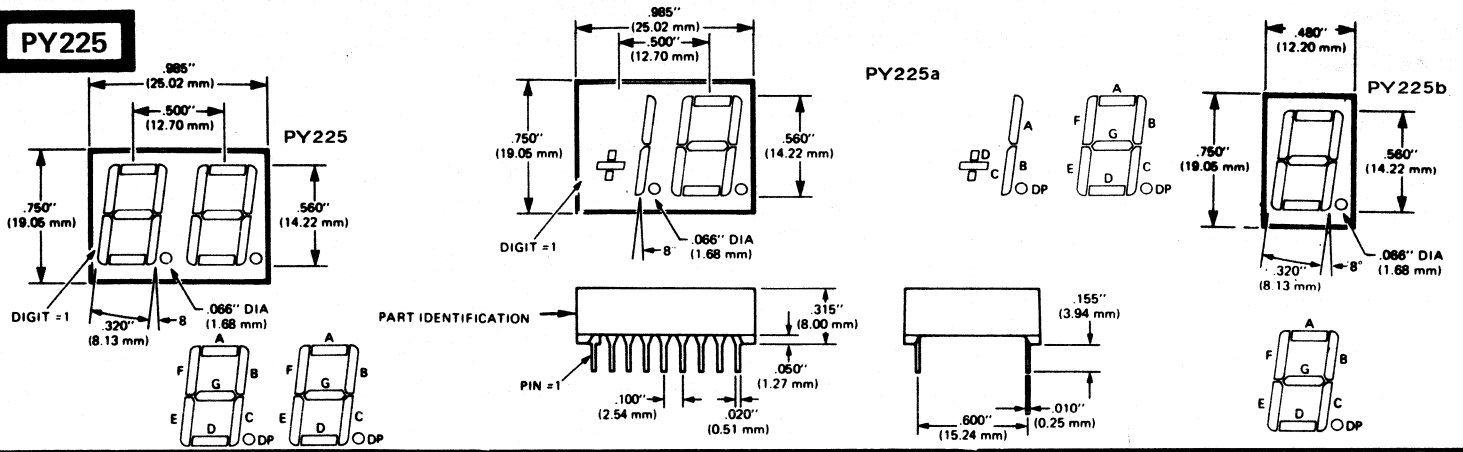
← INCH  
 ← MM

DIMEN- SION						
	PY 224	PY 224a	PY 224b	PY 224c	PY 224d	PY 224e
A	.40	.50	.60	.40	.50	.60
	10,1	12,7	15,2	10,1	12,7	15,2
B	1.75	2.20	2.75	2.20	2.75	3.00
	44,45	55,88	69,85	55,88	69,85	76,20
C	.60	.70	.80	.60	.70	.80
	15,24	17,78	20,32	15,24	17,78	20,32
D	2.00	2.50	3.00	2.50	3.00	3.25
	50,80	63,00	76,20	63,50	76,20	82,55
E	1.10	1.25	1.35	1.10	1.25	1.35
	27,94	31,75	34,29	27,94	31,75	34,29
F	.048	.048	.048	.048	.048	.048
	1,219	1,219	1,219	1,219	1,219	1,219
D	2.00	2.50	3.00	2.50	3.00	3.25
	50,800	63,00	76,20	63,50	76,20	82,55
G	.85	1.00	1.10	.85	1.00	1.10
	21,59	25,40	27,94	21,59	25,40	27,94
H	.130	.130	.130	.130	.130	.130
	3,302	3,302	3,302	3,302	3,302	3,302
I	.250	.250	.250	.250	.250	.250
	6,350	6,350	6,350	6,350	6,350	6,350
J	.025	.025	.025	.025	.025	.025
	0,635	0,635	0,635	0,635	0,635	0,635
K	.050	.050	.050	.050	.050	.050
	1,270	1,270	1,270	1,270	1,270	1,270
L	.030	.030	.030	.030	.030	.030
	0,762	0,762	0,762	0,762	0,762	0,762
M	.040	.040	.040	.040	.040	.040
	1,016	1,016	1,016	1,016	1,016	1,016
N	1.950	2.450	2.95	2.45	2.95	3.20
	49,530	62,230	74,930	62,230	74,930	81,280
TOTAL PAD POSITIONS	40	50	60	50	60	65

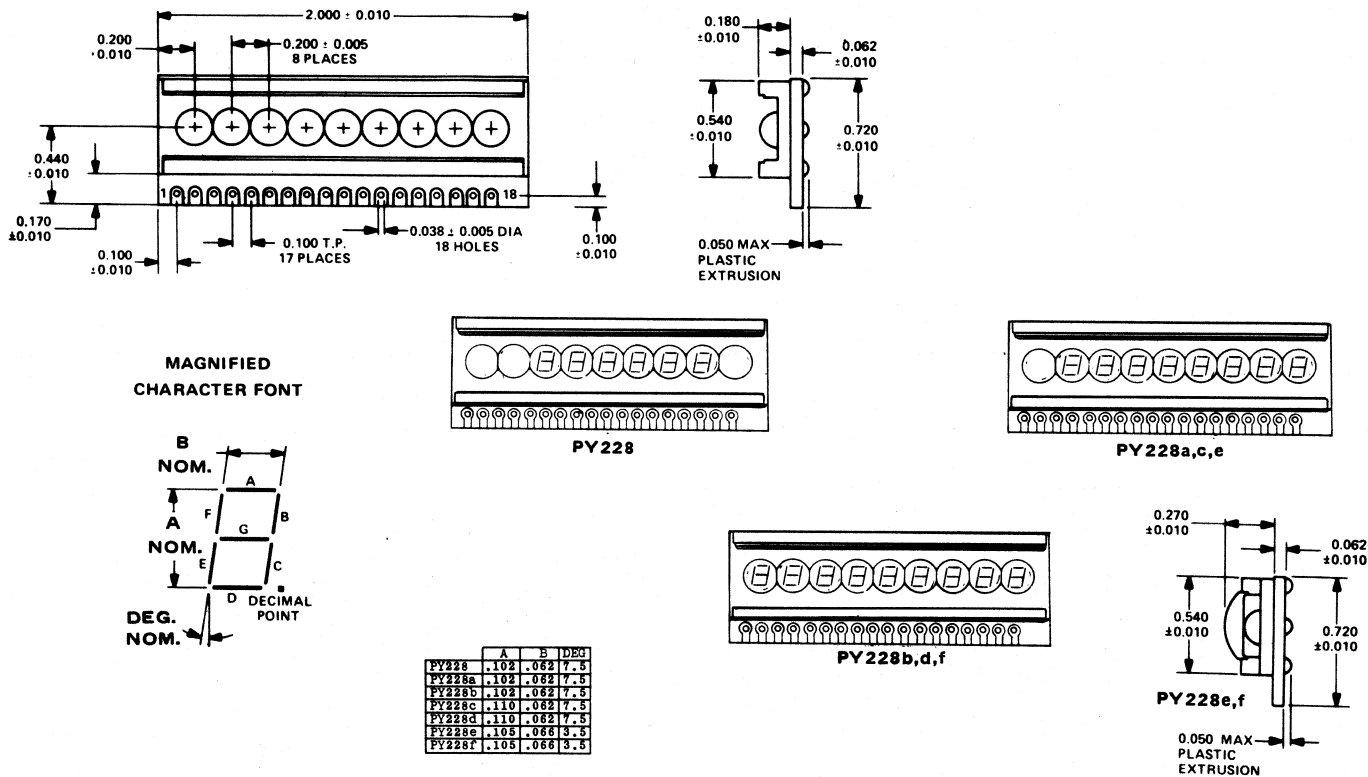
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

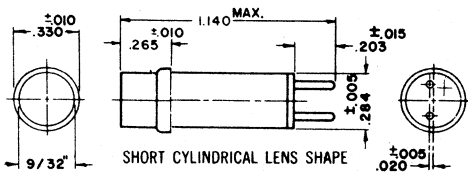
## PY225



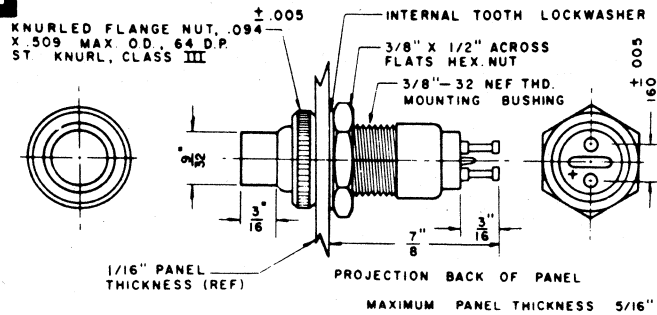
## PY228



## PY233



## PY234

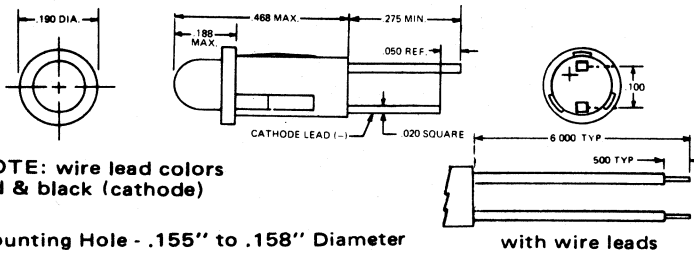


# 49. OUTLINE DRAWINGS

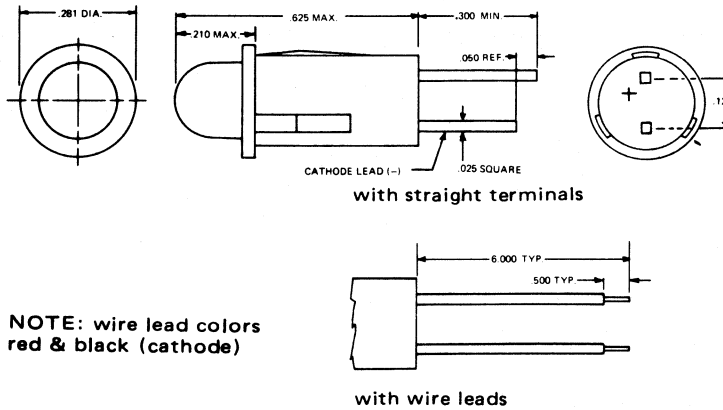
IN DRAWING NUMBER SEQUENCE

**PY235**

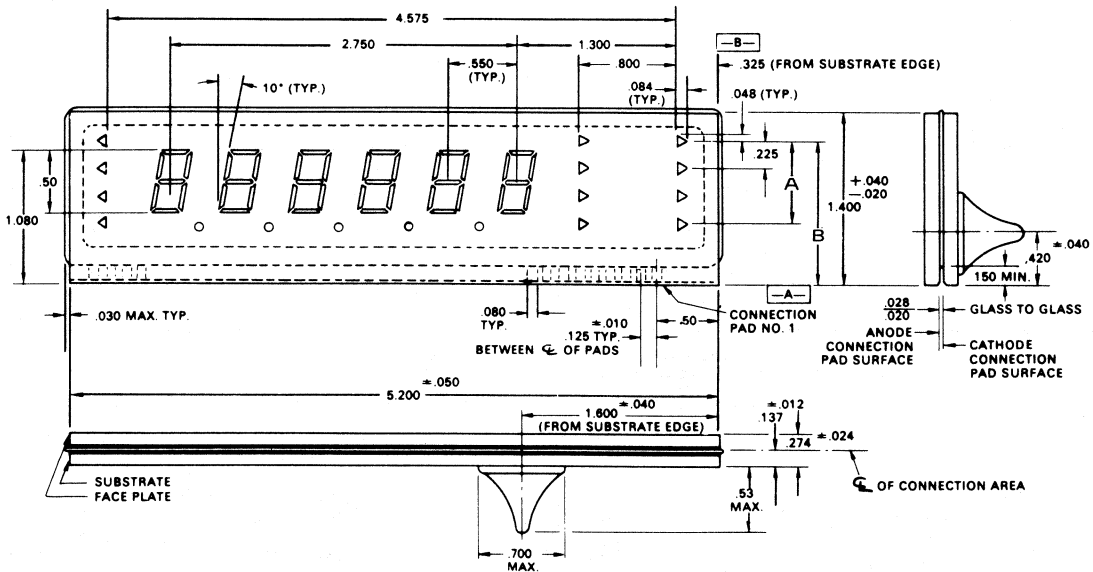
**PY235 (WITH STRAIGHT TERMINALS OR WIRE LEADS)**



**PY235a (WITH STRAIGHT TERMINALS OR WIRE LEADS)**



**PY243**

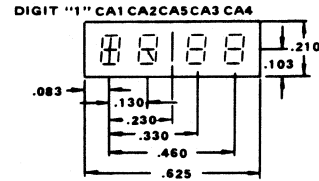
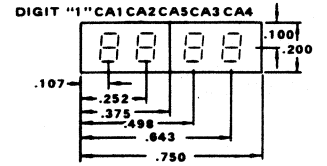
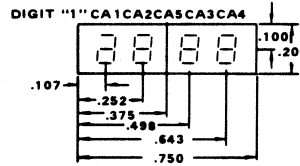
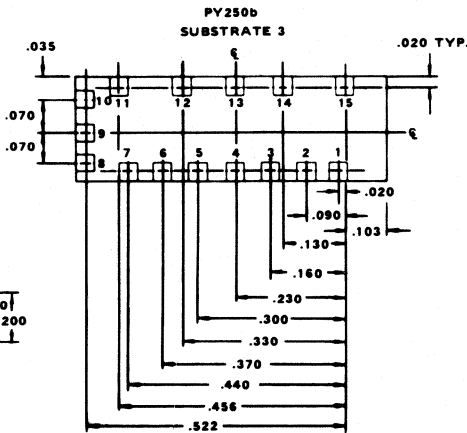
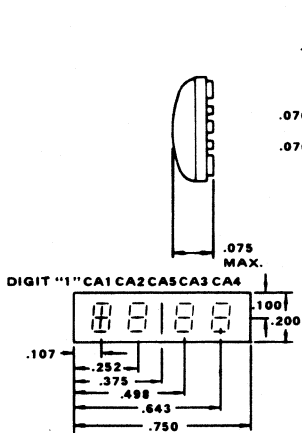
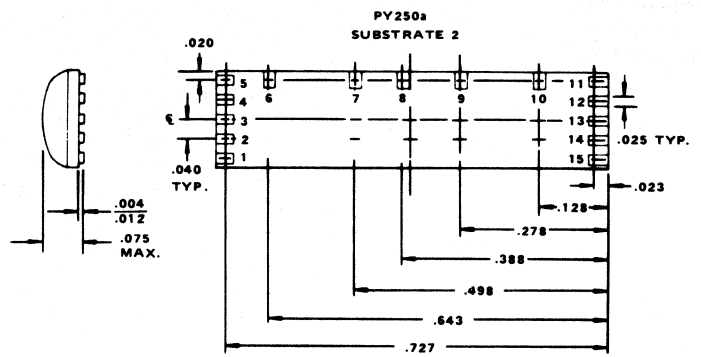
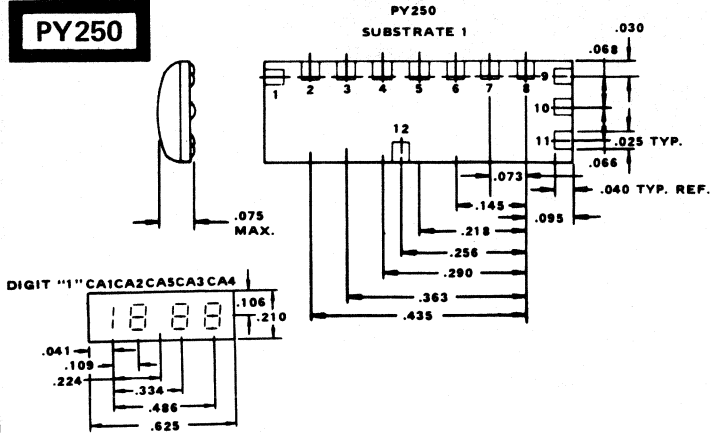


	A	B
PY243	.675	1.215
PY243a	.771	1.157

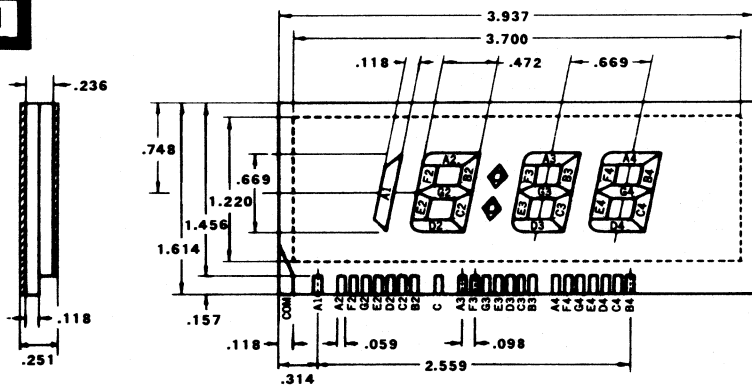
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

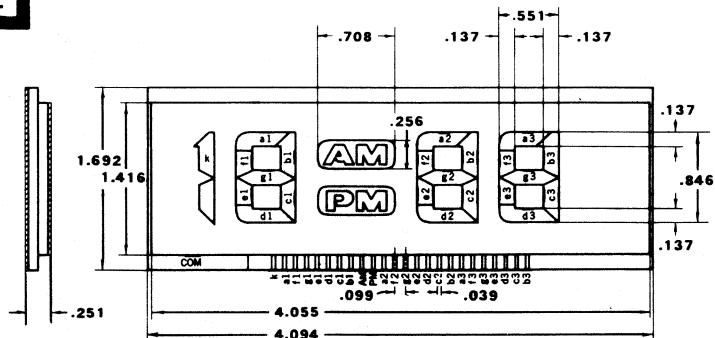
## PY250



## PY251



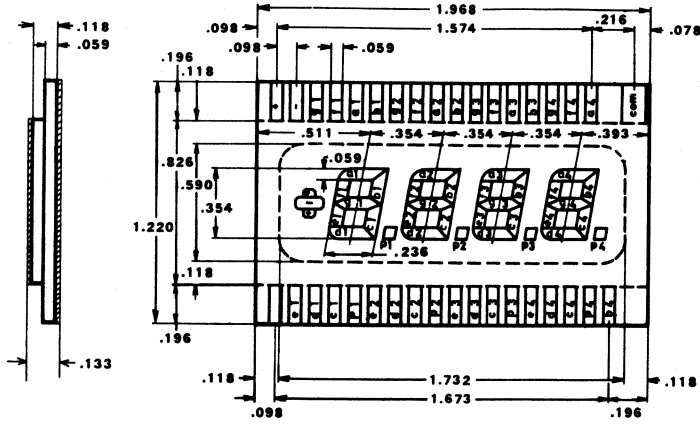
## PY252



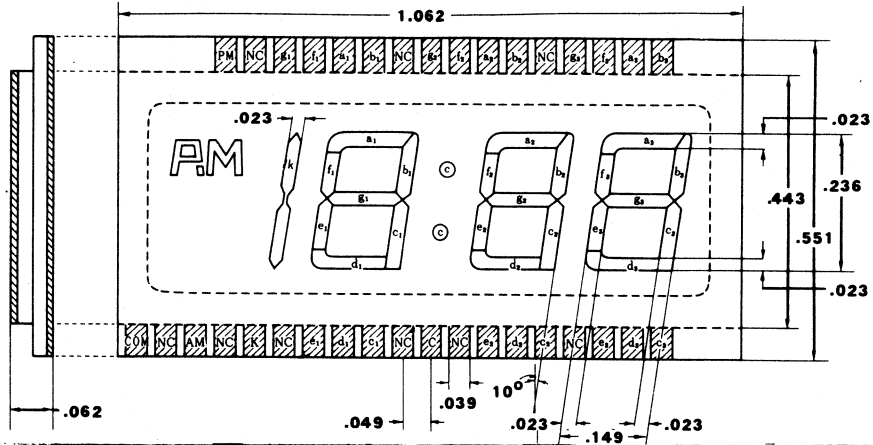
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

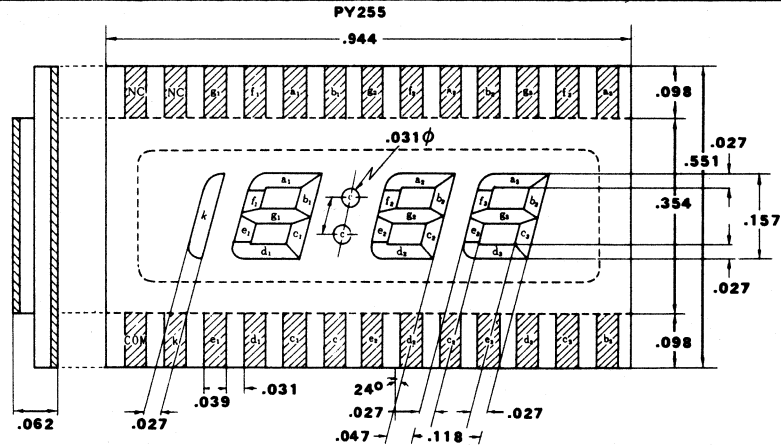
**PY253**



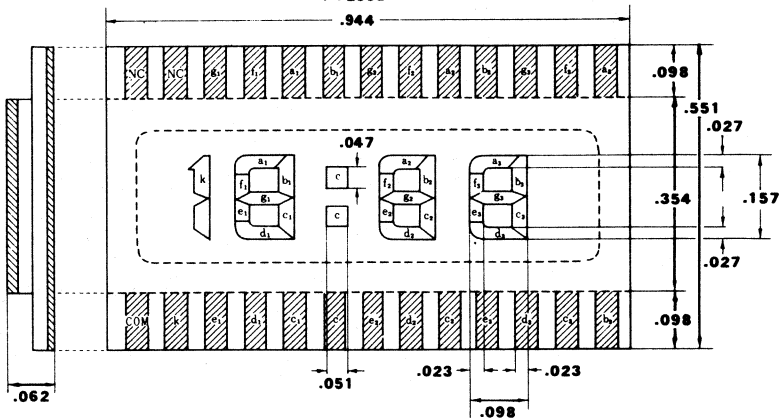
**PY254**



**PY255**



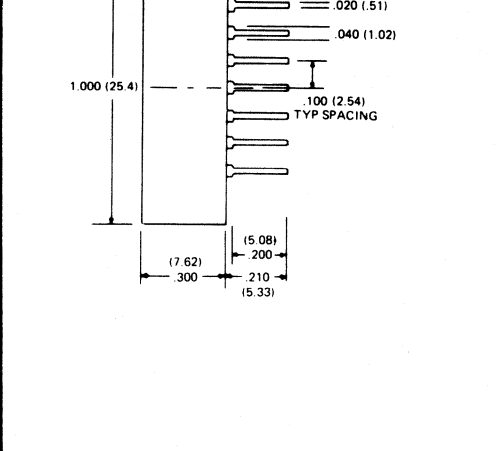
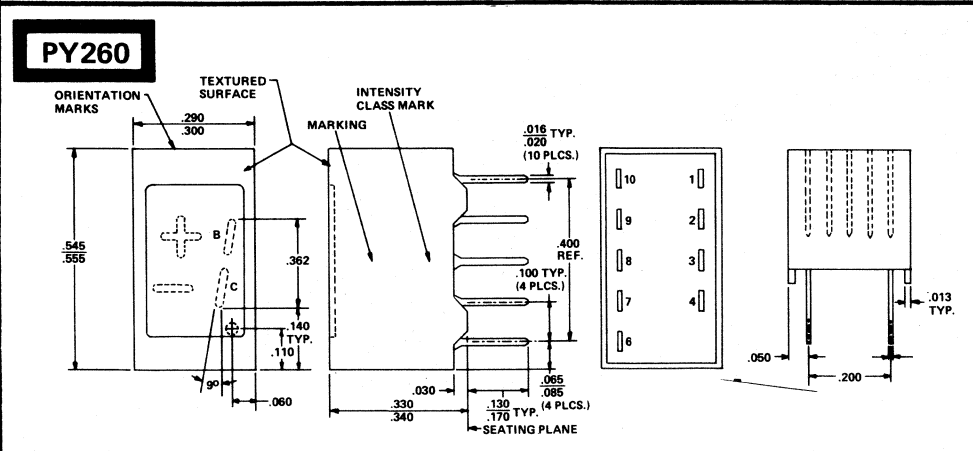
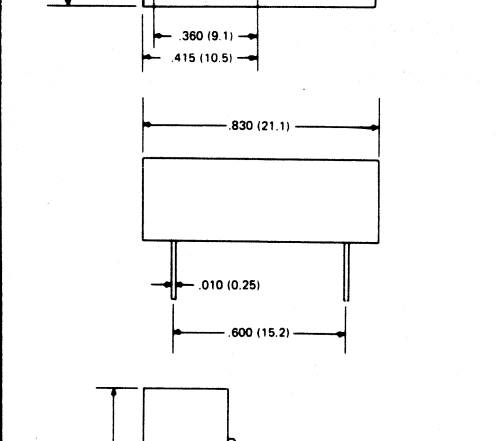
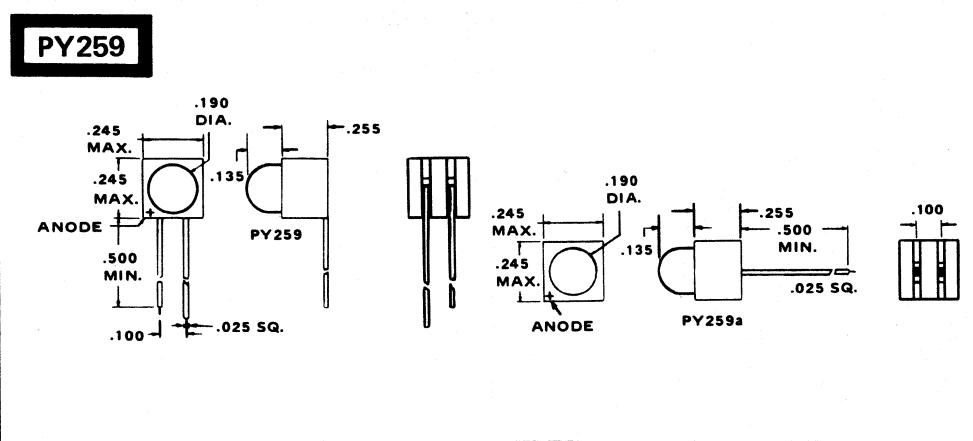
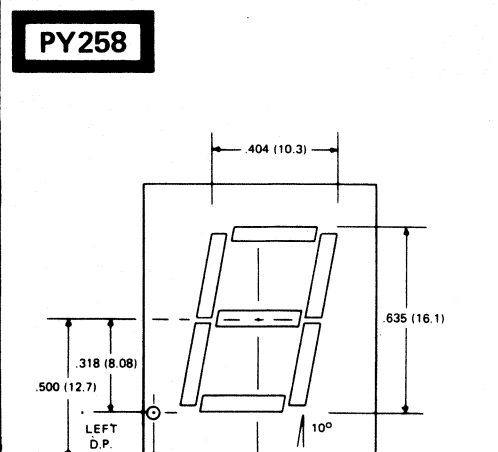
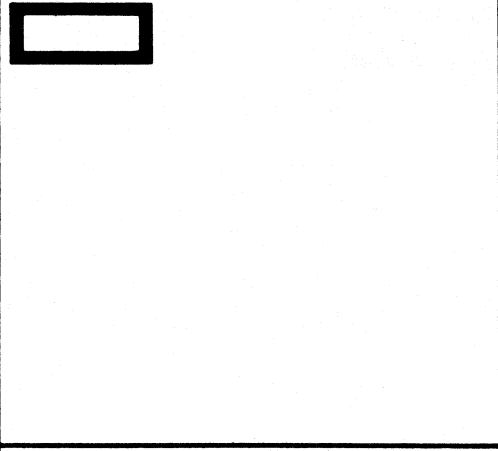
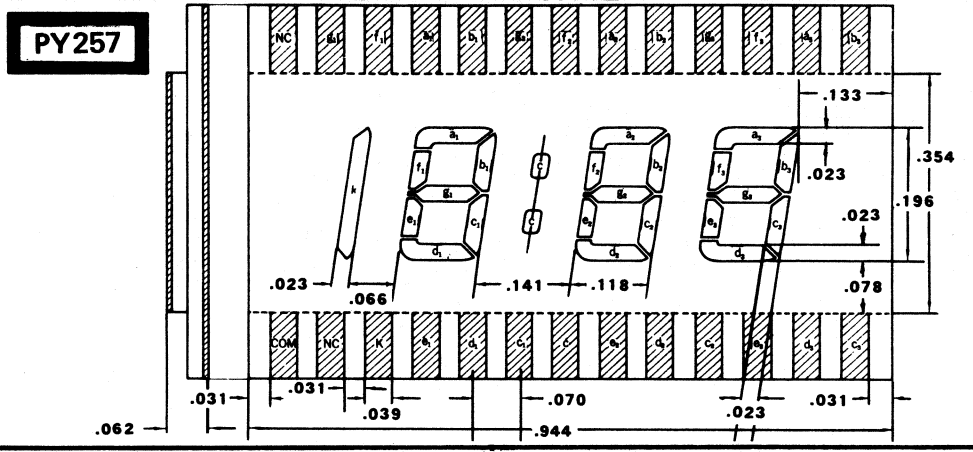
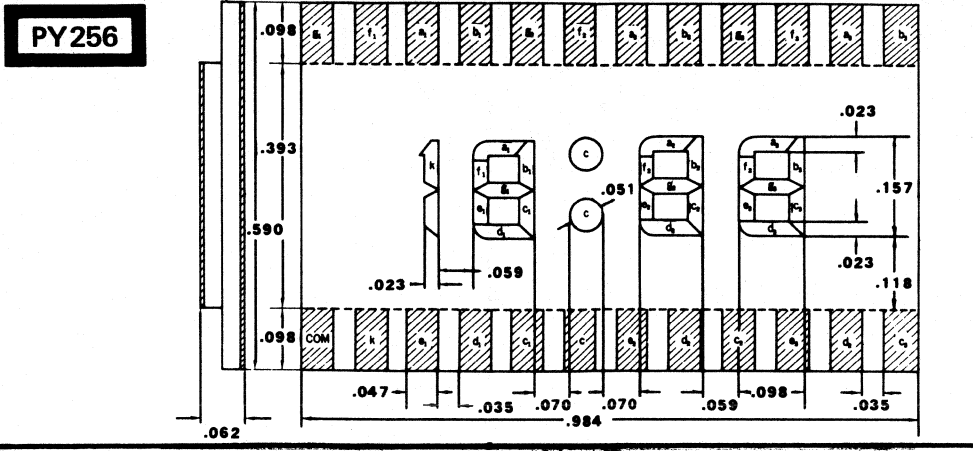
**PY255a**





# 49. OUTLINE DRAWINGS

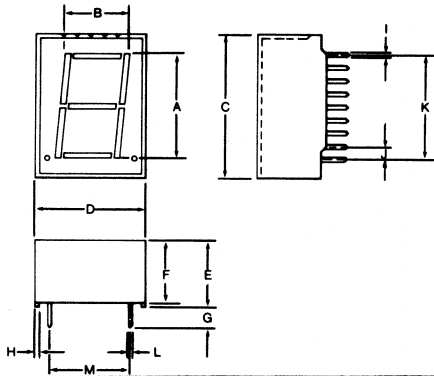
IN DRAWING NUMBER  
SEQUENCE



# 49. OUTLINE DRAWINGS

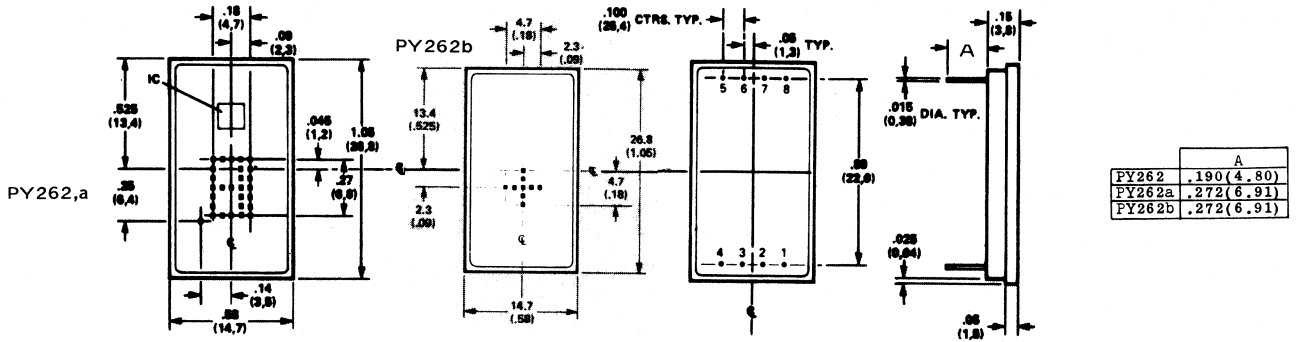
IN DRAWING NUMBER  
SEQUENCE

**PY261**



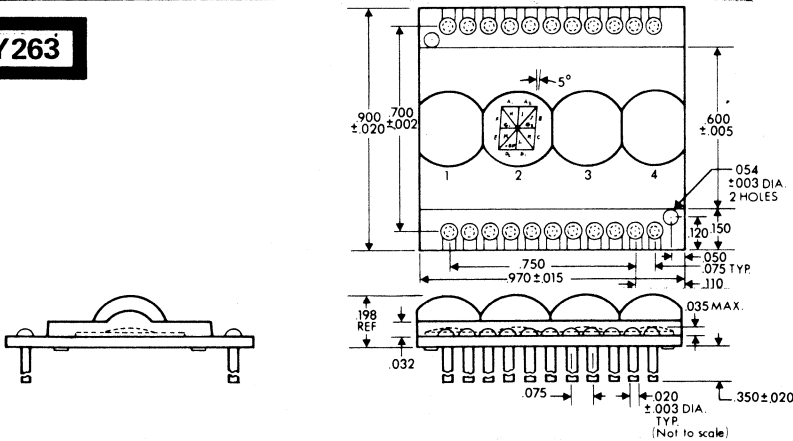
DIM	INCHES			MILLIMETERS		
	MIN	TYP	MAX	MIN	TYP	MAX
A		.800			20.32	
B		.480			12.19	
C	1.080		1.100	27.43		27.94
D	.820		.840	20.83		21.34
E	.490		.510	12.45		12.95
F	.455		.475	11.56		12.07
G		.150			3.81	
H		.027			0.69	
I	.016		.020	0.40		0.51
J	.090		.110	2.28		2.80
K	.690		.710	17.53		18.03
L		.010			0.25	
M		.600			15.24	

**PY262**

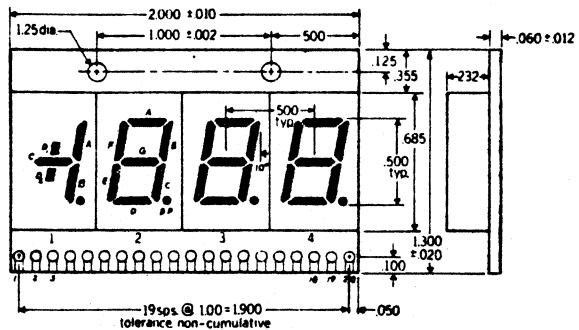


INCH (MM)

**PY263**



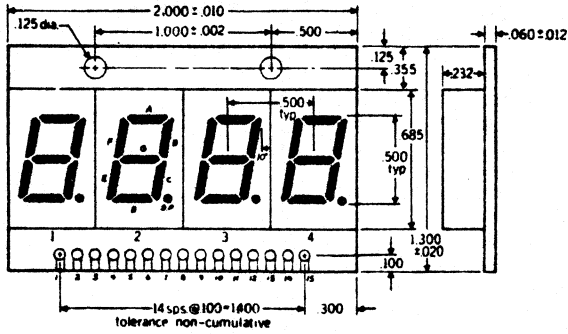
**PY264**



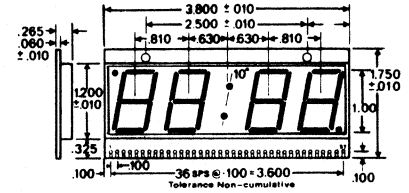
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

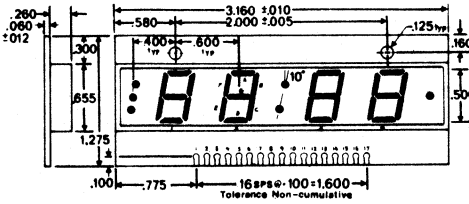
**PY265**



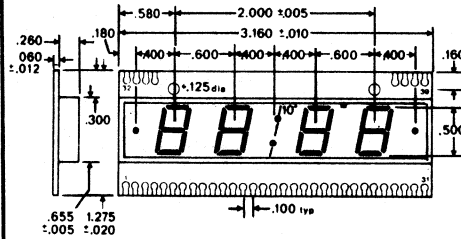
**PY266**



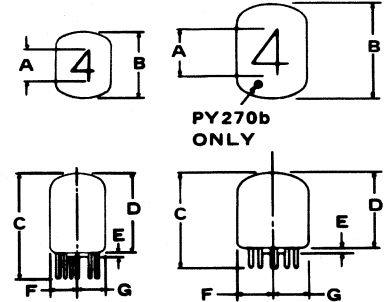
**PY267**



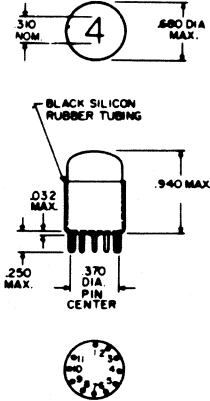
**PY268**



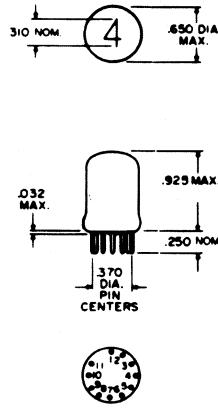
**PY270**



**PY271**



**PY272**

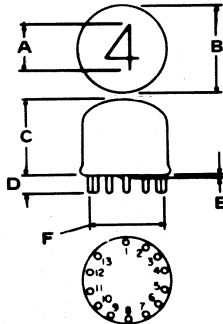


**PY270**

**PY270a,b**

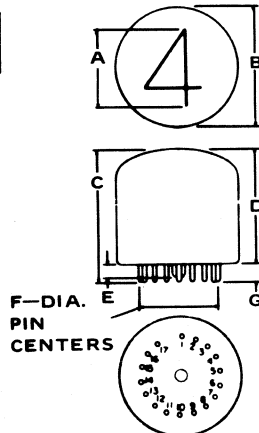
	A	B	C	D	E	F	G
PY270	.310 NOM	.625 MAX	1.000 MAX	.750 MAX	.064 MAX	.235 MAX	.235 MAX
PY270a	.610 NOM	1.020 MAX	1.120 MAX	.882 MAX	.064 MAX	.395 MAX	.395 MAX
PY270b	.610 NOM	1.020 MAX	1.120 MAX	.882 MAX	.064 MAX	.395 MAX	.395 MAX

**PY273**



	A	B	C	D	E	F
PY273	.610 NOM	1.080 MAX	1.125 MAX	.250 NOM	.064 MAX	1.656 MAX
PY273a	.608 NOM	1.350 MAX	1.212 MAX	.300 NOM	.064 MAX	1.656 MAX

**PY274**

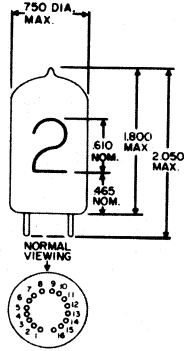


	A	B	C	D	E	F	G
PY274	1.375 NOM	2.060 MAX	2.280 MAX	1.980 MAX	.400 MAX	1.375 MAX	.300 NOM
PY274a	2.000 NOM	3.100 MAX	2.650 MAX	2.350 MAX	.400 MAX	1.375 MAX	.300 NOM

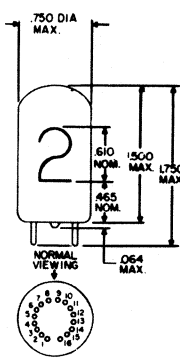
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

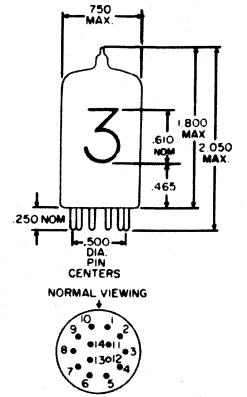
**PY276**



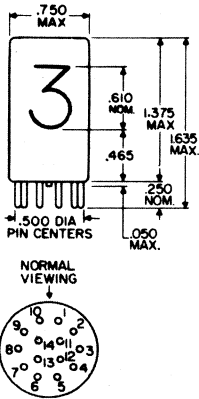
**PY277**



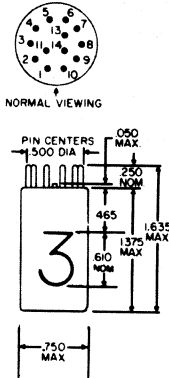
**PY278**



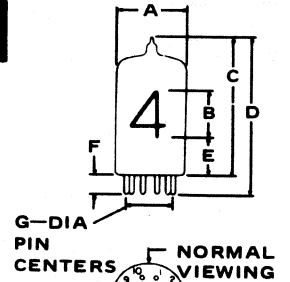
**PY279**



**PY280**

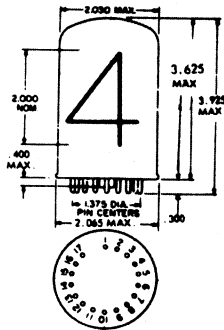


**PY281**

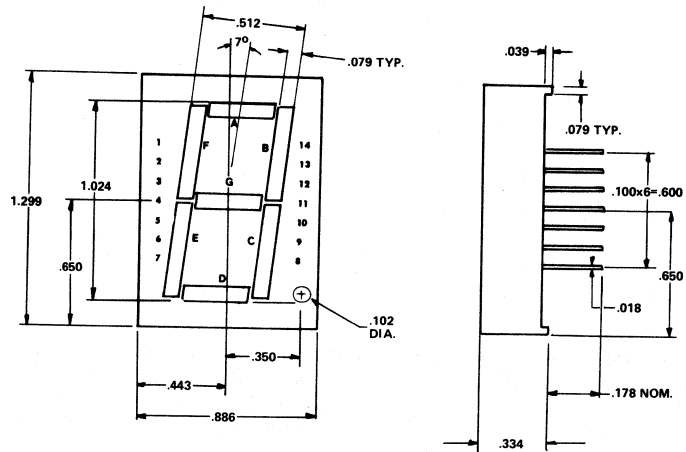


	A	B	C	D	E	F	G
PY281	.875 MAX	.610 NOM	1.812 MAX	2.062 MAX	.530 NOM	.250 NOM	.500 NOM
PY281a	.875 MAX	.608 NOM	1.812 MAX	2.062 MAX	.530 NOM	.250 NOM	.500 NOM

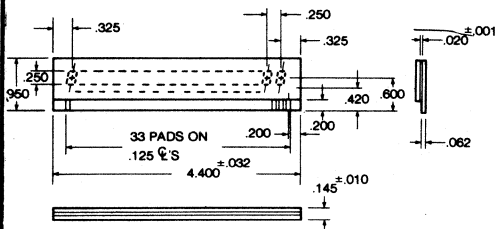
**PY282**



**PY284**



**PY283**



(PIN ASSIGNMENTS)

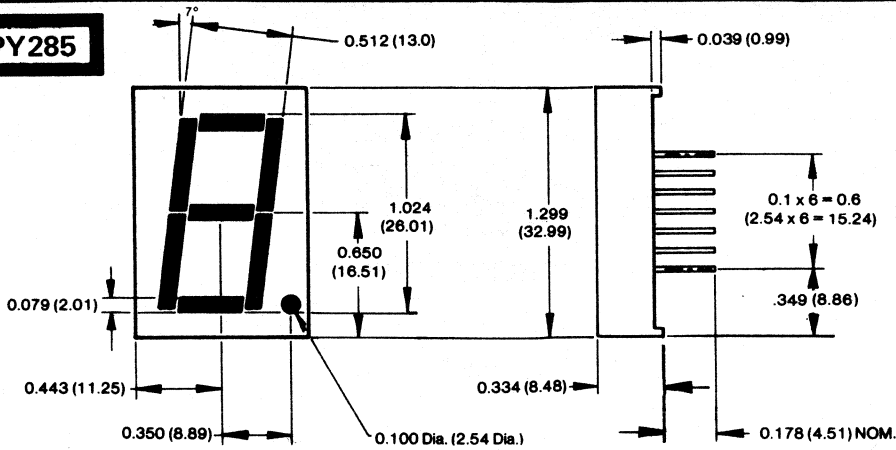
PIN	FUNCTION	PIN	FUNCTION
1	CATHODE A	14	ANODE
2	CATHODE F	13	CATHODE B
3	ANODE	12	NO PIN
4	NO PIN	11	CATHODE G
5	NO PIN	10	CATHODE C
6	ANODE	9	CATHODE DP
7	CATHODE E	8	CATHODE D

NOTE: PINS 3, 6 & 14 INTERNALLY CONNECTED  
NOTE: TOLERANCES ON ALL DIMENSIONS ARE ± .015.

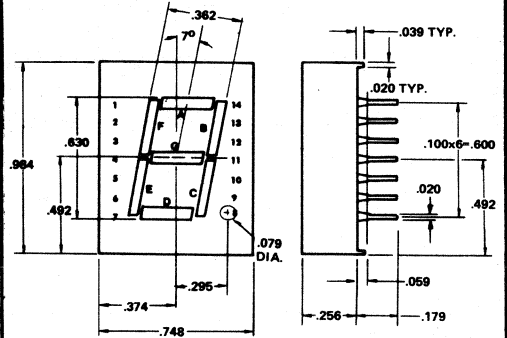
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

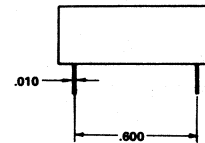
**PY285**



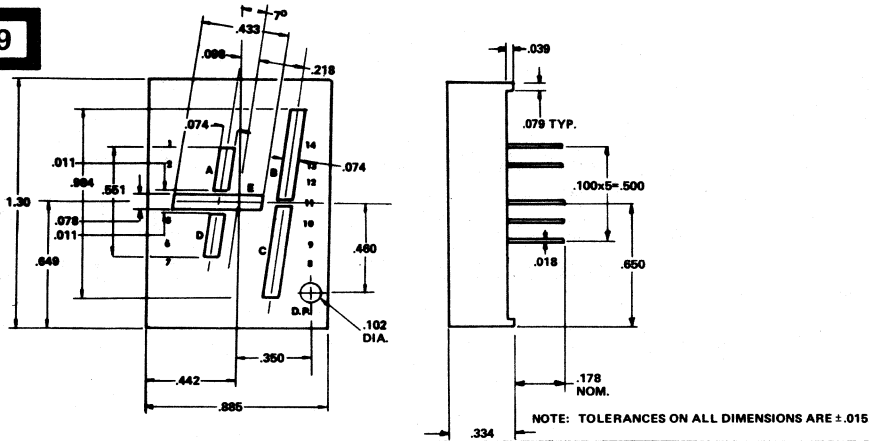
**PY286**



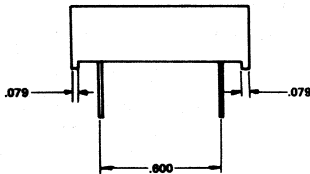
NOTE: TOLERANCE ON ALL DIMENSIONS ARE ± .015.



**PY289**

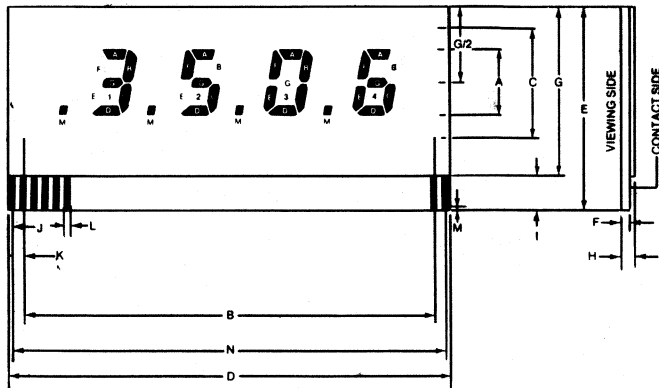


NOTE: TOLERANCES ON ALL DIMENSIONS ARE ± .015.

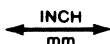


**PY292**

	PY292 a	PY292 b	PY292 c	PY292 d	PY292 e	PY292 f	PY292 g
A	.3 7,6	.4 10,1	.5 12,7	.6 15,2	.3 7,6	.4 10,1	.5 12,7
B	1.00 25,4	1.00 25,4	1.25 31,7	1.25 31,7	1.75 44,4	2.00 50,8	2.25 57,15
C	.45 11,4	.60 15,2	.70 17,7	.80 20,3	.45 11,4	.60 15,2	.70 17,7
D	1.25 31,75	1.25 31,75	1.50 38,10	1.50 38,10	2.00 50,80	2.25 57,15	2.75 69,85
E	.95 24,13	1.10 27,94	1.25 31,75	1.35 34,29	.95 24,13	1.10 27,94	1.25 31,75
F	.048 1,219	.048 1,219	.048 1,219	.048 1,219	.048 1,219	.048 1,219	.048 1,219
D	1.25 31,7	1.25 31,7	1.50 38,1	1.50 38,1	2.00 50,8	2.25 57,15	2.75 69,85
G	.70 17,78	.85 21,59	1.00 25,4	1.10 27,94	.70 17,78	.85 21,59	1.00 25,4
H	.130 3,3	.130 3,3	.130 3,3	.130 3,3	.130 3,3	.130 3,3	.130 3,3
I	.250 6,35	.250 6,35	.250 6,35	.250 6,35	.250 6,35	.250 6,35	.250 6,35
J	.025 0,635	.025 0,635	.025 0,635	.025 0,635	.025 0,635	.025 0,635	.025 0,635
K	.050 1,27	.050 1,27	.050 1,27	.050 1,27	.050 1,27	.050 1,27	.050 1,27
L	.030 0,762	.030 0,762	.030 0,762	.030 0,762	.030 0,762	.030 0,762	.030 0,762
M	.040 1,016	.040 1,016	.040 1,016	.040 1,016	.040 1,016	.040 1,016	.040 1,016
N	1.20 30	1.20 30	1.45 30	1.45 30	1.95 40	2.20 45	2.70 55
NUMBER OF PADS							



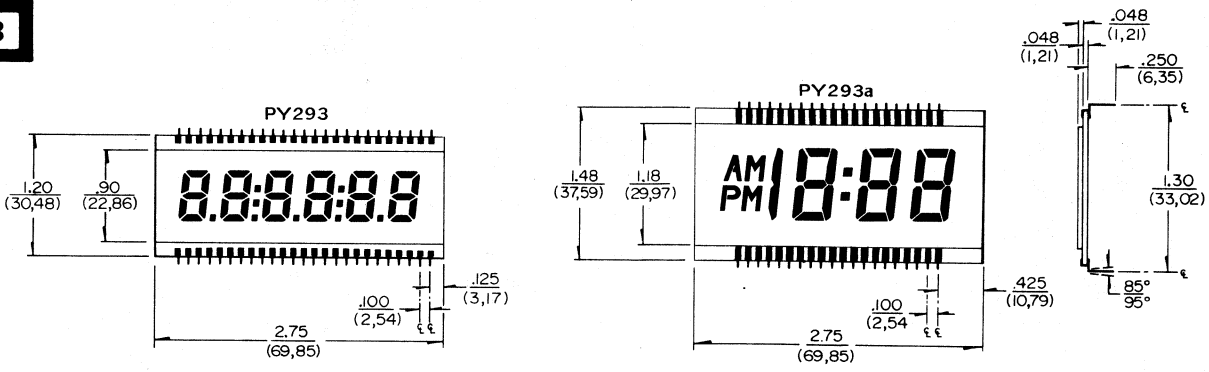
Vertical Height: Characters on 10° Slant  
 \*\*Within I dimension ± .010  
 \*\*\*Last pad position available, not necessarily last pad used



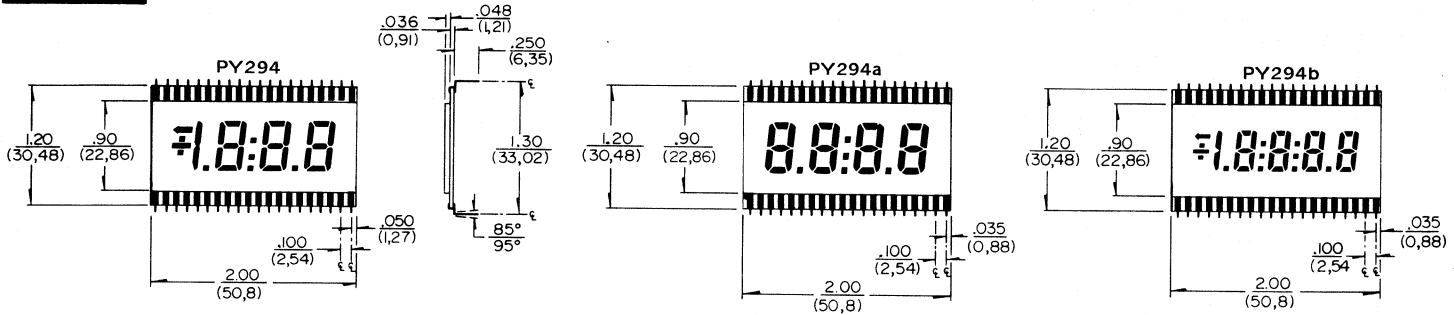
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

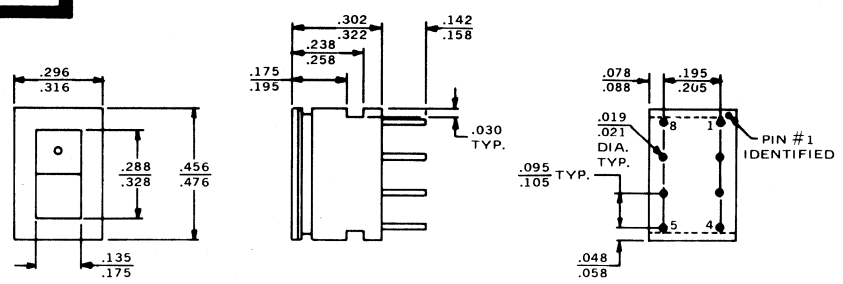
## PY293



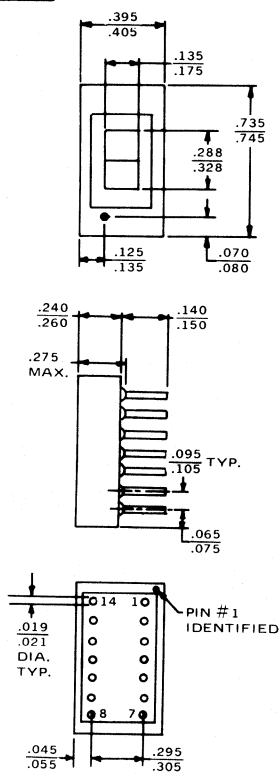
## PY294



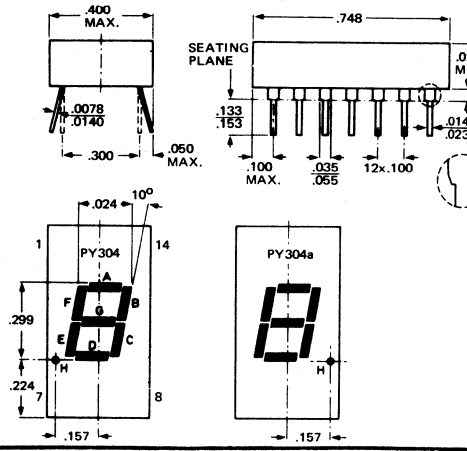
## PY302



## PY303



## PY304

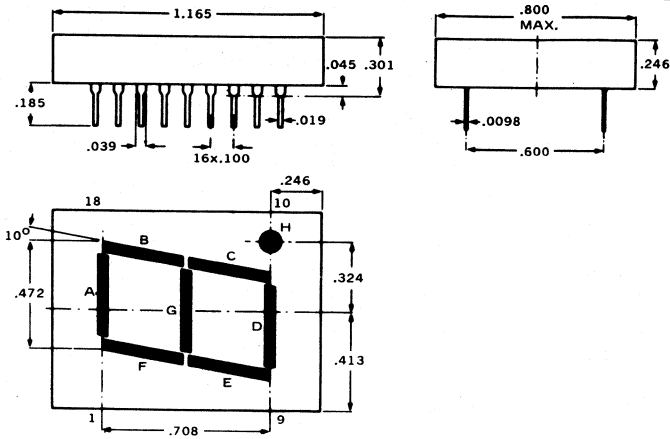




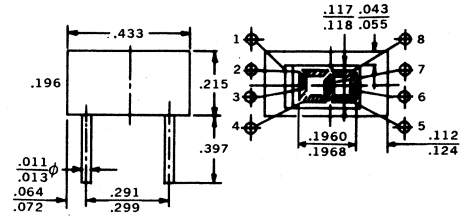
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

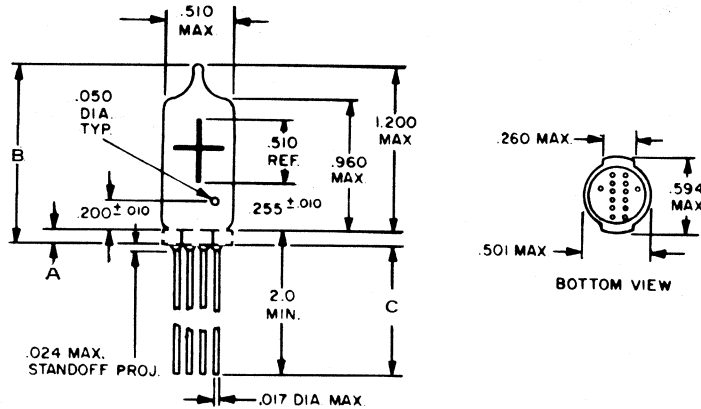
**PY310**



**PY311**

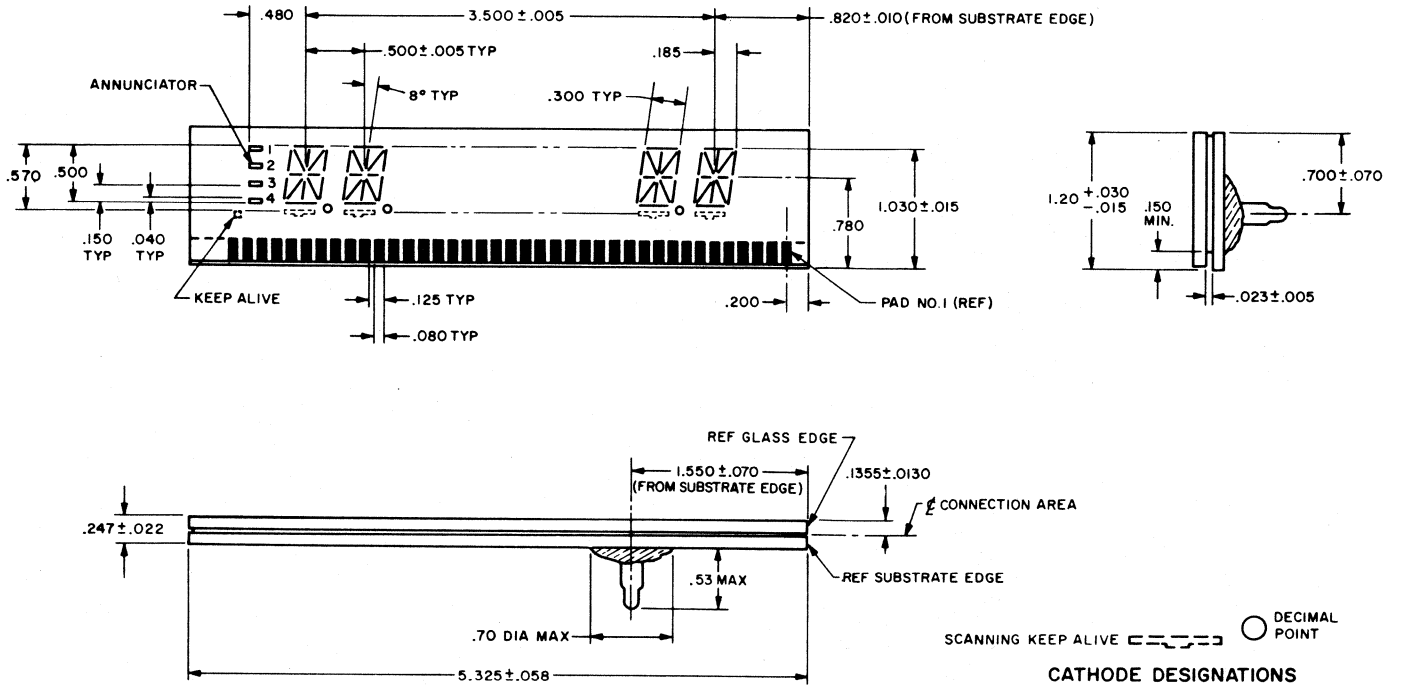


**PY315**



	A	B	C	REMARKS
PY315	NA	NA	NA	WITHOUT DOTTED BASE
PY315a	.129	1.329	.190 MAX	WITH DOTTED BASE
PY315b	.224	1.424	.190 MAX	WITH DOTTED BASE

**PY316**

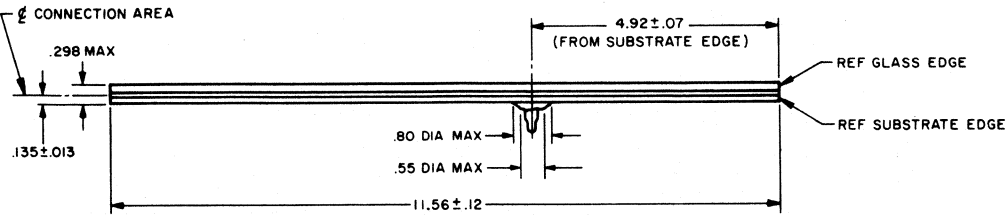
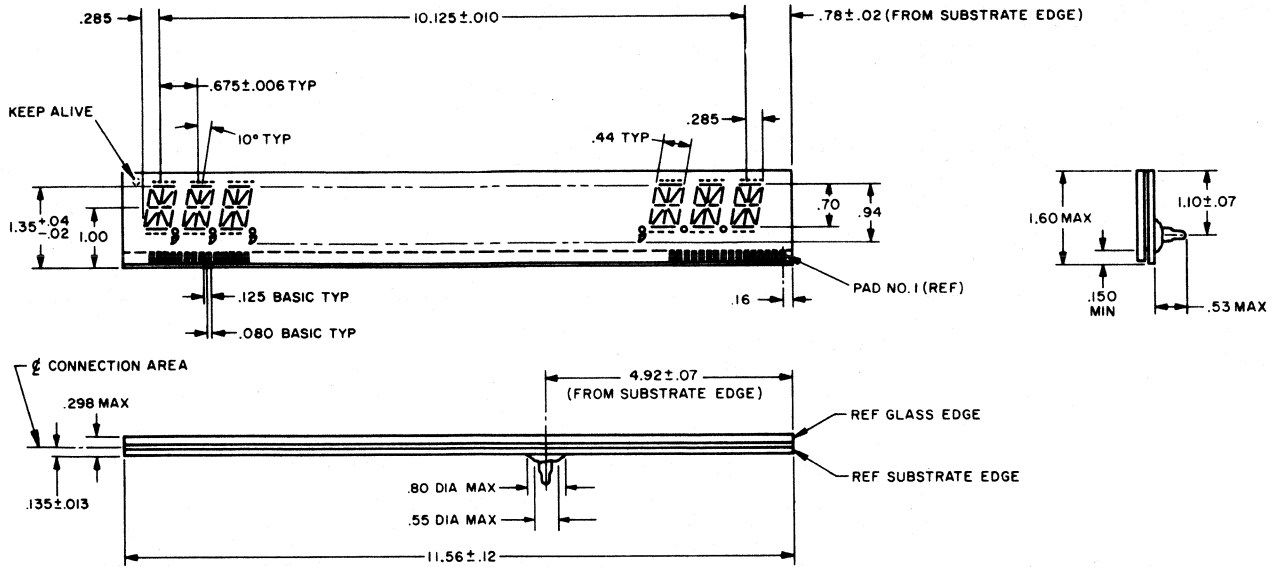




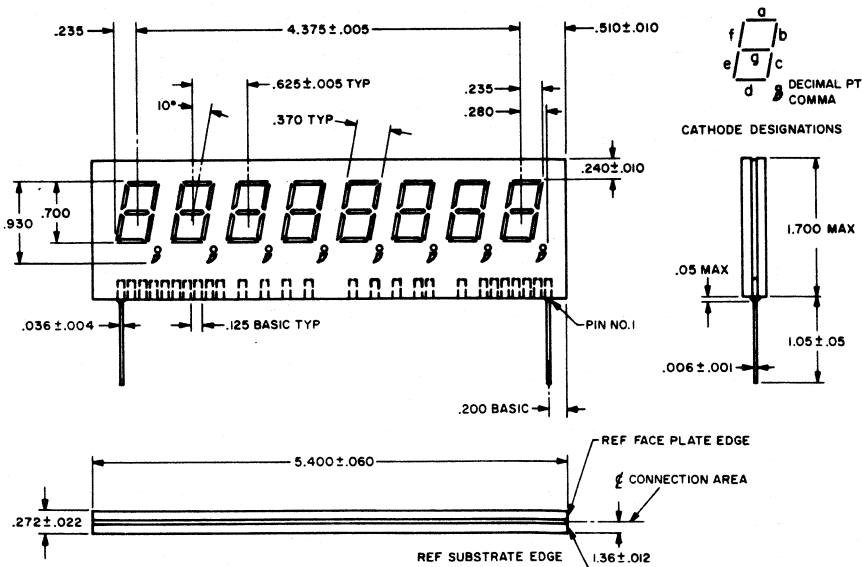
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

**PY317**



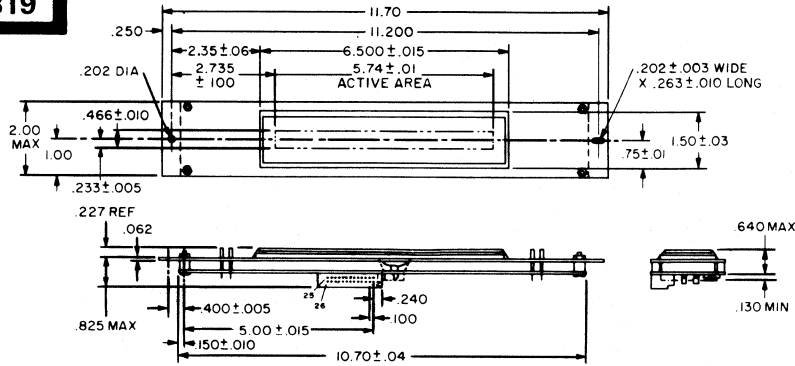
**PY318**



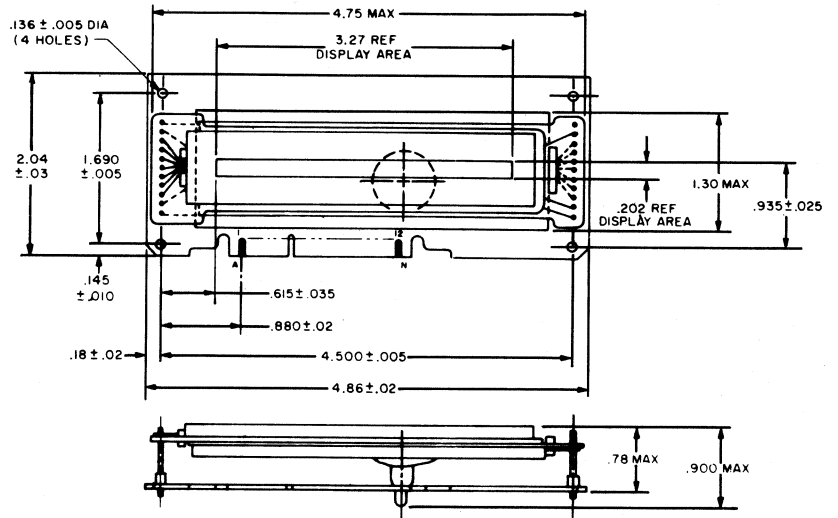
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

**PY319**

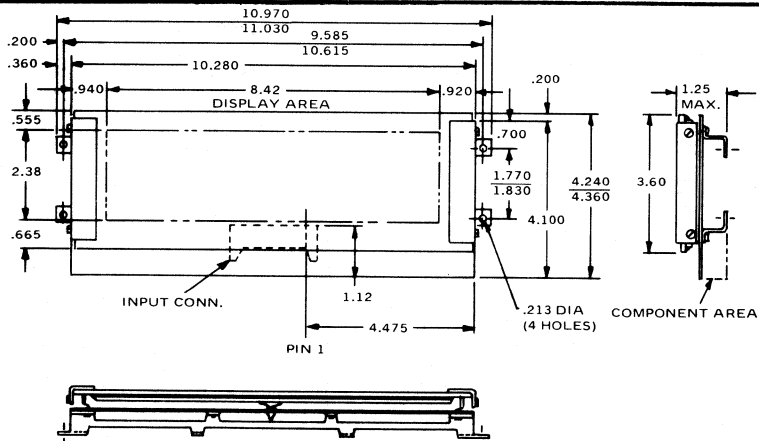


**PY320**



NOTES:  
1. EDGE CONNECTOR ON BOTTOM OF BOARD IS PROVIDED WITH KEYWAY SLOT BETWEEN POSITION 4 (D) & 5 (E).

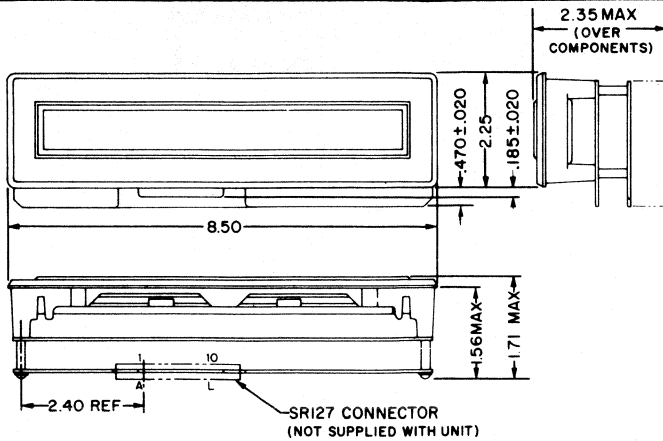
**PY321**



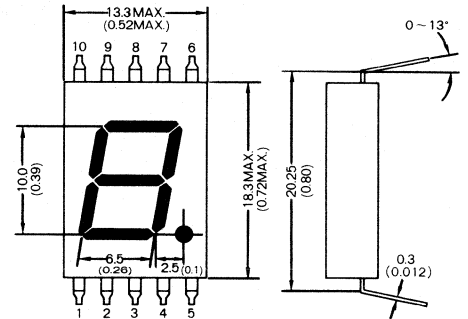
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

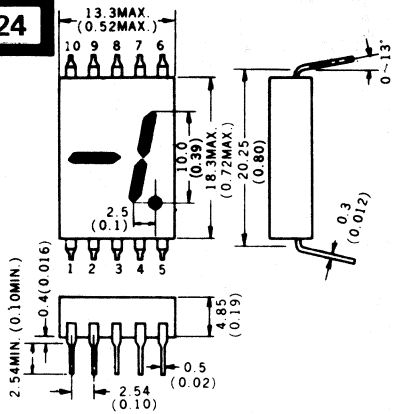
**PY322**



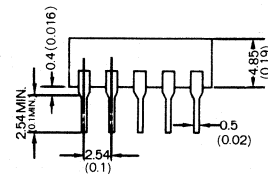
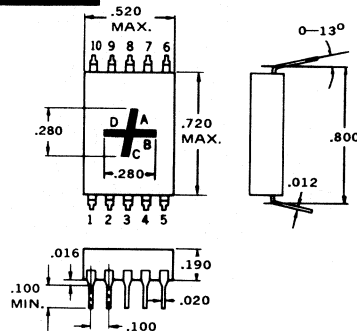
**PY323**



**PY324**



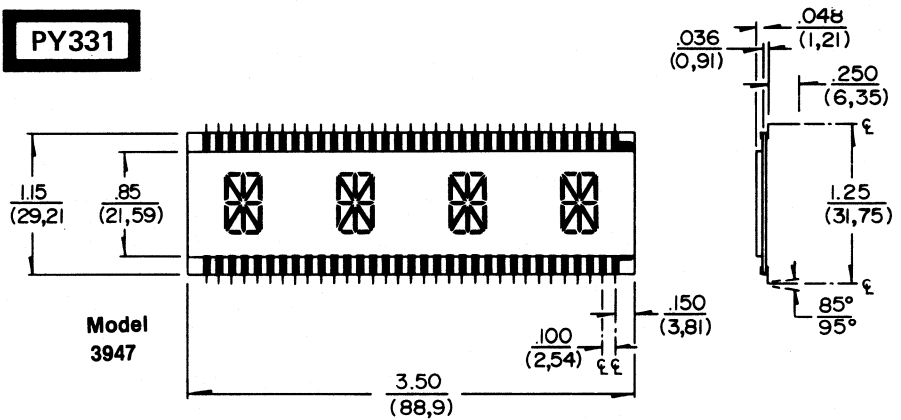
**PY325**



**PY330**



**PY331**

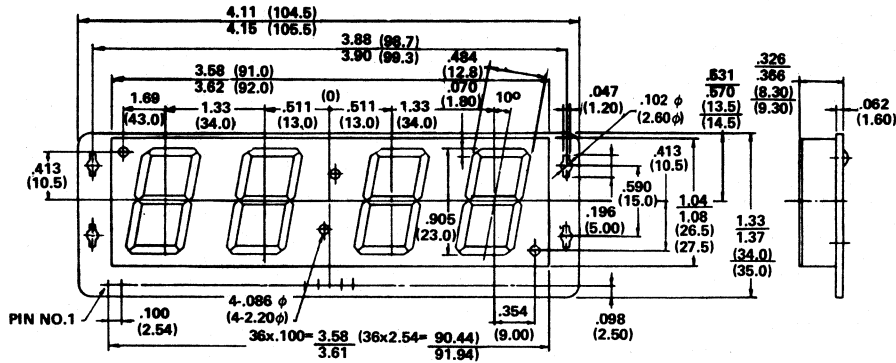


Model 3947

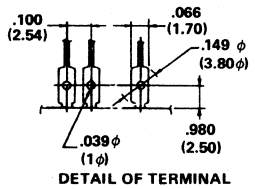
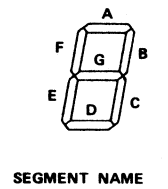
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

**PY332**



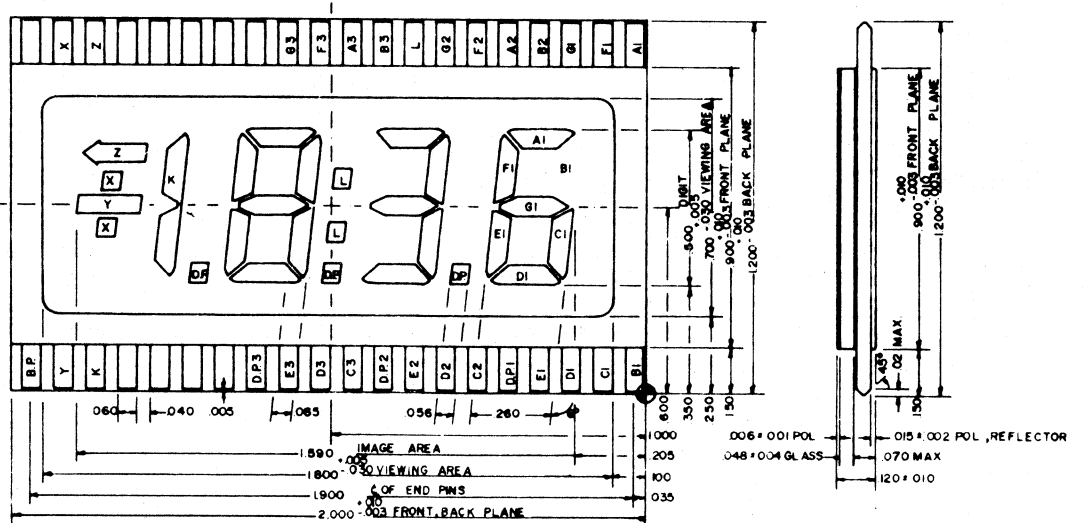
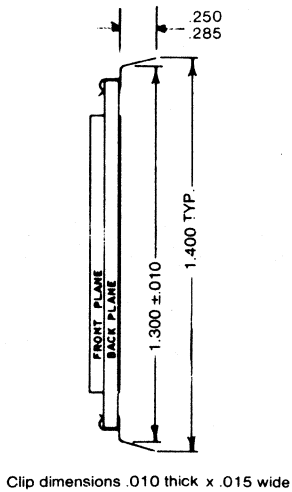
AM/PM 10's HOUR UNIT HOUR COLONS 10's MIN UNIT MIN ALARM/SLEEP



TYPE NO.	FULLY DISPLAYED FONT
PY332	18:88.
PY332a	88:88.
PY332b	88:88.

**PY333**

NOTE: Connector clips not shown in this view.







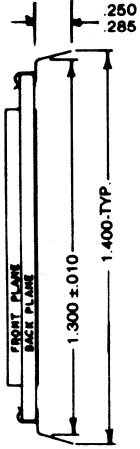


# 49. OUTLINE DRAWINGS

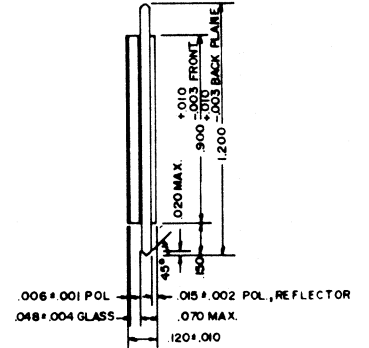
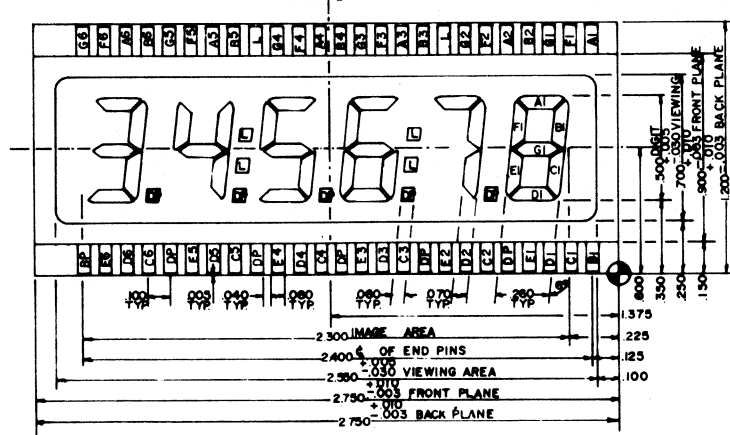
IN DRAWING NUMBER SEQUENCE

**PY342**

NOTE: Connector clips not shown in this view.

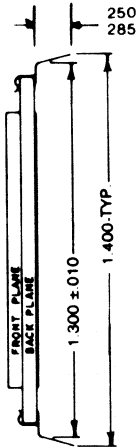


Clip dimensions .010 thick x .015 wide

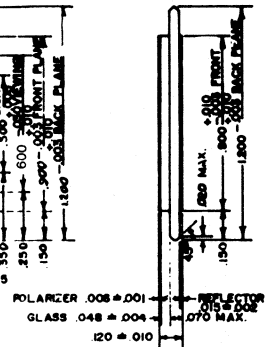
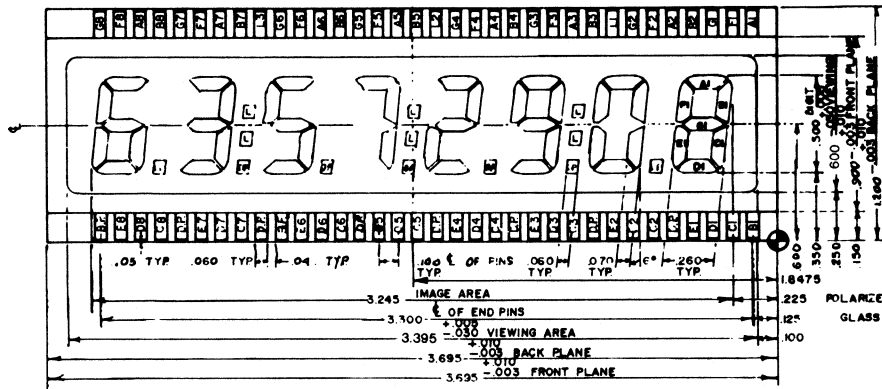


**PY344**

NOTE: Connector clips not shown in this view.



Clip dimensions .010 thick x .015 wide



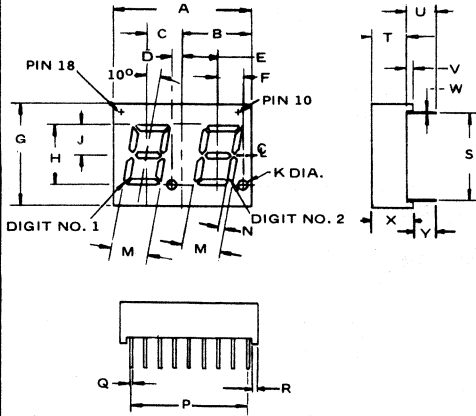


# 49. OUTLINE DRAWINGS

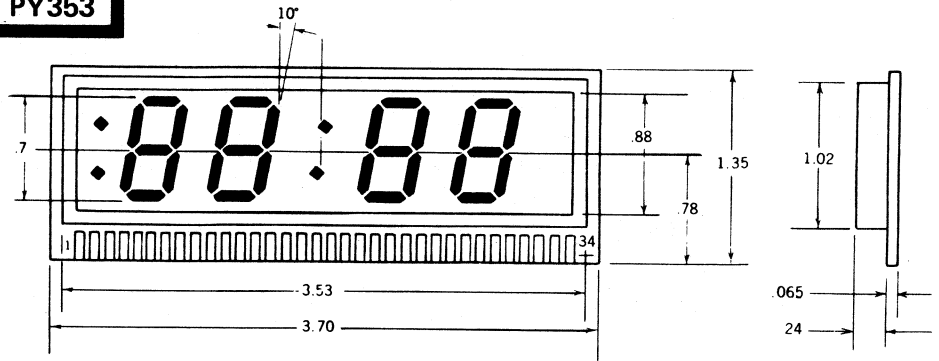
IN DRAWING NUMBER  
SEQUENCE

**PY349**

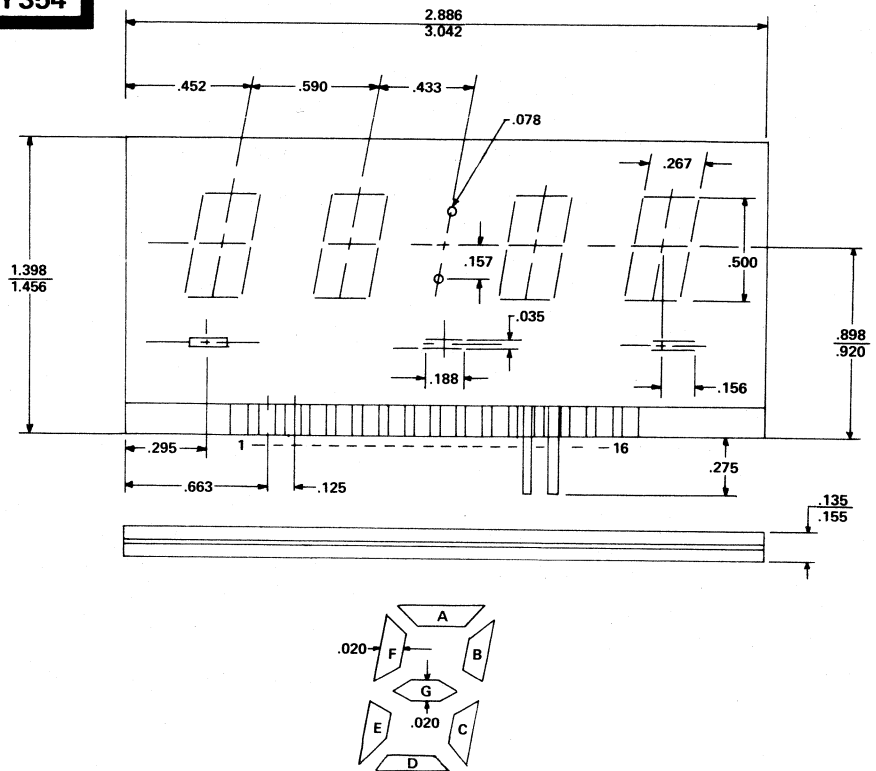
	A	B	C	D	E	F	G	H	J	K	M	N	P	Q	R	S	T	U	V	W	X	Y
PY349	24.0	12.0	6.22	1.90	6.22	4.32	18.0	10.1	5.08	1.57 TYP	6.80	1.02 TYP	20.3	.510 TYP	.890 TYP	15.2	5.99	6.10	1.02 TYP	.250 TYP		
PY349a	24.0	12.0	6.00		6.00	4.30	19.0	11.0			7.00		20.3	.500		15.2				.250	6.50	3.50 MIN
PY349b	25.0	12.5	6.25		6.25	4.50	19.0	14.4			8.00		20.3	.500		15.2				.250	8.00	3.50 MIN



**PY353**



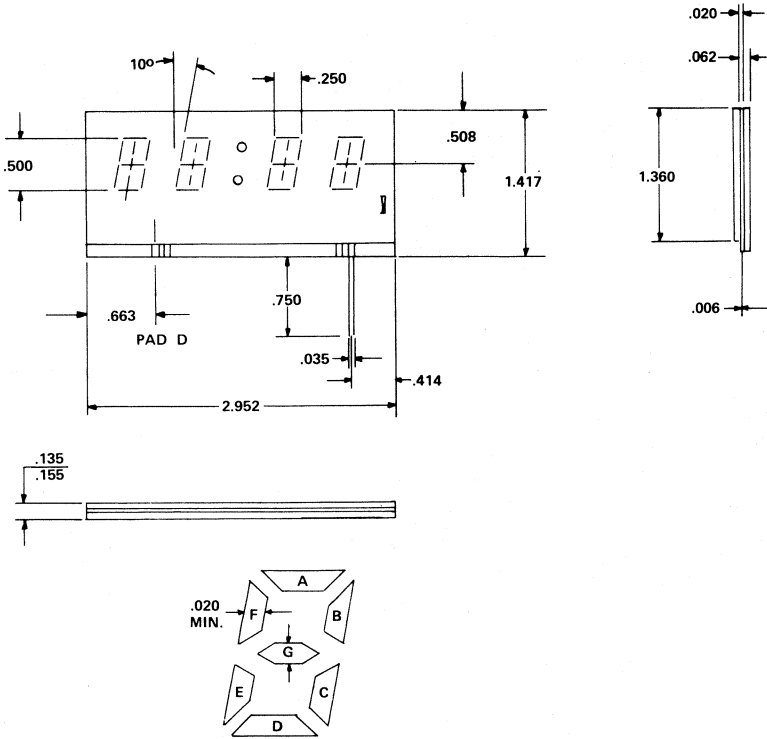
**PY354**



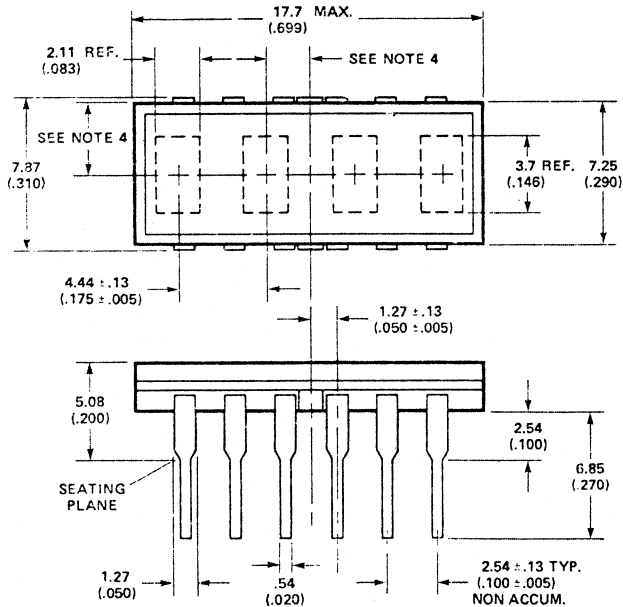
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

**PY355**



**PY36**

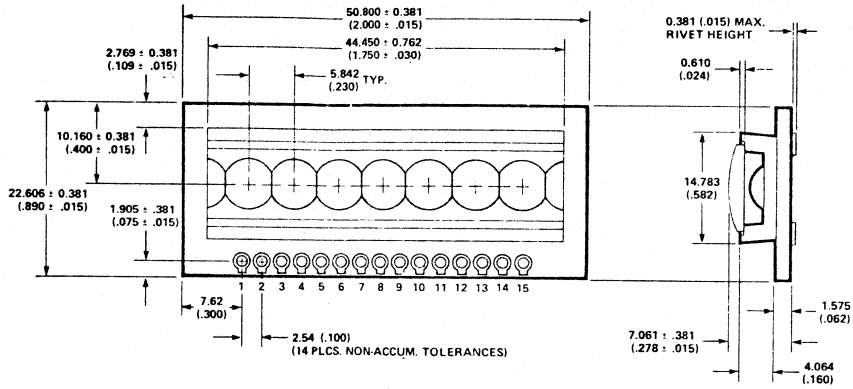


- NOTES:
1. DIMENSIONS IN mm (inches).
  2. UNLESS OTHERWISE SPECIFIED THE TOLERANCE ON ALL DIMENSIONS IS  $\pm .38$  mm ( $\pm .015$ ").
  3. LEAD MATERIAL IS GOLD PLATED COPPER ALLOY.
  4. CHARACTERS ARE CENTERED WITH RESPECT TO LEADS WITHIN  $\pm .13$ mm ( $\pm .005$ ").

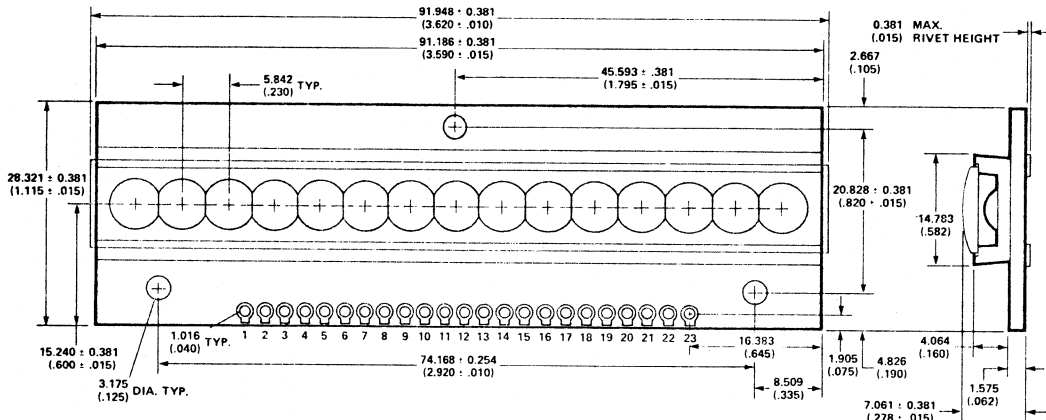
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

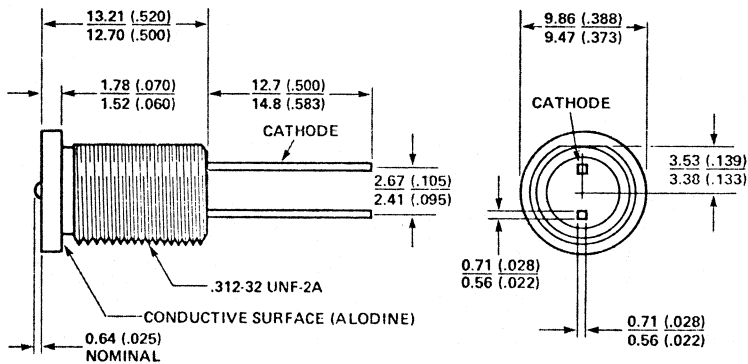
**PY363**



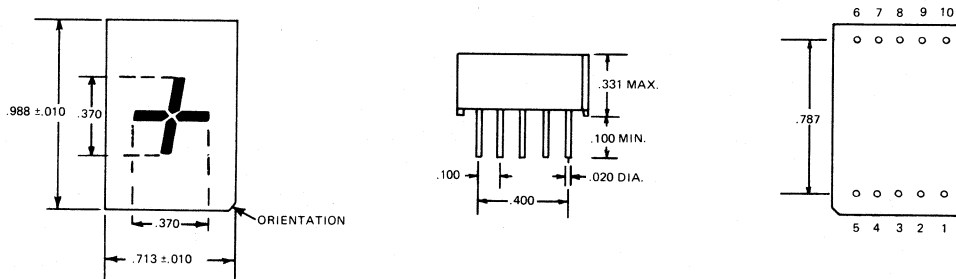
**PY364**



**PY371**



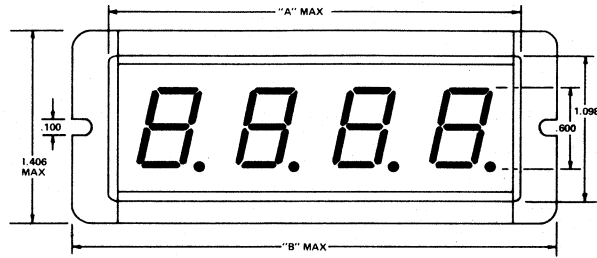
**PY372**



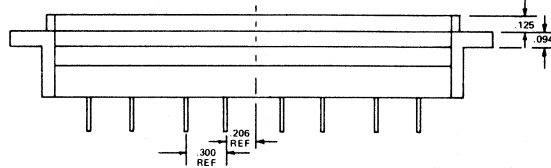
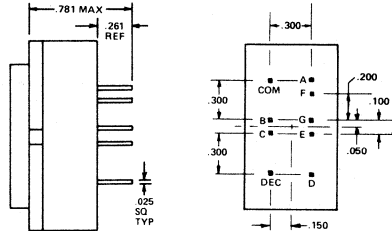
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

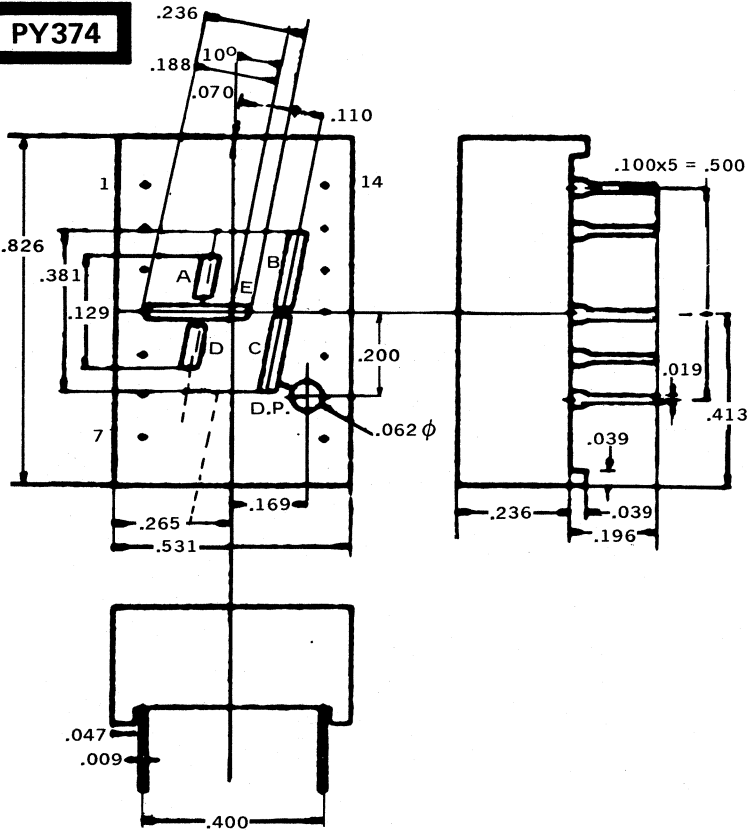
**PY373**



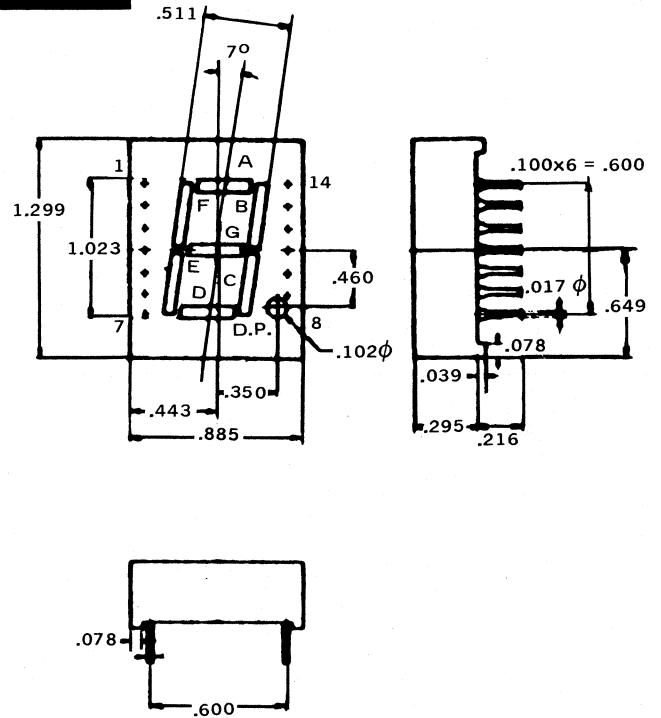
	A	B
PY373	1.606	2.098
PY373a	2.323	2.815
PY373b	3.040	3.532
PY373c	3.757	4.249
PY373d	4.474	4.966
PY373e	5.191	5.683
PY373f	5.908	6.400
PY373g	6.625	7.117
PY373h	7.342	7.834



**PY374**



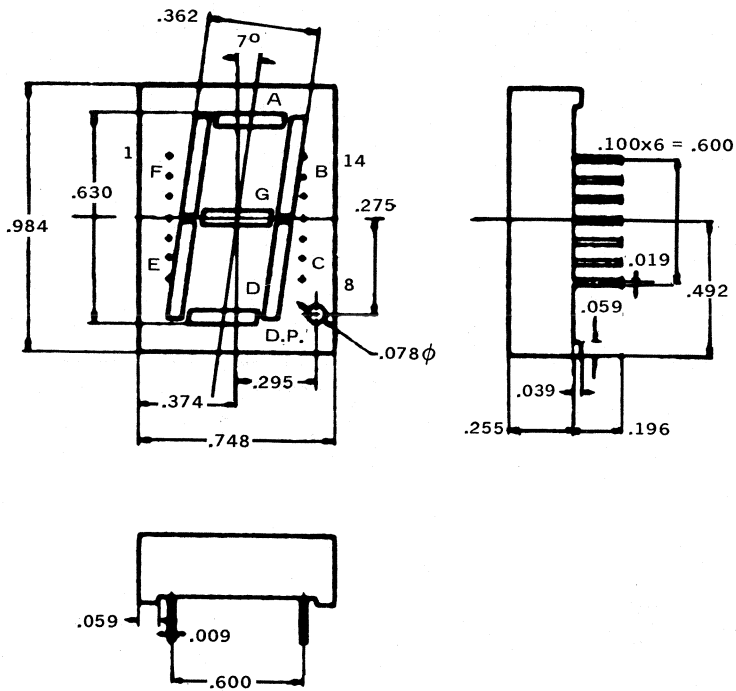
**PY375**



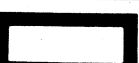
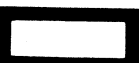
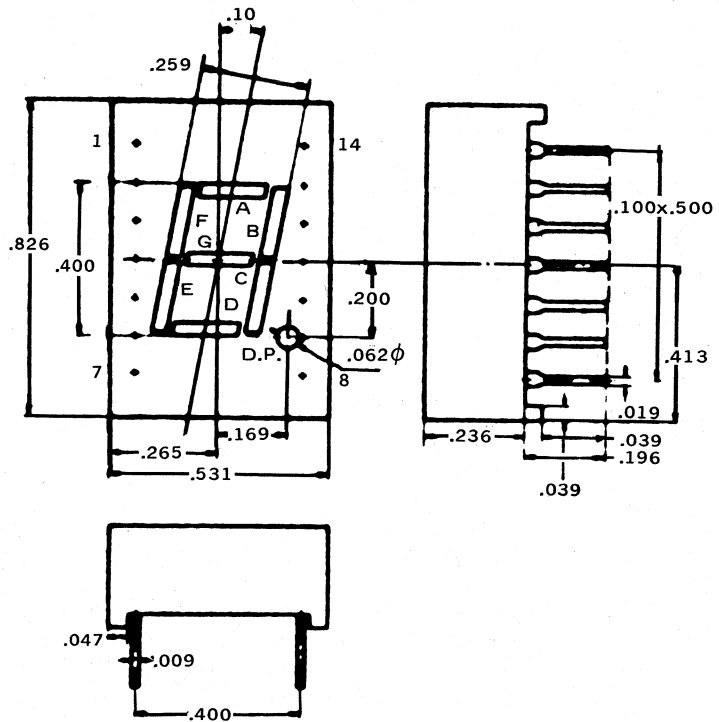
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

PY376



PY377

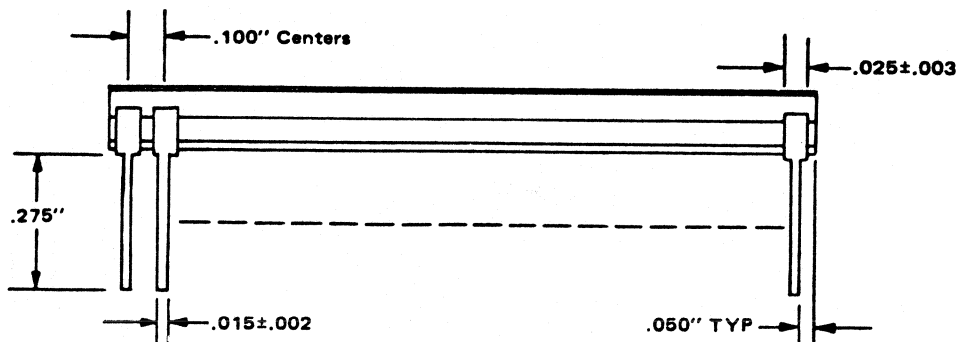
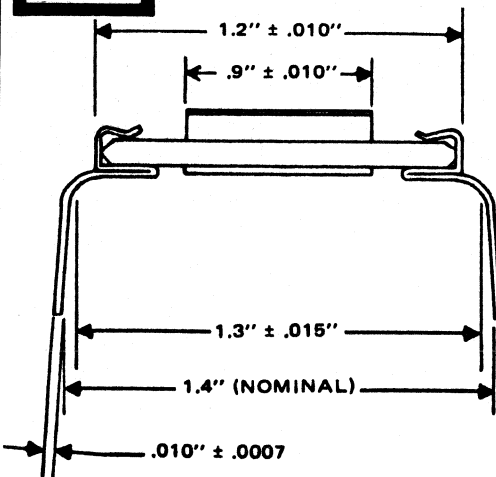




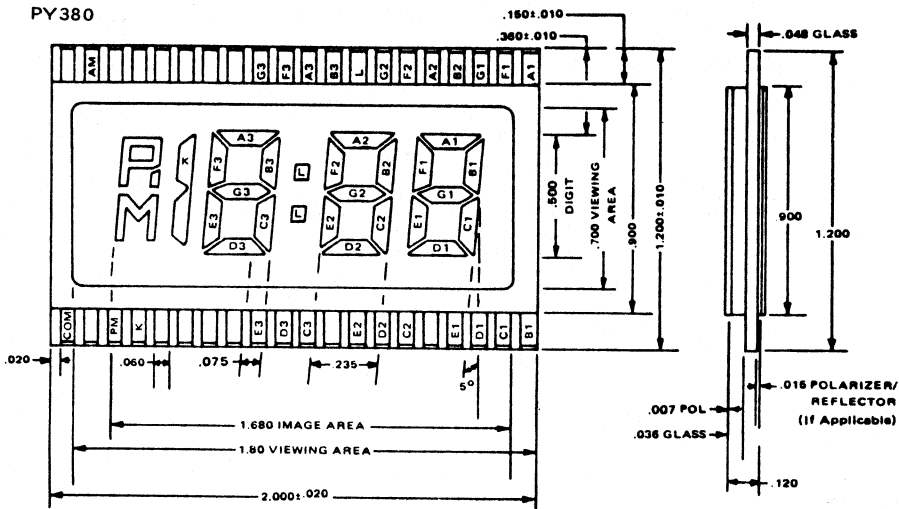
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

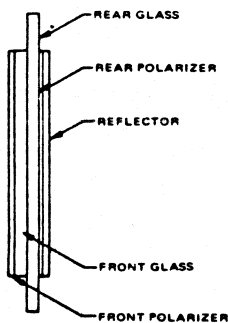
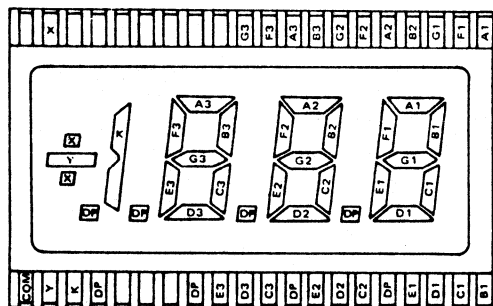
**PY380**



PY380

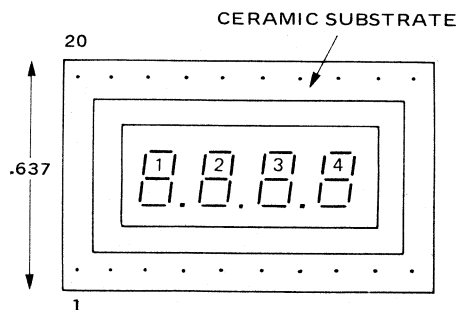
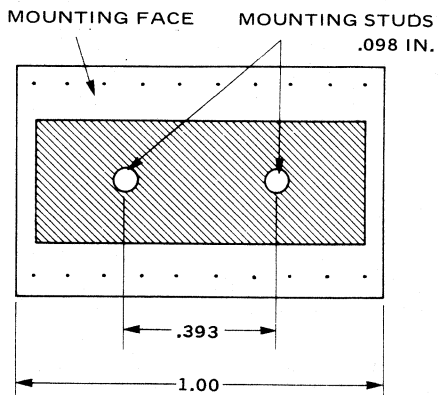


PY380a



\*\*\*"TW" Suffix designates displays with no rear reflector for backlighting application, white digits on black background. Reflective versions are black digits on white.

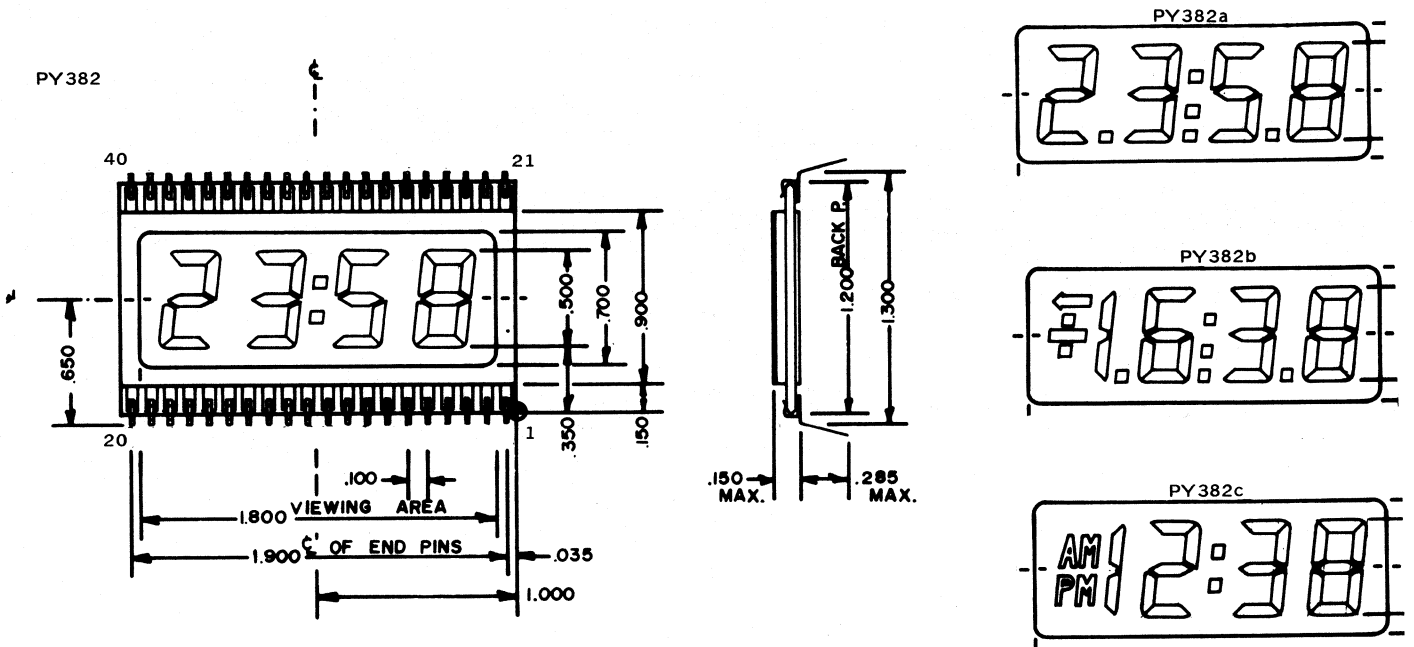
**PY381**



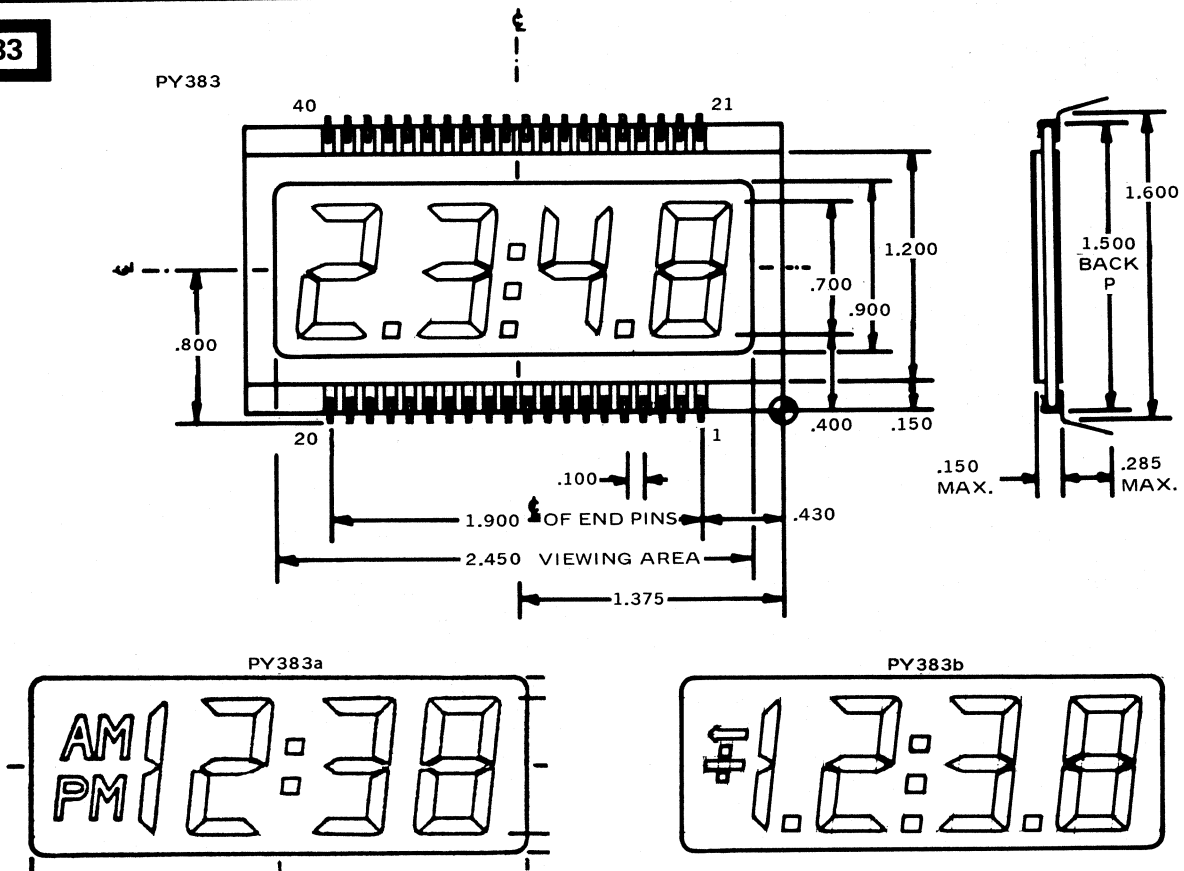
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

## PY382



## PY383





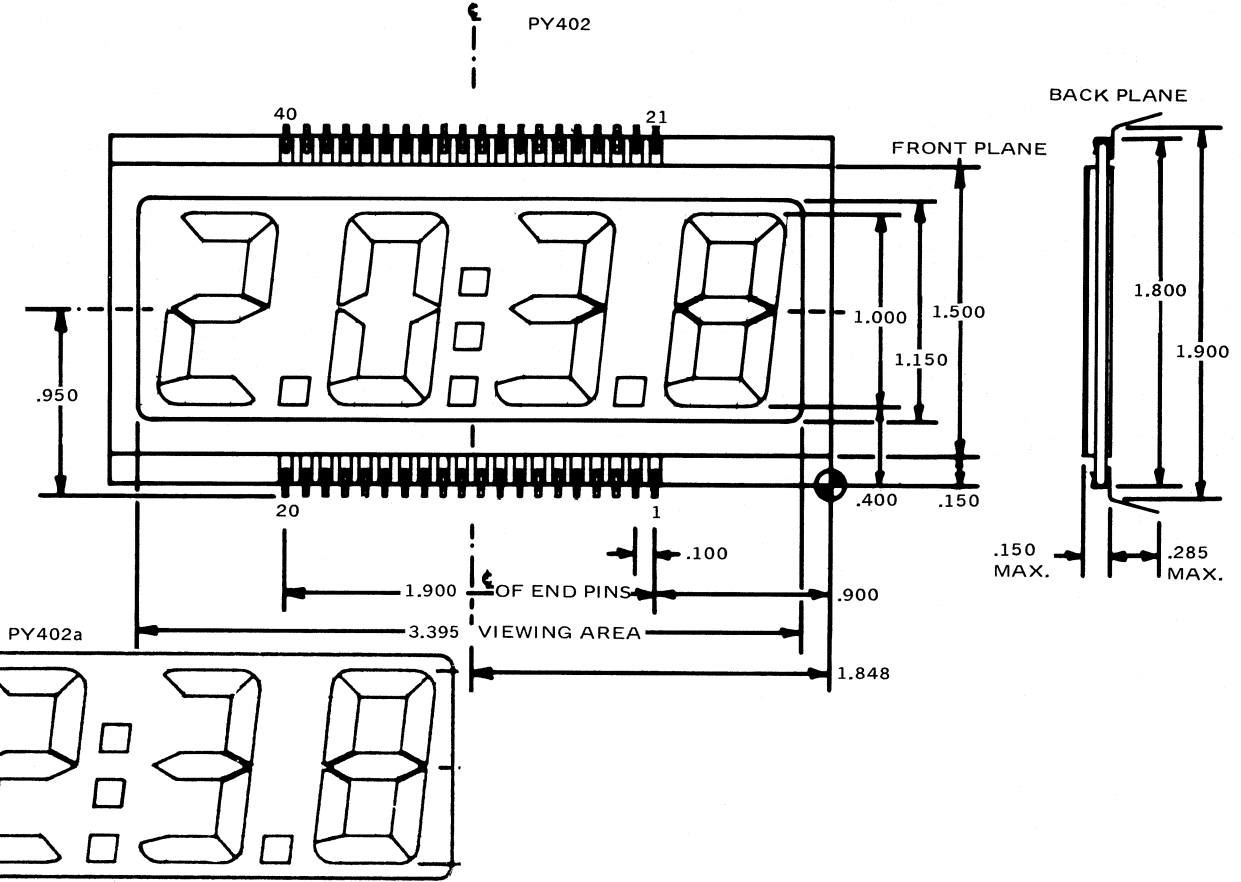


# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

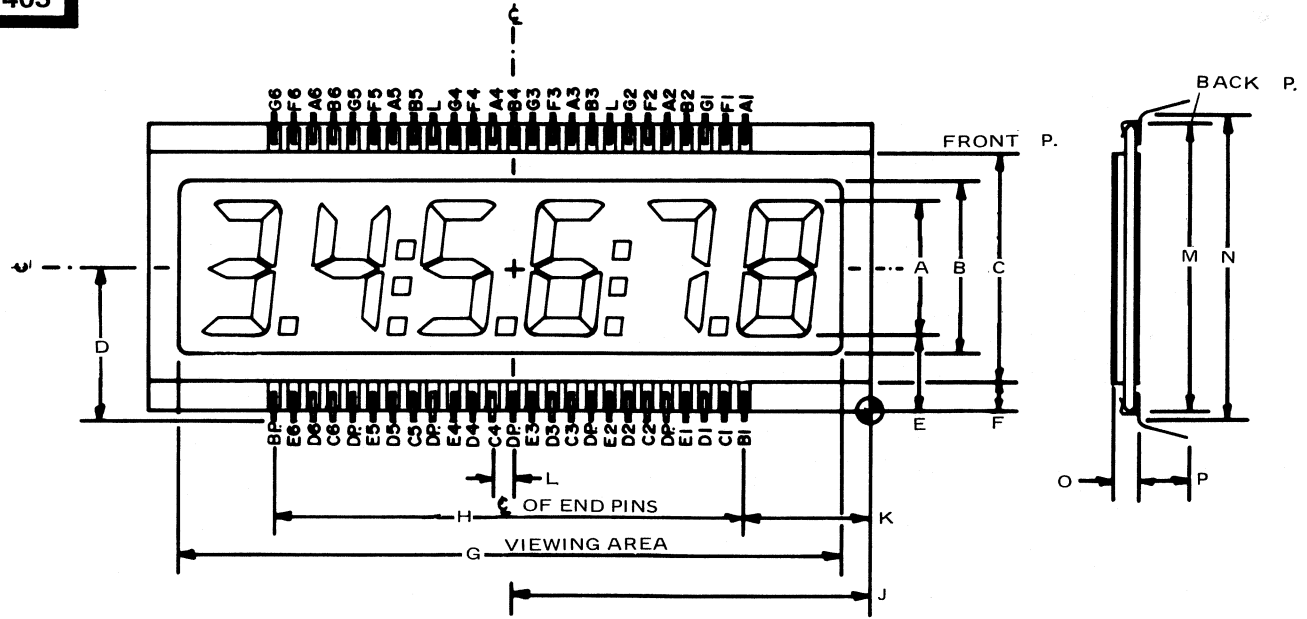
PY402

PY402



PY402a

PY403

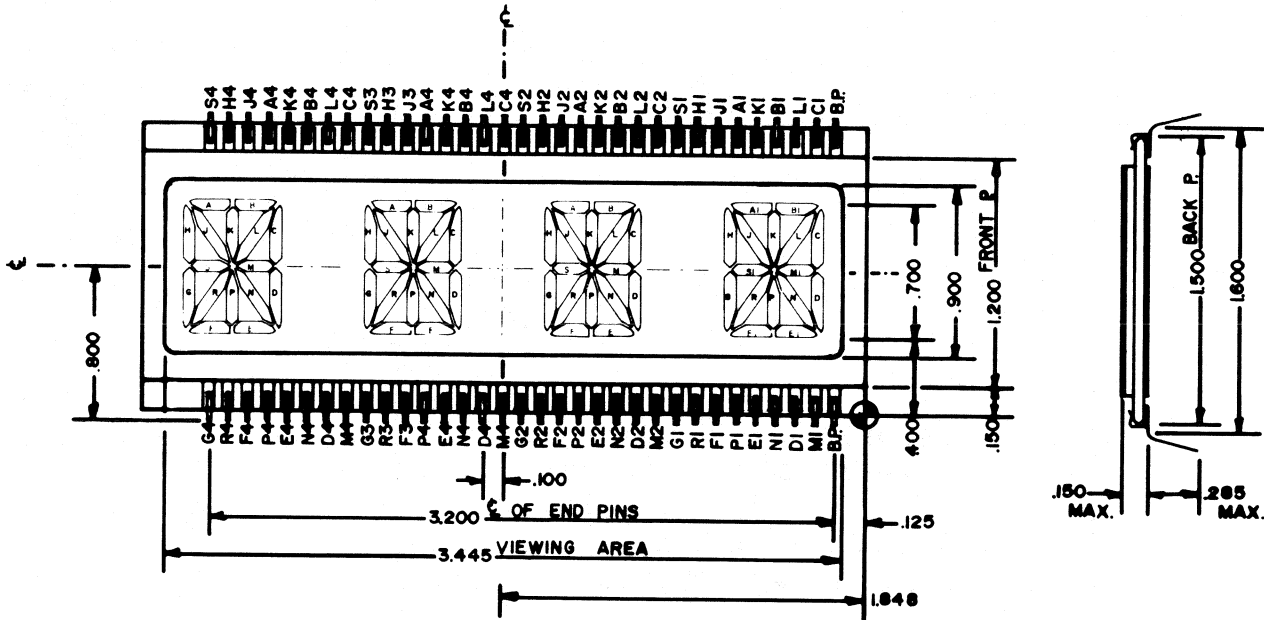


	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P
PY403	.700	.900	1.200	.800	.400	.150	3.395	2.400	1.848	.650	.100	1.500	1.600	.150	.285
PY403a	.500	.700	.900	.650	.350	.150	2.450	2.400	1.375	.125	.100	1.200	1.300	.150	.285

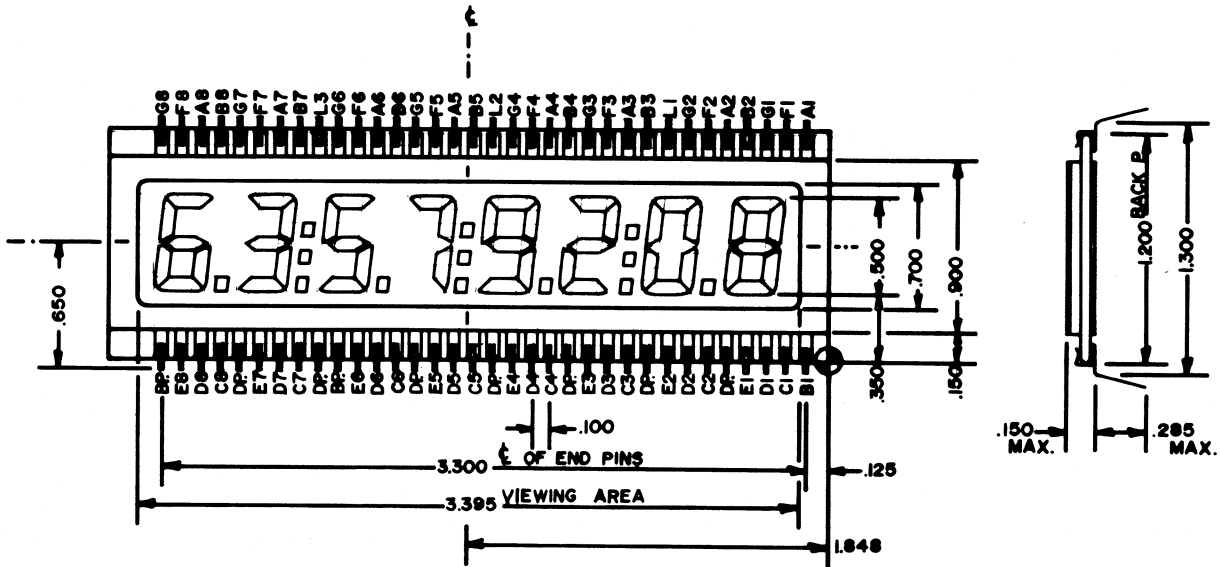
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

PY404



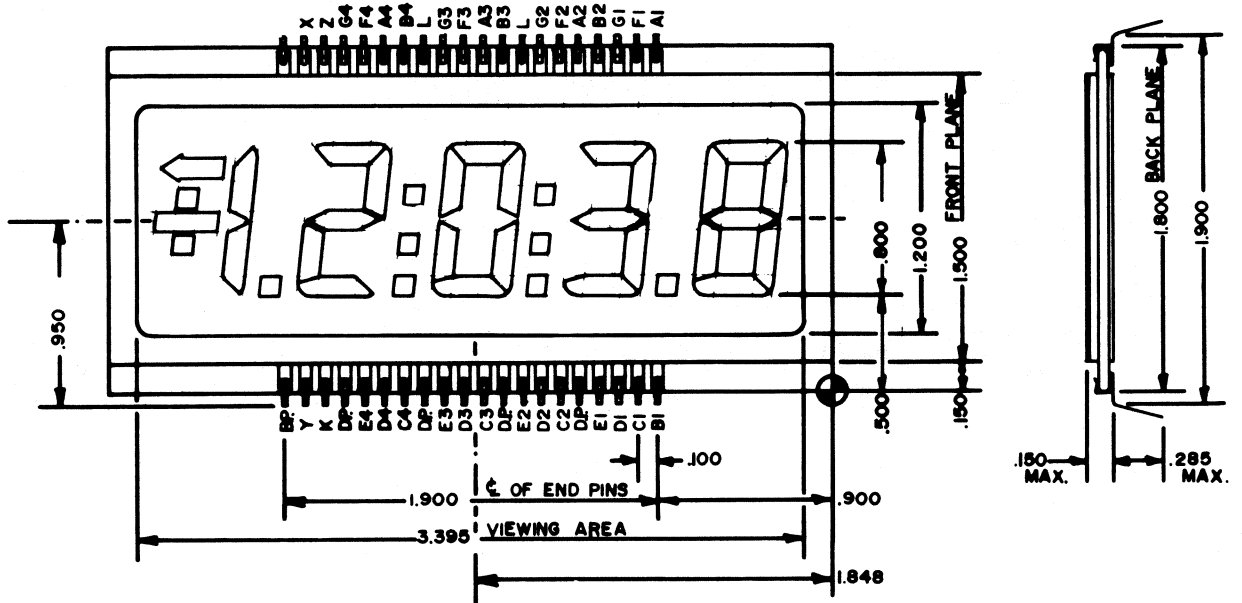
PY405



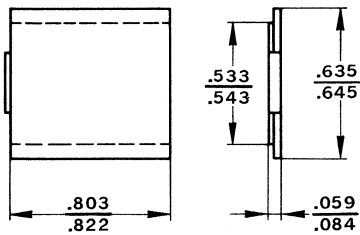
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

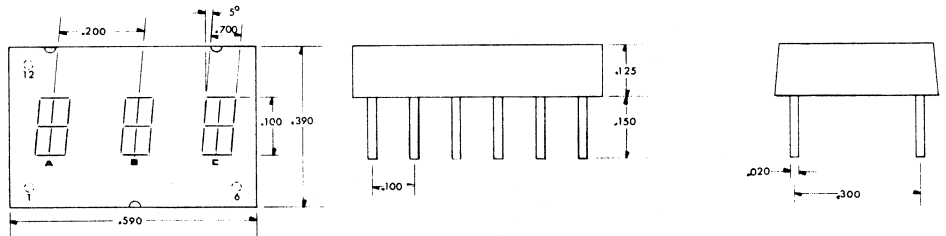
**PY406**



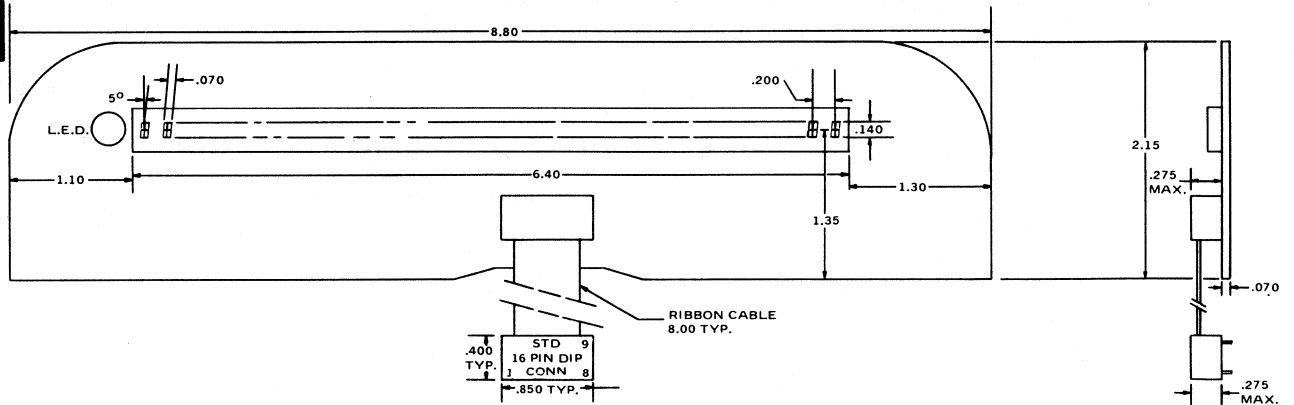
**PY407**



**PY408**



**PY409**

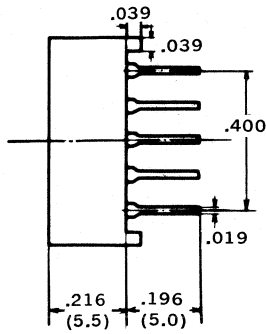
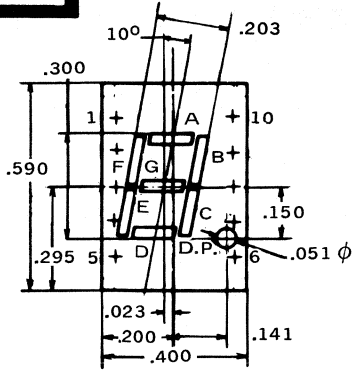


**D.A.T.A.**

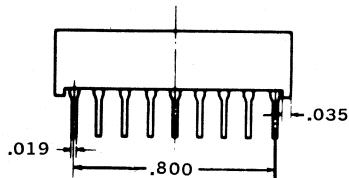
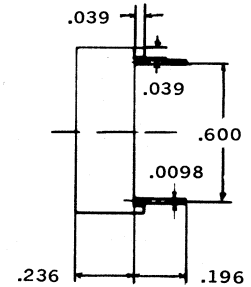
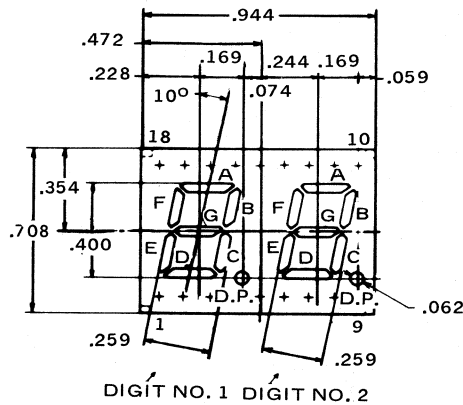
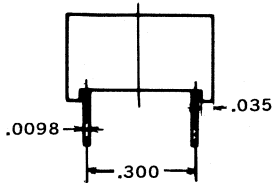
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

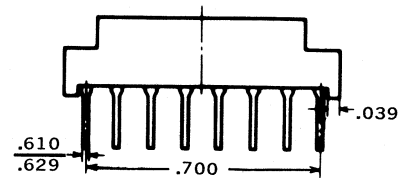
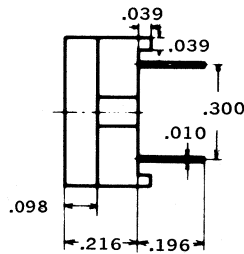
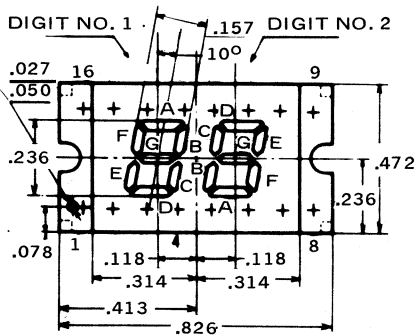
**PY410**



**PY411**



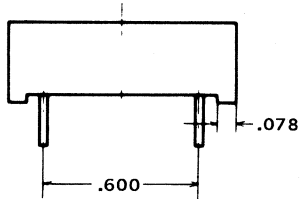
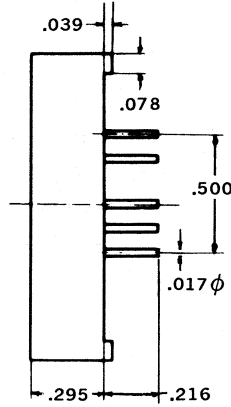
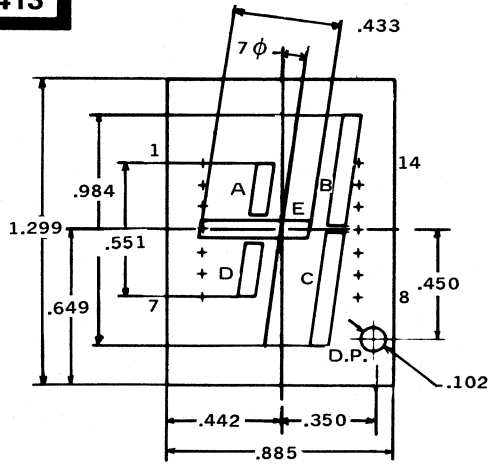
**PY412**



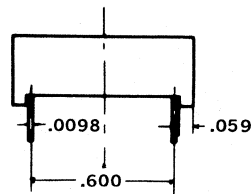
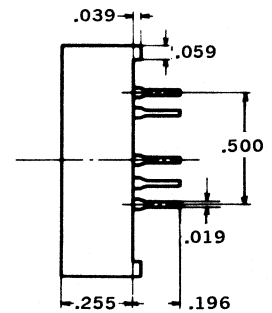
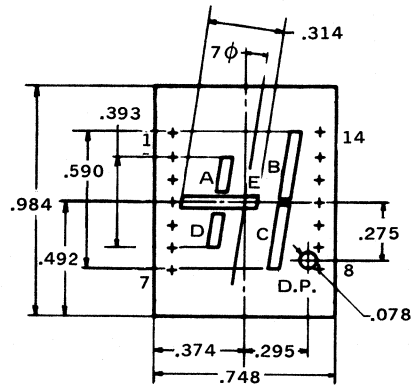
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

**PY413**



**PY414**

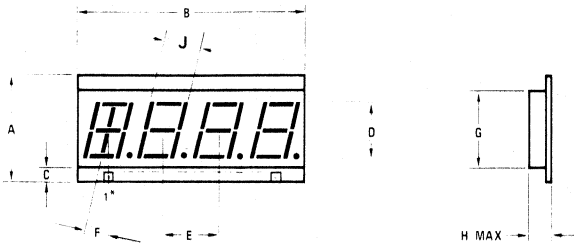




# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

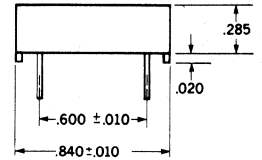
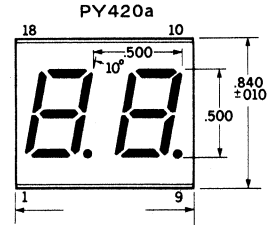
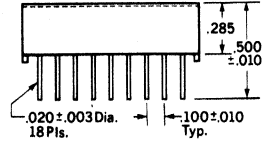
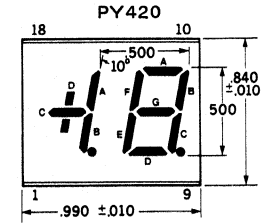
**PY419**



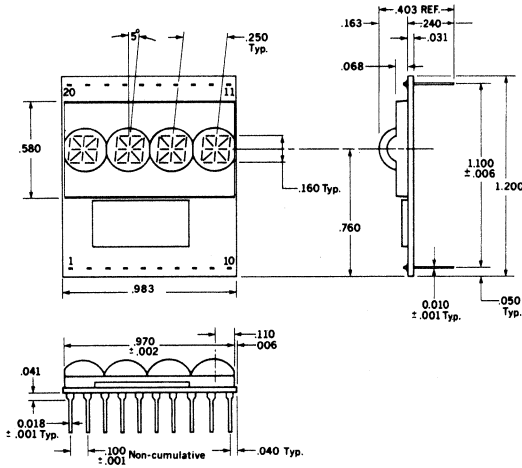
\*Pin 1 as shown, pin out follows counterclockwise

DIGIT SIZE	A	B	C	D	E	F	G	H	J	
PY419	.300	.830	1.590	.165	.300	.400	5*	.500	.225	.188
PY419a	.500	1.000	1.990	.180	.500	.500	10*	.700	.280	.300
PY419b	.700	1.150	2.390	.180	.700	.600	10*	.890	.300	.380

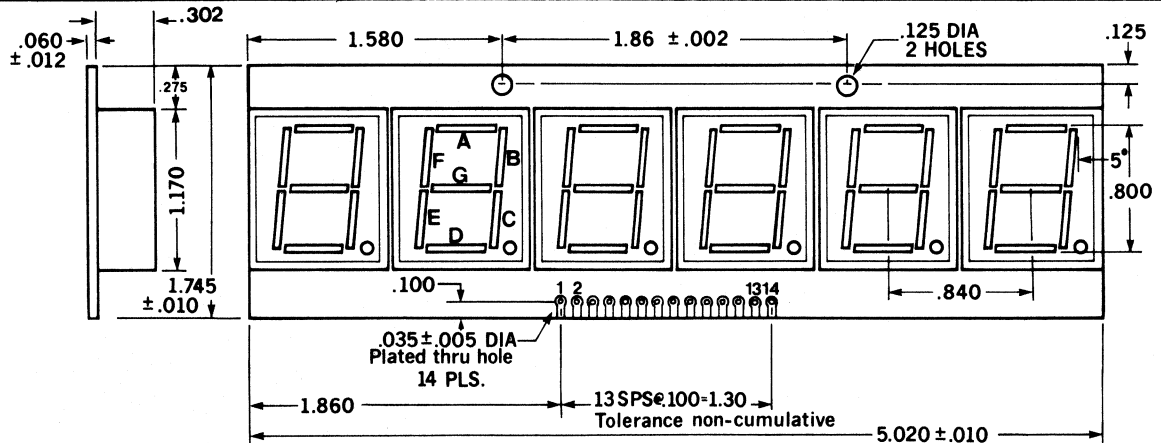
**PY420**



**PY421**



**PY422**

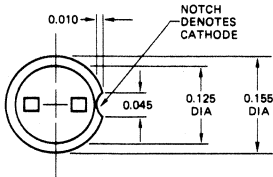
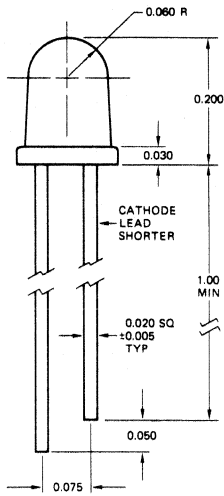




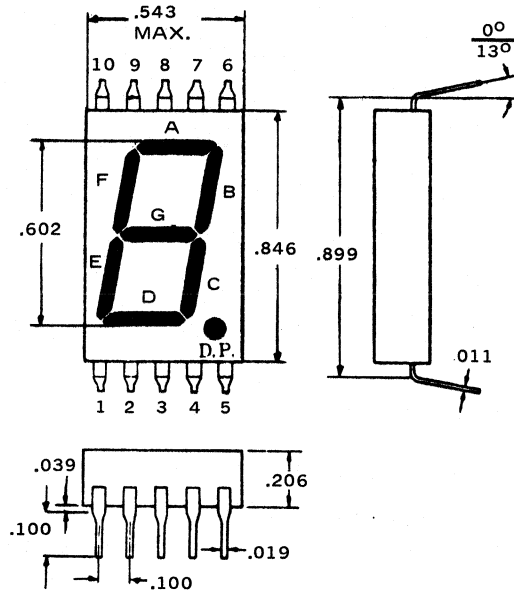
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

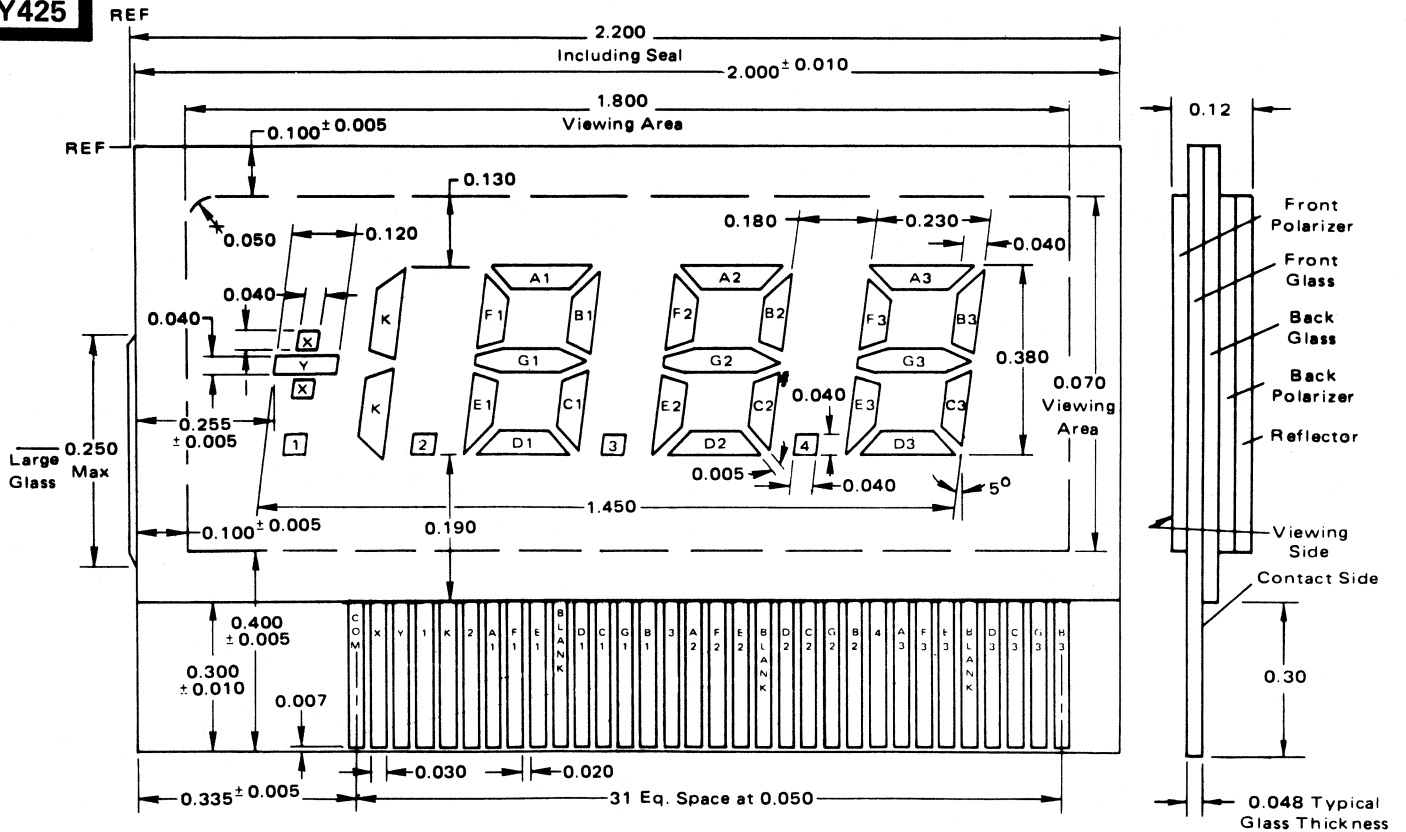
**PY423**



**PY424**



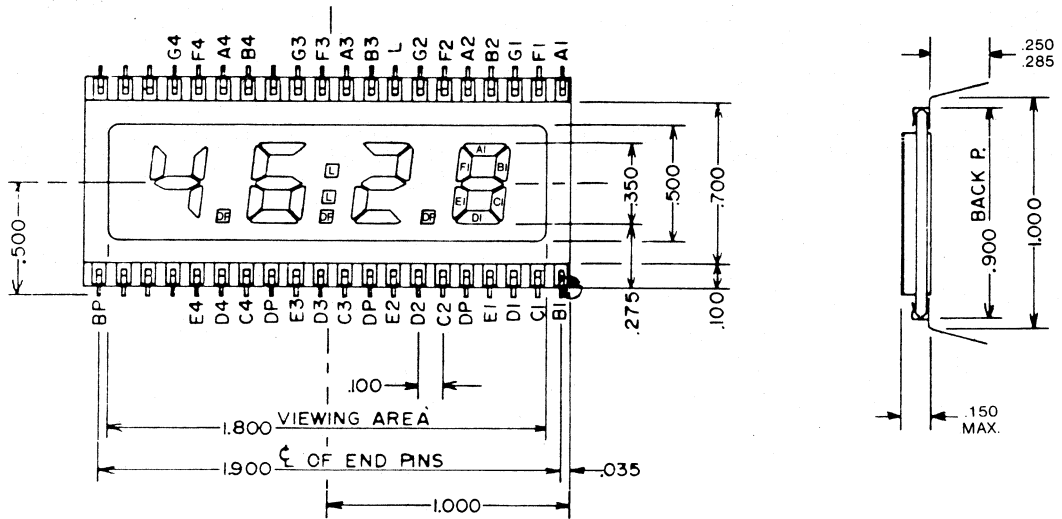
**PY425**



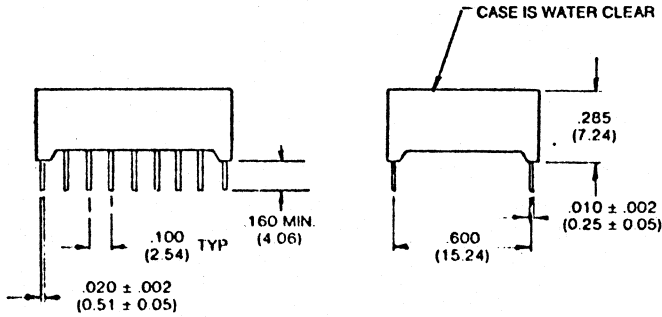
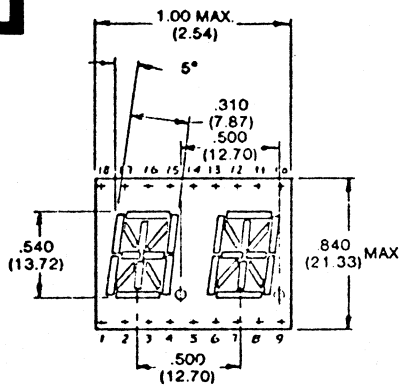
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

**PY426**



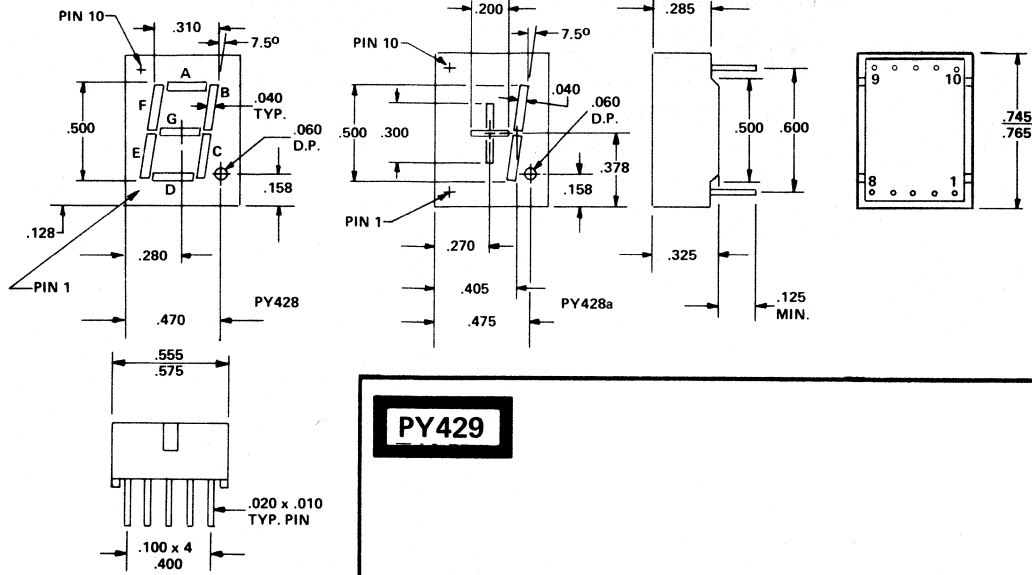
**PY427**



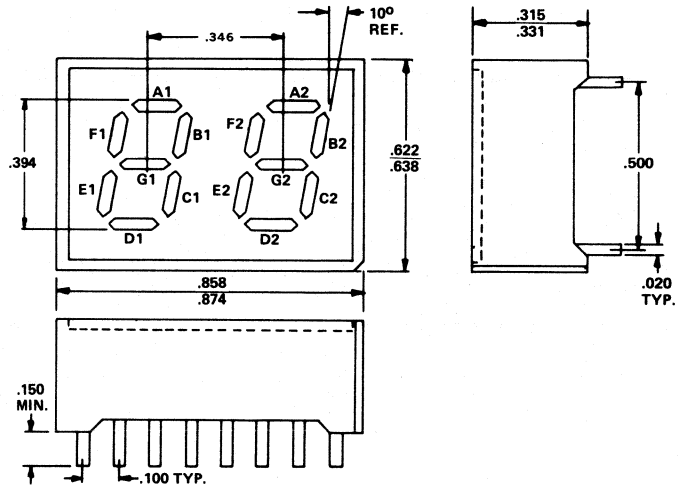
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

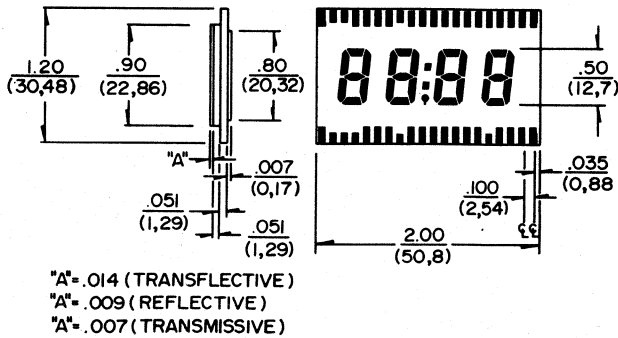
**PY428**



**PY429**



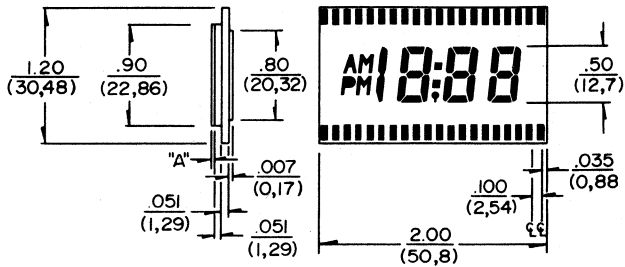
**PY430**



# 49. OUTLINE DRAWINGS

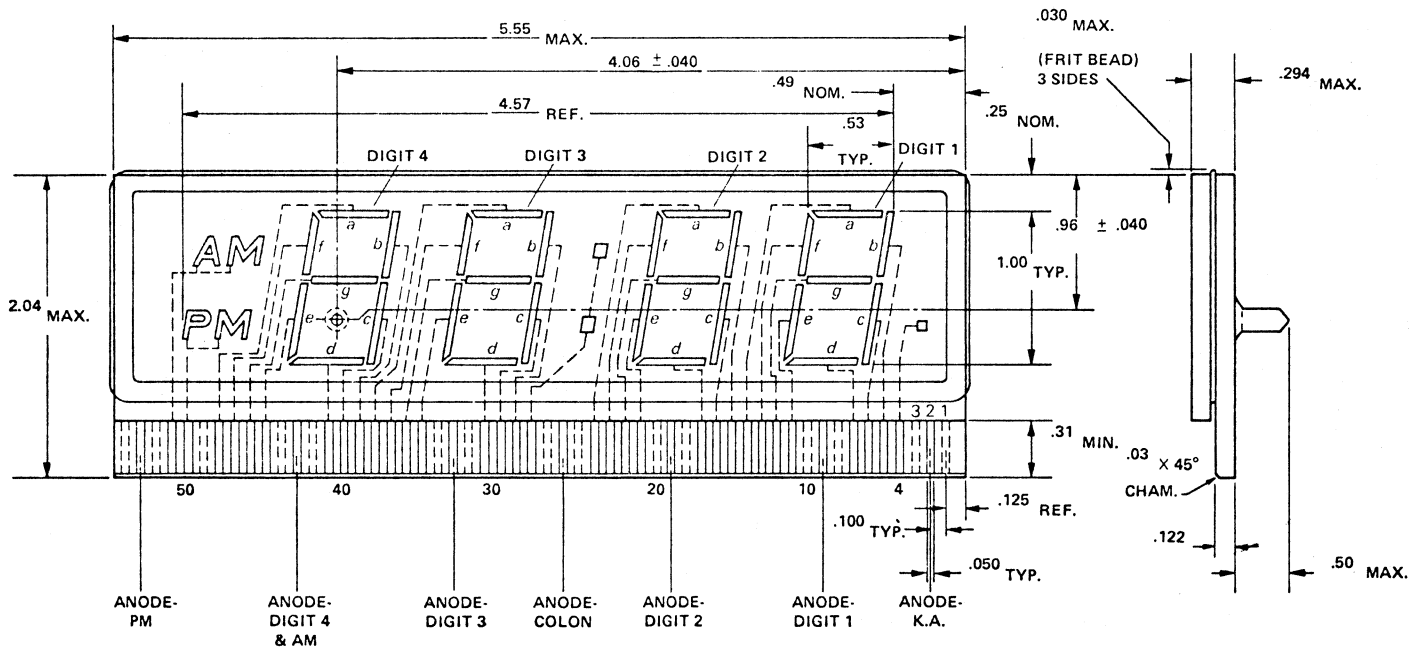
IN DRAWING NUMBER  
SEQUENCE

**PY431**



"A" = .014 (TRANSFLECTIVE)  
 "A" = .009 (REFLECTIVE)  
 "A" = .007 (TRANSMISSIVE)

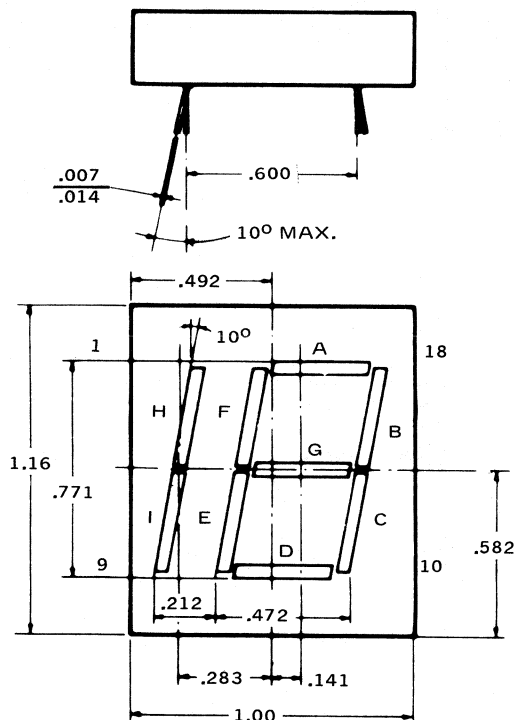
**PY432**



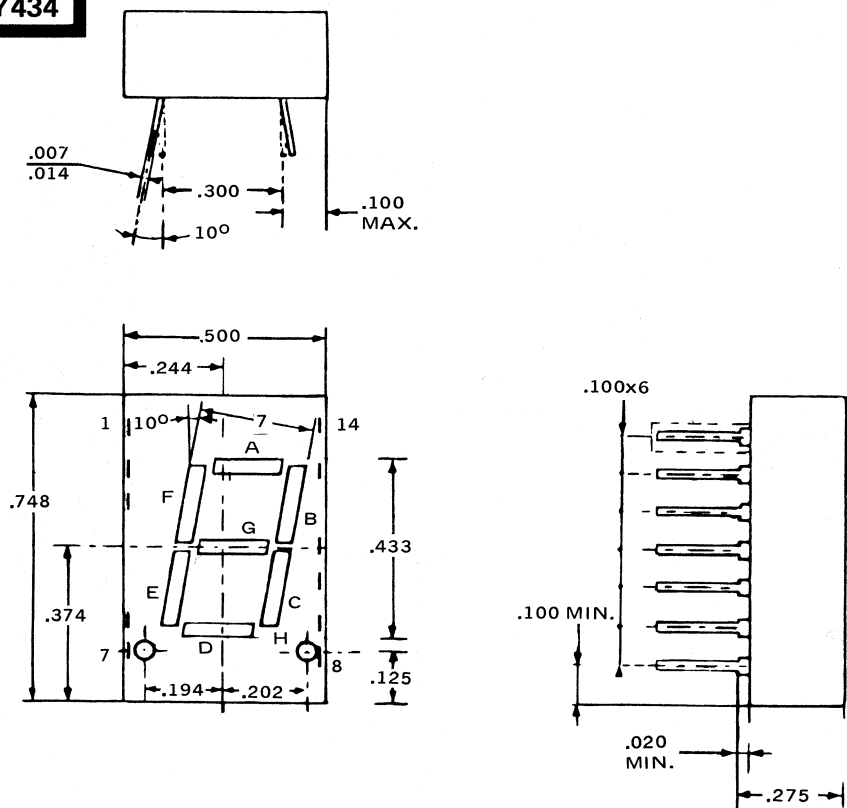
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

**PY433**



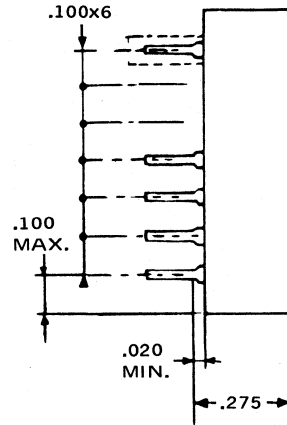
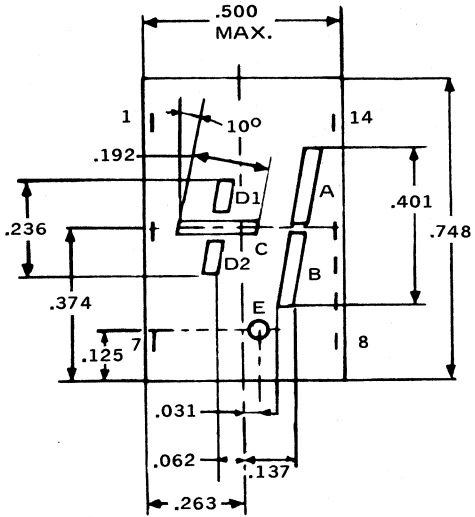
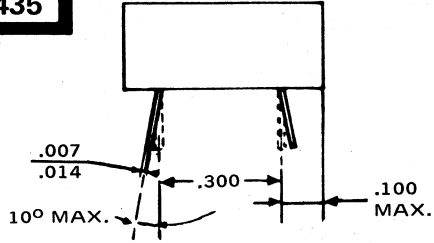
**PY434**



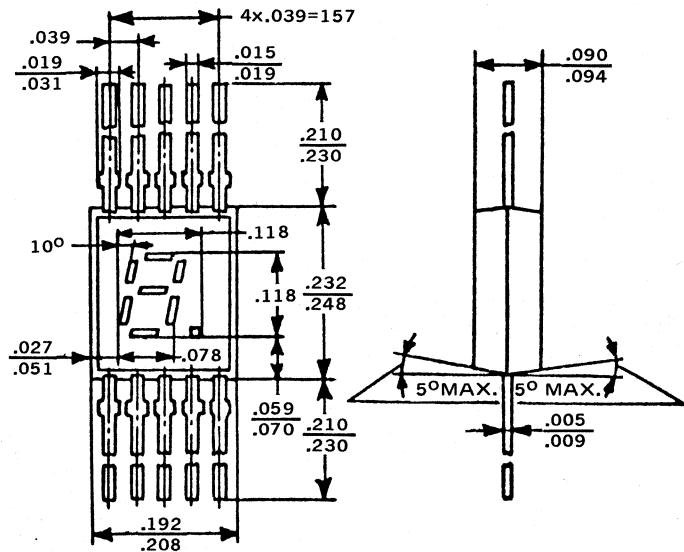
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

**PY435**



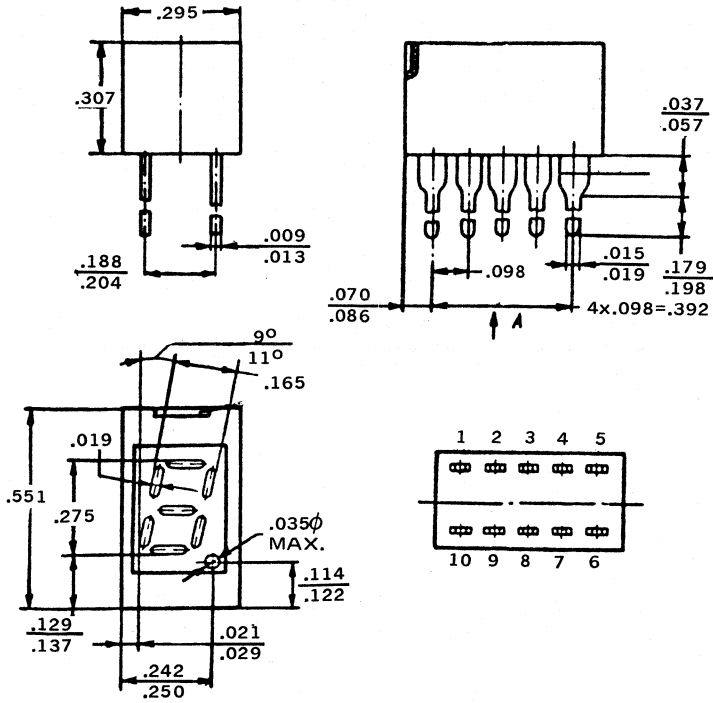
**PY436**



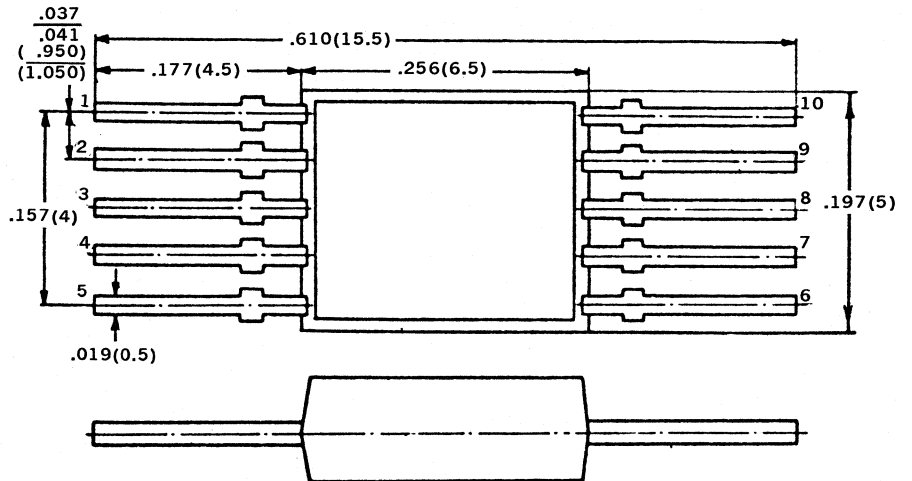
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

PY437



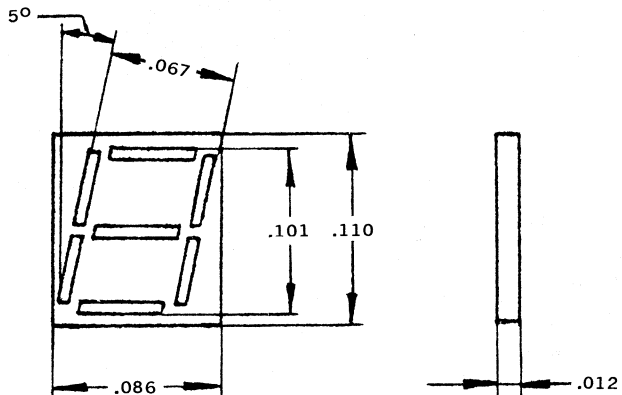
PY438



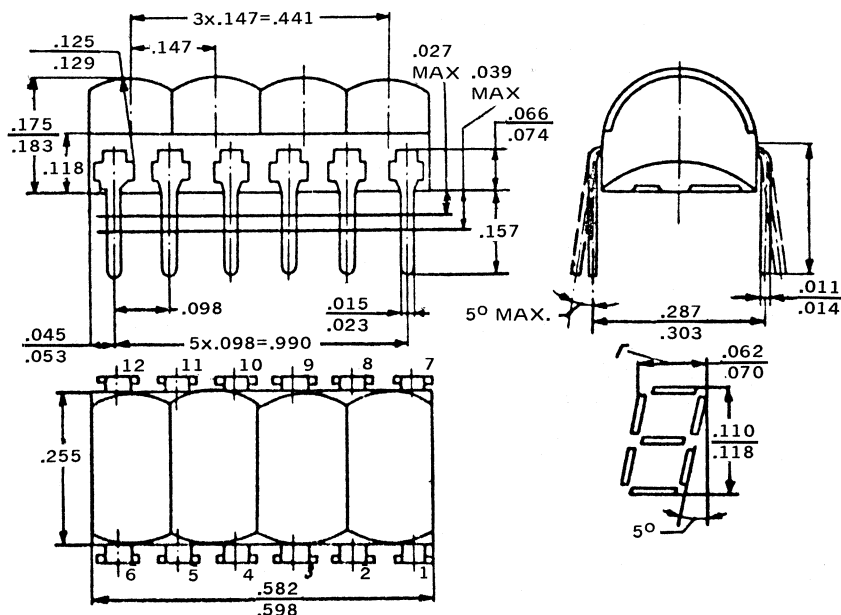
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

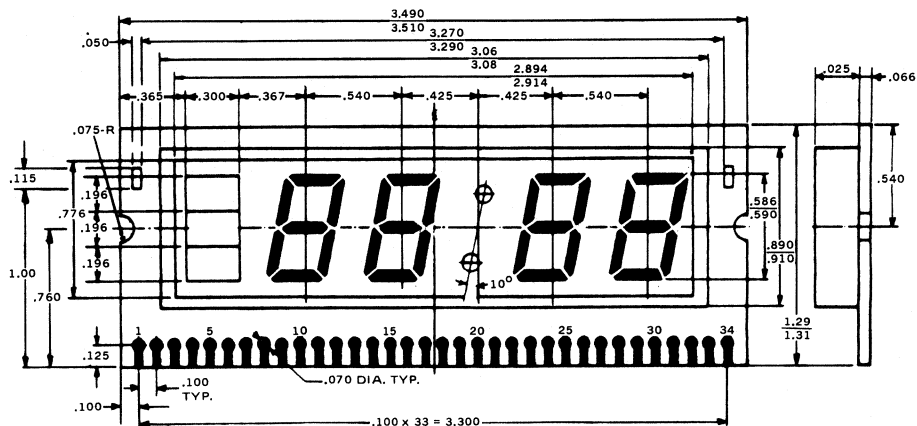
PY439



PY440



PY441

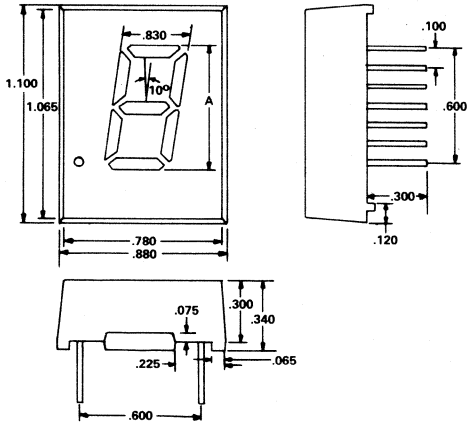




# 49. OUTLINE DRAWINGS

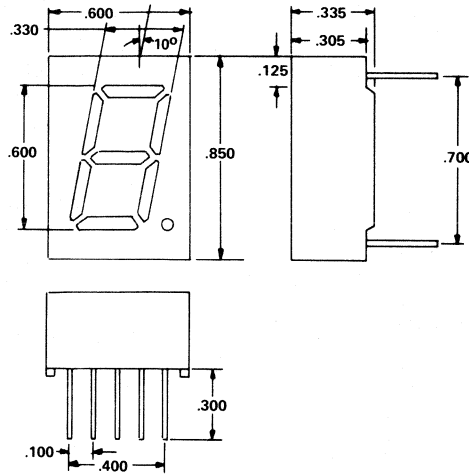
IN DRAWING NUMBER  
SEQUENCE

**PY444**

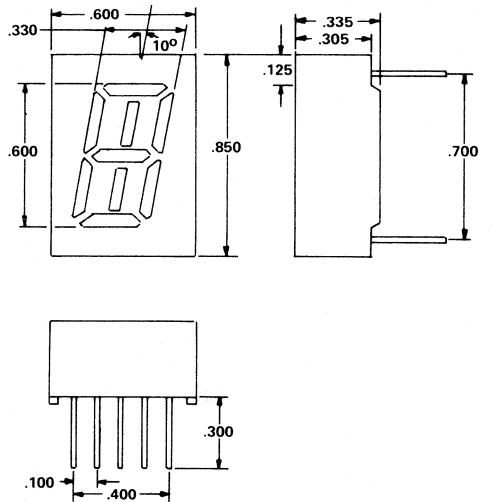


	A	DP
PY444	.630	Left
PY444a	.600	Left
PY444b	.600	Right

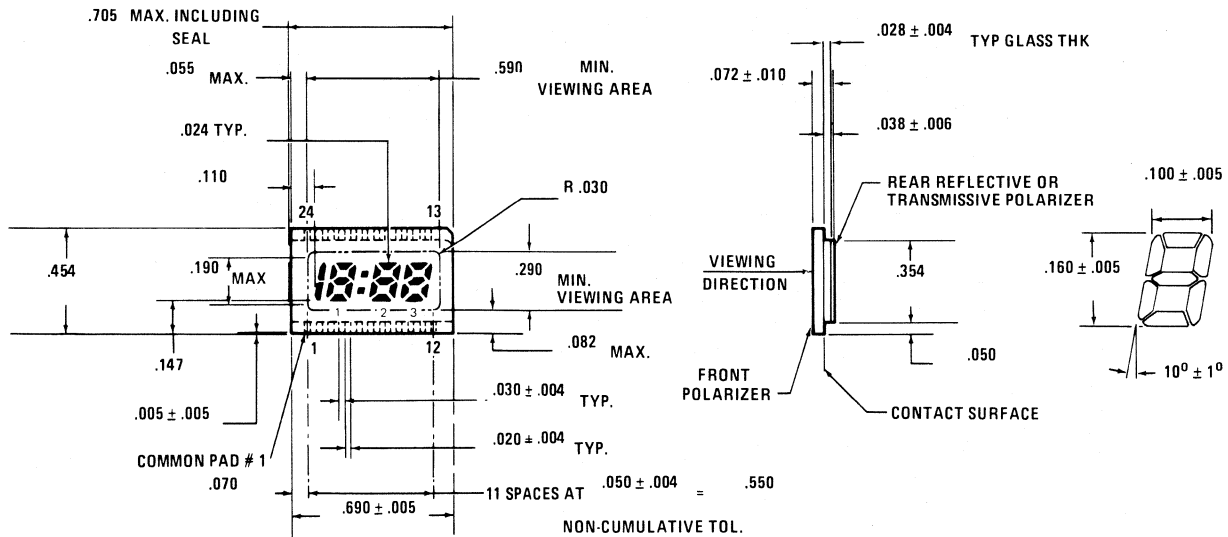
**PY445**



**PY446**



**PY448**

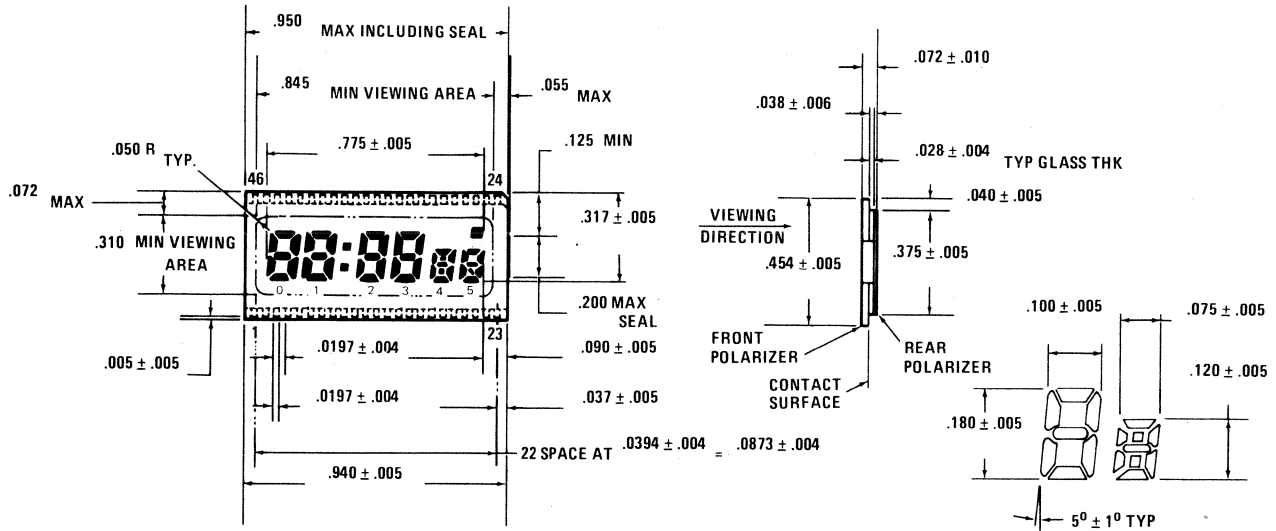




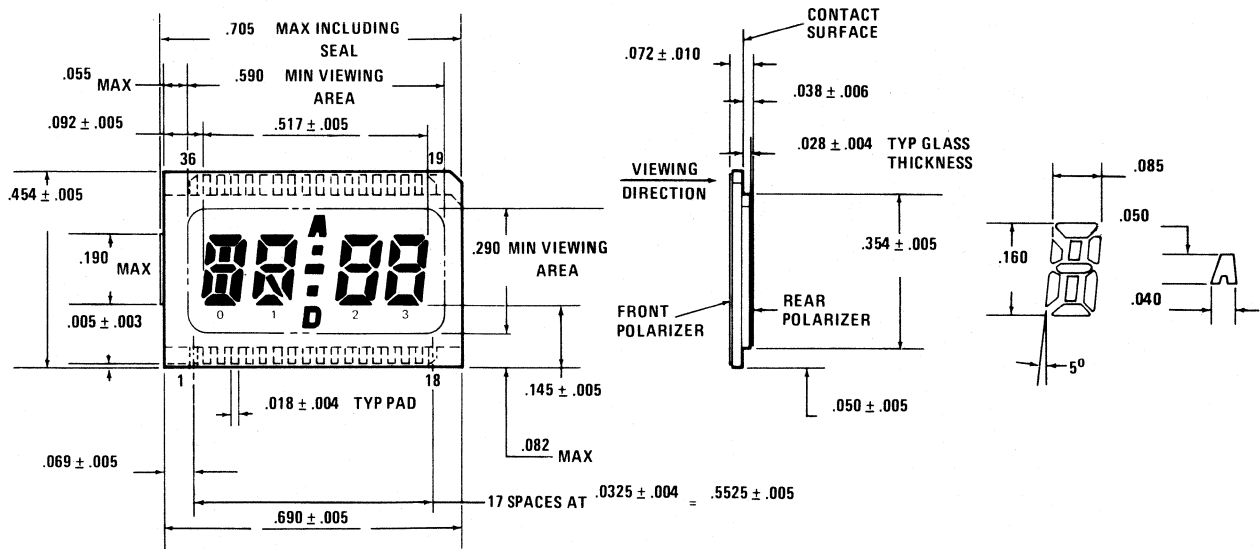
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

PY451



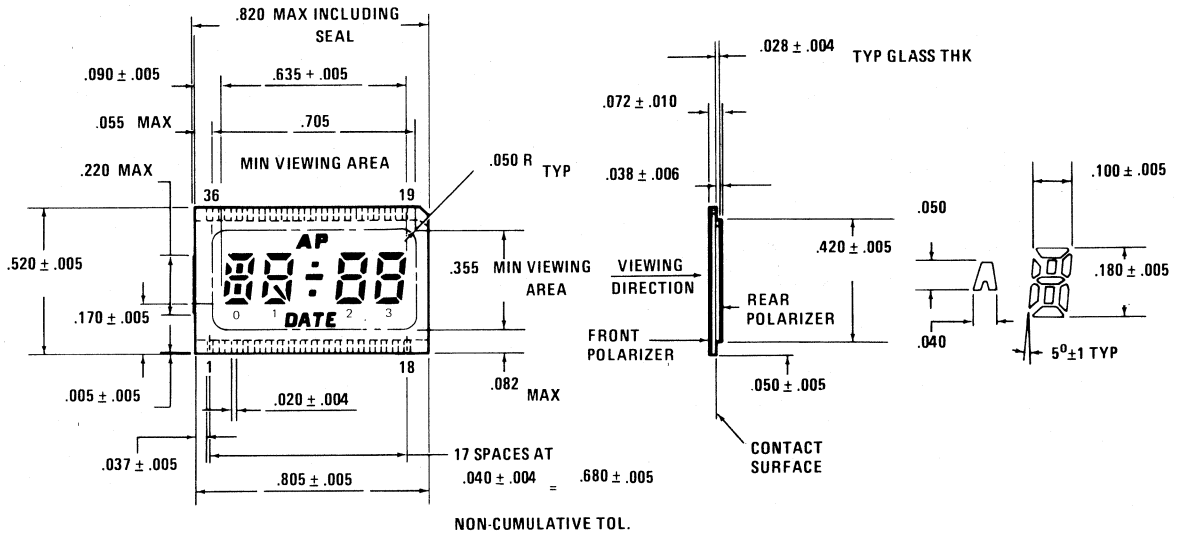
PY452



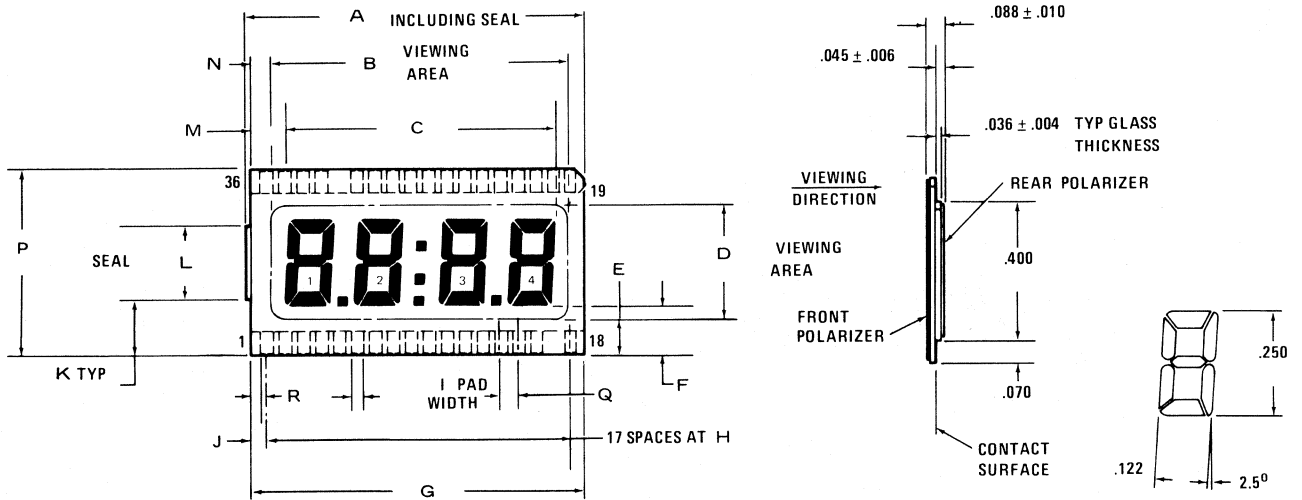
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

**PY453**



**PY454**

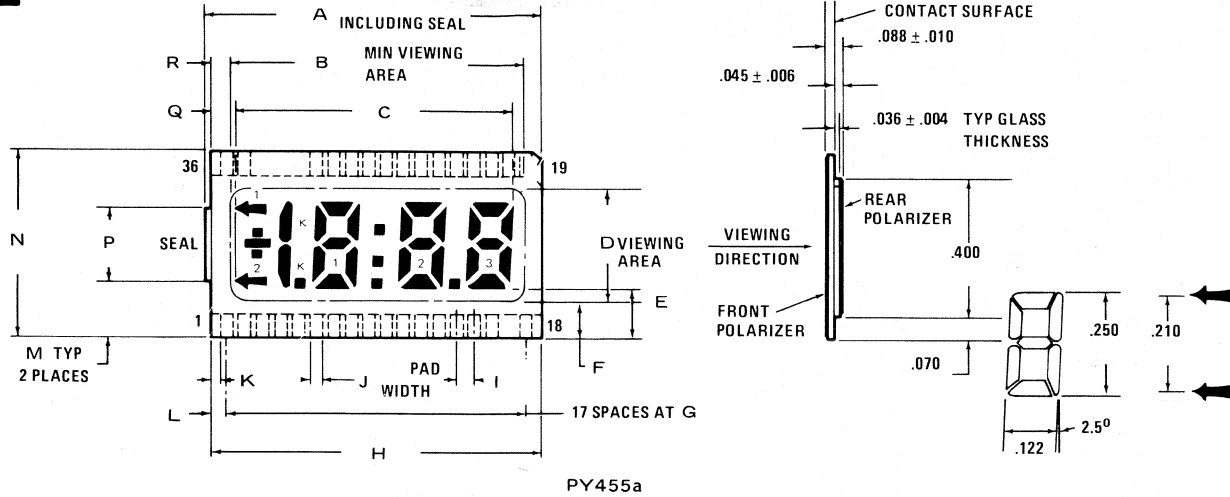


	A	B	C	D	E	F	G	H	I	J	K	L	M	N	P	Q	R
PY454	.950 MAX	.836 MIN	.750	.335	.105 MAX	.145	.936	.850	.035 TYP	.042	.135 MIN	.250	.092	.055 MAX	.540	.050	.025
PY454a	.950 MAX	.856 MIN	.775	.320	.110	.145	.936	.850	.035 TYP	.042	.135 MIN	.250	.080	.040	.540	.050	.025

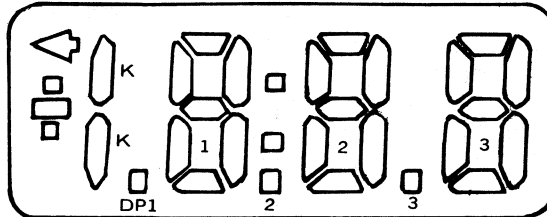
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

## PY455

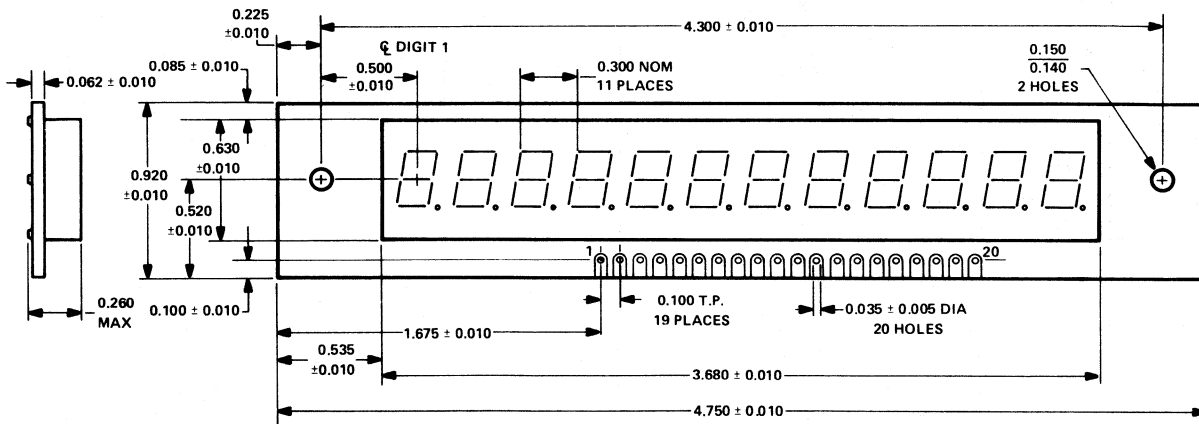


PY455a



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	P	Q	R
PY455	.950	.836	.780	.335	.145	.105	.850	.936	.050	.035	.025	.042	.135	.540	.250	.070	.055
	MAX	MIN															
PY455a	.950	.856	.775	.320	.145	.110	.850	.936	.050	.035	.025	.042	.135	.540	.250	.080	.040
	MAX	MIN															

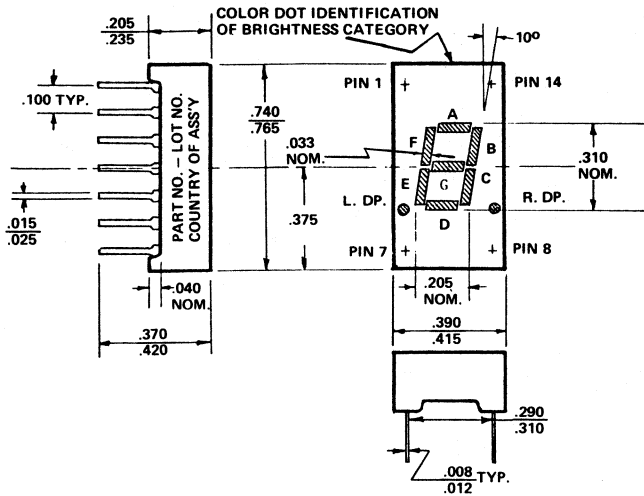
## PY456



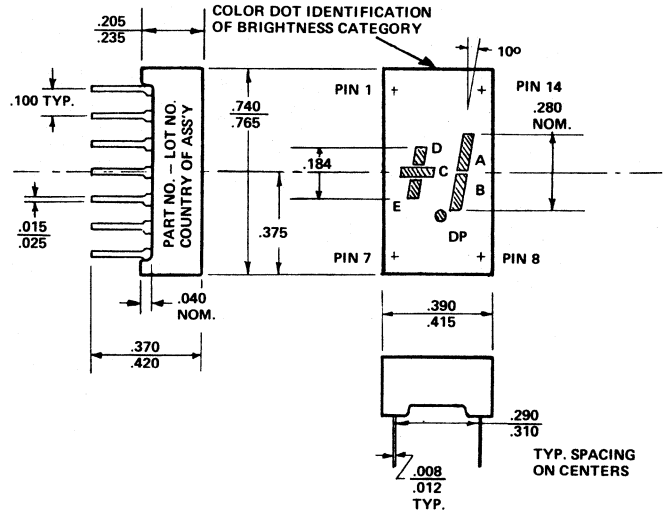
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

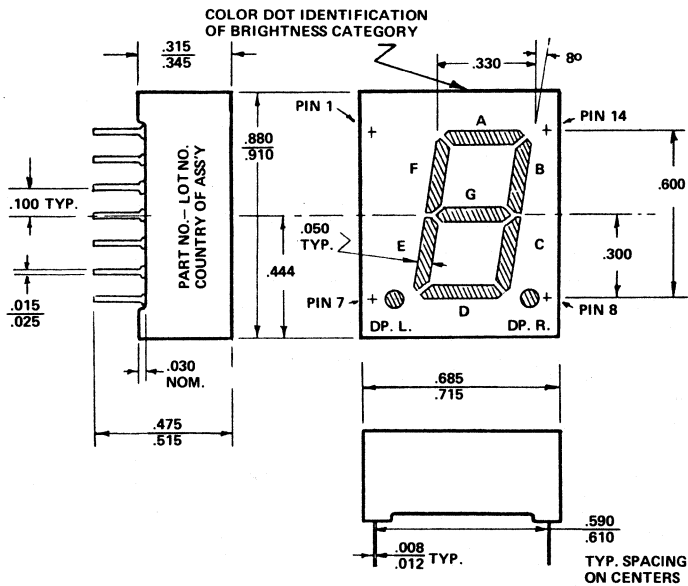
**PY457**



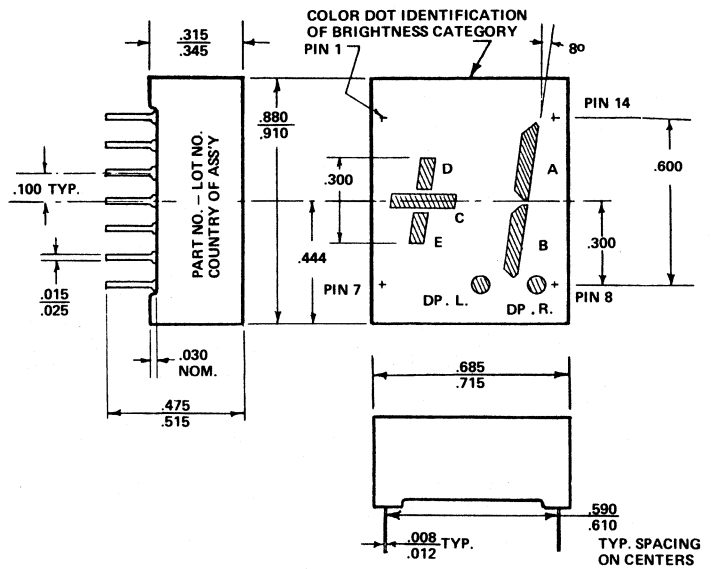
**PY458**



**PY459**



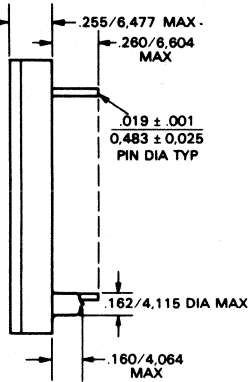
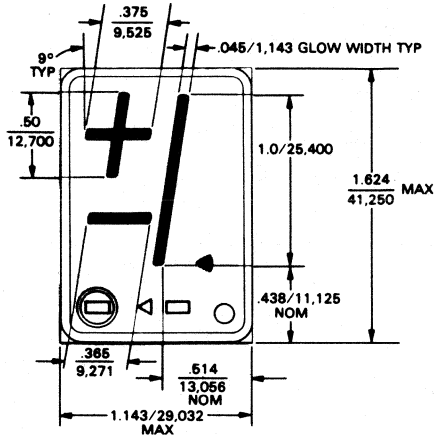
**PY460**



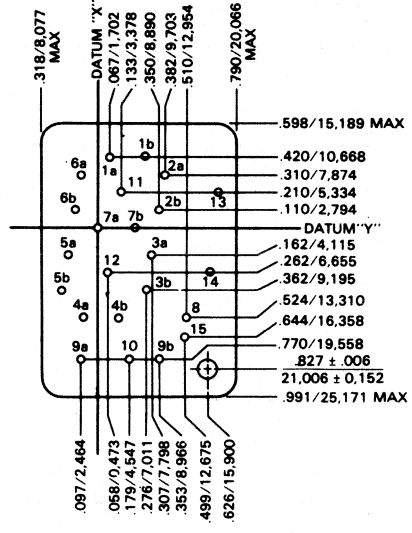
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

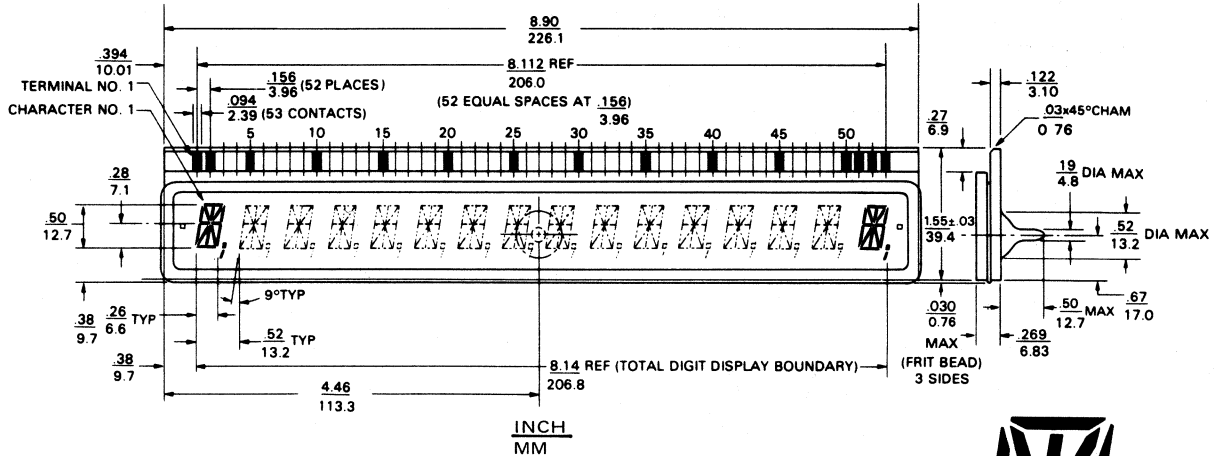
PY461



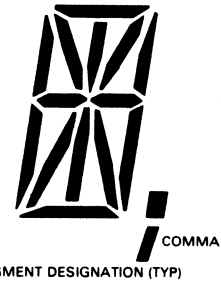
INCH  
MM



PY462



INCH  
MM



# 49. OUTLINE DRAWINGS

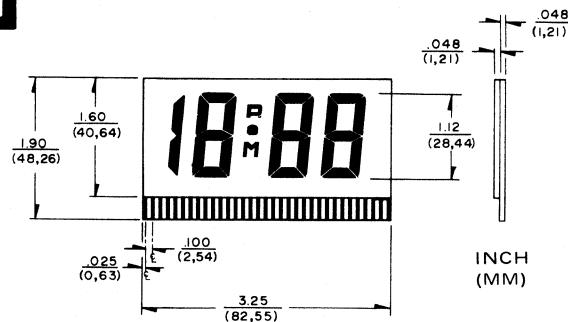
IN DRAWING NUMBER  
SEQUENCE

**PY463**

DWG. NO.	CHARACTERS/ PANEL	CHARACTER ARRANGEMENT	CHARACTER FORMAT	CHARACTER SIZE H x W	DOT PITCH	VIEWING AREA W x H	OVERALL SIZE W x H x D	CONNECTION STYLE	DRIVING METHOD
PY463a	32	1 x 32	5 x 7 + U	.33 x .23 (8.3 x 5.7)	.050 (1.27)	9.53 x .43 (242.1 x 10.9)	10.67 x 1.06 x .55 (271.0 x 27.0 x 14.0)	DIP	DOUBLE SCAN
PY463b	32	2 x 16	5 x 7 + U	.21 x .15 (5.3 x 3.7)	.031 (0.8)	2.98 x .65 (75.7 x 16.5)	4.31 x 1.86 x .74 (109.6 x 47.2 x 18.8)	PIN	SINGLE SCAN
PY463c	32	2 x 16	5 x 7 + U	.33 x .23 (8.3 x 5.7)	.050 (1.27)	4.72 x .98 (120.0 x 25.0)	5.72 x 1.87 x 1.06 (145.4 x 47.4 x 27.0)	DIP	SINGLE SCAN
PY463d	32	2 x 16	7 x 9	.27 x .15 (6.9 x 5.3)	.031 (0.8)	3.99 x .78 (101.3 x 19.7)	5.31 x 2.10 x .74 (135.0 x 53.4 x 18.8)	PIN	SINGLE SCAN
PY463e	64	4 x 16	5 x 7 + U	.21 x .15 (5.3 x 3.7)	.031 (0.8)	2.98 x 1.41 (75.7 x 35.7)	4.39 x 2.85 x .74 (111.6 x 72.4 x 18.8)	PIN	SINGLE SCAN
PY463f	64	4 x 16	5 x 7 + U	.33 x .23 (8.3 x 5.7)	.050 (1.27)	4.72 x 2.08 (120.0 x 52.7)	5.72 x 2.97 x 1.06 (145.4 x 75.4 x 27.0)	DIP	SINGLE SCAN
PY463g	80	2 x 40	7 x 9	.27 x .21 (6.9 x 5.3)	.031 (0.8)	10.04 x .68 (254.9 x 17.3)	12.17 x 2.36 x .92 (309.0 x 60.0 x 23.3)	PIN	DOUBLE SCAN
PY463h	120	3 x 40	7 x 9	.27 x .21 (6.9 x 5.3)	.031 (0.8)	10.04 x 1.09 (254.9 x 27.7)	12.17 x 2.36 x .92 (309.0 x 60.0 x 23.3)	PIN	DOUBLE SCAN
PY463j	128	4 x 32	5 x 7 + U	.21 x .15 (5.3 x 3.7)	.031 (0.8)	6.00 x 1.41 (152.5 x 35.7)	7.26 x 2.69 x .82 (184.4 x 68.4 x 20.75)	PIN	SINGLE SCAN
PY463k	128	4 x 32	5 x 7 + U	.26 x .18 (6.5 x 4.5)	.039 (1.0)	8.72 x 1.75 (221.5 x 44.5)	10.94 x 3.78 x 1.16 (278.0 x 96.0 x 29.5)	PWB	SINGLE SCAN
PY463m	256	8 x 32	5 x 7 + U	.21 x .15 (5.3 x 3.7)	.031 (0.8)	6.00 x 2.92 (152.5 x 74.1)	7.26 x 4.20 x .82 (184.4 x 106.8 x 20.8)	PIN	SINGLE SCAN
PY463n	256	8 x 32	5 x 7 + U	.26 x .18 (6.5 x 4.5)	.039 (1.0)	8.72 x 3.64 (221.5 x 92.5)	10.94 x 5.67 x 1.16 (278.0 x 144.0 x 29.5)	PWB	SINGLE SCAN
PY463p	320	8 x 40	5 x 9	.27 x .15 (6.9 x 3.7)	.031 (0.8)	7.52 x 2.92 (190.9 x 74.1)	8.88 x 4.28 x .82 (225.6 x 108.8 x 20.8)	PIN	SINGLE SCAN
PY463q	320	4 x 80	5 x 7 + U	.21 x .15 (5.3 x 3.7)	.031 (0.8)	15.08 x 1.41 (382.9 x 35.7)	17.24 x 2.77 x .92 (438.0 x 70.4 x 23.3)	PIN	DOUBLE SCAN
PY463r	384	12 x 32	5 x 7 + U	.21 x .15 (5.3 x 3.7)	.031 (0.8)	6.00 x 4.43 (152.5 x 112.5)	7.34 x 5.80 x .82 (186.4 x 147.2 x 20.8)	PIN	SINGLE SCAN
PY463s	480	12 x 40	5 x 9	.27 x .15 (6.9 x 3.7)	.031 (0.8)	7.52 x 4.43 (190.9 x 112.5)	8.88 x 5.80 x .82 (225.6 x 147.2 x 20.8)	PIN	SINGLE SCAN
PY463t	512	16 x 32	5 x 7 + U	.21 x .15 (5.3 x 3.7)	.031 (0.8)	5.94 x 6.00 (150.9 x 152.5)	7.34 x 7.27 x .82 (186.4 x 184.6 x 20.8)	PIN	SINGLE SCAN
PY463u	960	24 x 40	5 x 9	.27 x .15 (6.9 x 3.7)	.031 (0.8)	7.52 x 8.96 (190.9 x 227.7)	8.88 x 10.33 x .82 (225.6 x 262.4 x 20.8)	PIN	SINGLE SCAN

All individual character field formats are separated in the lines by a space equivalent to one dot. Those character formats which include "+U" indicate an underbar located beneath the character separated by a space equivalent to one dot.

**PY467**



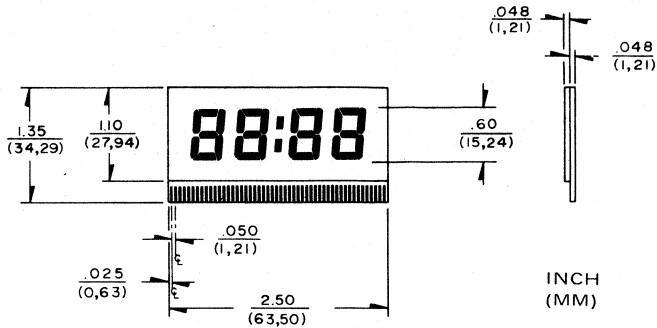
INCH  
(MM)



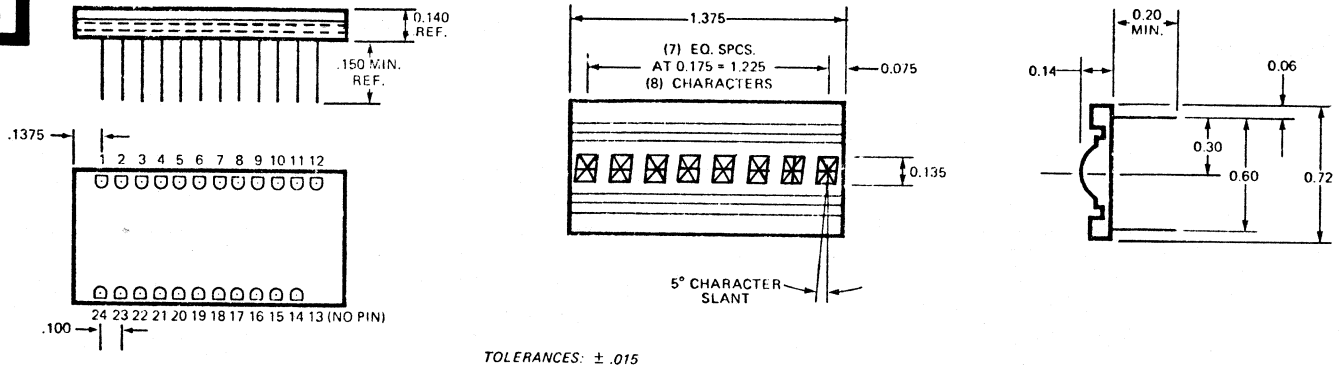
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

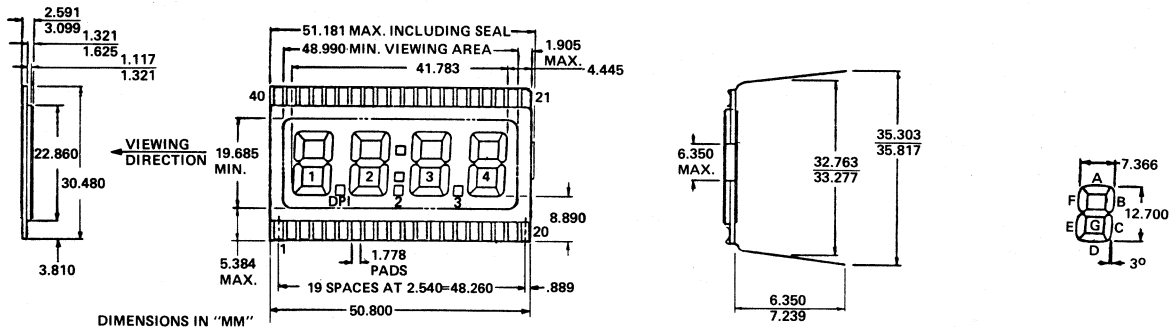
**PY468**



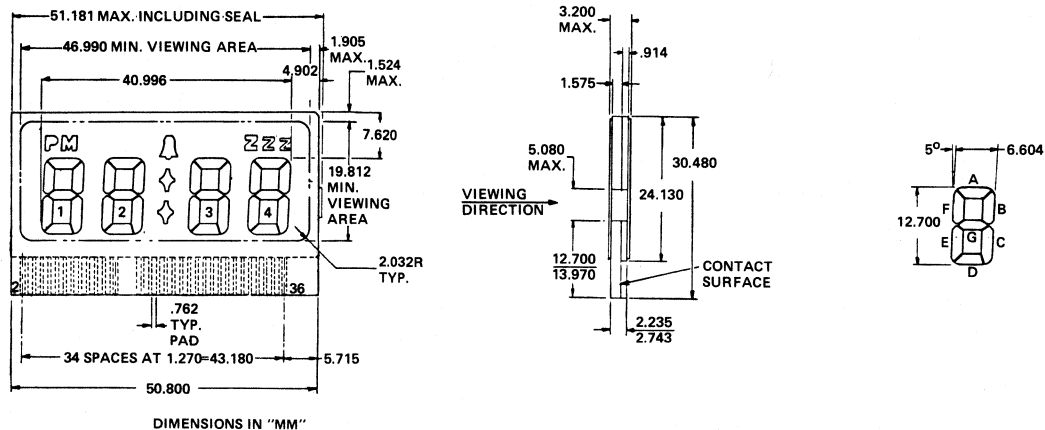
**PY469**



**PY470**



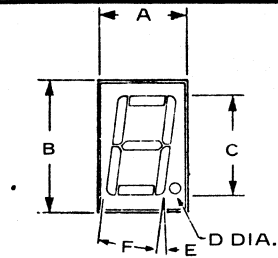
**PY471**



# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

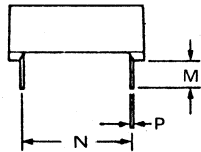
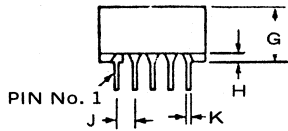
**PY472**



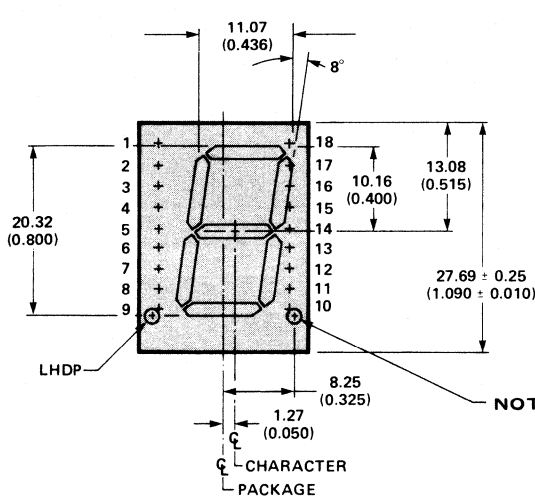
DIMENSIONS IN "MM"

PY472 ONLY  
TOLERANCE  
± .015"

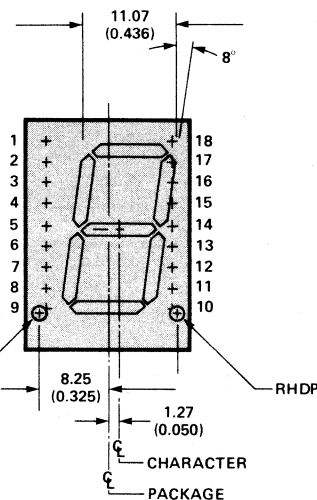
	A	B	C	D	E	F	G	H	J	K	M	N	P
PY472	12.2	19.0	14.2	1.68	8°	8.13	8.00	1.27	2.54 TYP	.510	3.94	15.2	.250
PY472a	12.2	19.0	14.4		10°	8.00	8.00		2.54	.500	3.50 MIN	15.2	.250



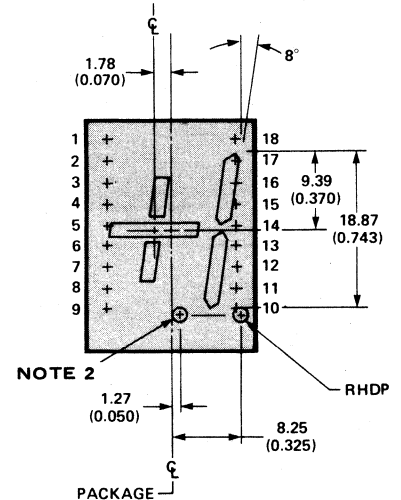
**PY473**



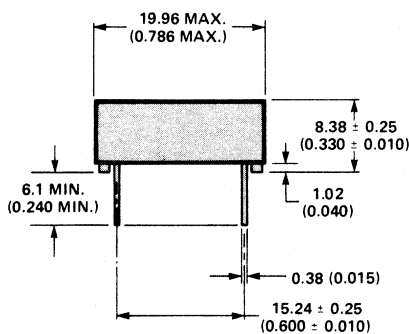
FRONT VIEW PY473



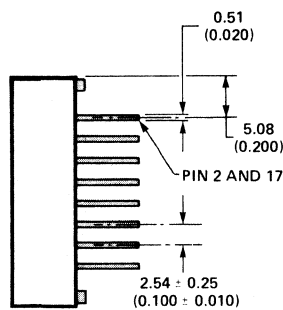
FRONT VIEW PY473a



FRONT VIEW PY473b



END VIEW



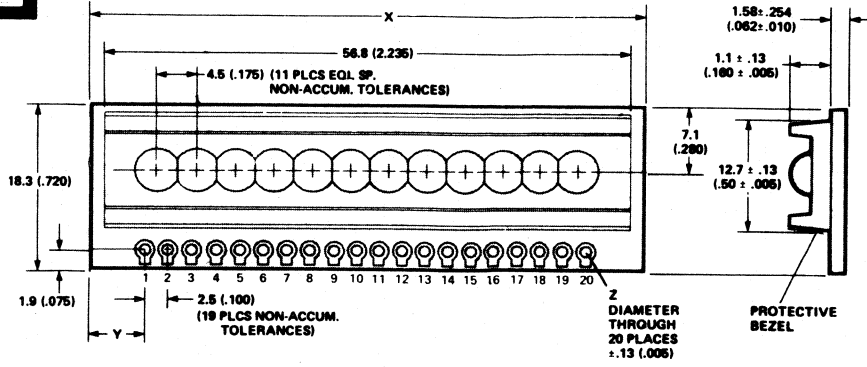
SIDE VIEW

NOTES:  
1. DIMENSIONS IN MILLIMETERS AND (INCHES).  
2. UNUSED dp POSITION.

# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

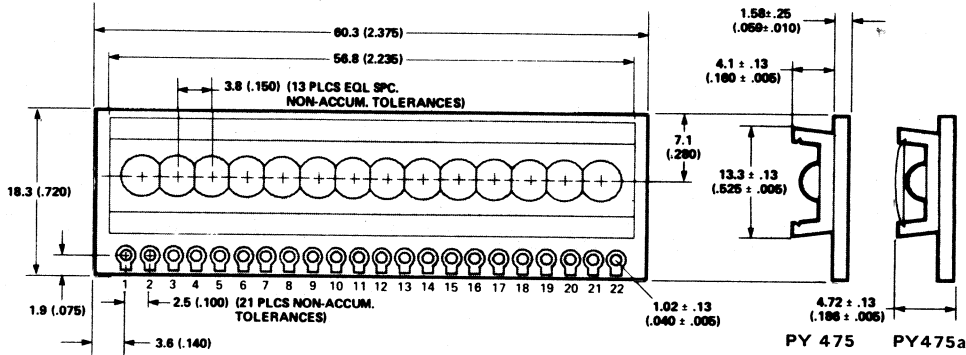
**PY474**



	X	Y	Z
PY474	60.3 (2.375)	6.03 (.2375)	1.02 (.040)
PY474a	59.6 (2.345)	5.70 (.2225)	1.42 (.056)

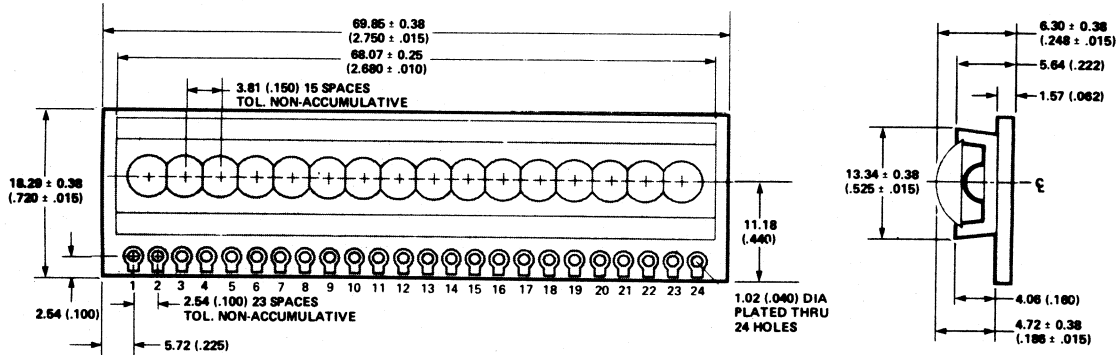
MM (IN)

**PY475**



MM (IN)

**PY476**



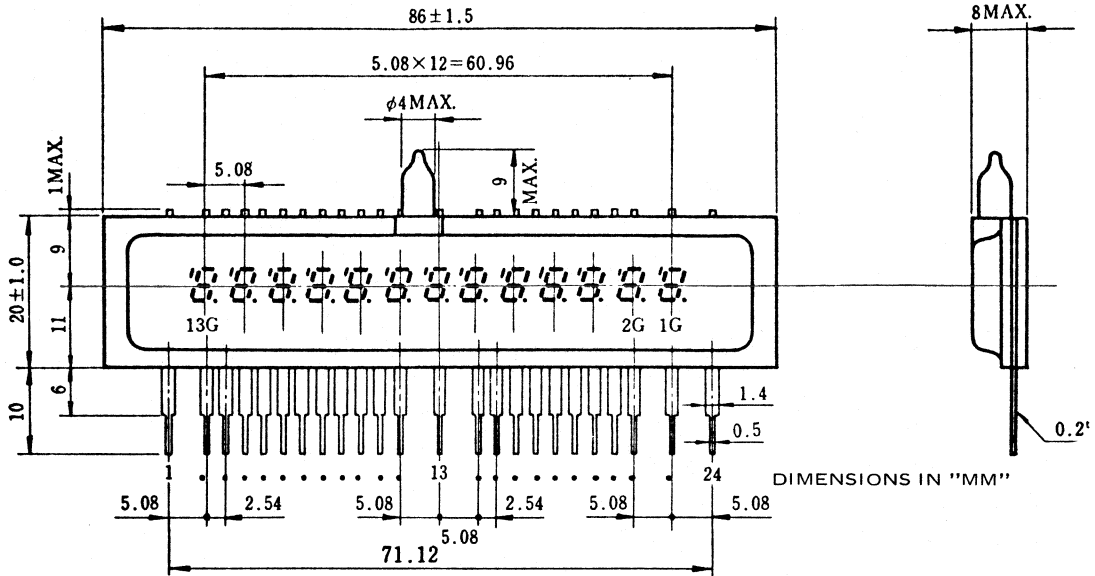
MM (IN)



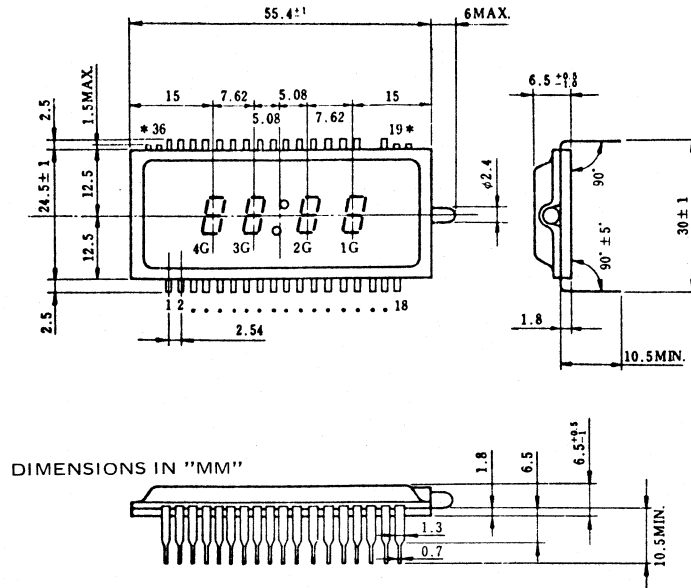
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

PY479



PY480



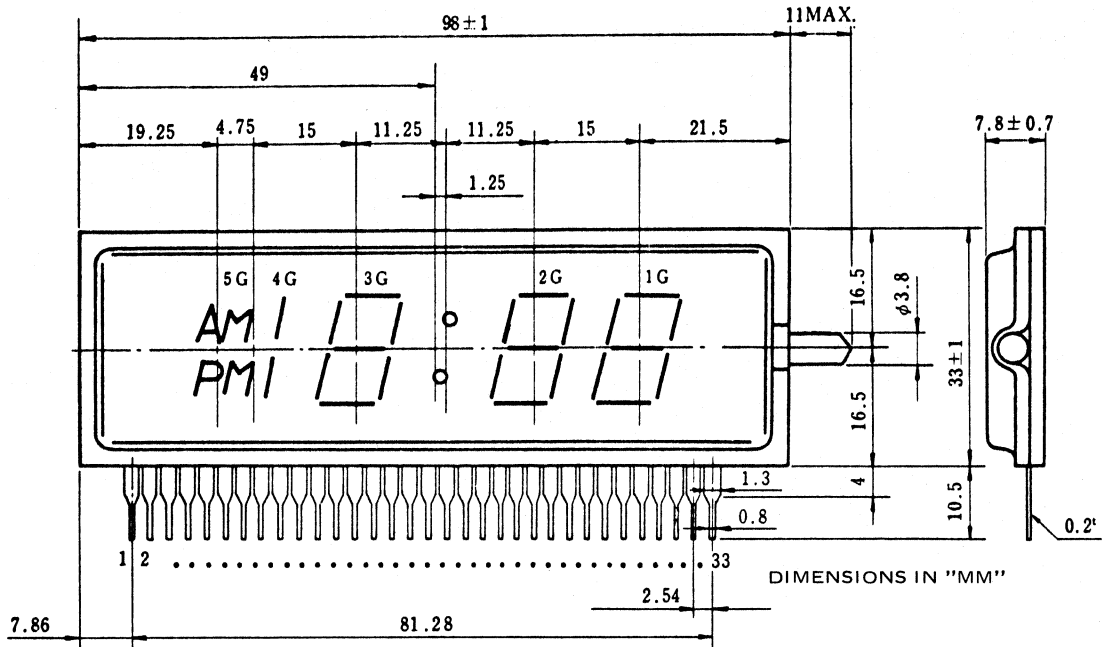




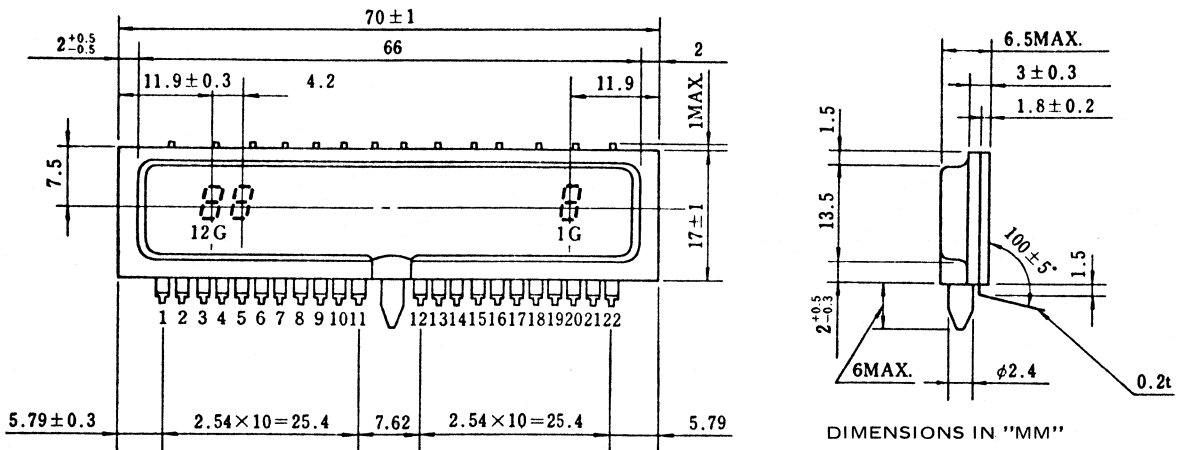
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

**PY485**



**PY486**

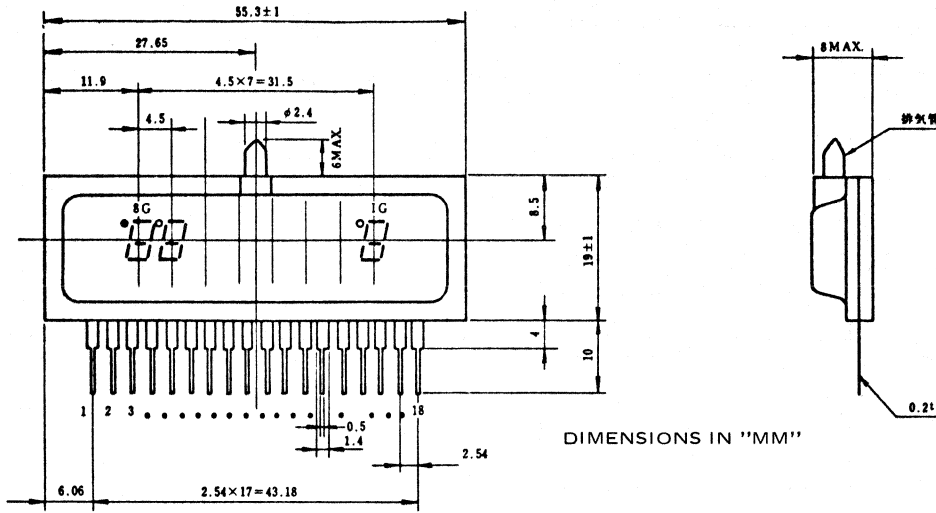




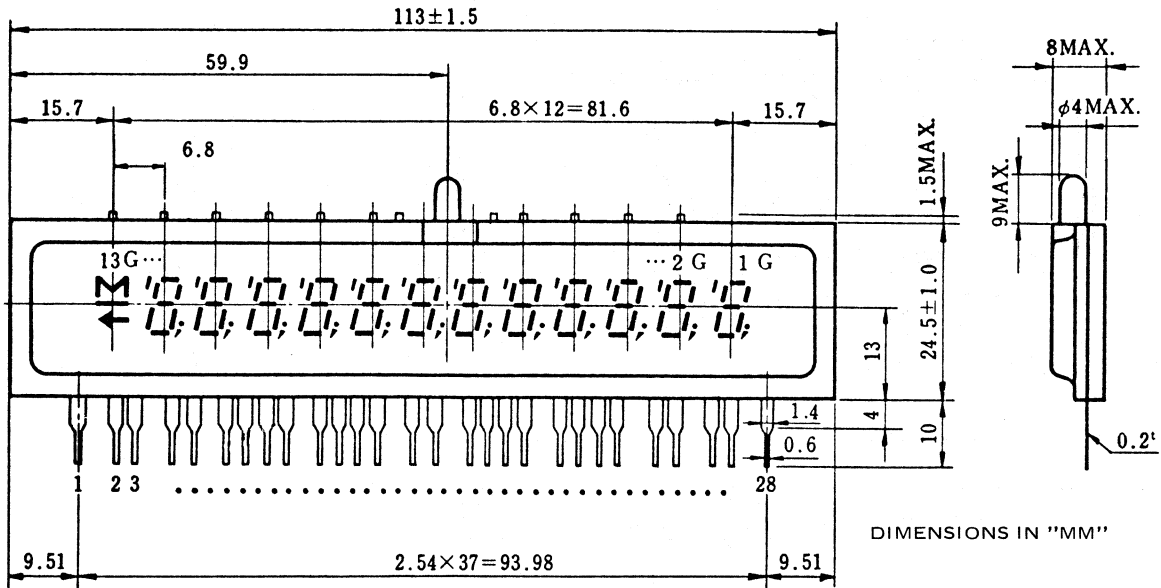
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

PY487



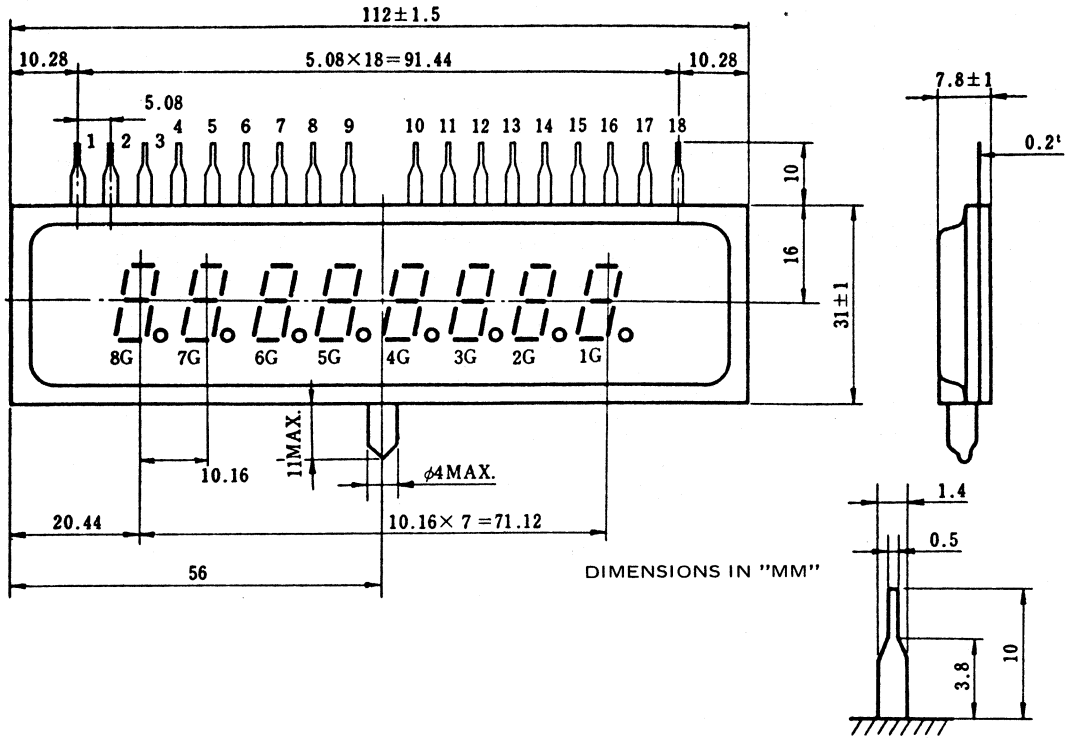
PY488



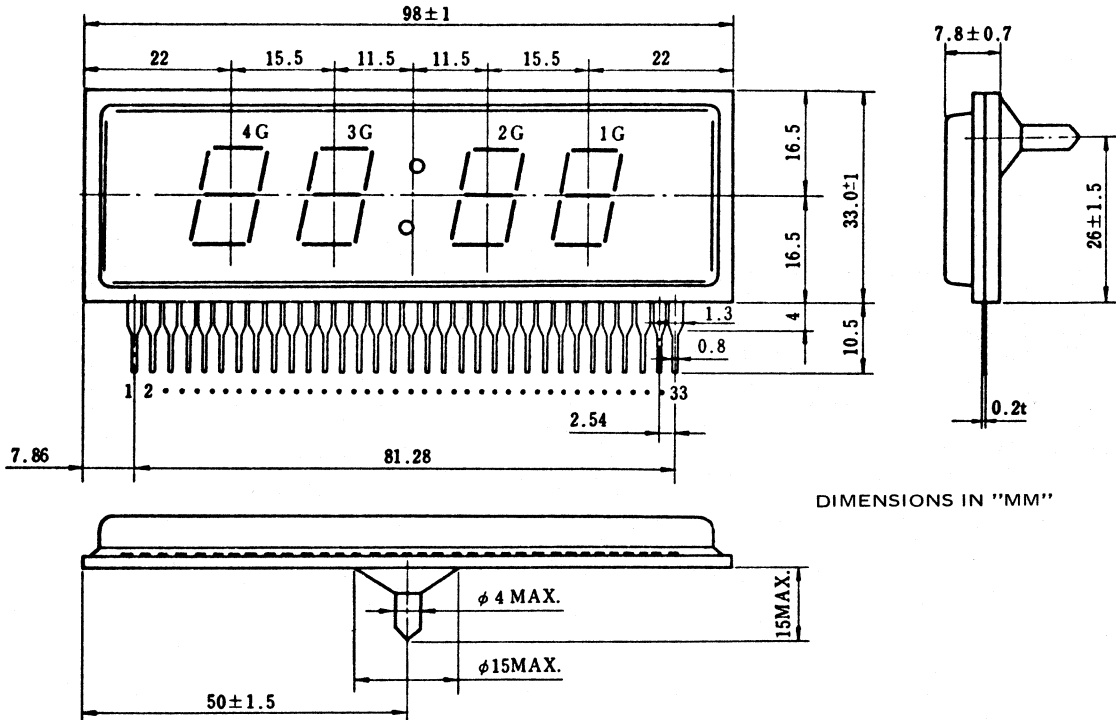
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

**PY489**



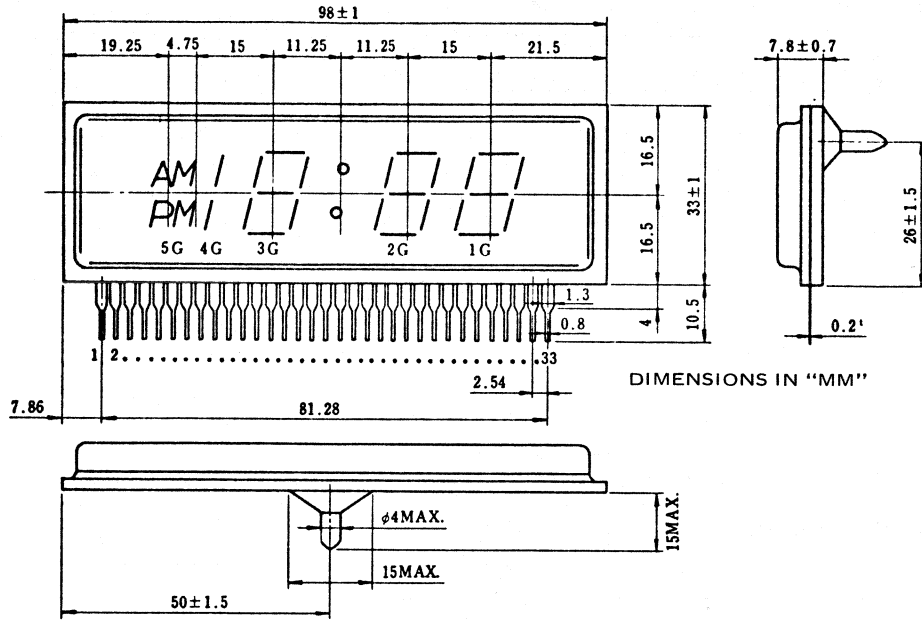
**PY490**



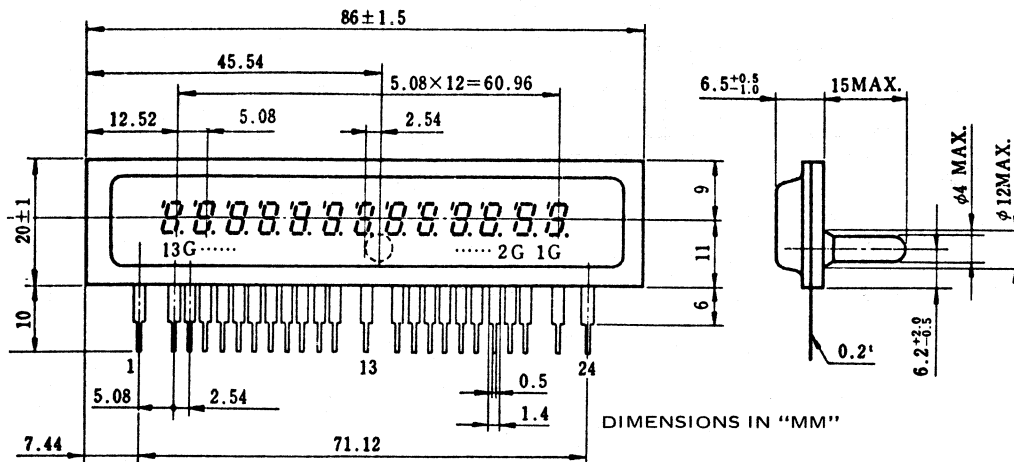
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

PY491



PY492

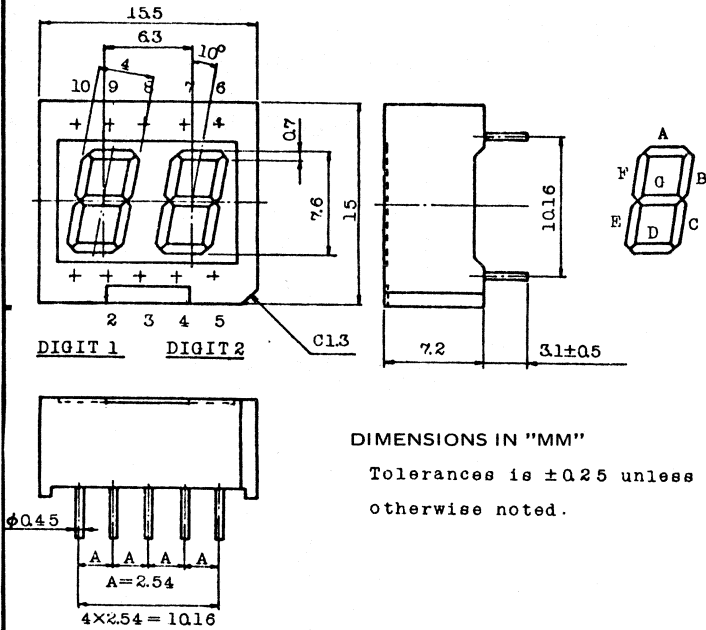




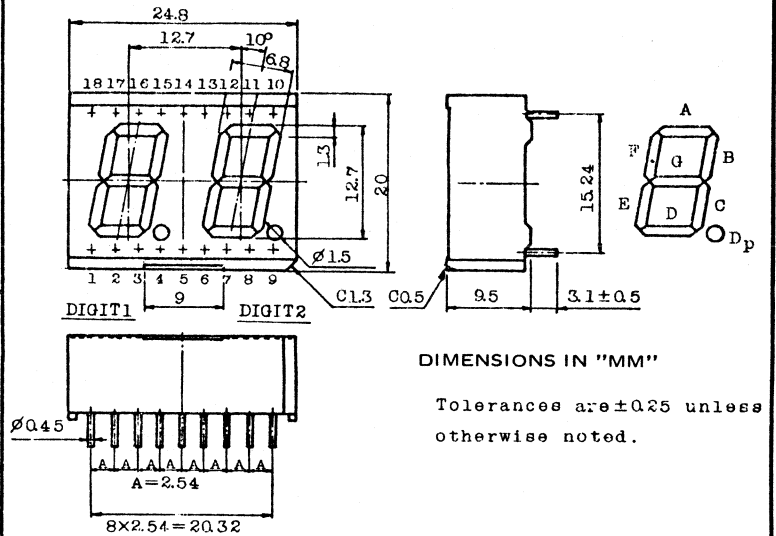
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

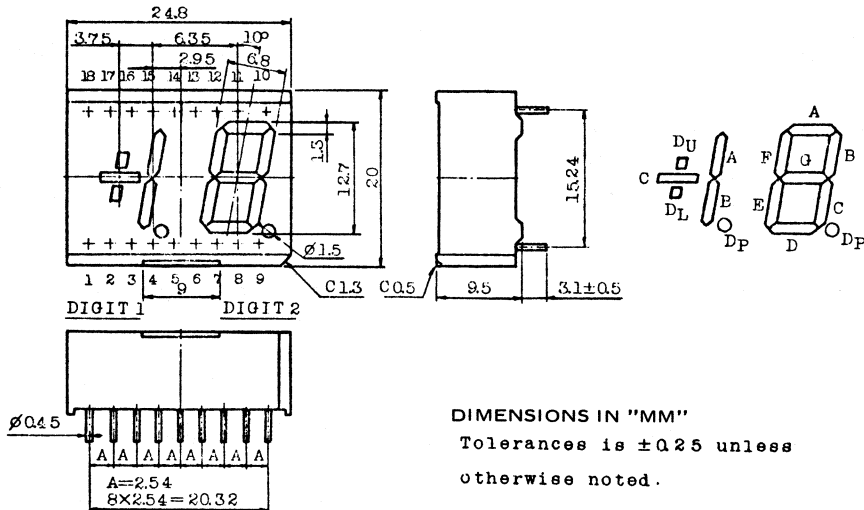
**PY500**



**PY501**



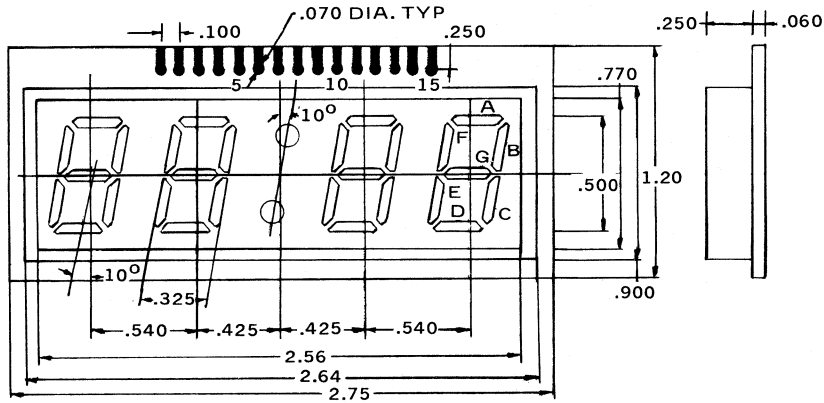
**PY502**



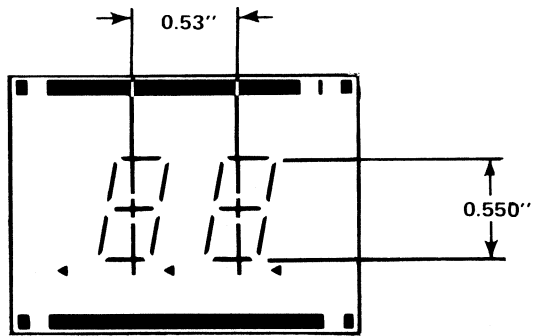
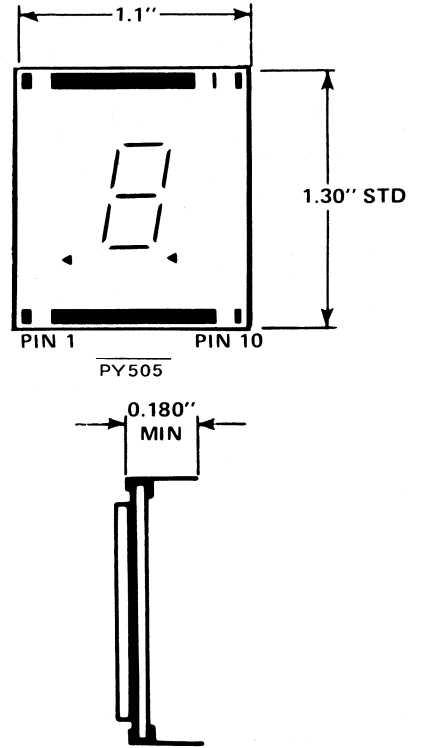
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

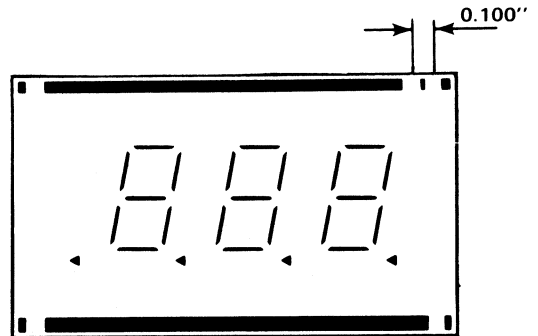
**PY503**



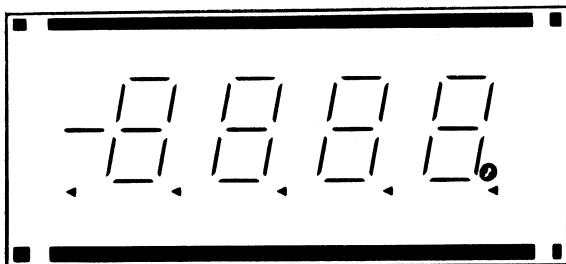
**PY505**



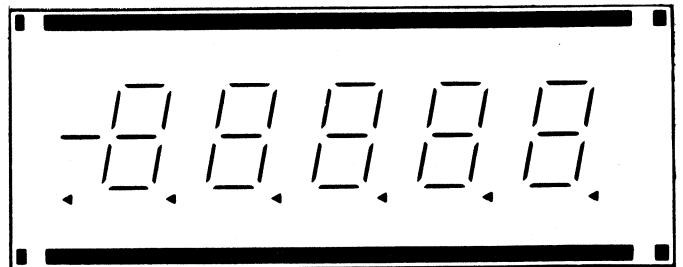
PY505a



PY505b



PY505c

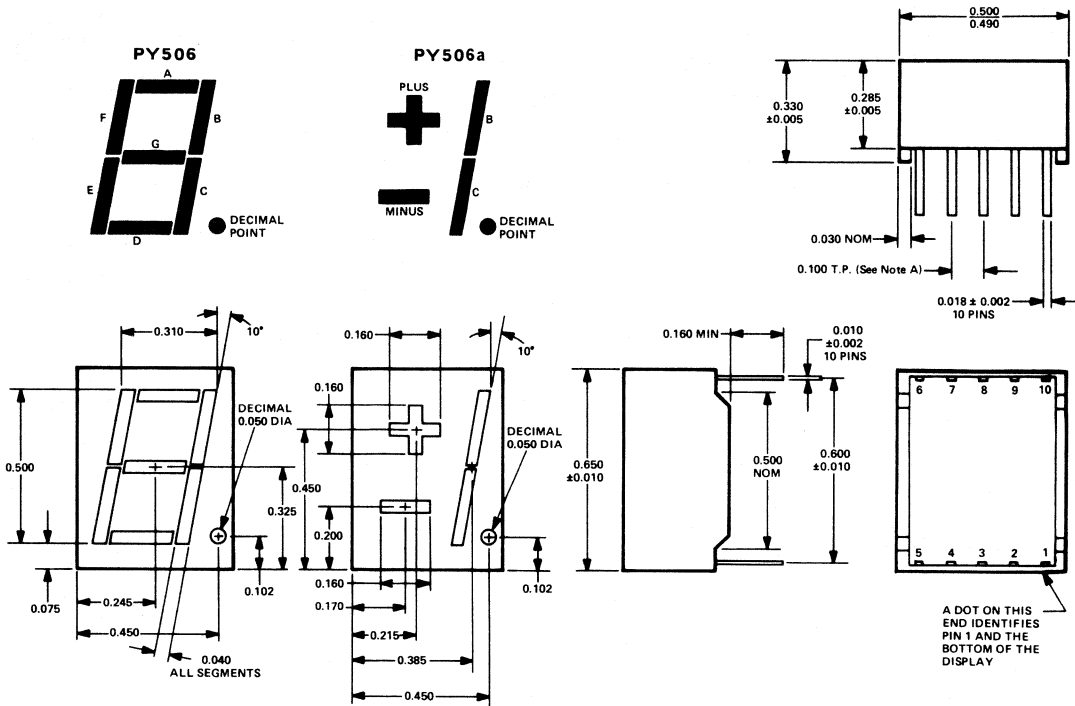


PY505d

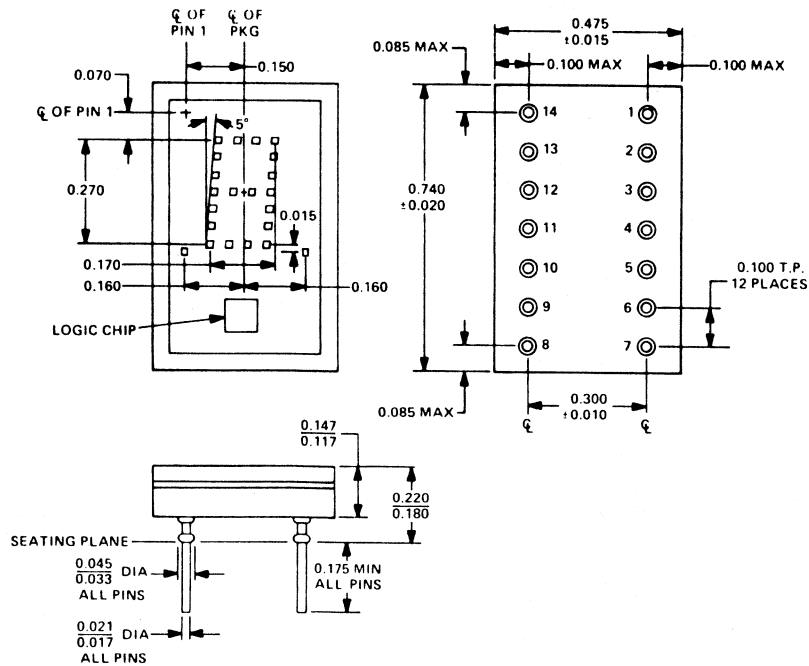
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

**PY506**



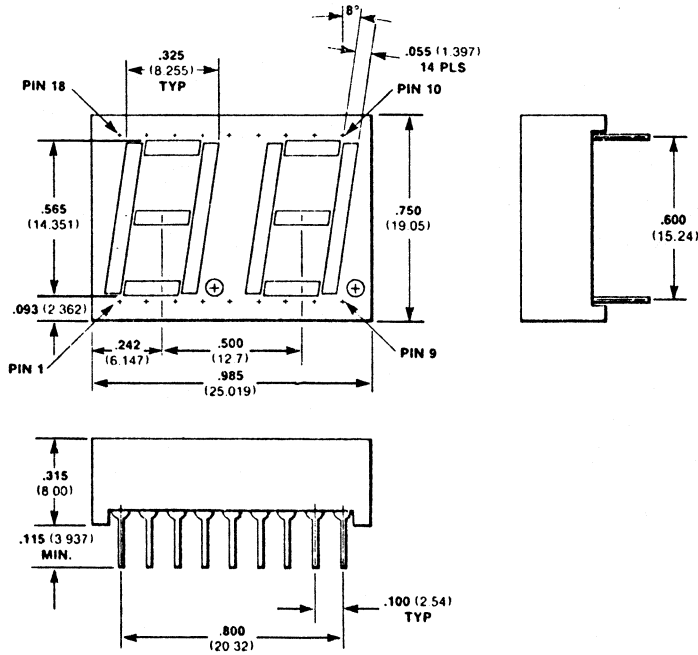
**PY507**



# 49. OUTLINE DRAWINGS

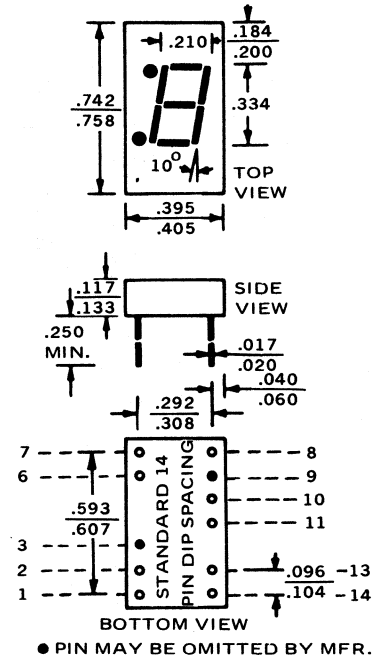
IN DRAWING NUMBER  
SEQUENCE

**PY508**



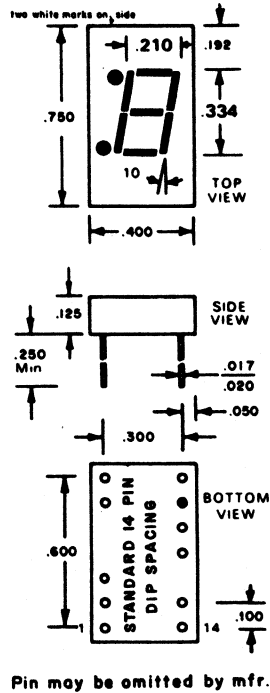
NOTES:  
All dimensions in inches (bold) and millimeters (parentheses)

**PY510**



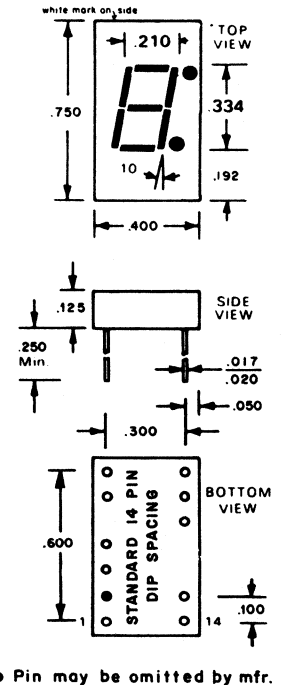
PY510 = PINS No. 3,9 MAY BE OMITTED BY MFR.  
PY510a = PIN No. 9 MAY BE OMITTED BY MFR.

**PY511**



● Pin may be omitted by mfr.

**PY512**



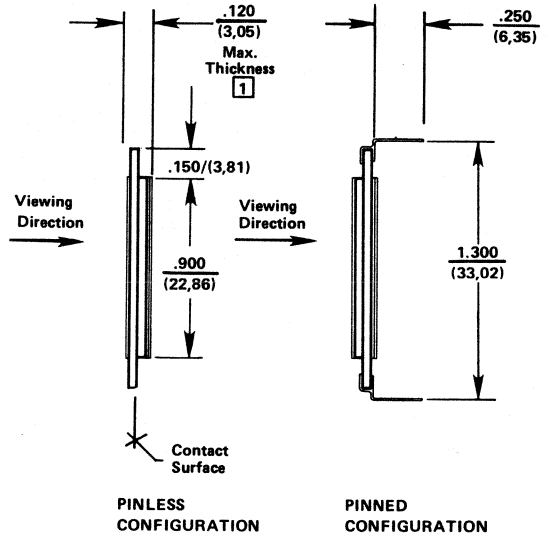
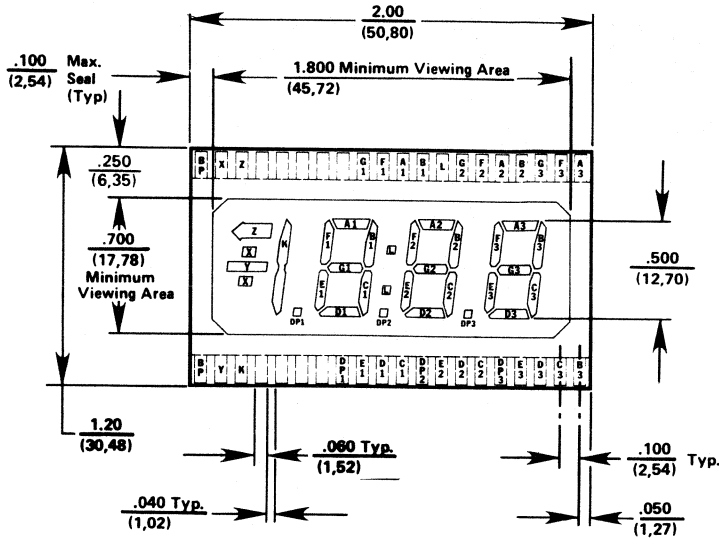
● Pin may be omitted by mfr.



# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

**PY513**



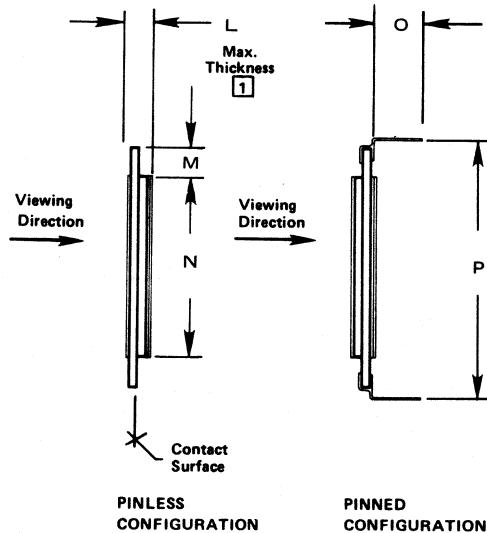
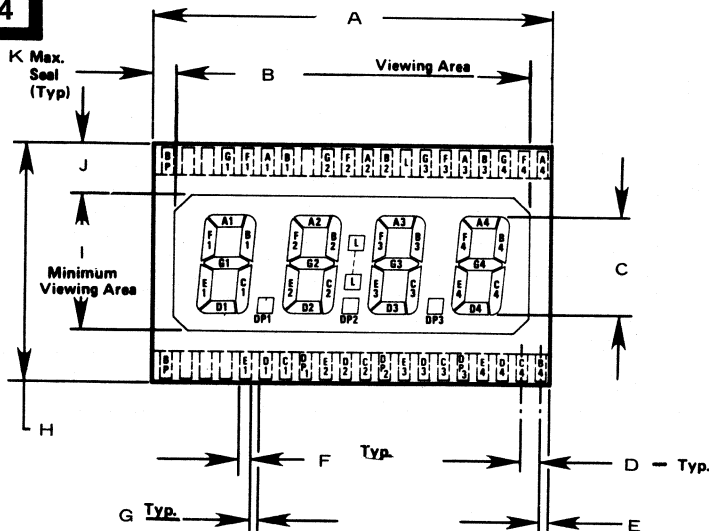
**NOTES**

1 Maximum thickness includes front and back polarizers plus reflector attached.

2 Dimensions:  $\frac{\text{Inches}}{\text{(mm)}}$

MINIMUM VIEWING AREA: 1.800 x .700 (45,72 mm x 17,78 mm)

**PY514**



**NOTES**

1 Maximum thickness includes front and back polarizers plus reflector attached.

FOR PY514b,c,d ONLY

M	#1	Reflective
O	#2	Transmissive
D	#3	Transflective
E	#4	Diffused Reflective
	#5	Diffused Transflective

PIN CONFIG.  
FOR PY514a  
ONLY

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
PY514	2.00	1.80 MIN	.500	.100	.035	.060	.040	1.20	.700	.250	.100	.120	.150	.900	.250	1.30
PY514a	2.75	2.50 MIN	.700	.100	.430	.060	.040	1.50	.950	.275	.125	.120	.150	1.20	.250	1.60
PY514b	2.00	1.80	.500	.100	.049	.060	.040	1.20	.700	.149		.111			.125	1.30
PY514c	2.75	2.55	.700	.100		.060	.040	1.50	1.00	.150		.111			.125	1.30
PY514d	2.25	2.05	.600	.100	.175	.060	.040	1.20	.800	.100		.111			.125	1.30

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Segment	BP	N/C	N/C	N/C	E1	D1	C1	dp1	E2	D2	C2	dp2	E3	D3	C3	dp3	E4	D4	C4	B4

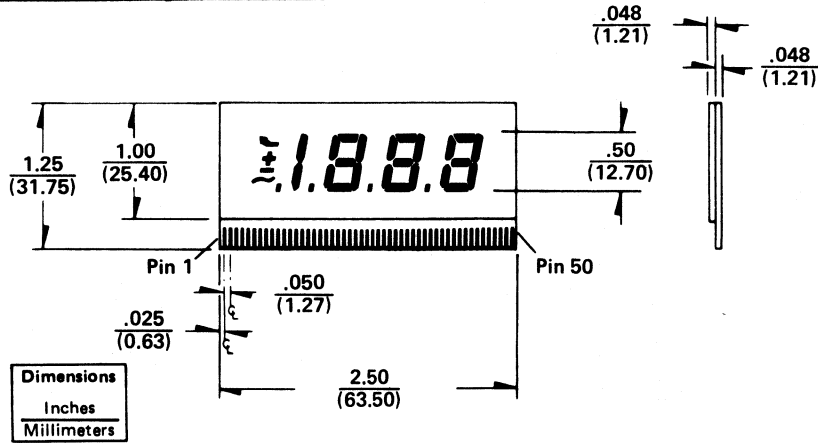
  

Pin No.	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Segment	A4	F4	G4	B3	A3	F3	G3	L	B2	A2	F2	G2	N/C	B1	A1	F1	G1	N/C	N/C	N/C

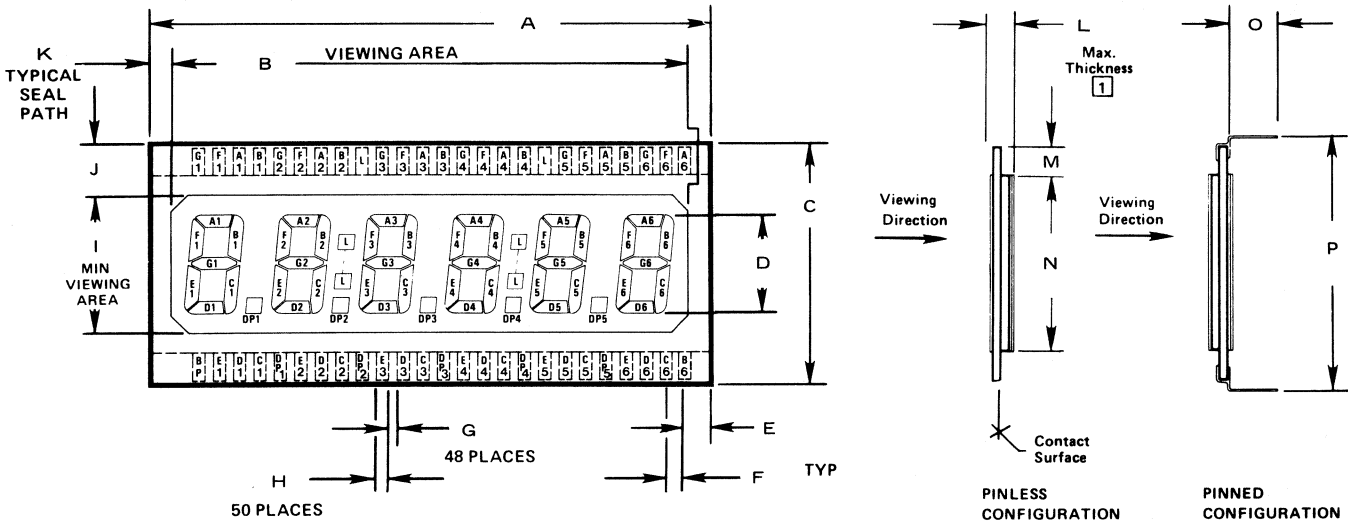
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

**PY515**



**PY516**



**NOTES**

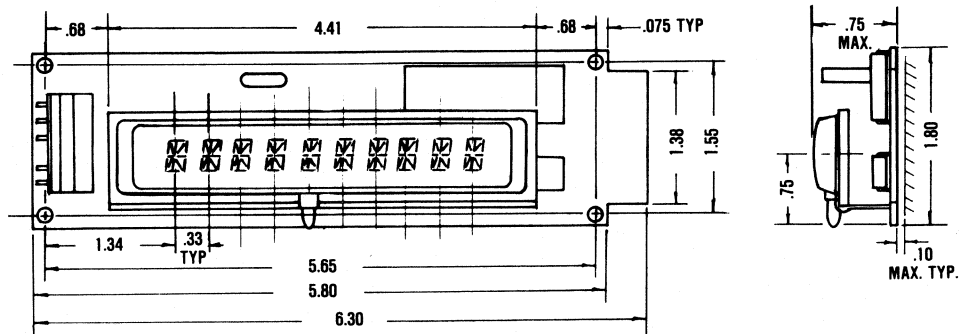
1 Maximum thickness includes front and back polarizers plus reflector attached.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
PY516	2.75	2.55	1.20	.500	.125	.100	.040	.060	.700	.250	.100	.120	.150	.900	.250	1.30
PY516a	3.69	3.45	1.50	.700	.650	.100	.040	.060	.950	.275	1.25	.120	.150	1.20	.250	1.60

PIN CONFIG.  
FOR PY516a  
ONLY

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Segment	BP	E1	D1	C1	dp1	E2	D2	C2	dp2	E3	D3	C3	dp3	E4	D4	C4	dp4	E5	D5	C5	dp5	E6	D6	C6	B6
Pin No.	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
Segment	A6	F6	G6	B5	A5	F5	G5	L	B4	A4	F4	G4	B3	A3	F3	G3	L	B2	A2	F2	G2	B1	A1	F1	G1

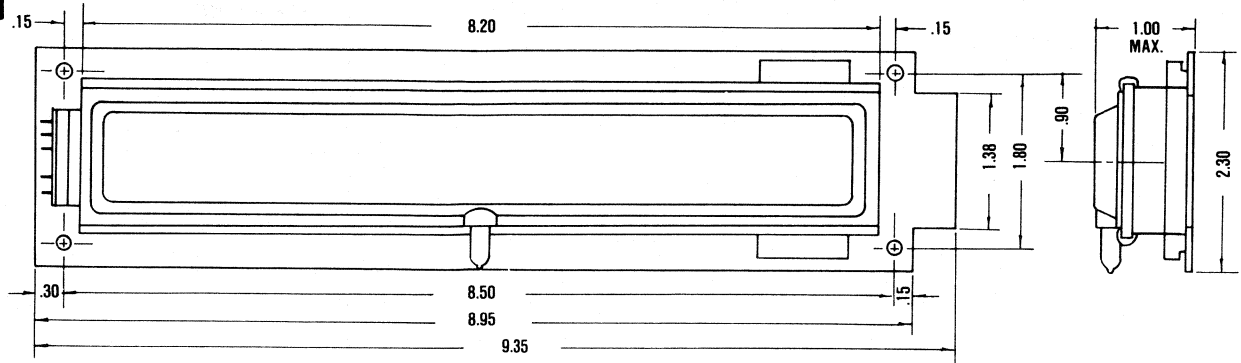
**PY517**



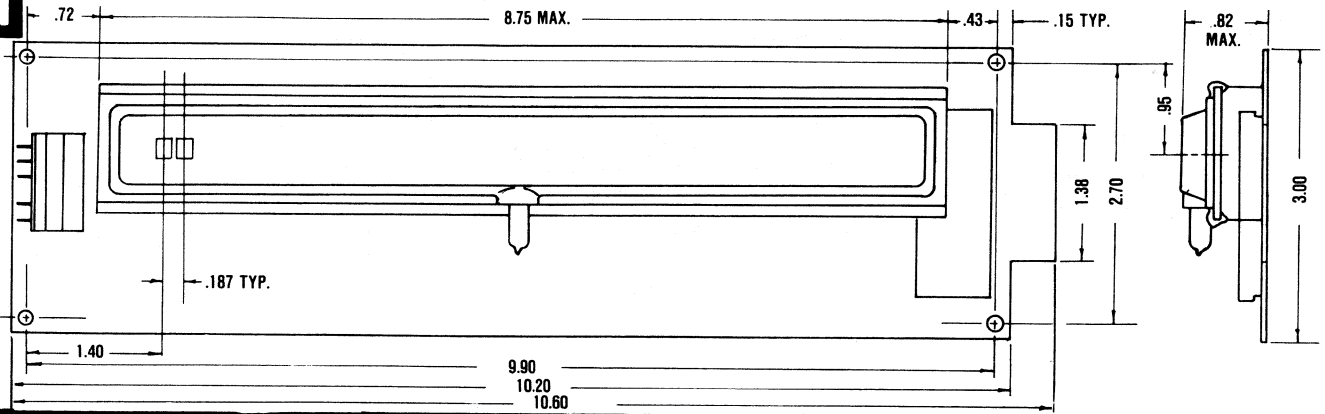
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

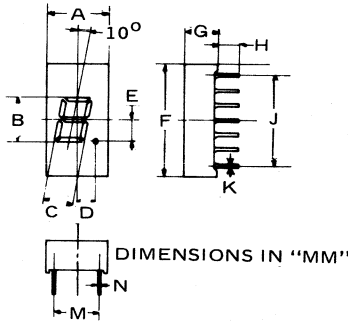
**PY518**



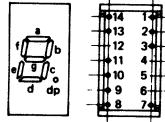
**PY519**



**PY520**



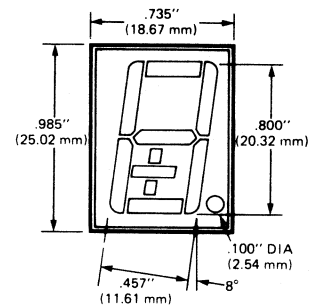
Terminal Assignments



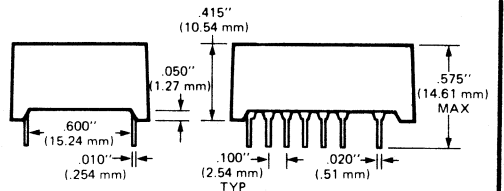
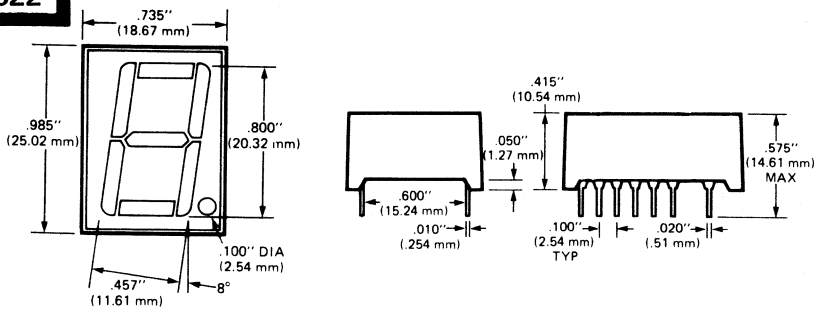
DIMENSIONS IN "MM"

	A	B	C	D	E	F	G	H	J	K	M	N
PY520	10.0	7.60	5.00	3.00	3.60	19.0	5.5	3.50 MIN	15.24	.500	7.60	.250
PY520a	11.0	11.0	7.00	4.30	6.00	19.0	6.5	3.50 MIN	15.24	.500	7.60	.250

**PY521**



**PY522**

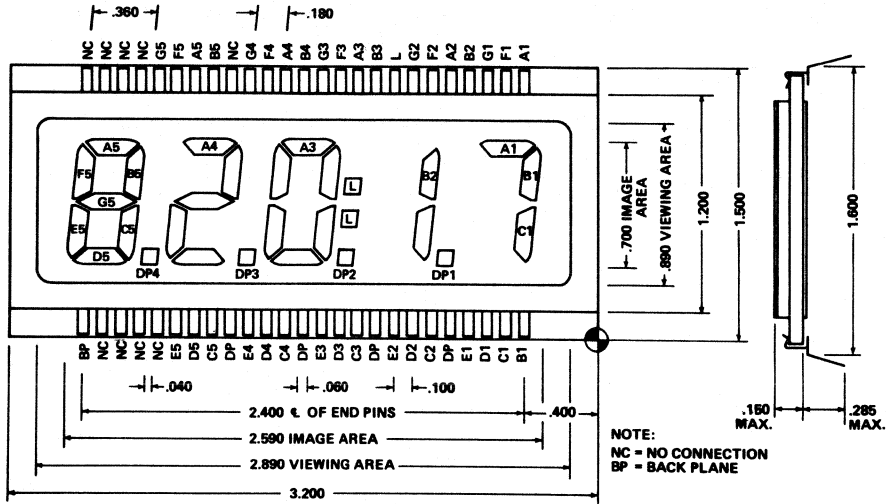




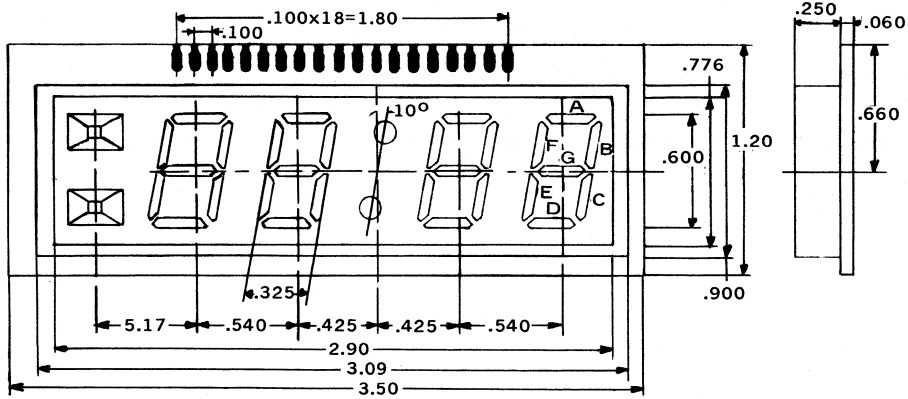
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

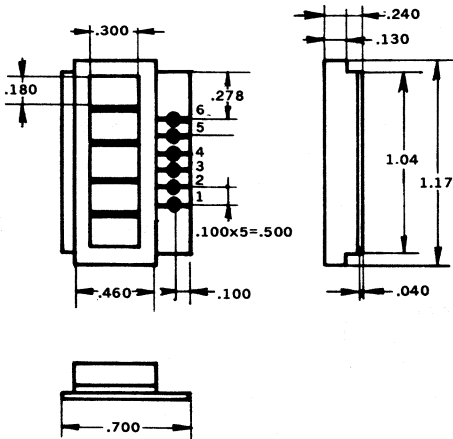
**PY535**



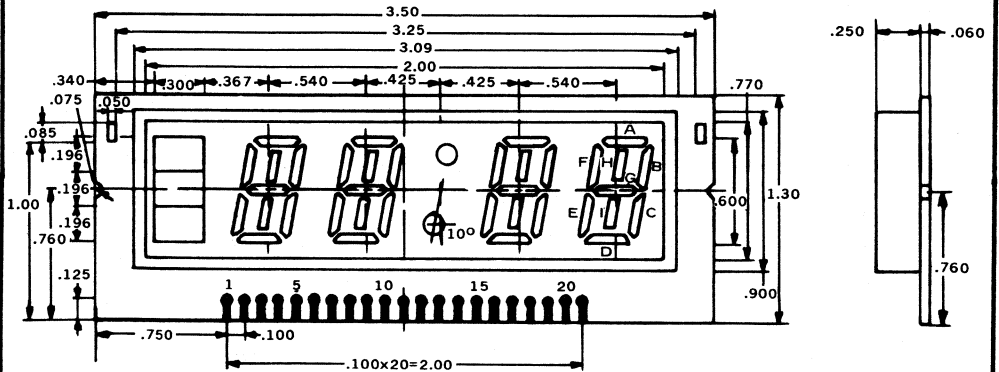
**PY536**



**PY537**



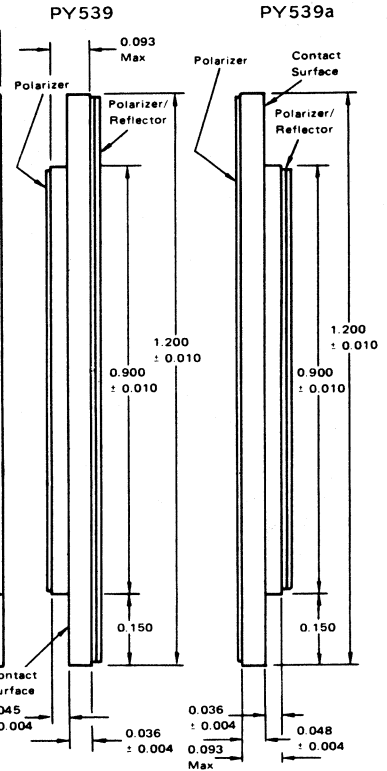
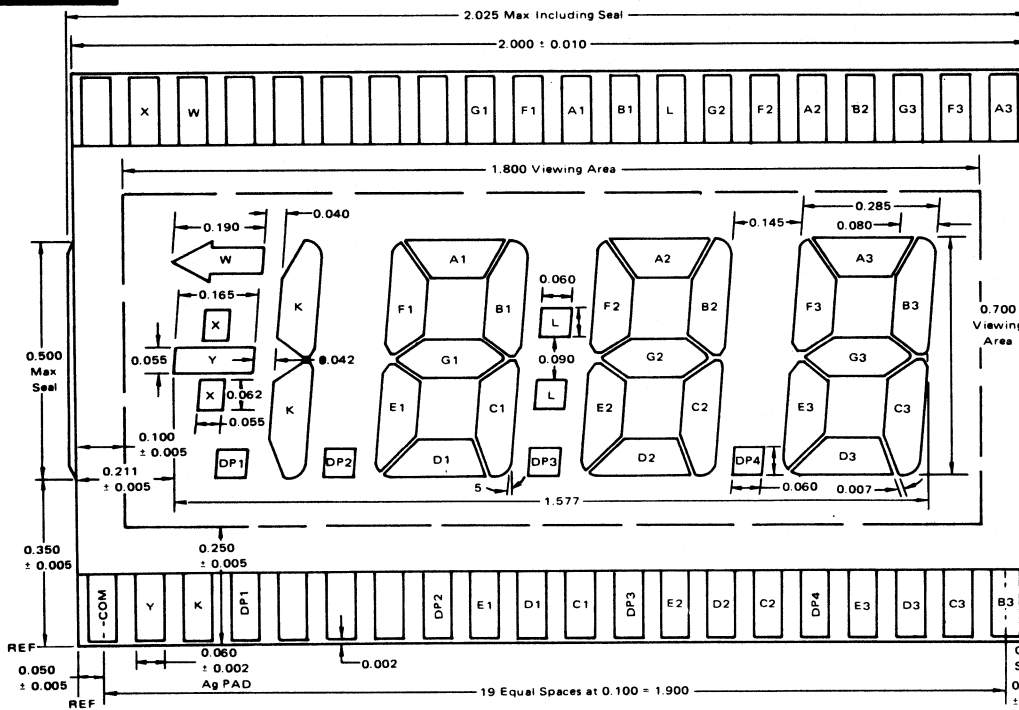
**PY538**



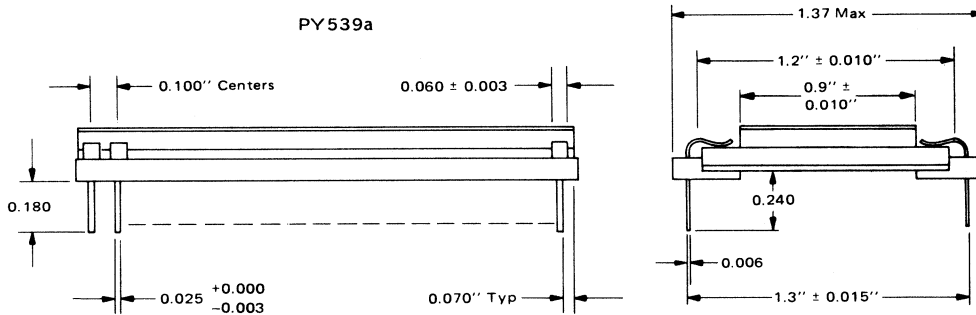
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

**PY539**

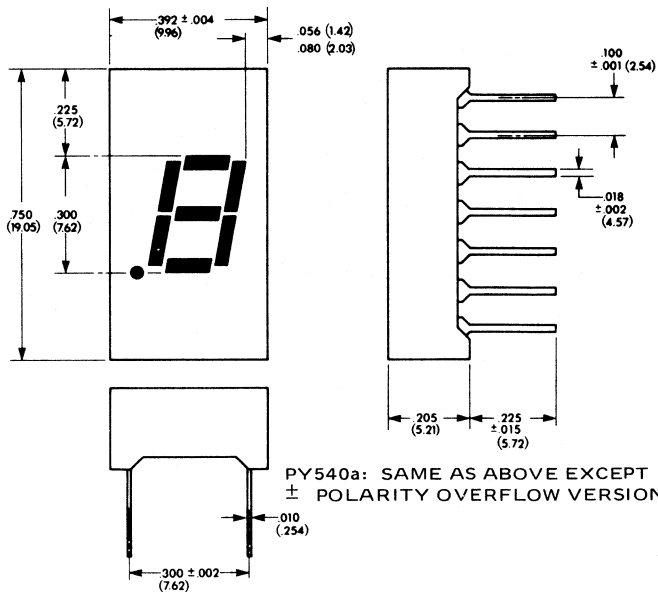


PY539a

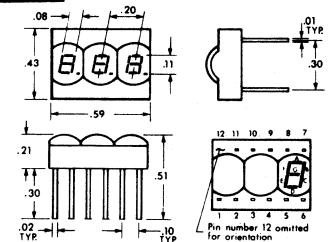


**PY540**

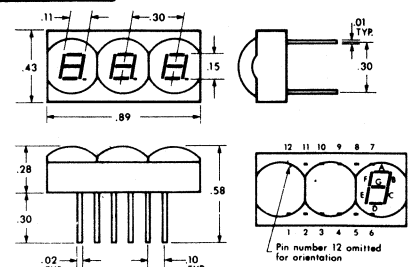
Dimensions in inches (mm)



**PY541**



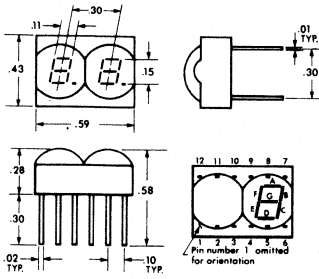
**PY542**



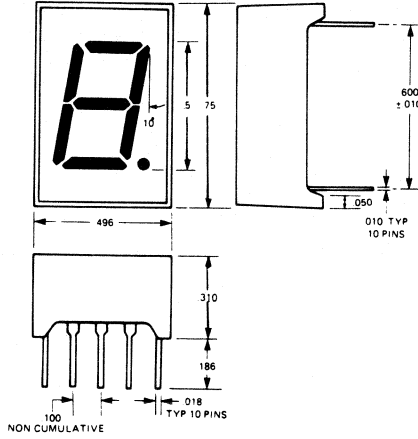
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

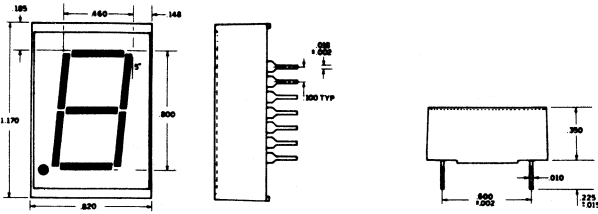
## PY543



## PY544

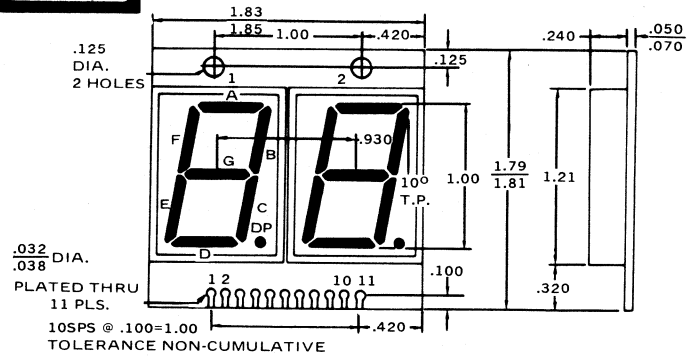


## PY545

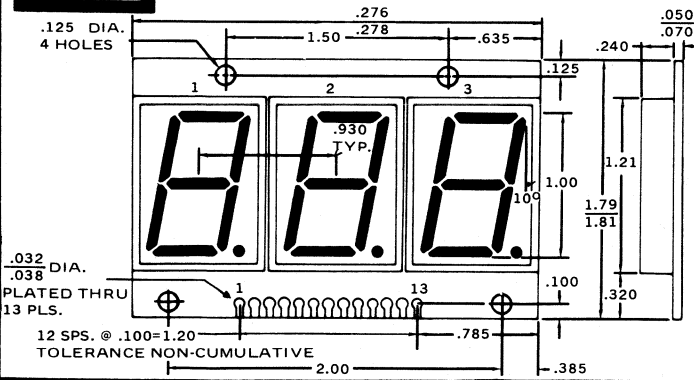


PY545a: SAME AS ABOVE EXCEPT  
± POLARITY OVER FLOW VERSION

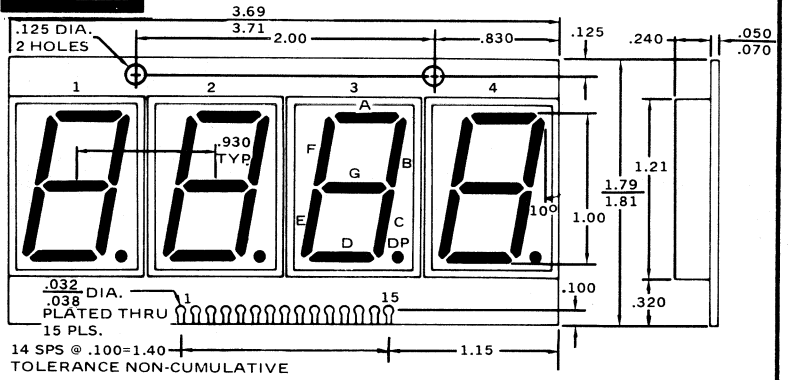
## PY546



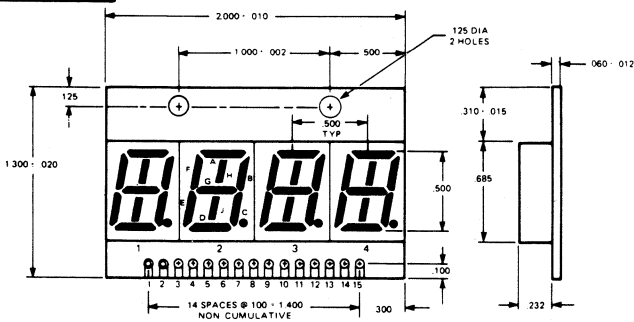
## PY547



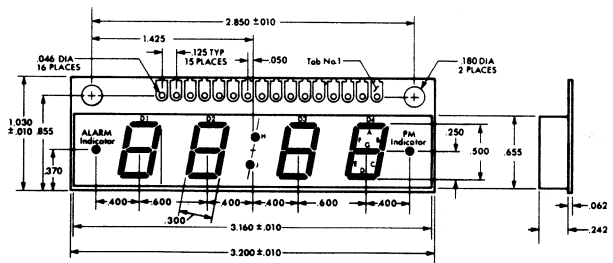
## PY548



## PY549



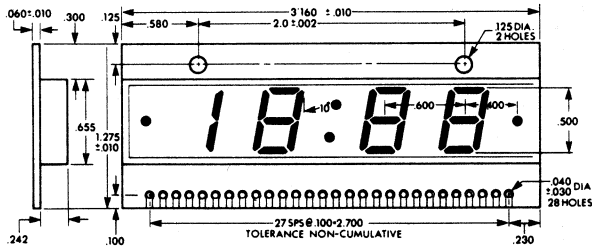
## PY550



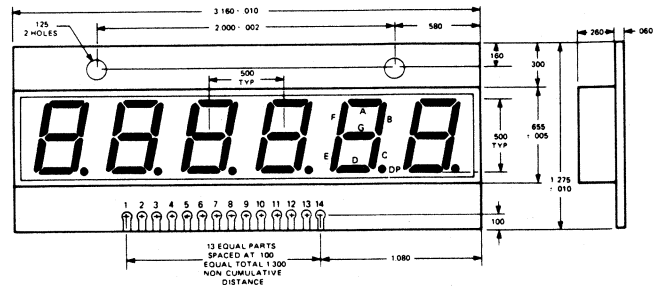
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

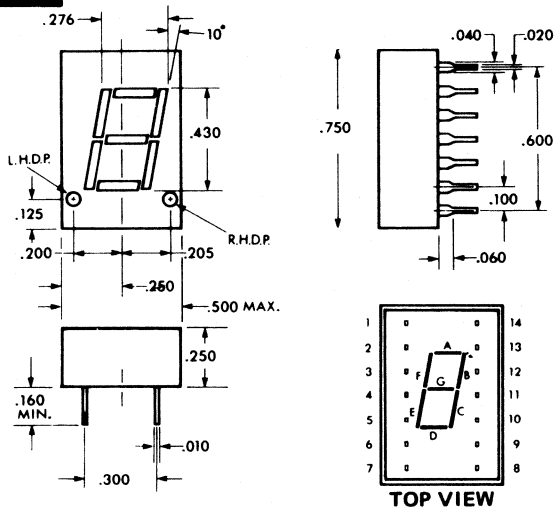
**PY551**



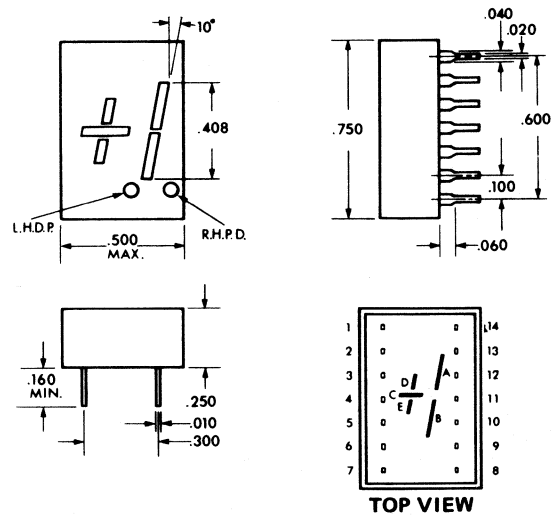
**PY552**



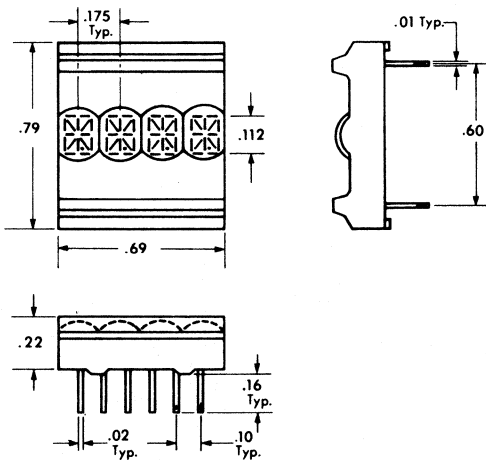
**PY553**



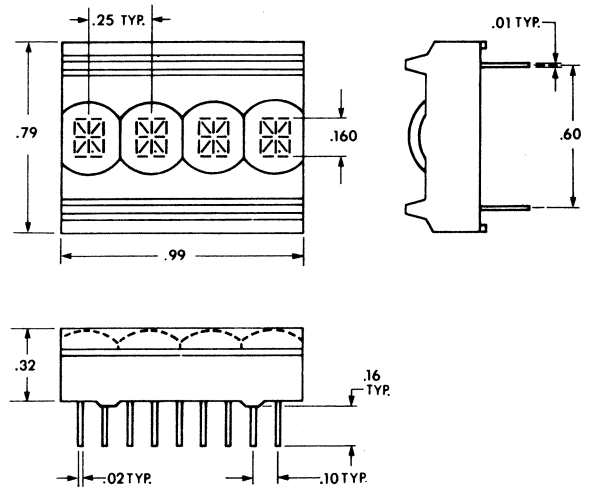
**PY554**



**PY555**



**PY556**

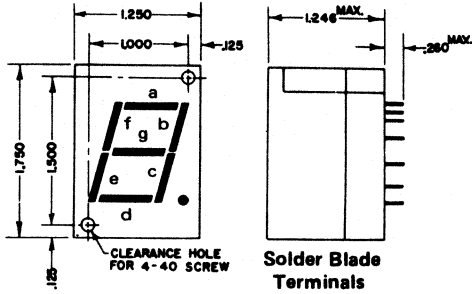




# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

## PY557

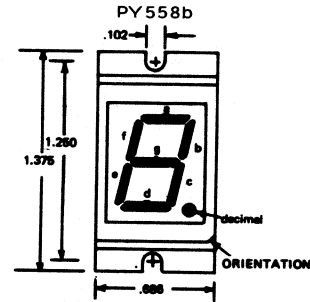
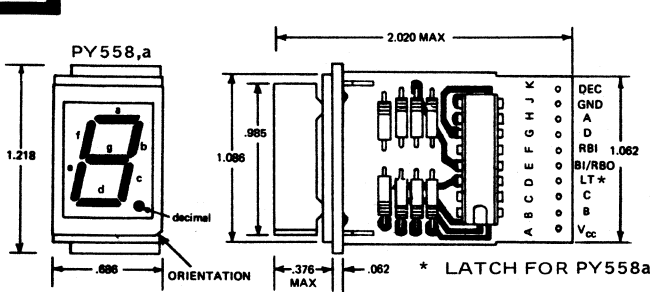


7 Segment PY557  
 7 segment with Right Decimal PY557a  
 7 segment with Colon\* PY557b  
 Plus/Minus PY557c  
 Plus/Minus with Right Decimal PY557d

\* Contains upper left point only. A 7 segment with right decimal must precede this display to form an entire colon.

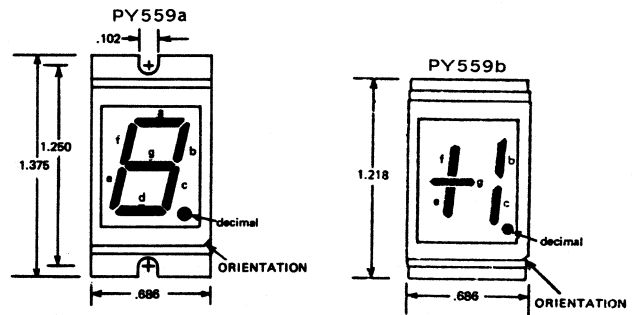
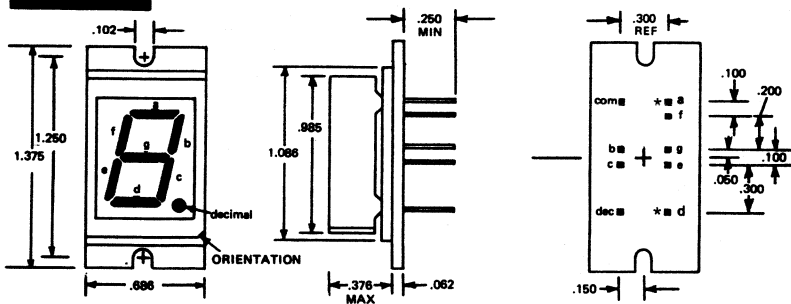
Terminal designations marked on display back.

## PY558



ASSEMBLY AVAILABLE WITH UP TO TEN MODULES (PY558 & PY558a ONLY)

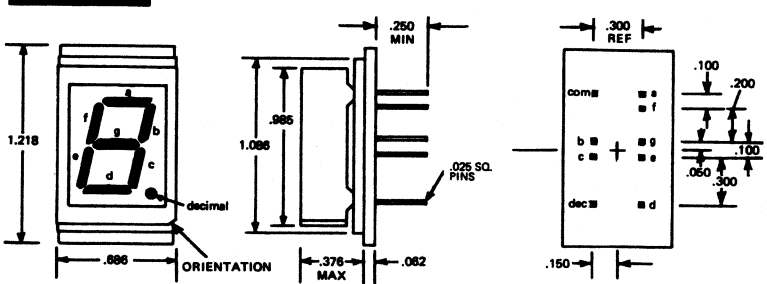
## PY559



ASSEMBLY AVAILABLE WITH UP TO TEN MODULES (PY559 & PY559b ONLY)

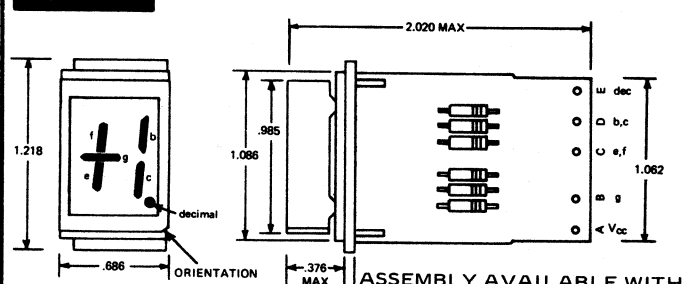
\* NOT PRESENT ON PY559b

## PY560



ASSEMBLY AVAILABLE WITH UP TO TEN MODULES

## PY561

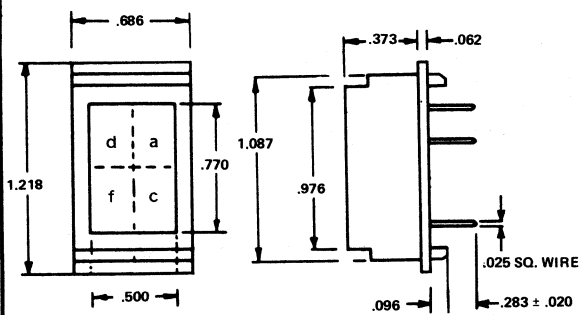


ASSEMBLY AVAILABLE WITH UP TO TEN MODULES

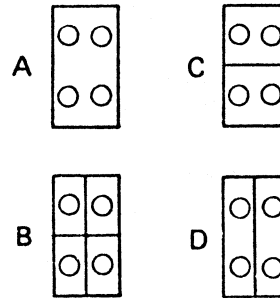
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

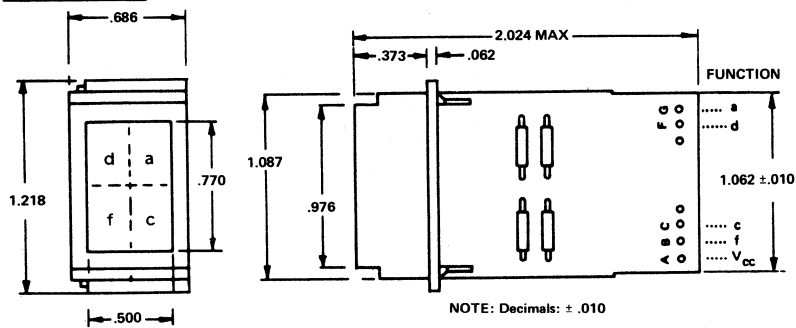
## PY562



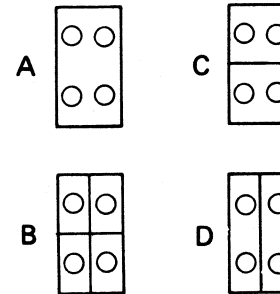
TYPICAL  
LIGHT CELL  
LAYOUTS POSSIBLE



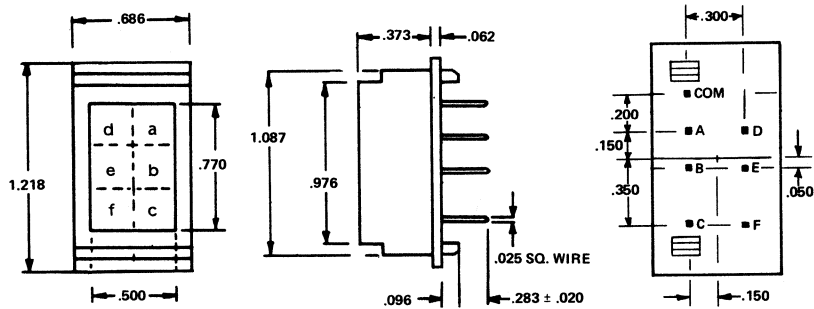
## PY563



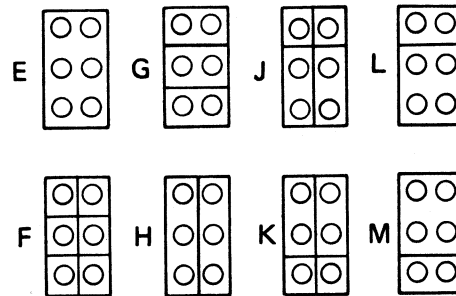
TYPICAL  
LIGHT CELL  
LAYOUTS POSSIBLE



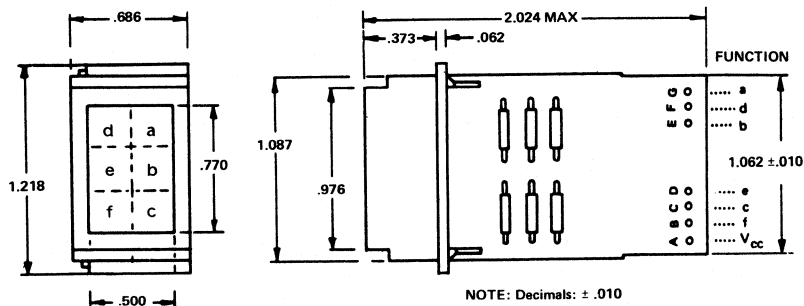
## PY564



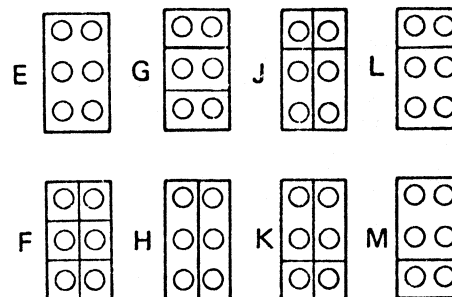
TYPICAL  
LIGHT CELL  
LAYOUTS POSSIBLE



## PY565



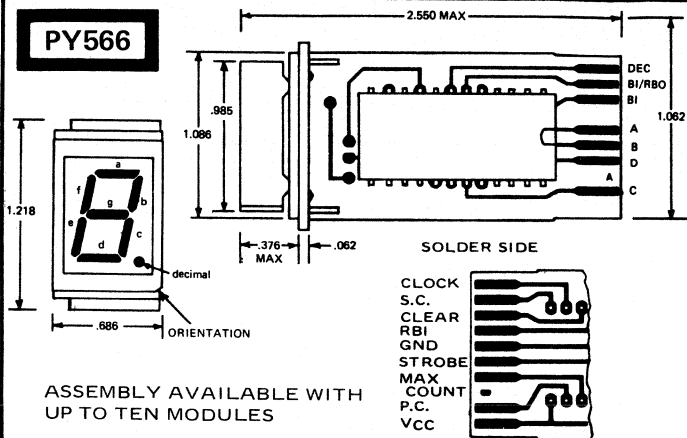
TYPICAL  
LIGHT CELL  
LAYOUTS POSSIBLE



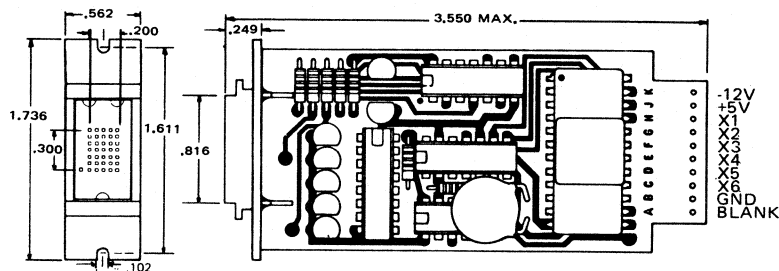
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

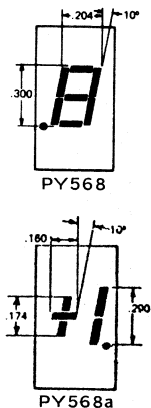
**PY566**



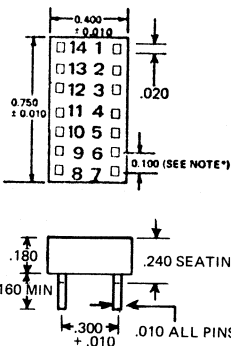
**PY567**



**PY568**



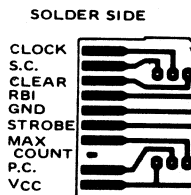
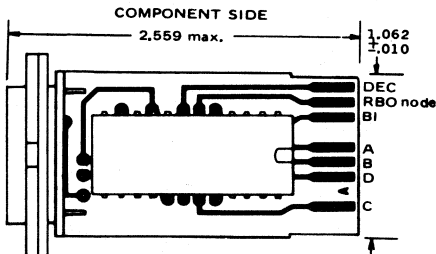
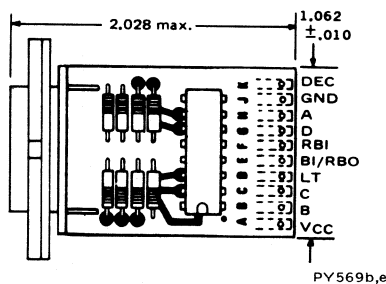
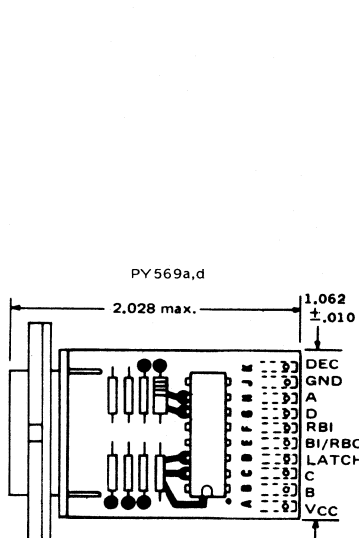
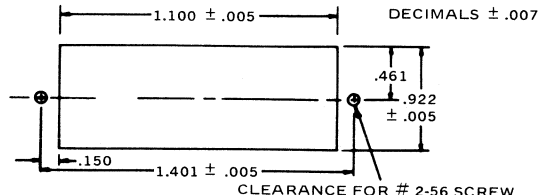
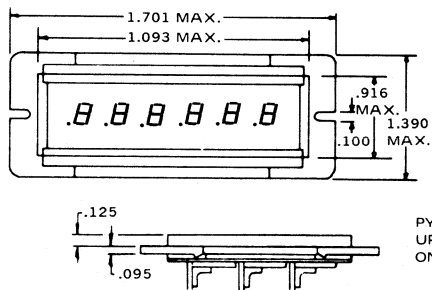
End and bottom views and  
terminal detail for both types



**\*NOTE:** The true position pin spacing is .100" between centerline. Each pin centerline is within .010" of its true longitudinal position relative to pins 4 and 11.

PY568: ASSEMBLY AVAILABLE WITH UP TO TEN MODULES

**PY569**

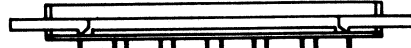
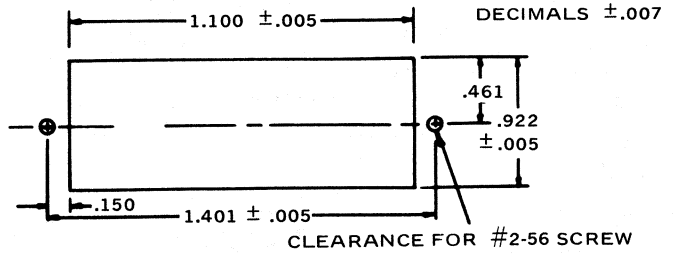
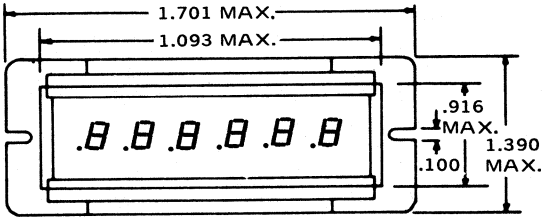


PY569c,d,e : MODULE ONLY

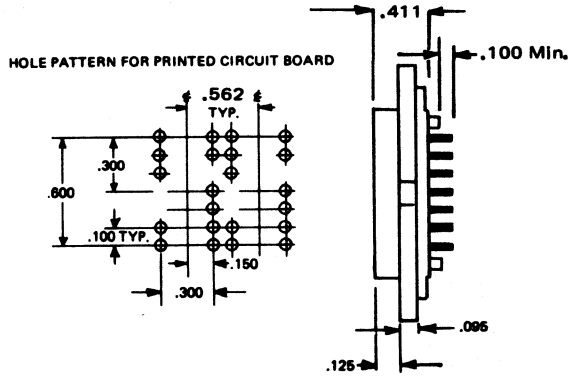
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

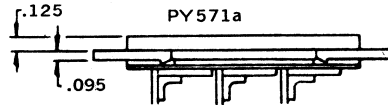
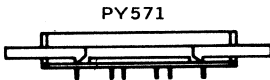
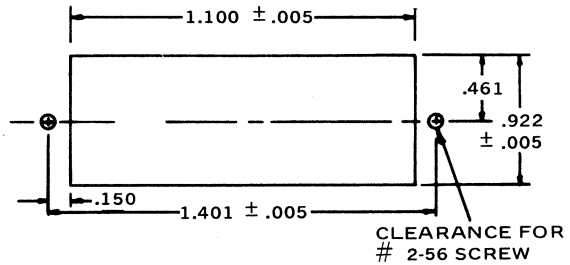
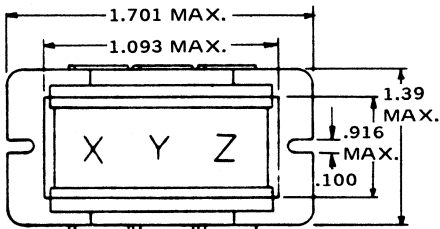
**PY570**



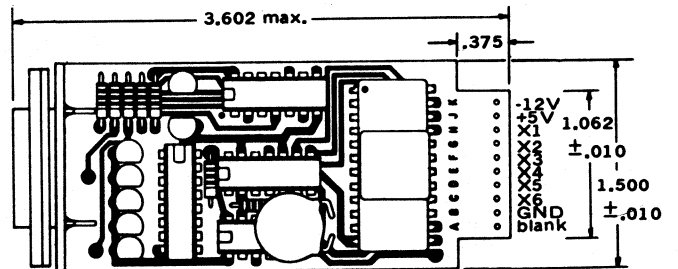
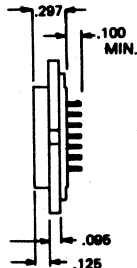
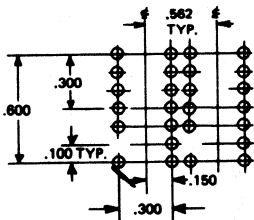
ASSEMBLY AVAILABLE WITH UP TO TEN MODULES. DIMENSIONS FOR ONE (1) SHOWN



**PY571**



HOLE PATTERN FOR PRINTED CIRCUIT BOARD



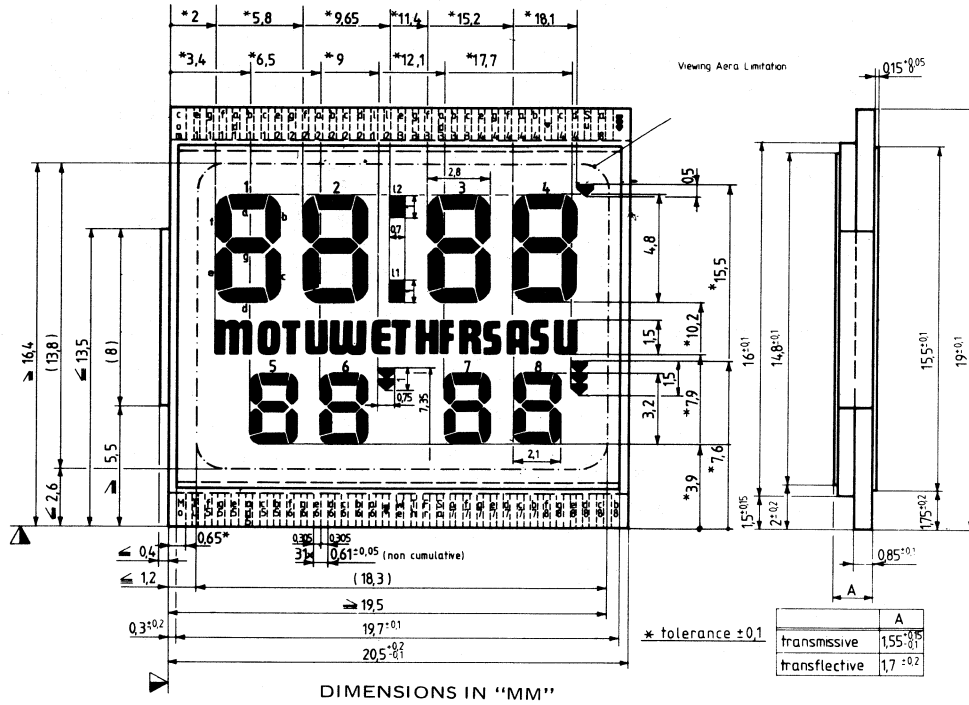
ASSEMBLY AVAILABLE WITH UP TO TEN MODULES DIMENSIONS SHOWN FOR ONE(1)



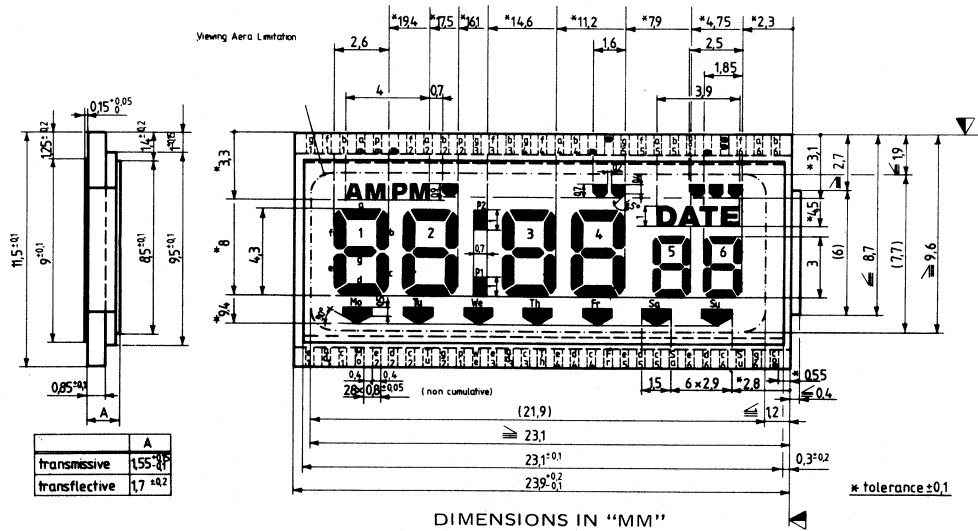
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

PY575



PY577

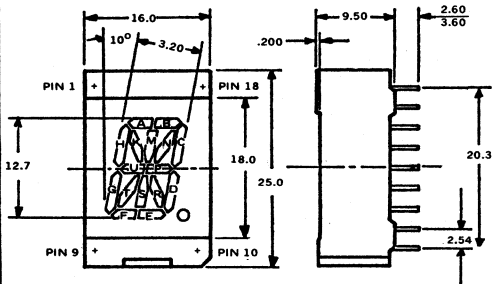




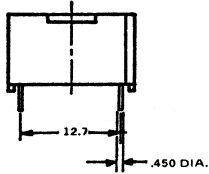
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

**PY581**



NOTE: DIMENSIONS ARE IN MILLIMETERS



**PY582**

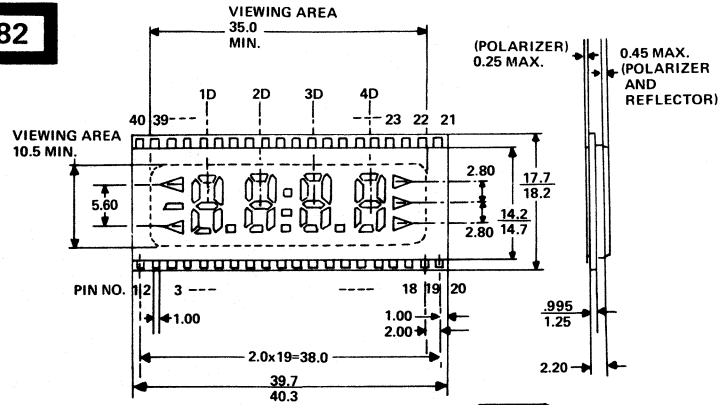


FIG. 1 DETAILED OUTLINE DIMENSIONS  
MM(INCH)

PIN NO.	SEGMENT	PIN NO.	SEGMENT
1	COMMON	21	DELTA-3
2	MINUS	22	4D-b
3	DELTA-2	23	4D-a
4	1D-e	24	4D-f
5	1D-d	25	4D-g
6	1D-c	26	3D-b
7	2D-dp	27	3D-a
8	2D-c	28	3D-f
9	2D-d	29	3D-g
10	2D-c	30	COLON
11	3D-dp	31	2D-b
12	3D-e	32	2D-a
13	3D-d	33	3D-f
14	3D-c	34	2D-g
15	4D-dp	35	1D-b
16	4D-e	36	1D-a
17	4D-d	37	1D-f
18	4D-c	38	1D-g
19	DELTA-5	39	DELTA-1
20	DELTA-4	40	COMMON

FIG. 2 PIN CONNECTIONS

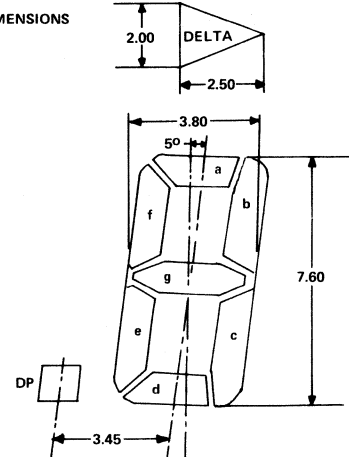
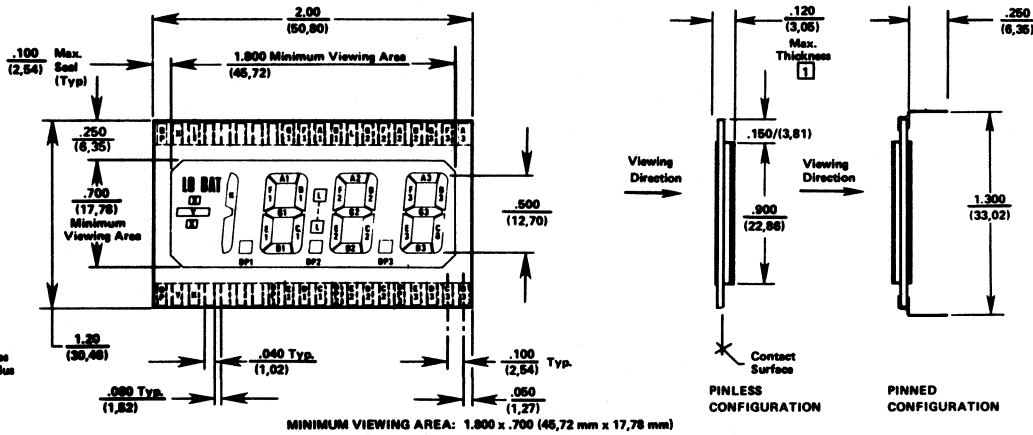


FIG. 3 CHARACTER DIMENSIONS

**PY583**



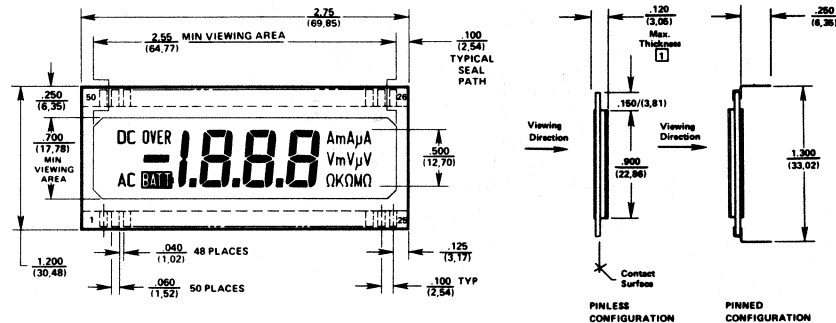
**NOTES**

1 Maximum thickness includes front and back polarizers plus reflector attached.

2 Dimensions: Inches (mm)

MINIMUM VIEWING AREA: 1.800 x .700 (46,72 mm x 17,78 mm)

**PY584**



**NOTES**

1 Maximum thickness includes front and back polarizers plus reflector attached.

2 Dimensions: Inches (mm)

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Segment	BP	N/C	AC	-	N/C	BAT	n	dp1	E1	D1	C1	dp2	E2	D2	C2	dp3	E3	D3	C3	NC	V	mV	Ω	KΩ	MΩ
Pin No.	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	46	46	47	48	49	50
Segment	μV	mA	mA	A	B3	N/C	A3	F3	G3	B2	A2	F2	G2	B1	A1	F1	G1	N/C	N/C	OV	DC	N/C	N/C	BP	

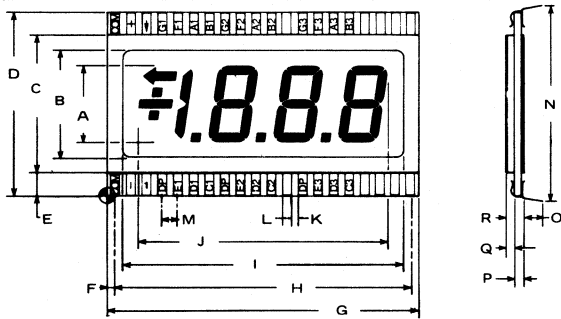




# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

## PY588

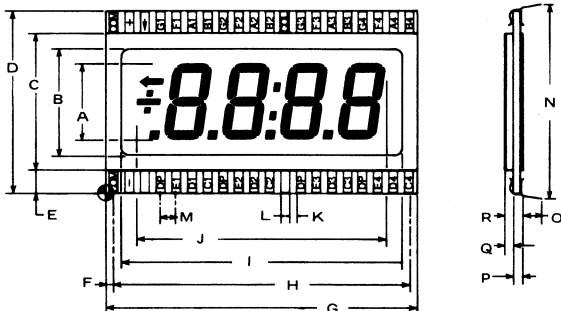


M #1	Reflective
O #2	Transmissive
D #3	Transflective
E #4	Diffused Reflective
#5	Diffused Transflective

EXCEPT PY588d

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
PY588	.500	.700	.900	1.20	.150	.050	2.00	1.90	1.80	1.60	.040	.060	.100	1.30	.125	.056	.055	.111
PY588a	.600	.800	1.00	1.20	.100	.174	2.25	2.05	1.90	1.85	.040	.060	.100	1.30	.125	.056	.055	.111
PY588b	.750	1.00	1.20	1.50	.150	.550	3.00	2.80	2.55	1.90	.040	.060	.100	1.30	.125	.056	.055	.111
PY588c	1.00	1.30	1.50	1.80	.150	1.05	4.00	3.80	3.50	1.90	.040	.060	.100	1.90	.125	.056	.055	.111
PY588d	.700	1.00	1.20	1.50	.150	.100	2.75	2.55	2.35	1.90	.040	.060	.100	1.60	.125	.056		.111

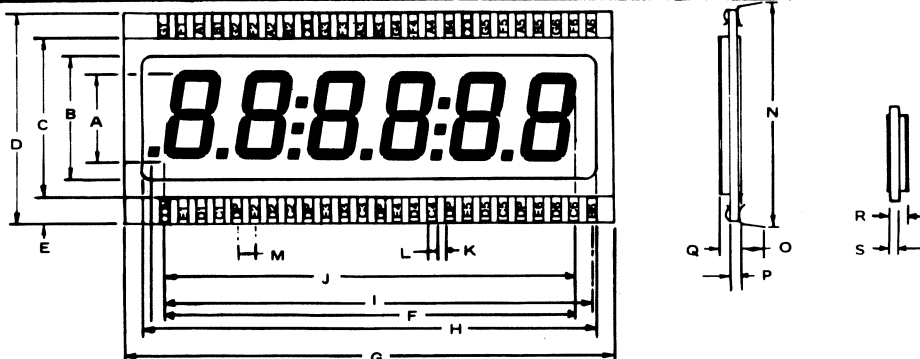
## PY589



M #1	Reflective
O #2	Transmissive
D #3	Transflective
E #4	Diffused Reflective
#5	Diffused Transflective

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
PY589	.500	.700	.900	1.20	.150	.050	2.00	1.90	1.80	1.60	.040	.060	.100	1.30	.125	.056	.055	.111
PY589a	1.00	1.30	1.50	1.80	.150	1.05	4.00	3.80	3.50	1.90	.040	.060	.100	1.90	.125	.056	.055	.111
PY589b	.600	.800	1.00	1.20	.100	.100	2.25		2.05	1.90	.040	.060	.100	1.30	.125		.055	.111
PY589c	.750	1.00	1.20	1.50	.150	.550	3.00	2.80	2.55	1.90	.040	.060	.100	1.60	.125	.056	.055	.111
PY589d	.300	.380	.480	.600	.060	.050	2.00	1.90	1.80	1.40	.040	.060	.100	.600	.125	.056	.055	.111

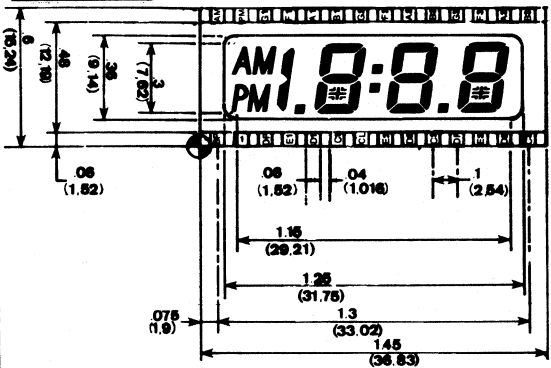
## PY590



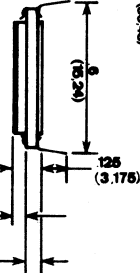
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
PY590	.500	.700	.900	1.20	.150		2.75	2.55	2.40	2.30	.040	.060	.100	1.30	.125	.056	.111		
PY590a	.700	1.00	1.20	1.50	.150		3.70	3.50	3.30	2.40	.040	.060	.100	1.60	.125	.056	.111		
PY590b	.300	.360	.480	.600	.150	1.67	2.00	1.87			.030	.045	.075					.111	.055

Note: Dimensions are in inches and (millimeters)

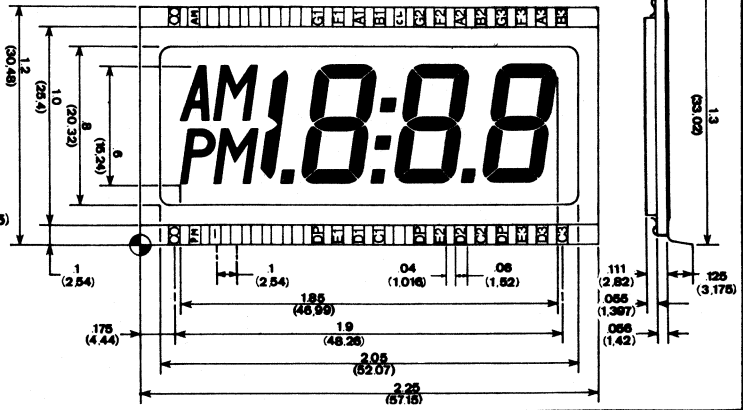
## PY591



PY591



PY591a

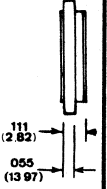
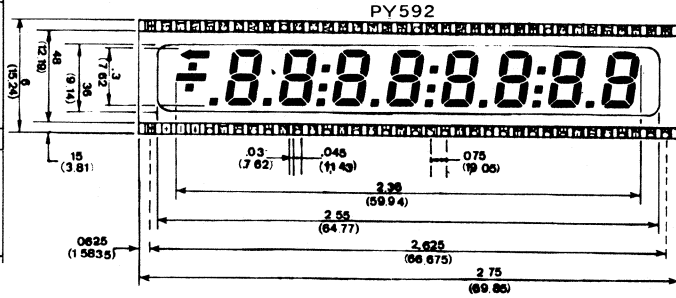
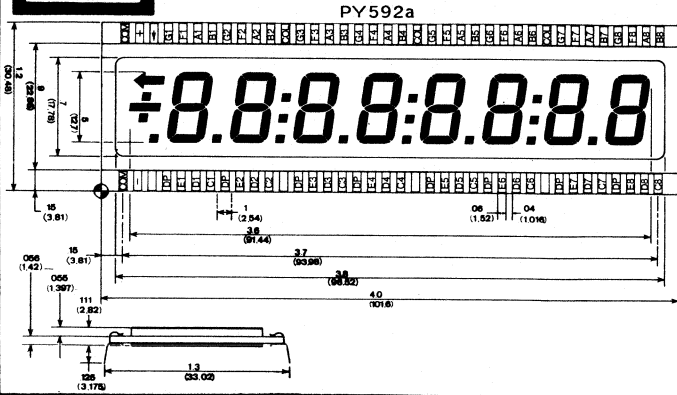


# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

## PY592

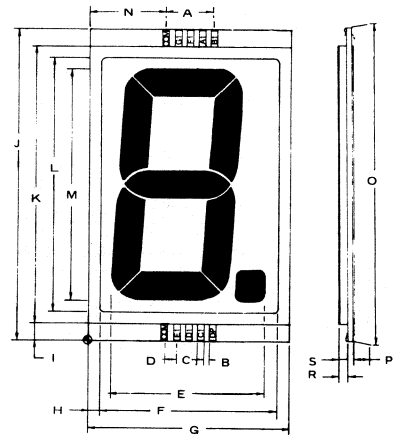
M	#1	Reflective
O	#2	Transmissive
D	#3	Transflective
E	#4	Diffused Reflective
	#5	Diffused Transflective



## PY593

M	#1	Reflective
O	#2	Transmissive
D	#3	Transflective
E	#4	Diffused Reflective
	#5	Diffused Transflective

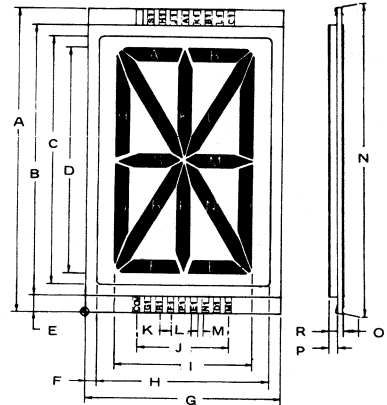
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	R	S
PY593	.400	.040	.060	.100	1.30	1.50	1.70	.100	.150	2.70	2.40	2.20	2.00	.650	2.80	.125	.055	.111
PY593a	.400	.040	.060	.100	1.80	1.90	2.10	.100	.150	3.70	3.40	3.20	3.00	.850	3.80	.125	.055	.111



## PY594

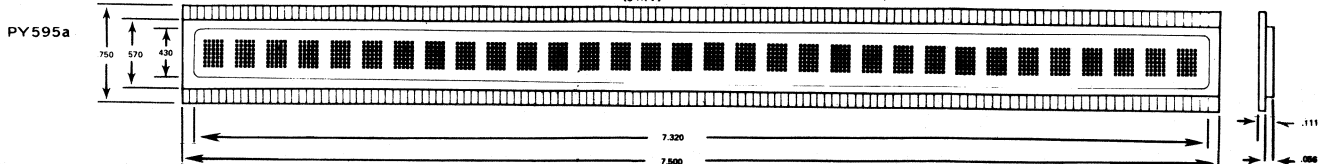
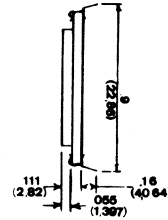
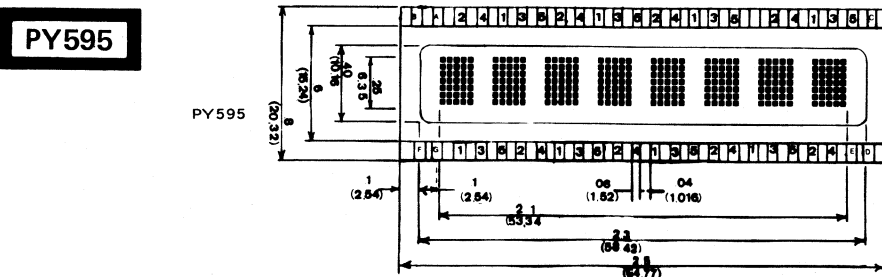
M	#1	Reflective
O	#2	Transmissive
D	#3	Transflective
E	#4	Diffused Reflective
	#5	Diffused Transflective

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	R
PY594	2.70	2.40	2.20	2.00	.150	.100	1.70	1.50	1.20	.800	.100	.060	.040	2.80	.125	.055	.111
PY594a	3.70	3.40	3.20	3.00	.150	.100	2.10	1.90	1.80	.800	.100	.060	.040	3.80	.125	.055	.111



## PY595

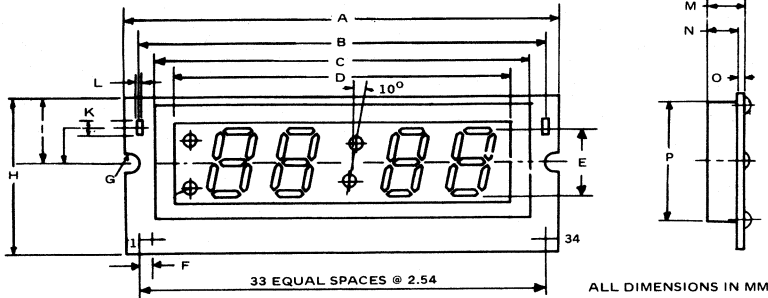
Note: Dimensions are in inches and (millimeters)



# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

## PY596

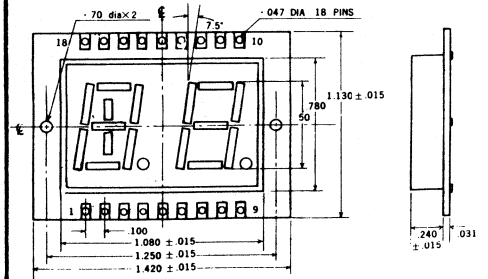


\*Tolerance  $\pm 0.5$

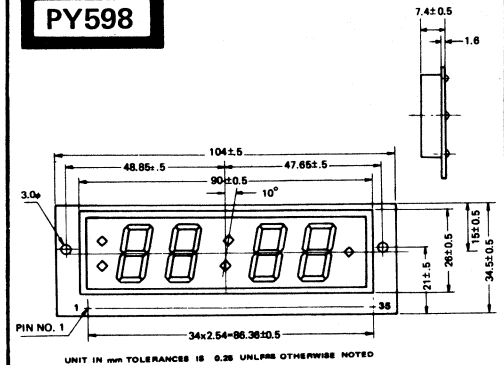
\*\*Tolerance 0.6  
-0.3

	A*	B*	C*	D	E	F	G	H*	I	J*	K*	L	M**	N	O	P*	PIN QTY
PY596	3.54	3.31	3.07	2.79	.600	.100	.072	1.30	.541	.295	.118	.047	.311	.248	.062	.944	34
PY596a	3.54	3.31	3.07	2.75	.600	.100	.072	1.30	.541	.295	.118	.047	.311	.248	.062	1.06	34
PY596b	3.62	3.38	3.32	2.75	.600	.100	.130	1.00	.409	.590	.125	.047	.303		.062	.708	35
PY596c	3.62	3.38	3.32	2.83	.600	.100	.130	1.03	.433	.590	.125	.047	.303		.062	.748	35
PY596d	3.70	3.31	3.07	2.75	.600	.100	.072	1.30	.541	.295	.118	.047	.311	.248	.062	.944	35
PY596e	3.62	3.38	3.32	2.83	.600	.100	.130	1.03	.433	.590	.125	.047	.303		.062	.748	35
PY596f	3.22		3.09	2.83	.600	.100		1.00	.433				.303		.062	.748	18
PY596g	3.62	3.38	3.32	2.83	.600	.100	.130	1.03	.433		.125	.047	.303		.062	.748	28
PY596h	3.62	3.38	3.32	2.83	.600	.100	.130	1.03	.433		.125	.047	.303		.062	.748	30
PY596m	3.54	3.38	3.32	2.83	.600	.100	.072	1.30	.541	.295	.118	.047	.311		.062	.944	18

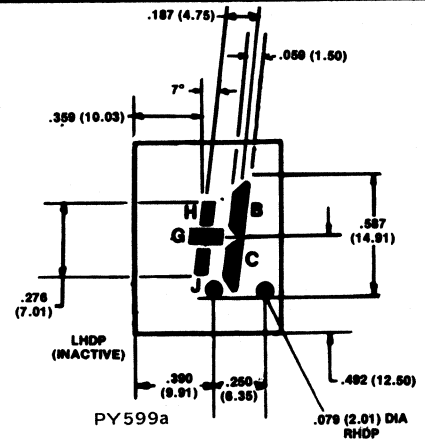
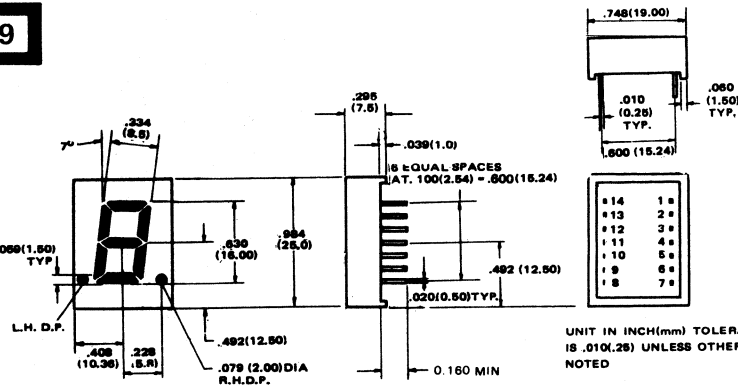
## PY597



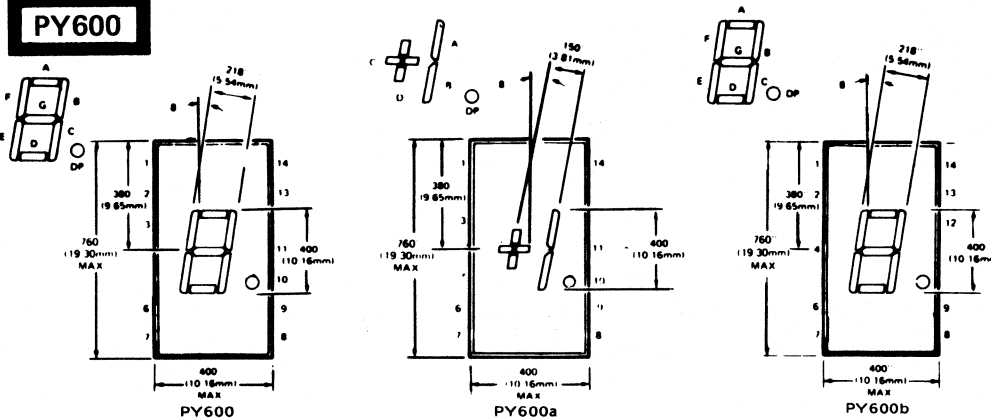
## PY598



## PY599



## PY600



TOLERANCE:  $\pm 0.015$ " (.381mm)  
LEADS ARE TIN/LEAD SOLDER DIPPED  
All dimensions are in inches and (millimeters).  
Specifications subject to change without notice.

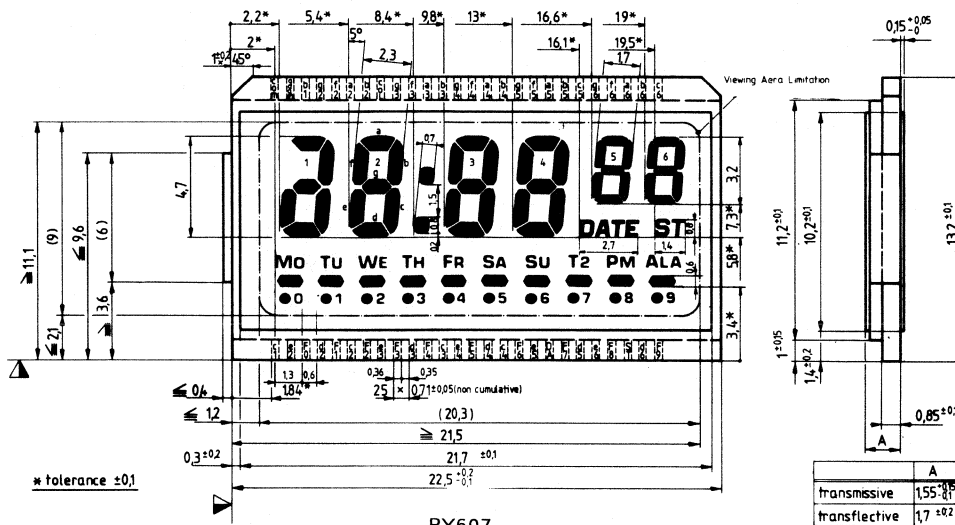




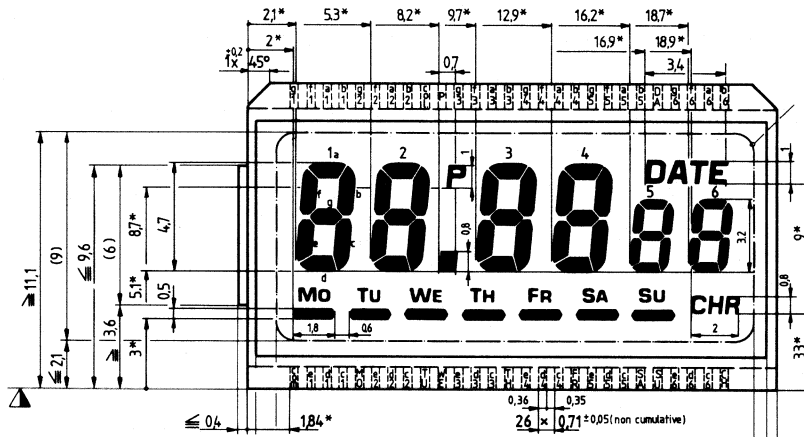
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

**PY607**

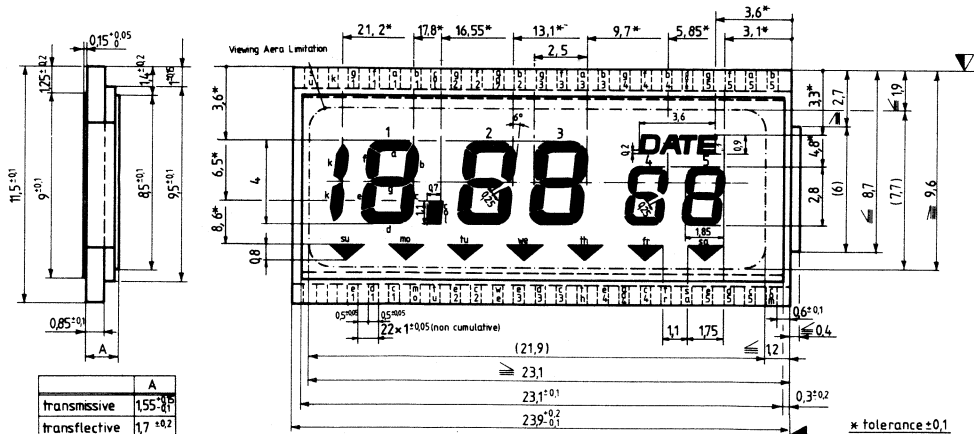


DIMENSIONS IN "MM"



NOTE: CORRESPONDING OVERALL LENGTH  
DIMENSIONS OF PY607 APPLY TO PY607a  
ALSO.

**PY608**

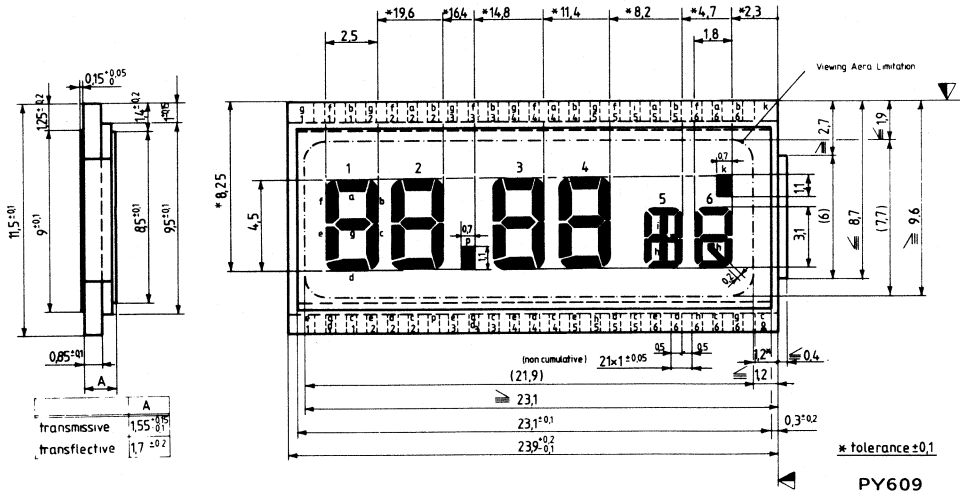


DIMENSIONS IN "MM"

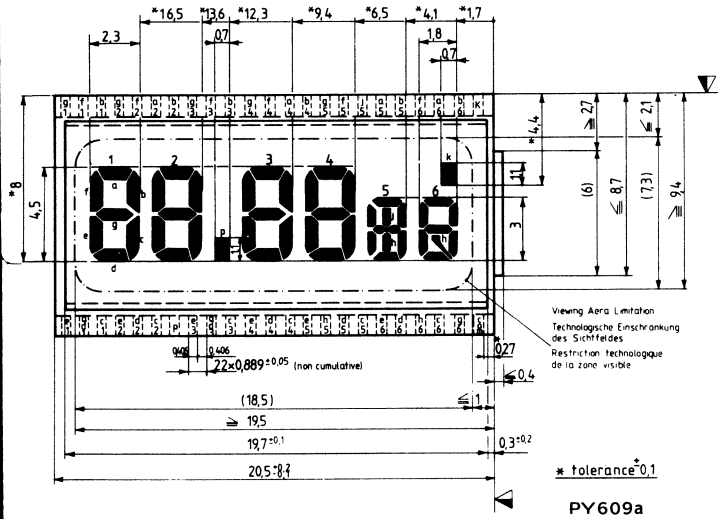
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

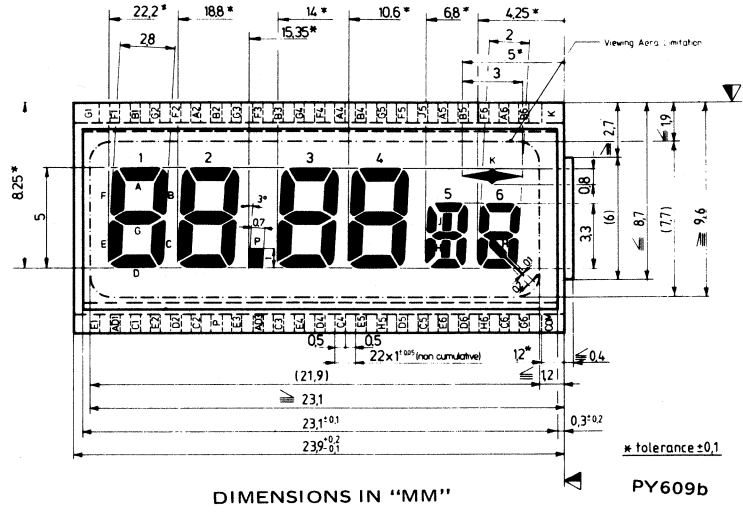
**PY609**



PY609



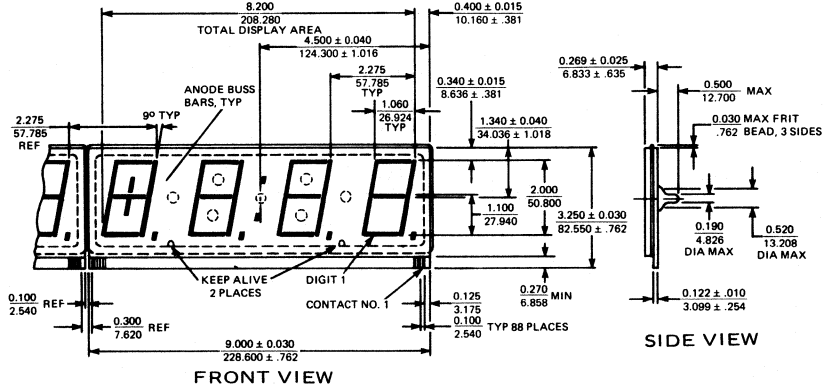
PY609a



DIMENSIONS IN "MM"

PY609b

**PY610**



FRONT VIEW

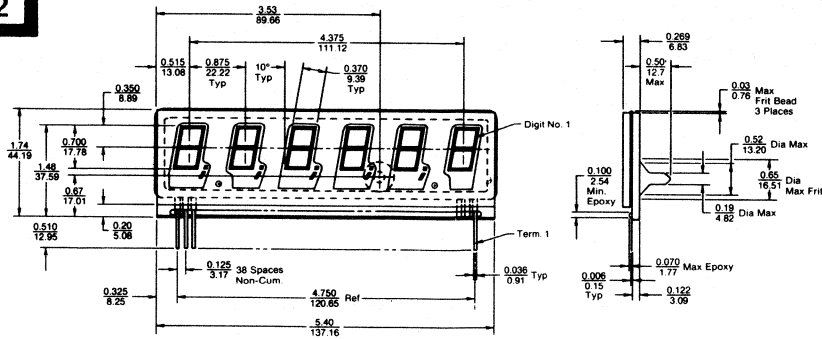
SIDE VIEW



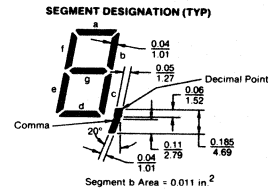
# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

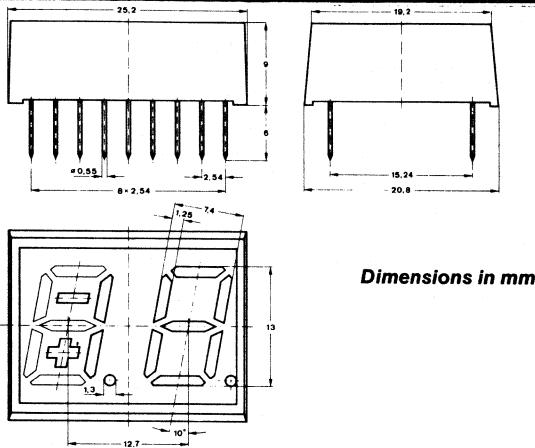
## PY612



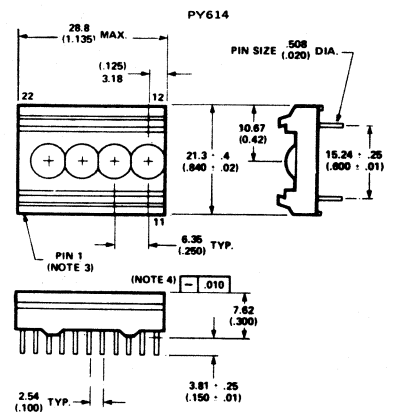
DIMENSIONS IN "MM"



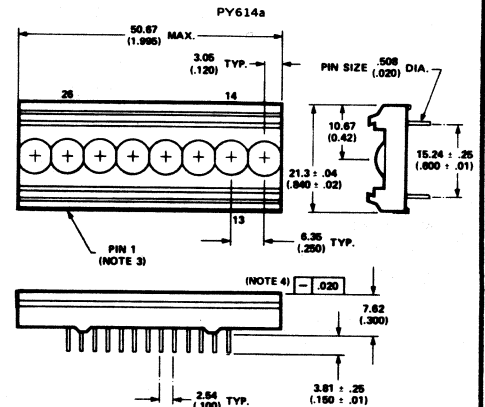
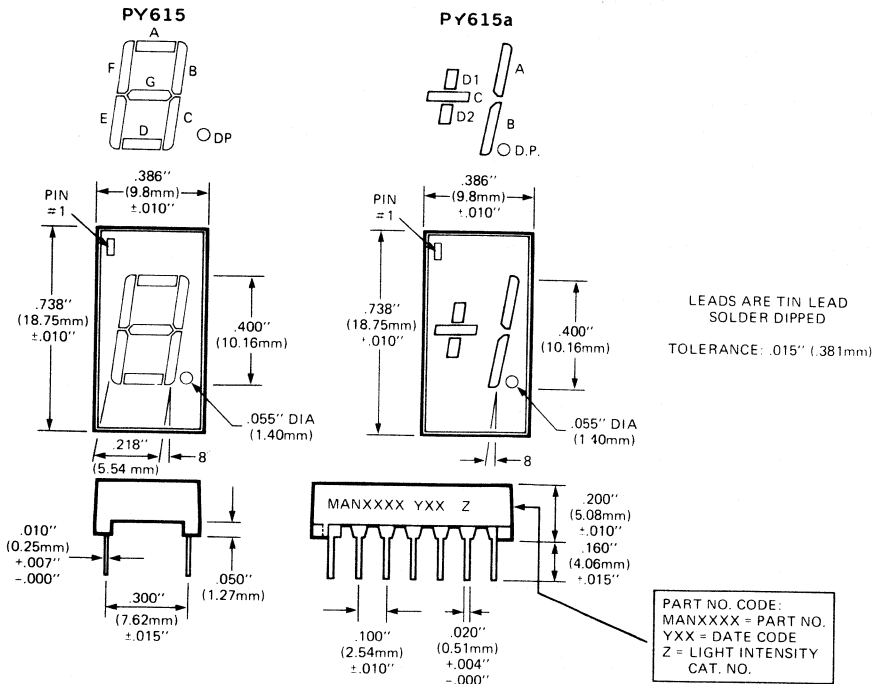
## PY613



## PY614



## PY615

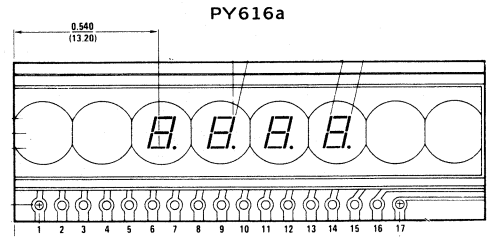
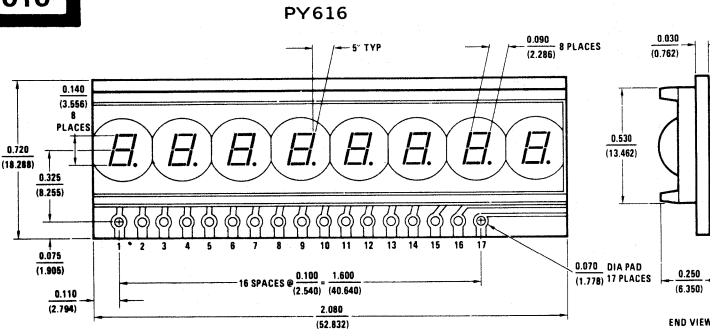


- NOTES:  
 1. ALL DIMENSIONS IN MILLIMETRES AND (INCHES).  
 2. ALL UNTOLERANCED DIMENSIONS ARE FOR REFERENCE ONLY.  
 3. PIN 1 IDENTIFIED BY INK DOT ADJACENT TO LEAD.  
 4. DEVICE PACKAGE IS STRAIGHT WITHIN INDICATED LIMIT.

# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

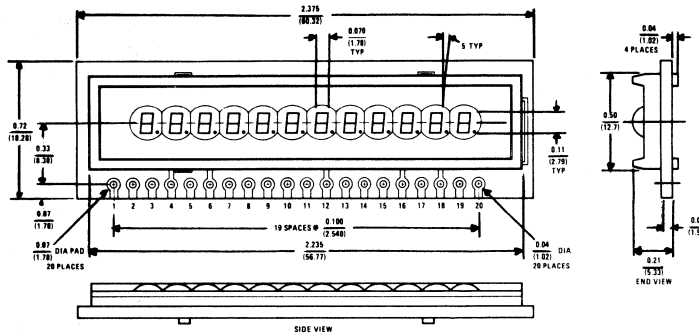
## PY616



NOTE 1: MATERIAL PC-75 CIRCUIT BOARD OR APPROVED EQUIVALENT.

NOTE 2: 8 AND 4 DIGITS ON 0.260 CENTERS.

## PY617



inches (millimeters)

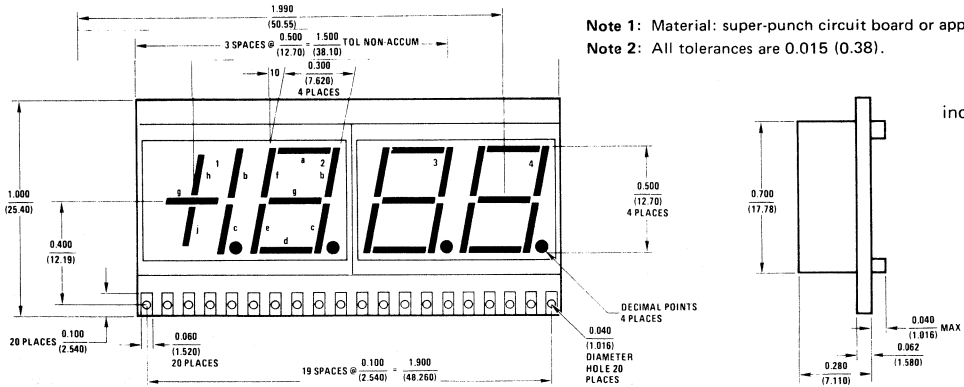
Note 1: Material: PC-75 circuit board or approved equivalent.

Note 2: 12 digits on 0.175/(4.445) centers.

ALL DIGITS ON 0.175 (4.45) CENTERS

Note 3: All tolerance  $\pm 0.015$  (0.381).

## PY618

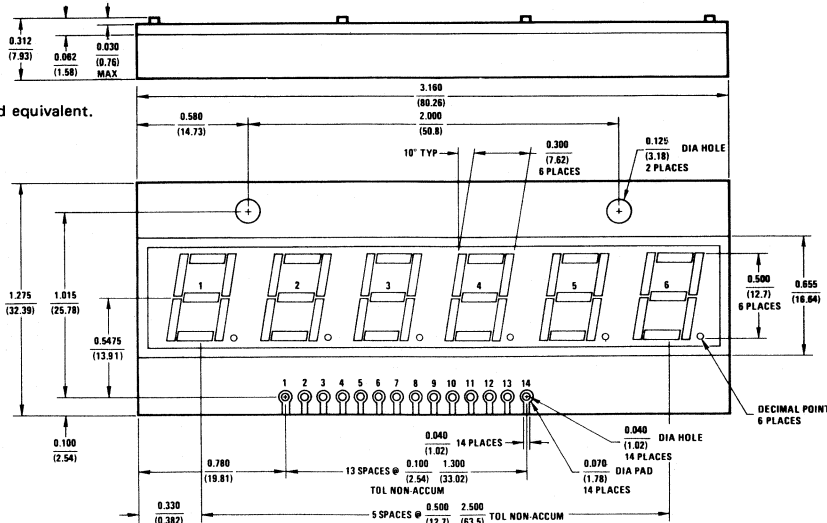


inches (millimeters)

Note 1: Material: super-punch circuit board or approved equivalent 0.062 thick.

Note 2: All tolerances are 0.015 (0.38).

## PY619



inches (millimeters)

Note 1: Material: superpunch or approved equivalent.

Note 2: Tolerances:  $\pm 0.015$ /(0.38).

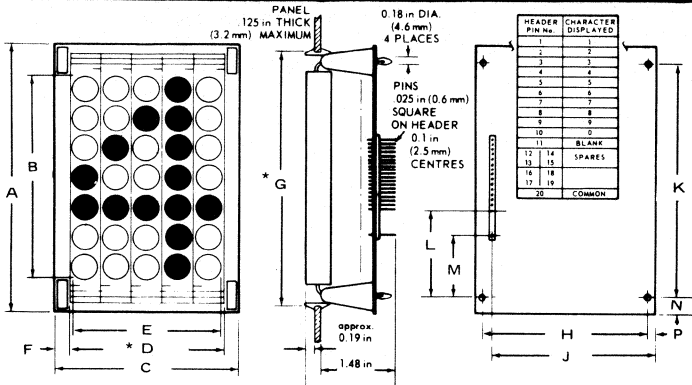




# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

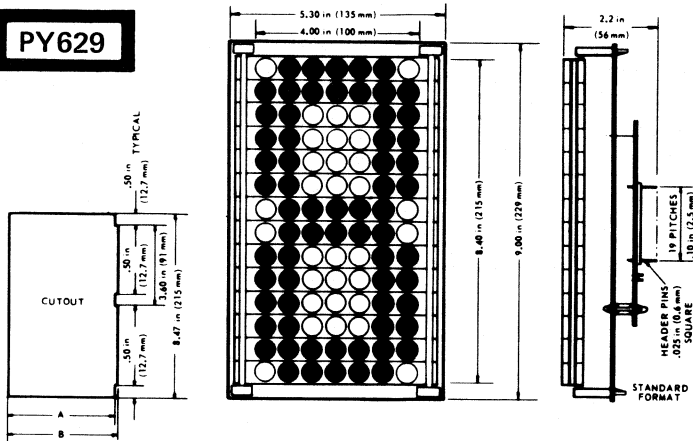
**PY628**



\* PANEL CUT-OUT  
NOTE: for panels up to 0.062 in. (1.6 mm) thick  
Cut-Out 3.03 in. (77 mm) x 4.96 in. (126 mm)

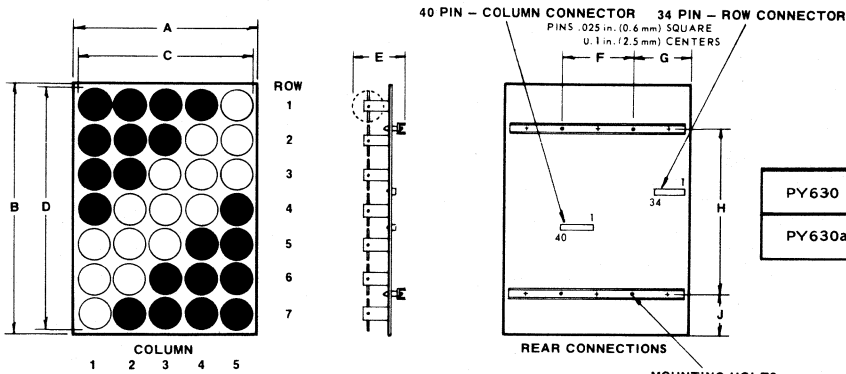
	A	B	C	D	E	F	G	H	J	K	L	M	N	P
PY628	3.70	2.70	2.60	2.03	1.95	.280	3.35	2.28	2.28	3.05		.430	.330	.160
PY628a	5.30	4.10	3.60	3.03	2.90	.280	5.03	3.28	3.25	4.63	1.72	1.22	.340	.160

**PY629**



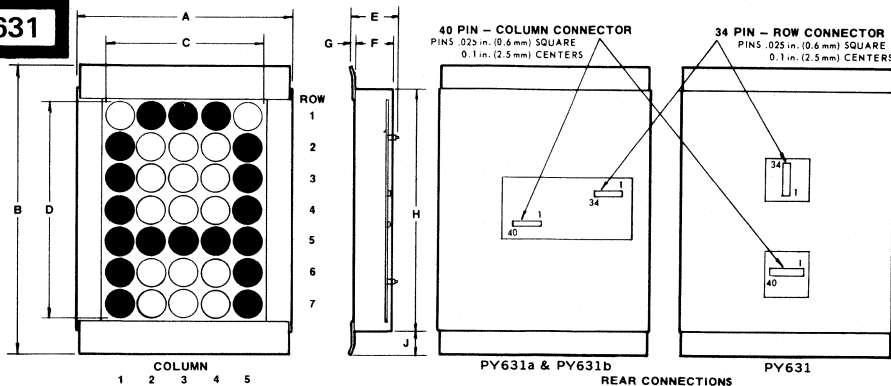
PANEL OPENING DIMENSIONS:  
for 0.063 in. (1.6 mm) THICKNESS  
A = 4.920 in. ±.005 (125 mm)  
B = 4.995 in. ±.010 (127 mm)  
for 0.125 in. (3.2 mm) THICKNESS  
A = 5.020 in. ±.005 (127.5 mm)  
B = 5.045 in. ±.010 (129.5 mm)  
ALL OTHER DIMENSIONS ARE AS SHOWN

**PY630**



		A	B	C	D	E	F	G	H	J
PY630	inches	9.6	13.2	9.1	12.9	3.42	3.8	2.9	9.1	2.25
	mm	244	335	231	328	87	97	74	231	57
PY630a	inches	13.1	18.0	12.6	17.8	3.75	8.5	2.35	8.6	4.95
	mm	333	457	320	452	95	216	60	218	126

**PY631**

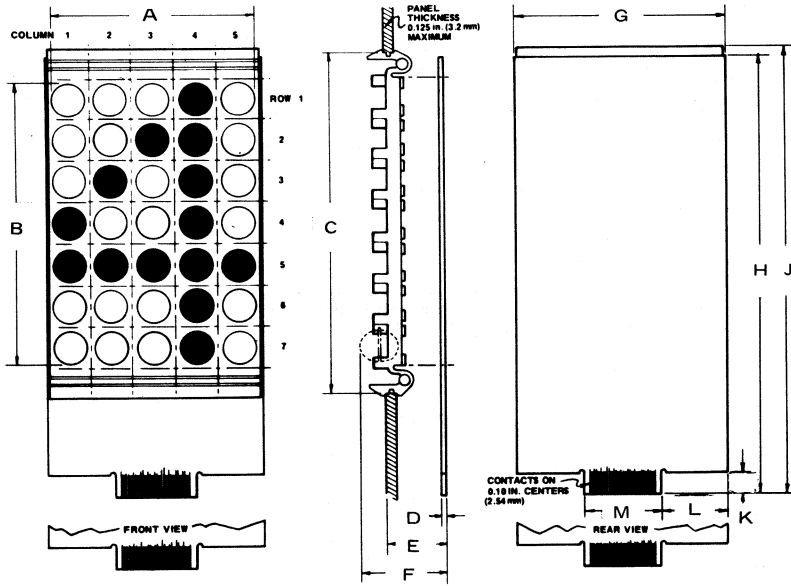


		A	B	C	D	E	F	G	H	J
PY631	inches	8.45	12.3	5.9	8.4	2.8	2.5	0.13	9.8	1.3
	mm	215	312	150	213	71	64	3.3	249	33
PY631a	inches	12.5	18.0	9.1	12.9	2.9	2.6	0.13	15.5	1.3
	mm	317	457	231	328	74	66	3.3	39	33
PY631b	inches	18.0	26.0	12.6	17.8	3.0	2.7	0.13	22.0	2.0
	mm	457	660	320	452	76	68	3.3	559	51

# 49. OUTLINE DRAWINGS

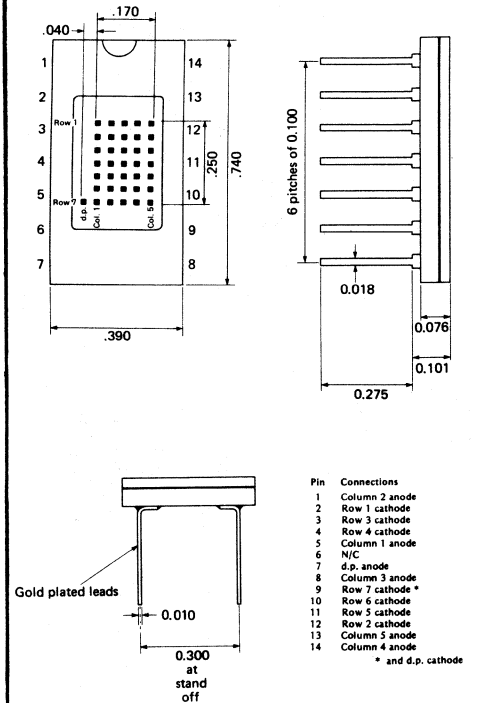
IN DRAWING NUMBER SEQUENCE

**PY632**

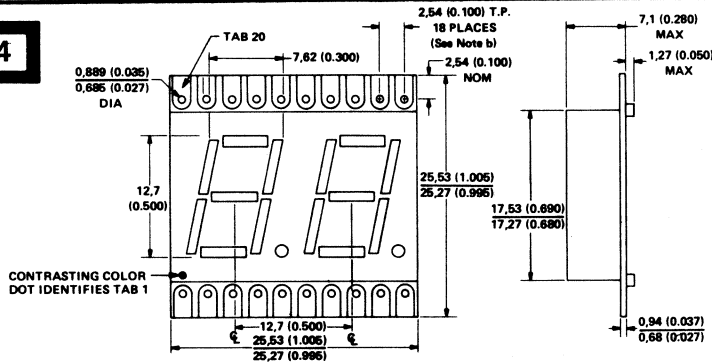


	A	B	C	D	E	F	G	H	J	K	L	M
PY632	1.95	2.70	3.35	.062	.780	1.04	2.03	4.47	4.57	.310	.470	1.08
PY632a	2.90	4.10	5.03	.062	.840	1.19	3.03	6.38	6.58	.310	.960	1.08

**PY633**

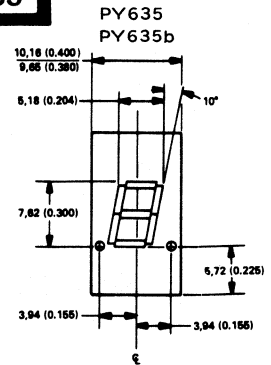


**PY634**



NOTES: a. All linear dimensions are in millimeters and parenthetically in inches.  
 b. The true position tab spacing is 2.54 (0.100). Each tab centerline is located within 0.254 (0.010) of its true position.  
 c. Dimensions associated with the digit segments and decimal points are nominal. The B, C, E, and F segments are at an angle of 10° with respect to the centerline of the display.

**PY635**



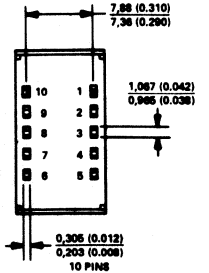
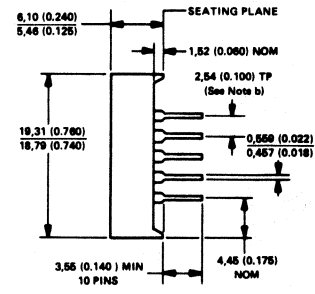
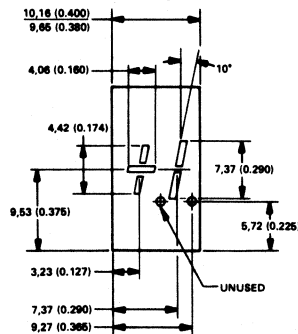
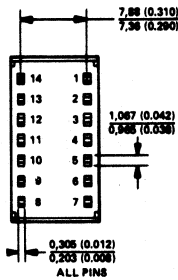
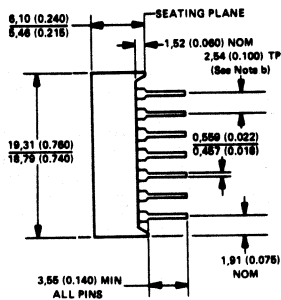
PY635  
PY635a

PY635  
PY635a

PY635a

PY635b

PY635b



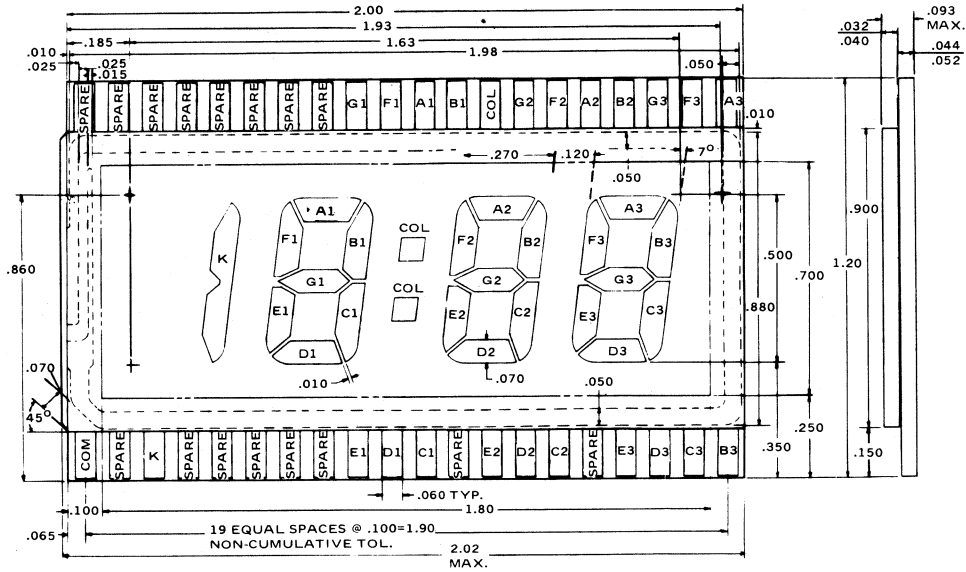
NOTES: a. All linear dimensions are in millimeters and parenthetically in inches.  
 b. Each pin centerline is located within 0.26 mm (0.010 inch) of its true longitudinal position.  
 c. All dimensions associated with segment and decimal point location are nominal.



# 49. OUTLINE DRAWINGS

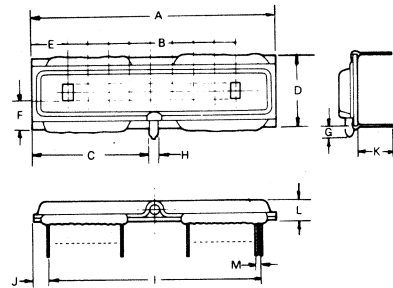
IN DRAWING NUMBER SEQUENCE

**PY640**

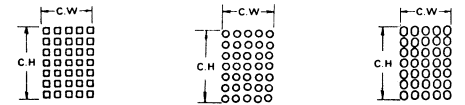


**PY641**

DIMENSIONS IN "MM"



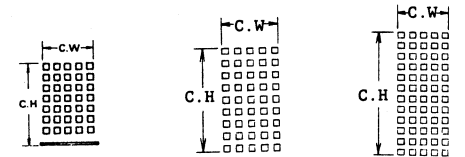
SEGMENT PATTERN



Pattern A

Pattern B

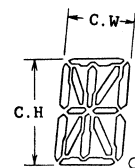
Pattern C



Pattern D

Pattern E

Pattern F



Pattern G

	CHARACTER DIMENSIONS		OUTER DIMENSIONS													PATTERN
	CH	CW	A	B (SPACE PITCH)	C	D	E	F	G	H	I	J	K	L	M	
PY641	5.00	3.00	65.5	7.00-5.50	31.9	25.0	12.7	9.60	5.00	2.75	50.8	6.60	14.0	7.30	2.54	G
PY641a	6.00	3.20	102.0	11.0-6.00	48.0	34.8	17.0	14.2	6.00	4.00	81.2	9.36	14.0	8.50	2.54	G
PY641b	6.00	3.20	126.0	15.0-6.00	60.0	34.8	17.0	14.2	6.00	4.00	81.2	21.3	14.0	8.50	2.54	G
PY641c	9.35	4.80	172.0	15.0-8.40	82.5	41.8	22.0	16.6	9.00	5.00	142.2	13.8	14.0	10.0	2.54	G
PY641d	5.50	3.00	140.0	19.0-5.50	66.5	34.8	16.7	14.5	9.00	5.00	81.2	28.3	14.0	10.7	2.54	G
PY641e	9.00	5.40	210.5	19.0-8.50	101.5	42.2	23.2	17.1	9.00	5.00	81.2	63.3	14.0	10.5	2.54	G
PY641f	6.00	3.50	210.0	31.0-5.50	101.5	41.8	18.7	17.8	9.00	5.00	142.2	32.8	14.0	10.2	2.54	G
PY641g	5.05	3.55	76.2	8.00-6.00	36.0	25.0	12.9	9.50	5.00	3.00	71.1	1.94	14.0	7.20	2.54	A
PY641h	14.0	9.80	172.0	9.00-14.0	82.5	42.0	20.9	15.1	9.00	5.00	152.4	8.80	14.0	10.0	2.54	B
PY641i	5.05	3.30	102.0	15.0-4.75	48.0	34.8	14.4	14.5	6.00	4.00	91.4	4.28	14.0	8.50	2.54	A
PY641j	9.00	6.30	172.0	15.0-8.30	82.5	41.8	22.7	16.2	9.00	5.00	142.2	13.8	14.0	10.5	2.54	B
PY641k	11.3	7.25	210.0	15.0-10.9	101.5	41.8	22.2	14.8	9.00	5.00	142.2	32.8	14.0	98.5	2.54	C
PY641l	5.05	3.55	140.0	19.0-5.20	66.5	35.0	25.6	14.5	9.00	5.00	111.7	13.1	14.0	10.5	2.54	A
PY641m	9.00	6.30	210.5	19.0-8.30	101.5	42.0	17.1	16.2	9.00	5.00	142.2	32.8	14.0	10.5	2.54	B
PY641n	6.05	3.55	208.0	31.0-5.50	101.5	41.0	18.7	17.4	9.00	5.00	198.1	4.94	14.0	9.85	2.54	D
PY641o	6.55	3.55	208.0	31.0-5.50	101.5	41.0	18.7	17.2	9.00	5.00	198.1	4.90	14.0	9.85	2.54	E
PY641p	5.05	3.55	222.0	39.0-4.75	107.5	35.0	17.3	14.5	9.00	5.00	198.1	10.9	14.0	10.0	2.54	A
PY641q	6.05	3.55	222.0	39.0-4.75	107.5	34.8	17.3	14.0	9.00	5.00	198.1	10.9	14.0	10.0	2.54	D
PY641r	8.80	3.55	240.0	37.0-5.20	117.5	41.0	18.6	16.1	9.00	5.00	218.4	10.7	14.0	10.0	2.54	F
PY641s	8.70	2.80	350.0	79.0-3.80	172.5	42.0	25.4	16.6	10.0	5.00	320.0	15.0	14.0	11.5	2.54	F
PY641t	5.05	3.55	222.0	39.0-4.75	107.5	50.8	17.3	16.1	9.00	5.00	198.1	10.9	14.0	12.2	2.54	A
PY641u	6.05	3.55	222.0	39.0-4.75	107.5	50.8	17.3	16.1	9.00	5.00	203.2	8.40	14.0	12.0	2.54	D
PY641v	6.00	3.50	271.0	39.0-4.75		136.0	40.5	34.5	11.0	5.00				19.0		D

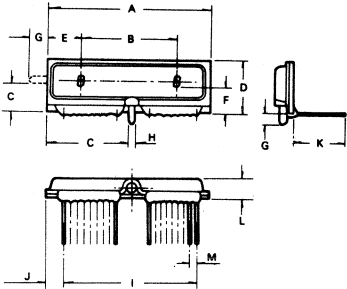


# 49. OUTLINE DRAWINGS

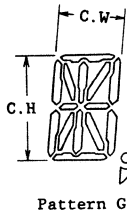
IN DRAWING NUMBER  
SEQUENCE

## PY642

DIMENSIONS IN "MM"



SEGMENT PATTERN

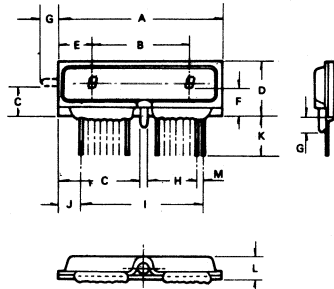


Pattern G

	CHARACTER DIMENSIONS		OUTER DIMENSIONS													PATTERN
	CH	CW	A	B (SPACE PITCH)	C	D	E	F	G	H	I	J	K	L	M	
PY642	8.00	4.80	113.5	9.00-8.70	54.0	26.2	16.8	10.2	6.00	4.00	81.2	15.3	14.0	9.35	2.54	G
PY642a	13.0	7.80	182.0	11.0-12.5	87.5	41.5	11.2	13.3	9.00	5.00	142.2	18.8	14.0	9.85	2.54	G
PY642b	4.50	2.30	59.5	7.00-4.60	27.9	21.2	12.5	10.1	5.00	2.20	48.2	4.85	14.0	6.50	2.54	
PY642c	5.00	2.00	56.1	7.00-4.60	27.4	20.2	10.6	8.90	5.00	2.75	50.8	2.10	7.00	6.70	2.54	
PY642d	5.00	2.35	66.5	8.00-5.10	32.5	23.5	11.1	10.0	5.50	3.00	50.8	7.10	14.0	7.20	2.54	
PY642e	8.00	3.60	94.5	10.0-6.50	44.0	27.0	10.5	10.3	6.00	4.00	81.2	6.10	14.0	9.50	2.54	
PY642f	9.50	4.00	140.0	10.0-9.50	66.5	40.0	21.5	16.4	9.00	5.00	111.7	13.1	14.0	10.5	2.54	
PY642g	5.30	2.40	87.5	12.0-5.00	41.6	21.2	13.0	8.50	5.00	2.75	76.2	4.90	14.0	7.30	2.54	
PY642h	6.50	2.90	94.5	12.0-5.50	44.5	26.5	11.8	11.0	6.00	4.00	81.2	5.90	14.0	9.50	2.54	
PY642i	8.00	3.30	113.5	12.0-6.30	54.1	26.2	18.2	10.2	6.00	4.00	81.2	15.3	14.0	9.50	2.54	
PY642j	9.50	4.00	140.0	12.0-8.00	66.5	40.0	21.0	16.2	9.00	5.00	111.7	13.1	14.0	10.5	2.54	
PY642k	9.50	4.00	140.0	12.0-8.00	66.5	39.5	21.0	16.2	9.00	5.00	116.8	10.5	14.0	10.5	2.54	
PY642l	6.50	2.90	114.0	14.0-5.80	54.1	26.5	15.4	11.0	6.00	4.00	91.4	10.2	14.0	9.50	2.54	
PY642m	10.0	6.50	58.0	3.00-8.50	27.0	27.0	14.8	10.2	6.00	4.00	50.8	3.60	14.0	8.50	2.54	
PY642n	10.0	5.00	82.0	4.00-10.5	38.0	30.5	19.0	11.0	6.00	4.00	91.4	10.2	14.0	8.50	2.54	
PY642o	12.0	6.00	102.0	4.00-12.5	47.5	41.0	24.8	14.5	9.00	5.00	81.2	9.40	14.0	10.5	2.54	
PY642p	12.5	7.00	94.0	4.00-12.0	44.0	35.5	16.0	12.2	6.00	4.00	81.2	5.36	14.0	8.50	2.54	
PY642q	14.0	7.95	140.0	4.00-20.0	66.5	40.0	29.0	13.5	9.00	5.00	81.2	28.4	14.0	10.5	2.54	
PY642r	15.0	8.00	102.0	4.00-14.5	48.0	38.5	21.0	13.2	6.00	4.00	81.2	9.36	14.0	8.70	2.54	
PY642s	9.50	4.50	82.0	5.00-8.60	38.0	30.5	18.5	11.2	6.00	4.00	73.6	3.17	14.0	8.50	2.54	
PY642t	11.5	5.80	102.0	5.00-11.0	47.5	41.0	22.5	14.9	9.00	5.00	81.2	9.40	14.0	12.5	2.54	
PY642u	14.0	7.95	140.0	5.00-17.5	66.5	40.0	25.2	14.2	9.00	5.00	81.2	28.4	14.0	10.5	2.54	
PY642v	12.6	8.00	160.0	6.00-13.0	77.0	33.5	15.0	10.2	7.00	4.00	142.2	7.88	14.0	8.50	2.54	
PY642w	14.5	7.20	172.0	8.00-13.5	82.5	40.0	18.9	13.5	9.00	5.00	111.7	29.1	14.0	10.5	2.54	
PY642x	9.50	4.00	102.0	8.00-8.00	47.5	39.5	18.0	16.4	9.00	5.00	81.2	9.36	14.0	10.5	2.54	
PY642y	9.50	4.00	102.0	8.00-8.00	47.5	39.5	18.0	16.4	9.00	5.00	81.2	9.36	14.0	10.5	2.54	
PY642z	12.0	6.00	140.0	7.00-12.0	66.5	40.0	19.0	15.5	9.00	5.00	116.8	10.5	14.0	10.5	2.54	
PY642aa	12.6	7.50	160.0	8.00-12.0	77.0	33.5	15.0	10.2	7.00	4.00	142.2	7.88	14.0	8.50	2.54	
PY642ab	14.5	7.20	172.0	8.00-15.0	82.5	40.0	25.0	13.5	9.00	5.00	111.7	29.1	14.0	10.5	2.54	
PY642ac	13.0	6.50	162.0	9.00-13.0	77.5	41.5	21.5	17.0	10.0	5.00	142.2	9.00	14.0	10.0	2.54	
PY642ad	7.60	4.20	56.5	2.00-7.62	12.1	25.2	14.8	9.70	5.20	2.75	38.1	7.18	14.0	7.20	2.54	
PY642ae	12.0	6.60	94.0	2.00-12.0	44.0	35.5	20.5	12.5	6.00	4.00	81.2	5.36	14.0	8.50	2.54	
PY642af	12.5	7.00	94.0	2.00-13.5	44.0	35.5	22.7	12.5	6.00	3.82	83.8	4.00	14.0	8.50	2.54	
PY642ag	25.0	12.0	142.0	2.00-19.5	67.5	61.0	20.5	18.5	9.00	5.00	81.2	29.0	14.0	12.0	2.54	
PY642ah	11.5	6.40	95.0	2.00-11.5	44.5	46.5	17.7	16.5	6.00	4.00	81.2	5.86	14.0	8.50	2.54	
PY642ai	16.3	67.0	102.0	2.00-9.00	48.0	38.5	16.0	11.8	6.00	4.00	81.2	9.40	14.0	8.50	2.54	
PY642aj	8.00	99.4	127.0	99.0-1.00	13.0	28.5	15.3	11.0	7.00	4.00	109.2	11.7	14.0	8.50	2.54	
PY642ak	8.00	84.4	127.0	99.0-.850	13.0	28.5	15.3	11.0	7.00	4.00	109.2	11.7	14.0	8.50	2.54	
PY642al	8.00	101.5	140.0	119.0-.850	66.0	40.0	13.8	16.5	9.00	5.00	116.8	10.5	14.0	10.5	2.54	

## PY643

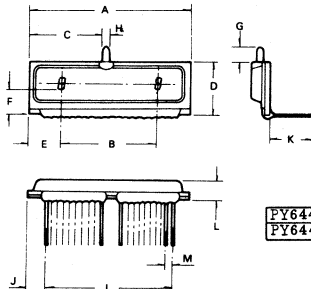
DIMENSIONS IN "MM"



	CHARACTER DIMENSIONS		OUTER DIMENSIONS												
	CH	CW	A	B (SPACE PITCH)	C	D	E	F	G	H	I	J	K	L	M
PY643	5.00	2.40	66.5	8.00-5.00	32.5	23.5	12.5	10.0	5.50	3.00	50.8	7.10	14.0	7.20	2.54
PY643a	7.00	3.40	94.5	8.00-7.80	44.5	26.2	14.3	9.95	6.00	4.00	81.2	5.86	14.0	9.50	2.54
PY643b	5.25	2.45	76.5	10.0-5.00	36.0	22.2	12.5	9.70	5.00	3.00	71.1	1.90	34.0	7.20	2.54
PY643c	5.75	2.45	76.5	10.0-5.00	36.0	22.0	12.5	9.20	5.00	3.00	71.1	1.94	14.0	7.20	2.54
PY643d	5.75	2.45	76.5	10.0-5.00	36.0	22.2	12.5	9.12	5.00	3.00	71.1	1.94	15.0	7.40	2.54
PY643e	6.50	3.00	94.5	10.0-6.60	44.5	26.5	12.0	10.9	6.00	4.00	81.2	5.86	34.0	9.50	2.54
PY643f	6.50	2.90	95.0	12.0-5.50	44.5	26.5	11.8	11.0	6.00	4.00	81.2	5.86	14.0	9.50	2.54
PY643g	8.00	3.30	113.5	12.0-6.60	54.1	26.2	16.4	10.2	6.00	3.80	81.2	15.3	34.0	9.50	2.54
PY643h	9.50	4.00	140.0	12.0-8.00	66.5	39.5	21.0	16.2	9.00	5.00	116.8	10.5	34.0	10.5	2.54
PY643i	6.50	2.90	113.5	14.0-6.00	54.0	26.2	14.0	10.7	6.00	4.00	91.4	10.2	34.0	9.50	2.54
PY643j	14.5	8.70	81.0	3.00-14.0	37.5	34.5	19.3	12.5	6.00	4.00	73.6	2.70	14.0	8.50	2.54
PY643k	11.0	6.90	81.0	4.00-10.8	37.5	34.5	18.3	12.5	6.00	4.00	73.6	2.70	14.0	8.50	2.54
PY643l	15.0	7.40	210.0	11.0-14.9	101.5	41.0	22.0	13.0	7.00	5.00	152.4	27.8	14.0	9.85	2.54
PY643m	8.00	4.20	56.5	2.00-7.00	12.1	25.5	13.0	9.50	7.00	2.75	50.8	2.10	14.0	7.00	2.54
PY643n	7.60	4.20	56.4	2.00-7.62	12.1	25.2	15.0	8.45	5.00	2.75	38.1	7.38	14.0	7.00	2.54
PY643o	15.0	7.00	102.0	2.00-13.0	48.0	38.5	16.1	12.5	9.00	4.00	93.9	3.01	34.0	8.50	2.54

## PY644

DIMENSIONS IN "MM"

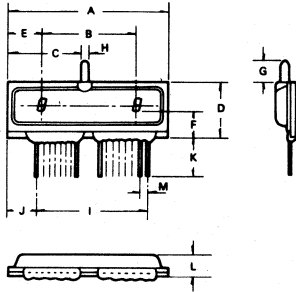


	CHARACTER DIMENSIONS		OUTER DIMENSIONS												
	CH	CW	A	B (SPACE PITCH)	C	D	E	F	G	H	I	J	K	L	M
PY644	4.50	1.75	72.5	12.0-4.00	52.5	20.8	11.5	8.85	5.50	3.00	58.4	6.29	14.0	6.80	2.54
PY644a	14.0	7.00	140.0	8.00-11.9	66.5	39.5	21.4	13.5	9.50	5.00	111.7	13.1	14.0	10.0	2.54

# 49. OUTLINE DRAWINGS

IN DRAWING NUMBER  
SEQUENCE

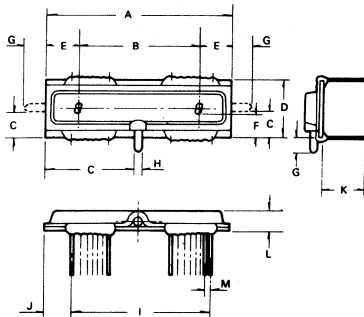
## PY645



DIMENSIONS IN "MM"

CHARACTER DIMENSIONS	OUTER DIMENSIONS														
	CH	CW	A	B (SPACE PITCH)	C	D	E	F	G	H	I	J	K	L	M
PY645	5.50	3.30	46.5	2.00-5.60 2.00-3.80	21.1	20.7	13.1	8.00	5.50	2.75	38.1	3.45	7.00	7.20	2.54

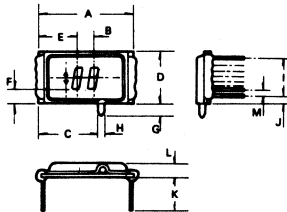
## PY646



DIMENSIONS IN "MM"

CHARACTER DIMENSIONS	OUTER DIMENSIONS														
	CH	CW	A	B (SPACE PITCH)	C	D	E	F	G	H	I	J	K	L	M
PY646	9.50	4.00	102.0	8.00-8.00	47.5	41.0	18.0	15.9	9.00	5.00	81.2	9.40	14.0	10.5	2.54
PY646a	3.70	1.50	66.5	11.0-3.80	32.3	25.0	10.9	10.2	5.00	3.00	50.8	7.10	21.0	7.50	2.54
PY646b	5.00	2.40	76.2	11.0-4.50	36.0	25.0	13.3	9.50	5.00	3.00	50.8	11.9	14.0	7.20	2.54
PY646c	9.50	4.00	140.0	12.0-8.00	66.5	41.0	21.0	15.7	9.00	5.00	81.3	28.4	14.0	10.5	2.54
PY646d	3.70	1.70	76.5	13.0-4.00	36.0	25.0	10.5	10.1	5.00	3.00	50.8	12.1	21.0	7.20	2.54
PY646e	9.50	3.70	140.0	14.0-6.90	66.5	41.0	20.7	15.9	9.00	5.00	81.3	28.4	14.0	10.5	2.54
PY646f	9.50	4.90	172.0	16.0-8.00	82.5	41.0	21.0	16.1	9.00	5.00	81.2	44.4	14.0	10.5	2.54
PY646g	10.0	4.60	60.0	3.00-8.50	27.0	29.5	14.7	9.50	6.00	4.00	50.8	3.60	14.0	8.50	2.54
PY646h	7.60	4.20	56.5	2.00-7.62 2.00-5.08	12.6	28.7	14.8	10.2	7.00	2.75	43.1	5.90	14.0	7.00	2.54
PY646i	7.60	4.00	50.0	2.00-7.78 2.00-4.08	22.8	27.5	14.4	9.70	5.00	2.75	40.6	3.73	8.50	6.50	2.54
PY646j	8.00	100.4	127.0	100.0-1.00	13.0	30.5	15.3	11.0	7.00	4.00	109.2	11.7	14.0	8.50	2.54

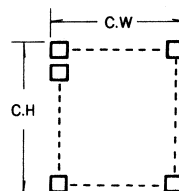
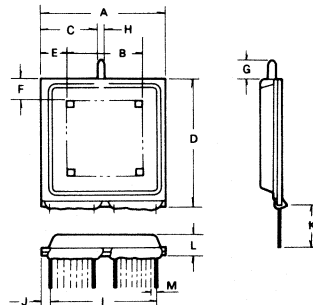
## PY647



DIMENSIONS IN "MM"

CHARACTER DIMENSIONS	OUTER DIMENSIONS														
	CH	CW	A	B (SPACE PITCH)	C	D	E	F	G	H	I	J	K	L	M
PY647	10.0	4.50	42.5	1.00-8.60	26.1	24.0	16.5	8.00	5.00	2.75	18.0	2.00	14.0	7.20	2.00
PY647a	12.6	5.50	45.5	1.00-8.00	30.1	27.0	19.0	6.20	5.00	2.75	18.0	3.50	14.0	7.20	2.00

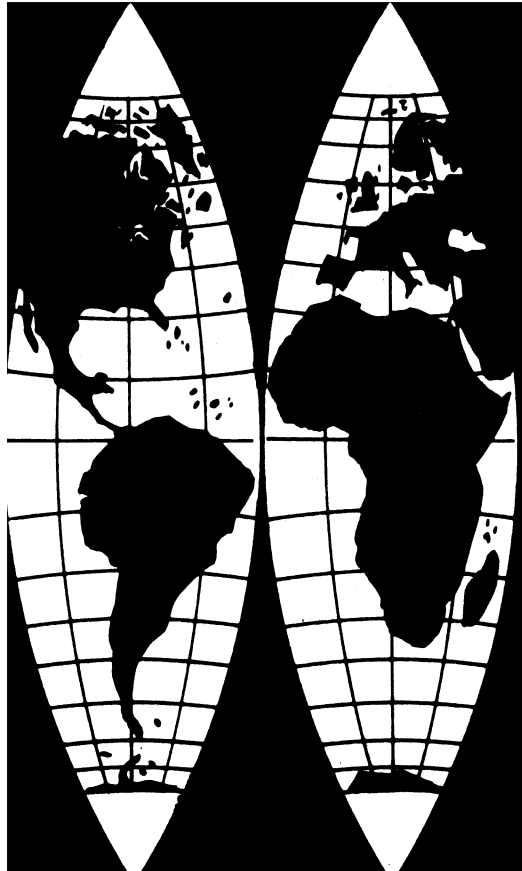
## PY648



DIMENSIONS IN "MM"

CHARACTER DIMENSIONS	OUTER DIMENSIONS														
	CH	CW	A	B (SPACE PITCH)	C	D	E	F	G	H	I	J	K	L	M
PY648	77.5	77.5	133.0	19.0-4.00	62.0	116.0	27.0	21.0	11.0	5.00	16.8	6.58	14.0	17.0	2.54
PY648a	80.0	80.0	138.0	79.0-1.00	66.5	118.0	29.0	19.0	9.00	5.00	127.0	5.50	14.0	17.0	2.54
PY648b	116.6	117.4	226.0	257.0-8.60	110.5	60.0	29.2	21.6	9.00	5.00	203.2	11.4	14.0	12.0	2.54





## OPTOELECTRONICS

### Manufacturers' Sales Offices

These manufacturers have listed their sales offices in this section for your convenience. Please contact the sales office nearest you for any additional information you may need.

(MANUFACTURERS IN ORDER OF D.A.T.A. CODE LETTERS)



#### ALGG – AEG-TELEFUNKEN

	Zip Code	Telephone No.	TWX/Telex
Postfach 1109, Heilbronn, West Germany .....	D 7100	07131-8821	728746



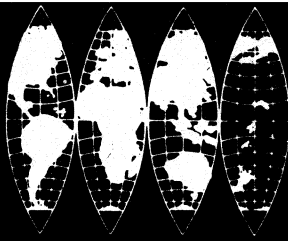
#### AND – AND, INC.

	Zip Code	Telephone No.
DIVISION WILLIAM J. PURDY COMPANY 770 Airport Boulevard, Burlingame, California .....	94010	415-347-9916

**Amperex**

#### APX – AMPEREX ELECTRONIC CORPORATION

	Zip Code	Telephone No.	TWX/Telex
Providence Pike, Slatersville, Rhode Island .....	02876	401-762-9000	710-387-1591



# SECTION 50

## Manufacturers' Sales Offices



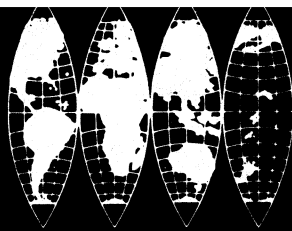
### BBCS — BBC BROWN, BOVERI & COMPANY, LTD.

SALES DEPARTMENT			Zip Code	Telephone No.	TWX/Telex
Baden, Switzerland .....			CH-5401	(064) 50 11 81	52921 bbcch 53203 bbcch
ENGLAND .....	<b>Brentford</b> (Middlesex)	British Brown Boveri Ltd. ....	TW8 0BH	(01) 568-8778	934734
		Albany House 41 High Street			
FRANCE .....	<b>Paris</b> (Cedex 08)	Cie. Electro-Mécanique .....	F-75017	7581272	620886F CEM FEVR
		Division Electronique et Equipements Courcellor I 2, rue Curnonsky			
GERMANY .....	<b>Lampertheim</b> .....	Brown Boveri & Cie Aktiengesellschaft .....	D-6840	(06206) 503-1	465727 a bbcl d
		GB Halbleiter u. Stromrichter Boveristrasse 1 (Postfach 80)			
HONG KONG .....	<b>Kowloon</b> .....	BBC Brown Boveri Hong Kong Ltd. ....		00852-3- 283121	64665 bbcl c hx:
		6/F Jan Sin Mee Industrial Building 2 Ng Fong Street San Po Kong			
UNITED STATES .....	<b>North Brunswick</b> .....	Brown Boveri Corporation .....	08902	201-932-6000	844464 844465
	(New Jersey)	1460 Livingston Avenue			



### CENB — CENTRONIC (T.C. CENTRONIC LTD.)

1101 Bristol Road, Mountainside, New Jersey .....	Zip Code	Telephone No.	TWX/Telex
	07092	201-233-7200	138275



# Manufacturers' Sales Offices



## CHE – CHERRY SEMICONDUCTOR CORPORATION

(formerly MICRO COMPONENTS CORPORATION)

99 Bald Hill Road, Cranston, Rhode Island .....	02920	401-463-6000	710-381-1757
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Zip Code

Telephone No.

TWX/Telex



## CLA – CLAIREX ELECTRONICS

Zip Code

Telephone No.

TWX/Telex

DIVISION OF CLAIREX CORPORATION

560 South Third Avenue, Mt. Vernon, New York .....	10550	914-664-6602	137 308
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CALIFORNIA .....	El Toro .....	Clairex Electronics .....	92630	714-768-4561
		25201 Wandering Lane		

ILLINOIS.....	Naperville.....	Clairex Electronics .....	60540	312-357-2304
		339 Redbud Drive		

MASSACHUSETTS ....	Hingham .....	Clairex Electronics.....	02043	617-749-5203
		2 Beach Lane		

SEE OUR AD OUTSIDE BACK COVER

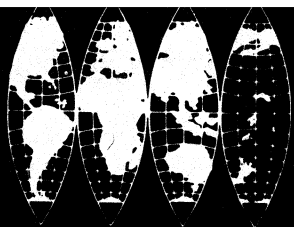


## DECO – DIGITAL ELECTRONICS CORPORATION

197 Airport Boulevard, Burlingame, California .....	94010	415-532-2920
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Zip Code

Telephone No.



# SECTION 50

## Manufacturers' Sales Offices

**FERRANTI**  
Electronic Systems

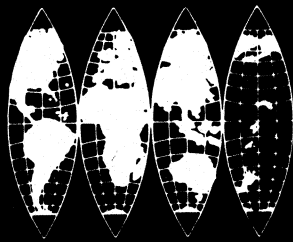
### FERB – FERRANTI ELECTRONICS LIMITED

			Zip Code	Telephone No.	TWX/Telex
Fields New Road, Chadderton Oldham, England .....			OL9 8NP	061-624-0515	668038
<b>GERMANY</b> .....	<b>Munich 22</b> .....	Ferranti GmbH .....	<b>D8000</b>	<b>089-293 871</b>	<b>523980</b>
		Widenmayerstrasse 5			
<b>U. S. A.</b> .....	<b>Plainview</b> .....	Ferranti Electric, Inc. ....	<b>11803</b>	<b>516-293-8383</b>	<b>510-224-6483</b>
	(New York)	East Bethpage Road			



### FPLC – FERRANTI-PACKARD LTD.

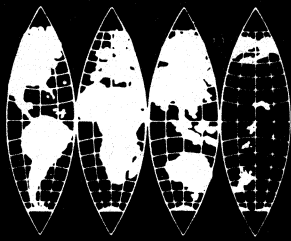
			Zip Code	Telephone No.	TWX/Telex
<b>ELECTRONICS DIVISION</b>					
6030 Ambler Drive, Mississauga, Ontario, Canada .....			L4W 2P1	(416) 3020	06-961437
<b>ARGENTINA</b> .....	<b>Buenos Aires</b> .....	Autotrol Argentina S.A. ....		<b>941-3477</b>	<b>33-22284</b>
		Jujuy 1664 (1247) Capital Fed.		(41-5315)	
<b>AUSTRALIA</b> .....	<b>Moorabbin</b> .....	STC-Cannon Components Pty. Ltd. ....	<b>3189</b>	<b>95-1566</b>	<b>AA 30877</b>
	(Victoria)	248 Wickham Road			
<b>BRAZIL</b> .....	<b>Sao Paulo</b> .....	Autotrol S/A .....	<b>CEP-01224</b>	<b>222-1114</b>	
		Rua Jaguaribe n.o. 126/128			
<b>CANADA</b> .....	<b>Willowdale</b> .....	Avotronics Ltd. ....	<b>M2J 1P8</b>	<b>(416) 493-9711</b>	<b>06-966-857</b>
		200 Consumers Road			
		Suite 200			
<b>COLUMBIA</b> .....	<b>Bogota</b> .....	Coasin Ltda .....		<b>32 46 06 85</b>	
		Carrera 13 No. 37-37		02 30	
		Oficina 406 Y 407			
<b>ECUADOR</b> .....	<b>Quito</b> .....	Proteco-Coasin Cia. Ltda .....		<b>526-759</b>	<b>2865</b>
		Ave. 6 de Diciembre 865 Y Roca		529-684	
<b>ENGLAND</b> .....	<b>Newmarket</b> .....	Pye Electro-Devices Ltd. ....	<b>CB8 0AX</b>	<b>(0638) 5161</b>	<b>81245 (PYECON)</b>
	(Suffolk)	Exning Road			



**FPLC – FERRANTI-PACKARD LTD. (Cont'd)**

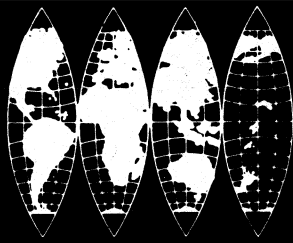
			Zip Code	Telephone No.	FWX/Telex
<b>ELECTRONICS DIVISION</b>					
6030 Ambler Drive, Mississauga, Ontario, Canada .....			L4W 2P1	(416) 3020	06-961437
<b>FRANCE</b> .....	<b>Sevres</b> .....	Takelec Airtronic S.A. .... Cite des Bruyeres Rue Carle Vernet	92310	027-75-35	250 997/204552
<b>GERMANY</b> .....	<b>Muenchen 2</b> .....	Contiflex A.G. .... Augustenstr. 79	8000	089/524014	529075
<b>INDIA</b> .....	<b>Fort Bombay</b> .....	Motwane Private Ltd. .... 127 Mahatma Gandhi Road	400023	273845	112456 MPLIN
<b>ITALY</b> .....	<b>Milano</b> .....	Metroelettronica .... Viale Cirene, 18	20135	546.26.41	312168 Metronic
<b>JAPAN</b> .....	<b>Tokyo</b> .....	Sumitomo Corporation .... 2-2 Hitotsubashi 1 Chome Chiyoda-ku	100	217-6034	J22202
<b>NETHERLANDS</b> .....	<b>The Hague</b> .....	Koning en Hartman .... Elektrotechniek B.V. 30 Koperwerf	2504	678380	31528 (KOHA NL)
<b>SOUTH AFRICA</b> .....	<b>Johannesburg</b> .....	Tecnetics (Pty.) Ltd. .... Post Office Box 56412 Pinegowrie 2123		48 6429	95-82689
<b>SPAIN</b> .....	<b>Madrid 16</b> .....	Planigrama Exclusivas Publicitarias S.A. .... Division Electronica Alberto Alcocer 40		457-15 03	27321
<b>SWEDEN</b> .....	<b>Vallingby</b> .....	Walmore Electronics AB .... Sorterargatan S-162	26	08/38 01 30	17880 (Walmore S)
<b>SWITZERLAND</b> .....	<b>Kuesnacht-Zurich</b> ....	Contiflex A.G. .... Fahnlibrunnenstrasse 3	CH-8700	01/9108181-38	54575 (CFLX CH)





**FPLC – FERRANTI-PACKARD LTD. (Cont'd)**

		Zip Code	Telephone No.	TWX/Telex
<b>ELECTRONICS DIVISION</b>				
6030 Ambler Drive, Mississauga, Ontario, Canada .....		L4W 2P1	(416) 3020	06-961437
<b>UNITED STATES.....</b>				
<b>Los Gatos</b> .....	Luscombe Engineering Co. of San Francisco	95030	408-354-6496	910-597-5398
(California)	248 West Main Street			
<b>Pasadena</b> .....	Luscombe Engineering Company .....	91106	213-684-2000	910-588-3285
(California)	99 South Chester Avenue			
<b>Atlanta</b> .....	Beacon Electronic Associates .....	30328	404-393-9880	810-751-3165
(Georgia)	6135 Barfield Road Suite 112			
<b>Nashua</b> .....	Bell Controls Inc. ....	03060	603-882-6984	710-228-6753
(New Hampshire)	111 Lock Street			
<b>Mount Vernon</b> .....	Sonkin Associates Inc. ....	10550	914-668-9809	
(New York)	10 Fiske Place			
<b>Dayton</b> .....	Berberich Associates .....	45459	513-433-0342	810-450-2643
(Ohio)	94 Compark Drive Suite 100			
<b>Paoli</b> .....	Tyler Griffin Company .....	19301	215-647-1550	84-52-99
(Pennsylvania)	46 Darby Road			
<b>Richardson</b> .....	Campion Sales Company .....	75080	214-238-8145	
(Texas)	506A North Central Expressway			
<b>Seattle</b> .....	Delcom Sales Company Inc. ....	98166	206-248-0090	
(Washington)	144 SW 153rd Street Post Office Box 66057			
<b>VENEZUELA</b> .....	Coasin C.A. ....	105	782-8741/9101/ 2302/3745	21228
	Apartado 50939 Sabana Grando No. 1			



**Manufacturers' Sales Offices**

**FAIRCHILD**

**FSC – FAIRCHILD CAMERA & INSTRUMENT CORPORATION**

	Zip Code	Telephone No.	TWX/Telex
SEMICONDUCTOR PRODUCTS GROUP 464 Ellis Street, Mountain View, California .....	94042	415-962-5011	910-379-6435 Cable FAIRSEMCO



**GESY – GENERAL ELECTRIC COMPANY**

	Zip Code	Telephone No.	TWX/Telex
SEMICONDUCTOR PRODUCTS DEPARTMENT Building 7, MD 49, Electronics Park, Syracuse, New York .....	13201	315-456-2715	710-541-0498
<b>EUROPE</b>			
IRELAND .....Dundalk ..... International General Electric Company .....		Dundalk 2371 thru 2380	33816
General Electric Marketing			

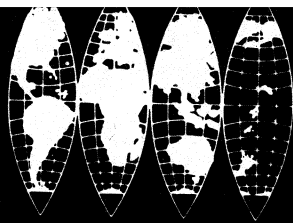
**HAFO – ASEA-HAFO AB**

	Zip Code	Telephone No.	TWX/Telex
Fack, Vällingby, Sweden .....	162 10	(08) 89 01 45 (Stockholm)	172 62 hafo S



**IPI – INTEGRATED PHOTOMATRIX INC.**

	Zip Code	Telephone No.
1101 Bristol Road, Mountainside, New Jersey .....	07092	201-233-7200



LEE – LEECRAFT MANUFACTURING CO., INC.

21-46 44th Road, Long Island City, New York .....	Zip Code	Telephone No.	TWX/Telex
	11101	212-392-8800	710-582-2897



MEHK – MICRO ELECTRONICS, LTD.

38 Hung To Road, Kwun Tong, Kowloon, Post Office Box 9477 .....	Zip Code	Telephone No.	TWX/Telex
		K-430181	HX 73510
AUSTRALIA ..... Sidney ..... M. E. Micro Electronics PTY Ltd. ....	2000	02 290-1924	23361
(NSW) ..... 160 Clarence Street			
..... Suite 32			
ENGLAND ..... Middlesex ..... York House .....		01-903-2721	934263
..... Empire Way			
..... Wembley			
GERMANY ..... Munich 40 ..... M. E. Micro Electronics GmbH .....	8000	188 182	5216194
..... Nordenstrasse 1A		184 640	
U. S. A. ..... Costa Mesa ..... Micro Electronics Corporation .....	92626	714-549-0375	910-595-1759
(Calif.) ..... 3001 Redhill Avenue			



MOL – MOLECTRON CORPORATION

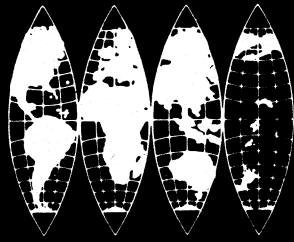
DIRECT SALES/SERVICE OFFICE	Zip Code	Telephone No.	TWX/Telex
177 North Wolfe Road, Sunnyvale, California .....	94086	408-738-2661	357436

EASTERN REGIONAL OFFICE

NEW YORK ..... North Bellmore ..... Molelectron Corporation .....	11710	516-826-8282	
..... 1666 Newbridge Road			

INTERNATIONAL DIRECT SALES/SERVICE OFFICE

WEST GERMANY/ ..... Düsseldorf 30 ..... Molelectron GmbH .....	4000	0211-651008/9	841-8586709
AUSTRIA ..... Westfalenstrasse 23-25			



**Manufacturers' Sales Offices**

**Monsanto**

**MTO – MONSANTO COMPANY**

	Zip Code	Telephone No.	TWX/Telex
<b>ELECTRONICS DIVISION</b>			
<b>WESTERN SALES OFFICE HEADQUARTERS</b>			
3400 Hillview Avenue, Palo Alto, California .....	94304	415-493-3300	
<b><u>EASTERN REGIONAL SALES OFFICE</u></b>			
<b>MASSACHUSETTS</b> ..... Dedham .....	Monsanto Commercial Products Company .	02026	617-329-1150
	990 Washington Street Suite 302		
<b><u>CENTRAL REGIONAL SALES OFFICE</u></b>			
<b>ILLINOIS</b> ..... Des Plaines .....	Monsanto Commercial Products Company .	60018	312-296-6688
	3158 River Road		
<b><u>SOUTH EASTERN REGIONAL SALES OFFICE</u></b>			
<b>FLORIDA</b> ..... Fort Lauderdale .....	Monsanto Commercial Products Company .	33309	305-973-4640
	2020 West McNab Road Suite 121		
<b><u>EUROPEAN SALES OFFICE</u></b>			
<b>BELGIUM</b> ..... Brussels .....	Monsanto Europe .....	B-1150	762-11-12
	Avenue de Tervuren 270-272		



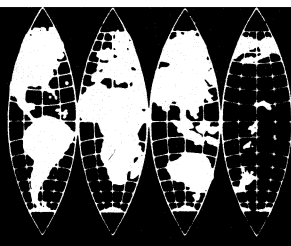
**NAT – NATIONAL ELECTRONICS, INC.**

	Zip Code	Telephone No.	TWX/Telex
Post Office Box 269, Geneva, Illinois .....	60134	312-232-4300	910-237-1685

**OCLI**

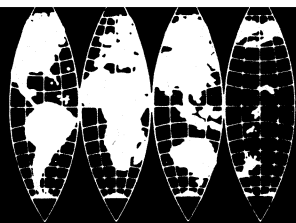
**OCLI – OCLI PHOTOELECTRONICS DIVISION**

	Zip Code	Telephone No.	TWX
15251 East Don Julian Road, City of Industry, California .....	91746	213-968-6581	910-584-4890
<b><u>INTERNATIONAL</u></b>			
<b>ENGLAND</b> .....High Wycombe.....	OCLI Europe .....	HP11 1ET	(0494)36286
(Buckinghamshire)	621 London Road		High Wycombe
			Telex 851-83239

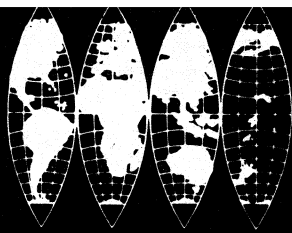
**PHIN – PHILIPS GLOEILAMPENFABRIEKEN**

			Zip Code	Telephone No.	TWX/Telex
<b>ELCOMA MARKETING COMMUNICATIONS</b>					
Building BA, Eindhoven, Netherlands .....				(040) 79 11 11	51121
<b>ARGENTINA</b> .....	<b>Buenos Aires</b> .....	Fapesa I.y.C .....		652-7438/7478	121243
		Av. Crovara 2550			
<b>AUSTRALIA</b> .....	<b>Lane Cove</b> .....	Philips Industries Holdings, Ltd. ....	2066	427 0888	2121503
		Elcoma Division	N.S.W.		
		67 Mars Road			
<b>AUSTRIA</b> .....	<b>Wien</b> .....	Ostereichische Philips .....	A-1101	62 91 11	11802
		Bauelemente Industrie G.m.b.H.			
		Triesterstrasse 64			
<b>BELGIUM</b> .....	<b>Bruxelles</b> .....	M.B.L.E. ....	B-1070	523 00 00	21420
		80 Rue des Deux Gares			
<b>BRAZIL</b> .....	<b>Sao Paulo, SP</b> .....	Ibrape .....	284-4511		112 4354
		Av. Paulista 2073-S/Loja			
<b>CANADA</b> .....	<b>Scarborough</b> .....	Philips Electronics Ltd. ....	M1B 1M8	292-5161	06-22221
	(Ontario)	Electron Devices Division			
		601 Milner Avenue			
<b>DENMARK</b> .....	<b>København NV</b> .....	Miniwatt A/S .....	DK-2400	(01) 69 16 22	15310
		Emdrupvej 115A			
<b>FINLAND</b> .....	<b>Helsinki 10</b> .....	Oy Philips Ab .....	SF-00100	1 72 71	12811
		Elcoma Division			
		Kaivokatu 8			
<b>FRANCE</b> .....	<b>Paris 11</b> .....	R.T.C. (RTCF)* .....	F-75540	355-44-99	680495
		La Radiotechnique Compelec			
		130 Avenue Ledru Rollin			
<b>GERMANY</b> .....	<b>Hamburg 1</b> .....	VALVO (VALG)* .....	D-1	(040)3296-1	2161891
		UB Bauelemente der Philips GmbH			
		Valvo Haus			
		Burchardstrasse 19			

\* Manufacturer code inside ( ) can be found in Section 52, Manufacturers' Codes, Names & Addresses

**Manufacturers' Sales Offices****PHIN — PHILIPS GLOEILAMPENFABRIEKEN (Cont'd)**

			Zip Code	Telephone No.	TWX/Telex
ELCOMA MARKETING COMMUNICATIONS					
Building BA, Eindhoven, Netherlands .....				(040) 79 11 11	51121
HONG KONG .....	Kwai Chung, N.T. (K.C.T.L.)	Philips Hong Kong Ltd. Components Dept. Philips Industrial Bldg. Kung Yip Street	289	12-24 51 21	3660
ITALY .....	Milano .....	Philips S.p.A..... Sezione Elcoma Piazza IV Novembre 3	I-20124	2-6994	36262
JAPAN .....	Tokyo .....	Nihon Philips Corporation..... Shuwa Shinagawa Bldg. 26-33 Takanawa, 3-chome Minato-ku	108	(448) 5611	7226388
KOREA .....	Seoul .....	Philips Electronics (Korea) Ltd..... Philips House-Elcoma Division 260-199 Itaewon-dong Yongsan-ku		794-4202	
MEXICO .....	Mexico 6, D.F. ....	Electronica S.A. de C.V. .... Varsovia No. 36		533-11-80	221771227
NETHERLANDS .....	Eindhoven .....	Philips Nederland B.V..... Afd. Elonco Boschdijk 525	5600 PD	(040) 79 33 33	51238
NEW ZEALAND .....	Auckland .....	Philips Electrical Industries Ltd. .... Elcoma Division 2 Wagener Place - St. Lukes		867119	2312
NORWAY .....	Oslo 3 .....	Norsk A/S Philips..... Electronica Dept. Sørkedalsveien 6		46 3890	16565
SOUTH AFRICA .....	Johannesburg .....	EDAC (Pty.) Ltd. .... South Park Lane New Doornfontein	2001	24/6701	95437786
SPAIN .....	Barcelona 7 .....	Copresa S.A. .... Balmes 22		301 63 12	54666



# SECTION 50

## Manufacturers' Sales Offices

### PHIN – PHILIPS GLOEILAMPENFABRIEKEN (Cont'd)



			Zip Code	Telephone No.	TWX/Telex
<b>ELCOMA MARKETING COMMUNICATIONS</b>					
Building BA, Eindhoven, Netherlands .....				(040) 79 11 11	51121
<b>SWEDEN</b> .....	<b>Stockholm 27</b> .....	A. B. Elcoma .....	S-11584	08/679780	10776
		Lidingovagen 50			
<b>SWITZERLAND</b> .....	<b>Zurich</b> .....	Philips A. G. ....	CH-8027	01/43 22 11	59280
		Elcoma Dept.			
		Allmendstrasse 140-142			
<b>TAIWAN</b> .....	<b>Taipei</b> .....	Philips Taiwan Ltd. ....		55 13101-5	734
		Elcoma Division			
		San Min Bldg., 3rd Floor			
		57-1 Chung Shan N. Road			
		Section 2			
<b>UNITED KINGDOM</b> ...	<b>London</b> .....	Mullard Ltd. ....	WC1E 7HD	01-580-6633	264341
		Mullard House			
		Torrington Place			
<b>UNITED STATES</b> .....	<b>Rhode Island</b> .....	Amperex Electronic Corporation (APX)*...	02876	401-762-9000	92-7584
		Sem. & Microcircuits Division			
		Providence Pike, Slatersville			

\* Manufacturer code inside ( ) can be found in Section 52, Manufacturers' Codes, Names & Addresses

### PLOB – PLESSEY OPTOELECTRONICS AND MICROWAVE

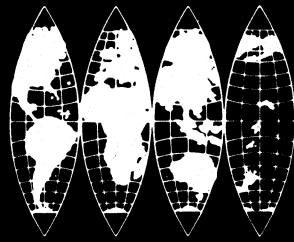


			Zip Code	Telephone No.	TWX/Telex
Wood Burcote Way, Towcester, Northants, England .....			NN12 7JN	0327-51871	311442
<b>UNITED STATES</b>					
<b>CALIFORNIA</b> .....	<b>Irvine</b> .....	Plessey Optoelectronics .....	92714	714-540-9934	910-595-1930
		1641 Kaiser			

### REA – READOUTS, INC.



		Zip Code	Telephone No.
Post Office Box 149, Del Mar, California .....		92014	714-755-2641



# SECTION 50

## Manufacturers' Sales Offices

### RTCF — R.T.C. LA RADIOTECHNIQUE—COMPELEC



130, Avenue Ledru-Rollin, Paris Cedex 11, France .....	Zip Code 75.540	Telephone No. 355-44-99	TWX/Telex PHILAMP PARIS 280 746
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### SAI — SANDERS ASSOCIATES, INC.

DEFENSIVE SYSTEMS DIVISION 95 Canal Street, Nashua, New Hampshire.....	Zip Code 03061	Telephone No. 603-885-3010	TWX/Telex 710-228-1894 094-3430
---	-------------------	-------------------------------	---------------------------------------

### SPT — SPECTRONICS, INC.



830 East Arapaho Road, Richardson, Texas .....	Zip Code 75081	Telephone No. 214-234-4271
--	-------------------	-------------------------------

### TWLT — TAIWAN LITON ELECTRONIC CO., LTD.



10th Floor, 74, Sec. 2, Hsin Yi Road, Taipei, Taiwan, R.O.C. ....	Zip Code 106	Telephone No. 3417291-4	TWX/Telex 24514 TWLITON
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HONG KONG .....	Kowloon .....	Jers Electronic Company, Ltd..... Room 2309-2311, Park-In Comm. Centre 56, Dundas Street	3-315257/0	85450 JERSE HX
JAPAN .....	Tokyo .....	Sherman Trade & Enterprises, Inc..... Room 1207 Nita Shasta Mansion Building No. 1-35, 4-chome Mita Minato-Ku	(454) 4191	SHERMAN J24615
SINGAPORE .....	Singapore .....	Dynamar International Ltd..... Room 526, Cuppage Centre Cuppage Road	9 2351139 2351623	DYNAMA RS26283
UNITED STATES .....	Van Nuys .....	Industrial Electronic Engineers, Inc. .... (California) 7740 Lemona Avenue	91405 213-787-0311	910-495-1753



**51. MANUFACTURERS' LOGOS**

IN MFR.  
CODE ORDER



ABI – Ashley-Butler



**TFK**

*(Product Identifier)*

ALGG – AEG-Telefunken



AMEN – Aksjeselskapet  
Mikro-Elektronikk



AND – And Inc.

**Amperex<sup>®</sup>**

APX – Amperex Electronics Corp.



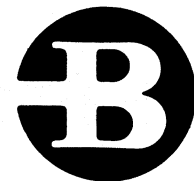
BAR – Barnes Engineering Co.

**BBC**  
BROWN BOVERI

BBCS – BBC Brown,  
Boveri & Co., Ltd.



BEC  
BECK – Beckman Instruments Inc.



BUR – Burroughs Corp.



CENB – Centronic  
(T.C. Centronic Ltd.)

**51. MANUFACTURERS' LOGOS**

IN MFR.  
CODE ORDER



CHE – Cherry Semiconductor Corp.



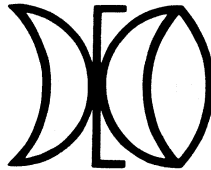
CLA – Clairex Electronics



CRS – Crystaloid Electronics Co.

**D C C**

DCO – Digital Components Corp.



DECO – Digital Electronics Corp.

**DIALIGHT**

DIA – Dialight Corp.



EGG – EG & G, Electro Optics Div.

**ELTEC**

EII – Eltec Instruments Inc.

**ELCOMA**

ELMA – Elcoma



FACC – Ford Aerospace & Communications Corp.

**51. MANUFACTURERS' LOGOS**

IN MFR.  
CODE ORDER

**FERRANTI**  
Electronic Systems



**FAIRCHILD**

FERB – Ferranti Electronics Ltd.

FPLC – Ferranti-Packard Ltd.

FSC – Fairchild Camera & Instrument Corp.



**HAMLIN**

HEWLETT  PACKARD  
COMPONENTS

GESY – General Electric Co.

HAM – Hamlin Inc.

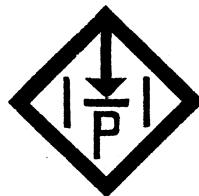
HPA – Hewlett Packard



IAV – International Audio Visual Inc.

IEE – Industrial Electronic Engineers Inc.

INR  
INRB  
INRI  
INRJ – International Rectifier Corp.



IPI – Integrated Photomatrix Inc.

**51. MANUFACTURERS' LOGOS**

IN MFR.  
CODE ORDER



IRI – Infrared Industries Inc.



ITT – ITT Semiconductors  
Intermetall



LAD – Laser Diode Laboratories Inc.



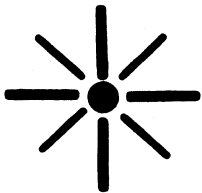
LCO – Tem-Pres Div./Leco Corp.



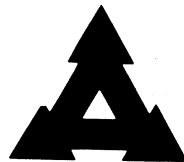
LEE – Leecraft Mfg. Co., Inc.



LIX – Litronix Inc.



MAI – Math Associates Inc.



MATJ – Matsushita Electronics Corp.



MEHK – Micro Electronics Ltd.



MELJ – Moririca Electronics Ltd.

**51. MANUFACTURERS' LOGOS**

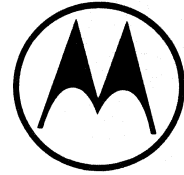
IN MFR.  
CODE ORDER



MER — Meret Inc.

**Molectron**

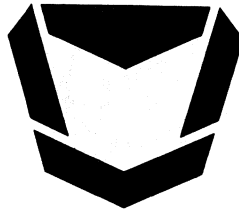
MOL — Molectron Corp.



MOTA — Motorola Semiconductor Products

**Monsanto**

MTO — Monsanto Commercial Products Co.



MULB — Mullard Ltd.



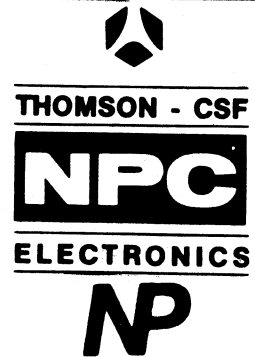
NAT — National Electronics Inc.

**NEC**

NECJ — Nippon Electric Co.

*Noritake*

NEIJ — Noritake Co., Ltd.



(Product Identifier)

NPC — Nucleonic Products Co.



NSC — National Semiconductor Corp.

# 51. MANUFACTURERS' LOGOS

IN MFR.  
CODE ORDER



NSL — National Semiconductors Ltd.



OCLI — Optical Coating  
Laboratory Inc.



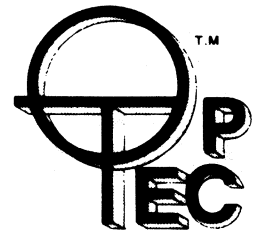
OPC — Opcoa-  
Division of AVX Corp.



OPE — Optoelectronics Inc.



OPI — Optron Inc.



OTI — Opto Technology Inc.



PHIN — N. V. Philips  
Gloeilampenfabrieken



PLOB — Plessey Optoelectronics &  
Microwave



RCA — RCA Corp.



READOUTS, INC.

REA — Readouts Inc.

**51. MANUFACTURERS' LOGOS**

IN MFR.  
CODE ORDER



REC – Refac Electronics Corp.

**RETICON**

RET – EG & G Reticon

**ROFIN**

ROF – Rofin Inc.



RTCF – R.T.C. La Radio Technique-  
Compelec



RTN – Raytheon Company



SAI – Sanders Associates Inc.



SAM – Skan-a-Matic Corp.



SBR – Santa Barbara  
Research Center

**SIEMENS**



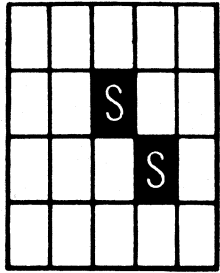
SIEG – Siemens Aktiengesellschaft



SNI – Sensors Inc.

**51. MANUFACTURERS' LOGOS**

IN MFR.  
CODE ORDER

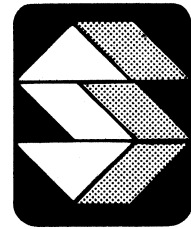


®

**SOL – Silicon Sensors**



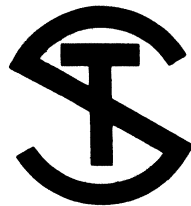
**SONY – Sony Corp.**



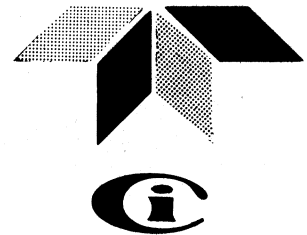
**SPT – Spectronics Inc.**



**SSCF – Silec-Semi-Conducteurs**



**STE – Sensor Technology Inc.**



*(Product Identifier)*

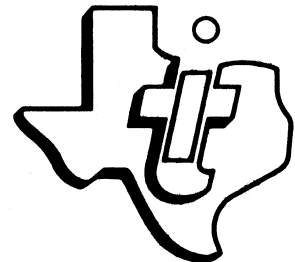
**TCY – Teledyne Crystalonics**



**THCF – Thomson-CSF**



**THCI – Thomson-CSF  
Componenti**



**TII – Texas Instruments**



**TOSJ – Toshiba Corp.**



**51. MANUFACTURERS' LOGOS**

IN MFR.  
CODE ORDER

**TCI**



TWLT – Taiwan Liton  
Electronic Co., Ltd.

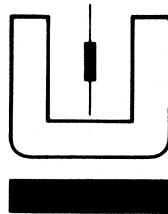


UCE – UCE Inc.

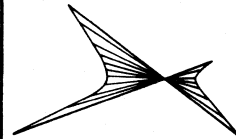
TSP – Transparent Conductors Inc.



UDT – United Detector  
Technology Inc.



UNI – Unitrode Corp.



**VACTEC, INC.**

VAC – Vactec Inc.

**Xciton**

XCI – Xciton Corp.

# 52. MANUFACTURERS' CODES, NAMES & ADDRESSES

## MANUFACTURERS IN ORDER OF D.A.T.A. CODE LETTERS

QPL MFR. DESIG.	FSCM/ NATO No.	D.A.T.A. MFRS.' CODE	
		ABI	* - Ashley-Butler, Inc., 208 U.S. Highway 206S, Somerville, NJ 08876
	D1597-	<b>ALGG</b>	* - <b>AEG-Telefunken, D-7100 Heilbronn, Postfach 1109, West Germany</b>
	N0602-	AMEN	* - AME Aksjeselskapet Mikro-Elektronikk, Knudsrudvn, 3191 Horten, Norway
		<b>AND</b>	* - <b>AND, Inc., Div. of Wm. J. Purdy Co., 770 Airport Blvd., Burlingame, CA 94010</b>
CEP	- 25403-	<b>APX</b>	* - <b>Amperex Electronics Co., Slatersville Div., Providence Pike, Slatersville, RI 02876</b>
	00430-	BAR	* - Barnes Engineering Co., Dept. EM, 30 Commerce Rd., Stamford, CT 06904
	S3771-	<b>BBCS</b>	* - <b>BBC Brown, Boveri &amp; Co., Ltd., CH5401, Baden, Switzerland</b>
	52536-	BEC	* - Beckman Instruments, Inc., 350 North Hayden Rd., Scottsdale, AZ 85257
	73138-	BECK	* - Beckman, 2500 Harbor Blvd., Fullerton, CA 92634
	83594-	BUR	* - Burroughs Corp., Electronic Components Div., P.O. Box 1226, Plainfield, NJ 07061
		<b>CENB</b>	* - <b>Centronic (TC Centronic Ltd.), King Henry's Dr., New Addington, Croydon, CR9 0BG, England</b>
		<b>CHE</b>	* - <b>Cherry Semiconductor Corp., 99 Bald Hill Rd., Cranston, RI 02920</b>
	71744-	CHM	- Chicago Miniature Lamp Works, 4433 No. Ravenswood Ave., Chicago, IL 60640
	03911-	<b>CLA</b>	* - <b>Clairex Electronics, Div. of Clairex Corp., 560 So. Third Ave., Mt. Vernon, NY 10550</b>
	33163-	CPD	- Control Products Div., Devar Inc., 706 Bostwick Ave., Bridgeport, CT 06605
		CRS	* ★ Crystaloid Electronics Co., P.O. Box 628, Hudson, OH 44236
		DCO	* - Digital Components Corp., 19 Grant St., Linden, NJ 07036
		<b>DECO</b>	* - <b>Digital Electronics Corp., 197 Airport Blvd., Burlingame, CA 94010</b>
	72619-	DIA	* - Dialight Corp., 203 Harrison Pl., Brooklyn, NY 11237
		DNPJ	- Dai Nippon Printing Co., c/o Nichimen Co., Inc., 1185 Ave. of the Americas, New York, NY 10036
	56040-	EEP	- Energy Electronic Products Corp., 6060 Manchester Ave., Los Angeles, CA 90045
	25506-	EGG	* - EG & G, Electro Optics Div., 35 Congress St., Salem, MA 01970
		EII	* - Eltec Instruments Inc., P.O. Box 9610, Central Business Park, Daytona Beach, FL 32020
	Z3537-	ELMA	* - Elcoma, 67-71 Mars Rd., Lane Cove, N.S.W., 2066, Australia
	09205-	FACC	* - Ford Aerospace & Communication Corp., Ford Rd., Newport Beach, CA 92663
	K1196-	<b>FERB</b>	* - <b>Ferranti Electronics Ltd., Fields New Rd., Chadderton, Oldham OL9 8NP, England</b>
		<b>FPLC</b>	* ★ <b>Ferranti-Packard Ltd., 6030 Ambler Dr., Mississauga, Ontario L4W 2P1, Canada</b>
CFJ	- 07263-	<b>FSC</b>	* - <b>Fairchild Camera &amp; Instrument Corp., Semicon. Prod. Group, 464 Ellis St., Mountain View, CA 94042</b>
CG	- 08838-	<b>GESY</b>	* - <b>General Electric Company, P.O. Box 44, West Genesee Street, Auburn, NY 13021</b>
		<b>HAFO</b>	- <b>ASEA-HAFO AB, Fack, S-162 10, Vallingby 1, Sweden</b>
	12617-	HAM	* - Hamlin, Inc., Lake and Grove Streets, Lake Mills, WI 53551
	50521-	HEI	- HEI, Inc., Jonathan Industrial Center, Chaska, MN 55318
CAQI	- 50434-	HPA	* - Hewlett Packard, Optoelectronics Div., 640 Page Mill Rd., Palo Alto, CA 94304
	54824-	IAV	* - International Audio Visual, Inc., 15818 Arminta St., Van Nuys, CA 91406
	05464-	IEE	* - Industrial Electronic Engineers, Inc., 7720-40 Lemona Ave., Van Nuys, CA 91405

★ New Manufacturers

\* See Section 51 for Manufacturers' Logos

Manufacturers shown in bold print have sales offices which are included in SECTION 50

# 52. MANUFACTURERS' CODES, NAMES & ADDRESSES

## MANUFACTURERS IN ORDER OF D.A.T.A. CODE LETTERS (Cont'd)

QPL MFR. DESIG.	FSCM/ NATO No.	D.A.T.A. MFRS. CODE	
CCBS	81483	INR	* - International Rectifier, Semicon. Div., 233 Kansas St., El Segundo, CA 90245
	K0512	INRB	* - International Rectifier, Hurst Green, Oxted, Surrey RH8 9BB, England
	A2849	INRI	* - International Rectifier Corp., Italiano S.p.A., Via Privata Liguria 49, 10071 Borgaro Torinese, Italy
		INRJ	* - International Rectifier Corp., Japan Ltd., Daiei Bldg., No. 23-7 Shinjuku 3-chome, Shinjuku-ku, Tokyo 160, Japan
		<b>IPI</b>	* - <b>Integrated Photomatrix, Inc., 1101 Bristol Rd., Mountainside, NJ 07092</b>
		IRI	* - Infrared Industries, Inc., 62 Fourth Ave., Waltham, MA 02154
D8849	ITT		* - ITT Semiconductors Intermetall, P.O. Box 840, D-7800 Freiburg I Br, West Germany
	LABF		- Laboratoires de Marcoussis, Centre de Recherches de la Compagnie Generale d'Electricite, Route de Nozay, 91460, Marcoussis, France
	LAD		* - Laser Diode Laboratories, Inc., 205 Forrest St., Metuchen, NJ 08840
	LCO		* - Leco Corp., Tem-Pres Div., 1526 William St., State College, PA 16801
	LEE		* - <b>Leecraft Manufacturing Co., Inc., 21-46 44th Rd., Long Island City, NY 11101</b>
50579	LIX		* - Litronix, Inc., 19000 Homestead Rd., Cupertino, CA 95014
	LXD		- Liquid Xtal Displays, Inc., 24500 Highpoint Rd., Cleveland, OH 44122
	MAI		* ★ Math Associates, Inc., 376 Great Neck Rd., Great Neck, NY 11021
01619	MATJ		* - Matsushita Electronics Corp., (Panasonic), Kotari Yakemachi, Nagaokakyo City, Kyoto, Japan
Z2458	<b>MEHK</b>		* - <b>Micro Electronics Ltd., 38 Hung To Rd., Kwun Tong, Kowloon, Hong Kong</b>
	MELJ		* - Moririca Electronics Ltd., 205 Totsuka-cho, Totsuka-ku, Yokohama, Japan
53071	MER		* - Meret, Inc., 1815 24th St., Santa Monica, CA 90404
55621	MII		- Micon Industries, 252 Oak St., Oakland, CA 94607
	<b>MOL</b>		* - <b>Molelectron Corp., 177 N. Wolfe Rd., Sunnyvale, CA 94086</b>
CGG	04713	MOTA	* - Motorola Semiconductor Products, 5005 E. McDowell Rd., M370, Phoenix, AZ 85008
	50522	<b>MTO</b>	* - <b>Monsanto Commercial Products Co., 3400 Hillview Ave., Palo Alto, CA 94304</b>
K8996	MULB		* - Mullard, Ltd., Mullard House, Torrington Pl., London WC1E 7HD, England
83781	<b>NAT</b>		* - <b>National Electronics Inc., Varian Div., P.O. Box 269, Geneva, IL 60134</b>
S0543	NECJ		* - Nippon Electric Co., Ltd., Semicon. & IC Sales Dept., 1753 Shimonumabe, Nakahara-Ku, Kawasaki City, Kanagawa Pref., Japan
	NEIJ		* ★ Noritake Co., Ltd., Electronics Div., 1-1 Noritake Shimachi, Nishi-ku, Nagoya, Japan
08257	NPC		* - Nucleonic Products Co., Inc., 6660 Variel Ave., Canoga Park, CA 91304
CCXP	27014	NSC	* - National Semiconductor Corp., 2900 Semiconductor Dr., Santa Clara, CA 95051
	NSL		* - National Semiconductors, Ltd., 331 Cornelia St., Plattsburgh, NY 12901
	11536	<b>OCLI</b>	* - <b>OCLI Photoelectronics Division, 15251 E. Don Julian Rd., City of Industry, CA 91746</b>
	50347	OPC	* - OPCOA, Div. IDSI, 330 Talmadge Rd., Edison, NJ 08817
	54243	OPE	* - Optoelectronics, Inc., 1309 Dynamic St., Petaluma, CA 94952
CDTF	32694	OPI	* - Optron, Inc., 1201 Tappan Circle, Carrollton, TX 75006
		OTI	* - Opto Technology, Inc., 1674 S. Wolf Rd., Wheeling, IL 60090
		PAN	- Pantek International Corp., P.O. Box 587, Lewistown, PA 17044
H0002	<b>PHIN</b>		* - <b>N. V. Philips Gloeilampenfabrieken, Elcoma Tech. Dept., Bldg. BA, Eindhoven, Netherlands</b>

★ New Manufacturers

\* See Section 51 for Manufacturers' Logos

# : CODE CHANGE THIS EDITION

Old: INTG - Intermetall

New: ITT - ITT Intermetall

Manufacturers shown in bold print have sales offices which are included in SECTION 50

# 52. MANUFACTURERS' CODES, NAMES & ADDRESSES

## MANUFACTURERS IN ORDER OF D.A.T.A. CODE LETTERS (Cont'd)

QPL MFR. DESIG.	FSCM/ NATO No.	D.A.T.A. MFRS.' CODE	
	K8747-	<b>PLOB</b> *	<b>Plessey Optoelectronics &amp; Microwave, Wood Burcote Way, Towcester, Northamptonshire, U.K.</b>
CRC -	95444 -	RCA *	RCA, Solid State Division, Route 202, Somerville, NJ 08876
	52923 -	<b>REA</b> *	<b>Readouts, Inc., P.O. Box 149, Del Mar, CA 92014</b>
	28564 -	REC *	Refac Electronics Corp., P.O. Box 809, Winsted, CT 06098
	56025 -	RET *	EG & G Reticon, 345 Potrero Ave., Sunnyvale, CA 94086
		ROF *	★ Rofin, Inc., Echo Bridge Office Park, 381 Elliott St., Newton Upper Falls, MA 02164
	12556 -	<b>RTCF</b> *	<b>R. T. C. LaRadio Technique-Compelec, 130 Av. Ledru-Rollin, 75540 Paris, Cedex 11, France</b>
CRP -	94144 -	RTN *	Raytheon Company, Microwave & Power Tube Div., 465 Center St., Quincy, MA 02169
		<b>SAI</b> *	<b>Sanders Associates, Inc., Defensive Systems Div., 95 Canal St., Nashua, NH 03061</b>
	51522 -	SAM *	Skam-A-Matic Corp., P.O. Box S, Route 5 West, Elbridge, NY 13060
	11323 -	SBR *	Santa Barbara Research Center, 75 Coromar Dr., Goleta, CA 93017
	92346 -	SIEG *	Siemens AG, BVOE FHL, Munchen 80, Sankt. Martin Str., 76, Germany
		SNI *	Sensors, Inc., P.O. Box 1383, Ann Arbor, MI 48106
	54822 -	SOL *	Silicon Sensors, Inc., (formerly Solar Systems, Inc), Highway 18 East, Dodgeville, WI 53533
		SONY *	★ Sony Corporation, Box 10, Tokyo A.P., Atsugi-HANJI, Gaimu-ku, Tokyo 149, Japan
	32388 -	<b>SPT</b> *	<b>Spectronics, Inc., 830 E. Arapaho Rd., Richardson, TX 75080</b>
	S4117 -	SRPJ	Sharp Corp., 2613-1, Ichinomotocho, Tennishi, Nara-Prefecture, Japan
	16402 -	SSCF *	Le Silicium Semiconducteur, 30 Ave. de la Republique, 94800 Villejuif, France
	29927 -	STE *	Sensor Technology, Inc., 21012 Lassen St., Chatsworth, CA 91311
CCZK -	12498 -	TCY *	Teledyne Crystalonics, 147 Sherman St., Cambridge, MA 02140
	F5602 -	THCF *	Thomson-CSF, Div. Semiconducteurs SESCOSEM, 50, rue Jean Pierre Timbaud, BP5, 92403 Courbevoie, France
		THCI *	Thomson-CSF Componenti, Divisione Semiconduttori, Via Melchiorre Gioia, 72, 20125 Milano, Italy
CGO -	01295 -	TII *	Texas Instruments, Inc., Components Group, MS84, P.O. Box 5012, Dallas, TX 75222
	K0461 -	TIIB	Texas Instruments Ltd., Manton Lane, Bedford, MK41 7PA, Bedford, England
	S0557 -	TOSJ *	Toshiba Corporation, 72 Horikawa-cho, Saiwai-ku, Kawasaki-City, Kanagawa, 210, Japan
		TSP *	Transparent Conductors, Inc., 26 Coromar Dr., P.O. Box 549, Goleta, CA 93017
		<b>TWLT</b> *	★ <b>Taiwan Liton Electronic Co., Ltd., 74, Sec. 2, HSIN YI Rd., Taipei, Taiwan, R.O.C.</b>
		UCE *	Uce, Inc., 20 No. Main St., Norwalk, CT 06854
	50486 -	UDT *	United Detector Technology, Inc., 2644 30th St., Santa Monica, CA 90405
CDAS -	12969 -	UNI *	Unitrode Corp., 580 Pleasant St., Watertown, MA 02172
		USSR	V/O Electronorgtechnica, Smolenskaja Pl. 32/34, Moscow 121200, U.S.S.R.
		VAC *	Vactec, Inc., 2423 Northline Industrial Blvd., Maryland Heights, MO 63043
	53184 -	XCI *	Xciton Corporation, Shaker Park, 5 Hemlock St., Latham, NY 12110

★ **New Manufacturers**

\* See Section 51 for Manufacturers' Logos

#: CODE CHANGE THIS EDITION

Old: MISI - Sescosem Italiana

New: THCI - Thomson-CSF

**Manufacturers shown in bold print have sales offices which are included in SECTION 50**