PREPARED BY:	DATE :	SPEC.No. DG-958080
M. Yabe	Sep. 01. '95	
APPROVED BY:	DATE :	ISSUE Aug. 30. 1995
M. Abe	Sep. 01. 1995	'AGE 8 Pages

SHARP

ELECTRONIC COMPONENTS GROUP
SHARP CORPORATION

SPECIFICATION

REPRESENTATIVE DIVISION
OPTO-ELECTRONIC DEVICES DIV.

DEVICE SPECIFICATION FOR
GaP Yellow-green
Chip LED Device

MODEL No. LT1E62A

1. These specification sheets include the contents under the copyright of Sharp Corporation ('W"). Please keep them with reasonable care as important information. Please do not reproduce or cause anyone reproduce them without Sharp's consent.
2. Please obey the absolute maximum ratings and notes etc. in these specification sheets. and the notice mentioned below for actual use of this device. SHARP takes no responsibility for any damage caused by improper use of the device deviated from the absolute maximum ratings and notes etc. in these specification sheets. and the notice mentioned below for actual use of this device.

(Notice)
(1) This device is designed for use in the following applications;

. OA equipment . Audio visual equipment . Home appliance
. Telecommunication equipment (Terminal) .Measuring equipment
[. Tooling machine . Computer, etc.
among those applications. if there is applicable to the item(2), and(3). Please obey the corresponded not ice.

(2) The appropriate measures. such as fail-safe design and redundant design considering safety design of overall system and equipment, should be taken to ensure the reliability and safety in the function and precision when this device is used for equipment, such as;

. Transportation control and safety equipment (aircraft, train, automobile etc.)
• Traffic signal . Gas leakage sensor breaker ● Fire box and burglar alarm box]
[. Other safety equipment, etc.

(3) Please do not use for the uses mentioned below which require extremely high reliability and safety in function and precision

. Space equipment . Telecommunication equipment (Trunk)]
[.Nuclear power control equipment . Medical equipment etc.]

(4) Contact and consult with a Sharp representative if there are anY questions when intending to use this device for any applications listed above or applicable to the listed above.

3. Contact and consult with a Sharp representative, in advance, if there any questions about this device.

CUSTOMER'S APPROVAL

DATE

BY

DATE PRESENTED Sep. 1. 1995

BY M. Abe

M. Abe
Department General Manager of
Engineering Dept. , III
Opto-Electronic Devices Div.
ELECOM Group
SHARP CORPORATION

SHARP

LT1E62A

This **data** sheet is to introduce the light emitting diode device Model No. LTl E62A, delivered to

l. Structure and characteristics
Structure : **GaP** yellow-green chip LED device
Outline dimensions **and** pin connections : See page **2**
Taping specification : See page 3 4 5 6
Packing specification : See page 7
Soldering method : See page 8

Z. Absolute **maximum** ratings (Ta= 25℃)

Parameter		Symbol	Value	Unit
Power dissipation		P	8 4	■W
Continuous forward current		I_F	30	■A
Peak forward current (No te 1)		I_{FM}	50	■A
Derating factor	DC	–	0.40	■A／℃
	Pulse	–	0.67	■A／℃
Reverse voltage		V_R	5	V
Operating temperature		Topr	−30～+ 85	℃
Storage temperature		Tstg	−40～+100	℃

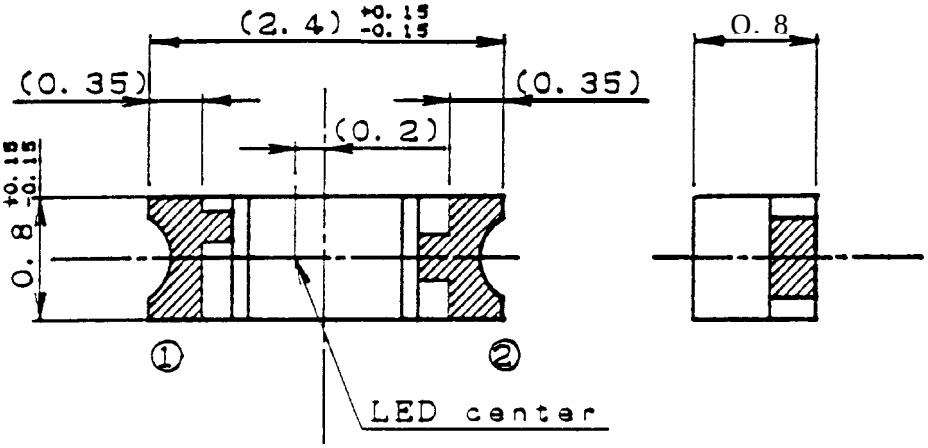
(Note 1) Duty ratio = 1/10 , Pulse width = O. 1 IRS

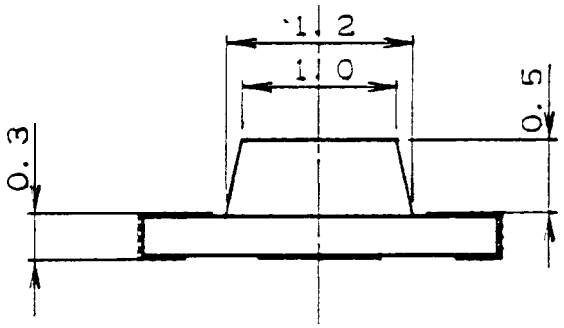
3. Electro optical characteristics (Ta= 25℃)

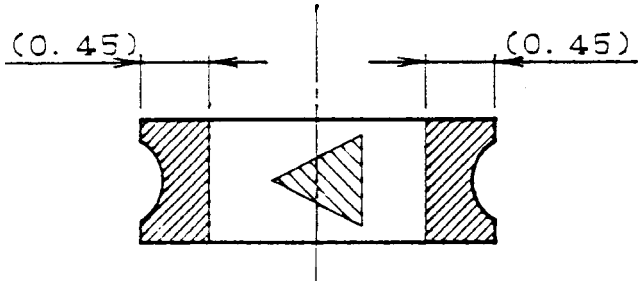
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Forward voltage	V_F	I_F = 20 mA	–	2.1	2.8	v
Luminous intensity (Note 2)	I_V		9.4	19	–	mcd
Peak emission wavelength	λp		–	565	-	nm
Spectrum radiation bandwidth	△λ		–	30	-	nm
Reverse current	I_R	V_R= 4 V	–	–	10	μA
Terminal capacitance	Ct	V= 0V, f= 1MHz	–	35	–	pF

(Note 2) Torelance: ±15%

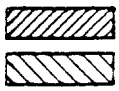
SHARP





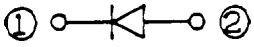


1. Plated area
   Resist area



2. Pin Conection

Q Cathode
Q Anode



3. Unspecified tel. to be ±0.1

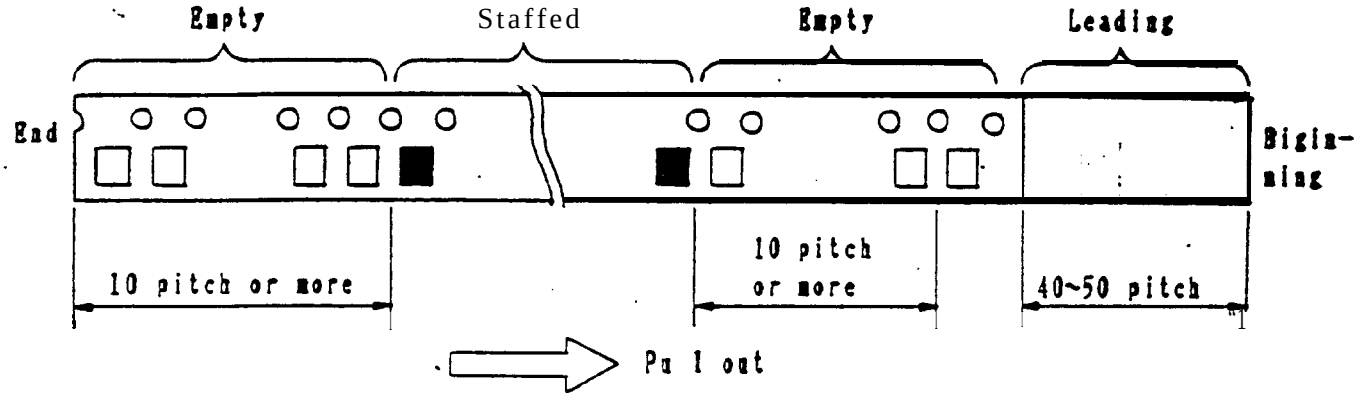
適用機種 APPLICABLE MODEL	尺度 SCALE	単位 UNIT				
LT1E62A	20/1	mm				
			改訂日 DATE	改訂記事 REVISE	担当 CHNG	
板厚 THICKNESS / 員数 PIECES	材質 MATERIAL	仕上 FINISH	名称 NAME	Outline dimensions and terminal connections		
		Auめっき				
日付 DATE 1995. 5. 29	シャープ株式会社 電子部品事業本部		コード CODE			
設計 DESIGN / 製図 DRAW / 検図 CHECK / 検図 CHECK / 承認 APPROVE	オプトデバイス(事)第3技術部					
	OPTO-ELECTRONIC DEVICES DIV ELECOM GROUP		図番 DRAWING No.	50604026M		
	SHARP CORPORATION					

SHARP

Taping Specification

1. This data sheet is to introduce the taping specification of LED device, model No. LT1E62A
2. Taping specification

2.1 Taping specification



2.2 Shipment table

SHIPMENT TABLE	
PART No.	← Model number
QUANTITY	← Quantity of products
LOT No.	← Lot number*: ① ② ③ ④ ⑤
SHARP	
MADE IN JAPAN	

*: Lot indication

① Production plant code(to be indicated alphabetically)

② Production lot(single or double figures)

③ Year of production(the last two figures of the year)

④ Month of production
(to be indicated alphabetically with January corresponding to A)

⑤ Date of production(01~31)

SHARP

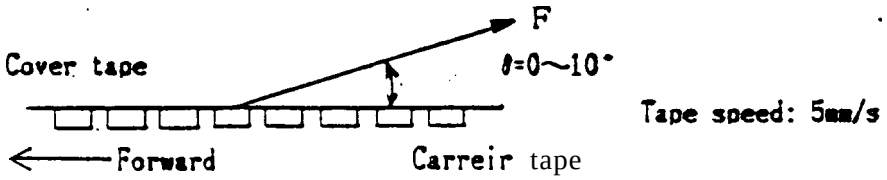
2.3 Related ● atters

2.3.1. Packing,

There should not be ● issing ● bove continuous three products.

2.3.2. Tape strength

1) Cover tape strength against peel ing: F = 0.1~0.8N (θ=10° or less)



2) Tape strength against bending

The radius of bending circle should be 30mm or more.

If it is less titan 30mm, the cover tape may peel.

2.3.3. Taking out of products

1) Products should be easily taken out.

2) Products should not be attached to the cover tape at peeling.

2.3.4.. Jointing of tape

There should not be joint of cover tape or carrier tape.

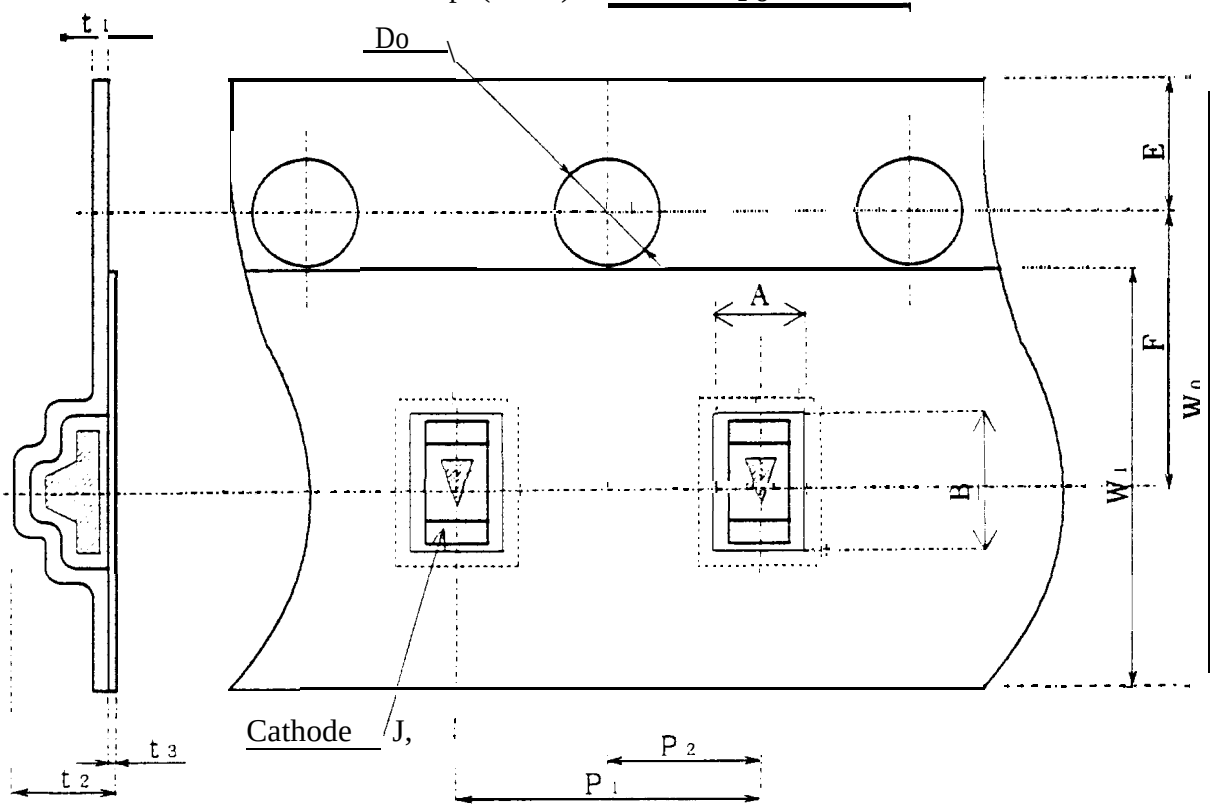
3. Quantity per reel

Average: 4,000 Pcs. per *reel* "

SHARP

4-1.Taping

4-1-l .Shape and dimension of tape(TYP.)

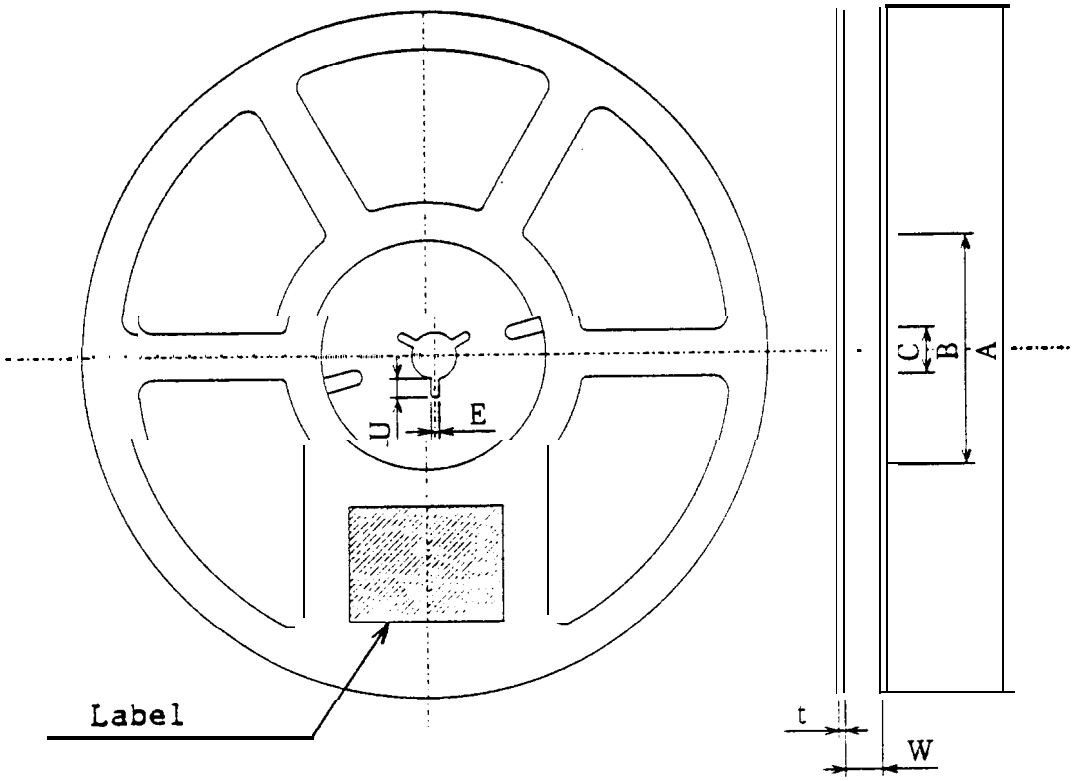


Parameter		Symbol	Dimension	Remarks
Concave square hole for part insertion	Vertical	A	1.2 mm	Dimension excludes corner R at inside bottom
	Horizontal	B	2.1 mm	
	Pitch	P ,	4.0mm	
Round sprocket hole	Diameter	DO	1 .5mm	
	Pitch	P_0	4.0mm	Accumulated error ±0.5mm/10 pitch
	Position	E	1.75mm	Distance between tape edge and hole center
Center to center dimension	Vert.dire	P_2	2. Omm	Center line of the concave square hole and round sprocket hole
	Hori.dire	F	3.5mm	
Cover tape	Width	W_1	5.5mm	
	Thickness	t_3	0.1mm	
Carrier tape	Width	W_0	8. Omm	
	Thickness	t_1	0.2mm	
Thickness of the entire unit		t_2	1.3 mm	With cover tape and carrier tape combined

※ Material: Carrier tape. ..PET, Cover tape. ..Polyester

SHARP

4-1-2. Shape and dimension of reel(TYP.)



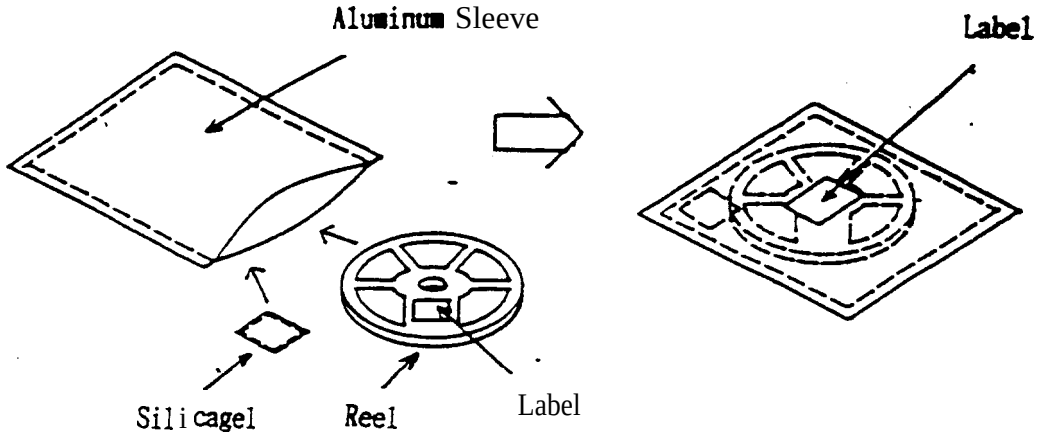
Parameter			Symbol	Dimension	Remarks
Flange	Diameter		A	ϕ178mm	
	Thickness		t	1.5mm	
	Inner space direction		W	10mm	Dimension of shaft core
Hub	External diameter		B	ϕ60mm	
	Spindle hole diameter		C	ϕ13mm	
	Key slit..	Width	E	2.0mm	
		Depth	U	4.5mm	
Notation for part name etc.			Labeling on one side of flange. (Part name, quantity, lot No.)		

※ Material: Reel...Polystyrene

SHARP

Packing Specification

In order to avoid the absorption of humidity in transport and storage, the devices are packed in aluminum sleeve.



1. Storage Conditions

The storage should be done under following conditions:

Temperature 5 to 30℃

Humidity less than 60%RH

2. Treatment after Opening

1) Please make a soldering within 2 days after opening under following conditions:-

Temperature 5 to 30℃

Humidity less than 60%RH

2) In case the devices are not used for a long time after opening, the storage in dry box is recommendable. Or it is better to repack the devices with a desiccative by the sealer and put them in the same storage conditions as 6-1. Then they should be used within 2 weeks.

3) Please make a soldering after a following baking treatment if unused term should be over the conditions of 2).

Recommendable Conditions:

① in taping

Temperature 60t Time 90 to 100 Hours

② in individual (on PWB or metallic tray)

Temperature 110℃ Time 3 to 4 Hours

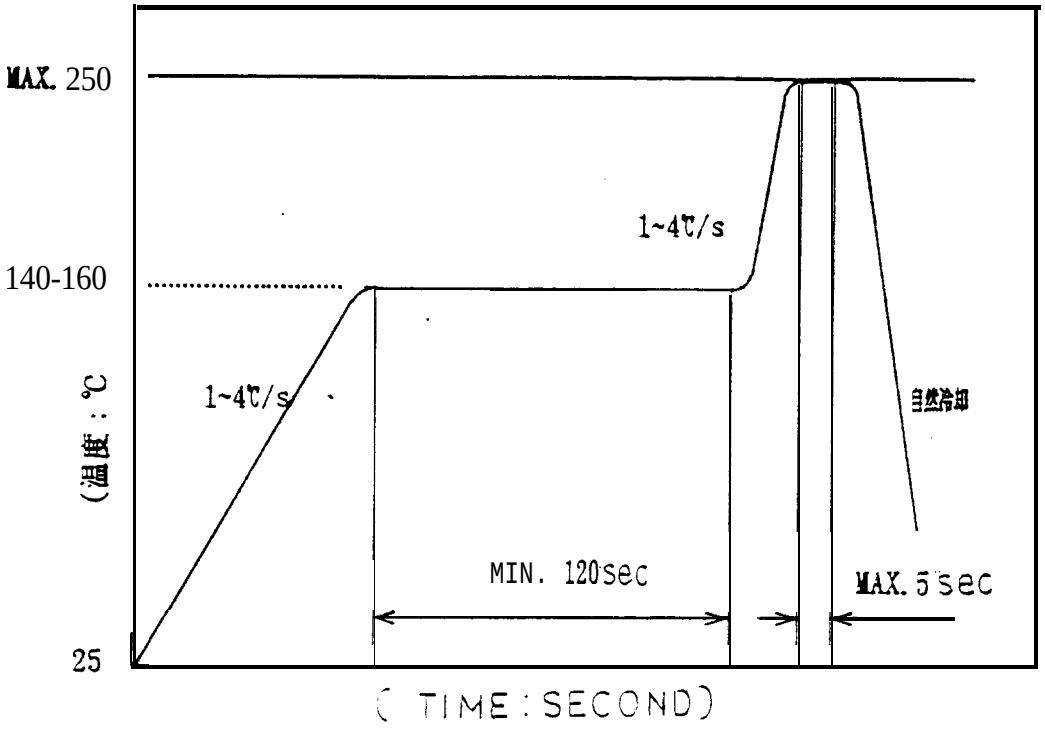
SHARP

Mounting precautions

1, Soldering

1-1 Reflow soldering

To be done-under the following condition.



Recommendable Thermal Model

1-2 Reflow soldering precautions

Second time soldering should be done within 8 hours after the first one is finished.
(Storage condition: at30C, RH<60%)

2. Soldering iron method

At 300C within seconds

When using a soldering iron, care must be taken not to damage the package
(Pay attion not to allow any undue stress or heat on package.)