SHARP CORPORATION

TECHNICAL LITERATURE
FOR
GaAsP/GaP Yellow chip LED Device

MODEL NO. LT1H92A

DOC. NO. DG-94X106

DATE Oct. 31. 1994

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2. Please obey the instructions mentioned below for actual use of this device. SHARP takes no responsibility for damage caused by improper use on the devices.

(1) This device is designed for general electronic equipment.
Main uses of this device are as follows;
•Computer •OA equipment -Telecommunication equipment (Terminal)
•Measuring equipment •Tooling machine •AV equipment
•Home appliance, etc.

(2) Please take proper steps in order to maintain reliability and safety, in case this device is used for the uses mentioned below which require high reliability.

-Unit concerning control and safety of a vehicle (airplane, train, automobile etc.) •Gas leak detection breaker •Traffic signal
•Fire box and burglar alarm box •Other safety equipment. etc.

(3) Please don't use for the uses mentioned below which require extremely high reliability

•Space equipment •Telecommunication equipment (Trunk)
•Nuclear control equipment ●Medical equipment etc.

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LT1H 92A

This data sheet is to introduce the light emitting diode device Model No. LT1H92A, delivered to

I. Structure and characteristics

Structure : GaAsP/GaP yellow chip LED device

Outline dimensions and pin connections : See page 2

Taping specification : See page 3 4 5 6

Soldering method : See page 7

Z. Absolute maximum ratings (Ta=25℃)

Parameter	Symbol	Value	Unit
Power dissipation	P	84	mW
Continuous forward current	I_F	30	mA
Peak forward current(Note1)	I_{FM}	50	mA
Derating factor		(DC) 0.40 (Pulse) 0.67	mA/℃
Reverse voltage	V_R	5	V
Operating temperature	Topr	-25 - +85	℃
Storage temperature	Tstg	-25～+100	℃

(Note 1) Duty ratio = 1/10 , Pulse width = 0,1 ms

3. Electro optical characteristics (Ta=25℃)

Parameter	Symbol	Conditions	Min.	TYP.	Max.	Unit
Forward voltage	V_F	I_F=20 mA	-	2.0	2,8	V
Luminous intensity (Note 2)	I_V	I_F=20 mA	4.4	16.0	-	mcd
Peak emission wavelength	λp	I_F=20 mA	-	585	-	nm
Spectrum radiation bandwidth	$\Delta\lambda$	I_F=20 mA	-	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%

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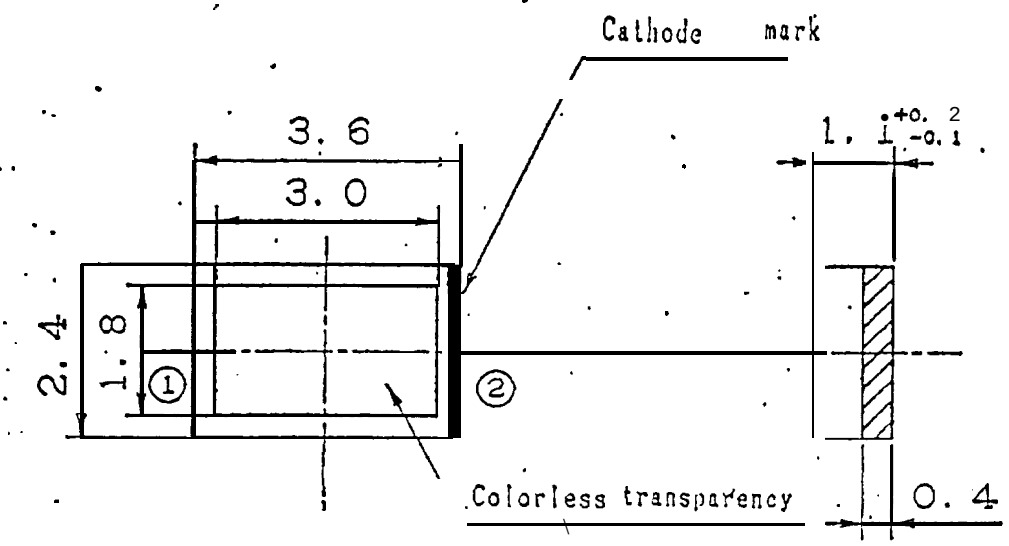
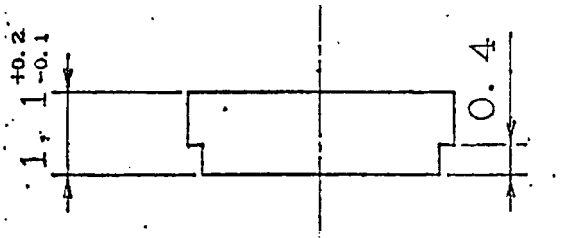
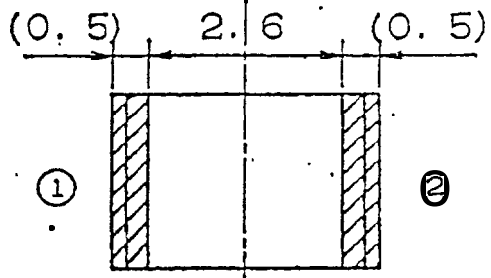


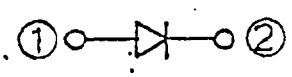




Pin connections

①. ANODE

②. CATHODE



Unspecified tol. to be ±0.1 mm

DATE	REVISE
DRAWING No.	5 0 5 0 2 6 4 0

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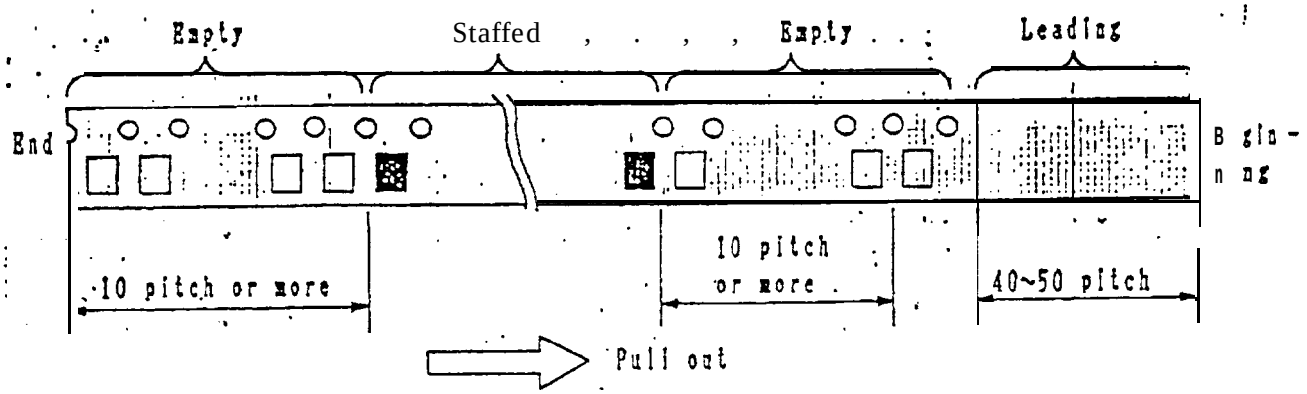
Taping Specification

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

" 2. Taping specification

2.1 Taping specification



2.2 Shipment table

SHIPMENT TABLE

PART NO.
QUANTITY. (PK)
LOT NO.

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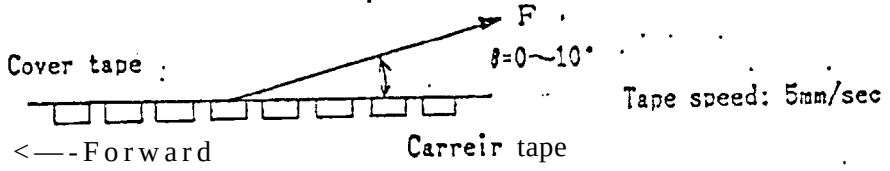
2.3 Related matters

2.3.1. Packing ,

There should not be missing above continuous three products." . " "

2.3.2. Tape strength

1) Cover tape strength against peeling: F = 10 - 80 gr(θ=10° or less)



2) Tape strength against bending .

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

If it is less than 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.

2.3.5. Storege condition : lower than 60℃ and 90%RH

(the term of validity: 1 year)

.3. Quantity "per reel'

Average: 3,000 Pcs. per reel

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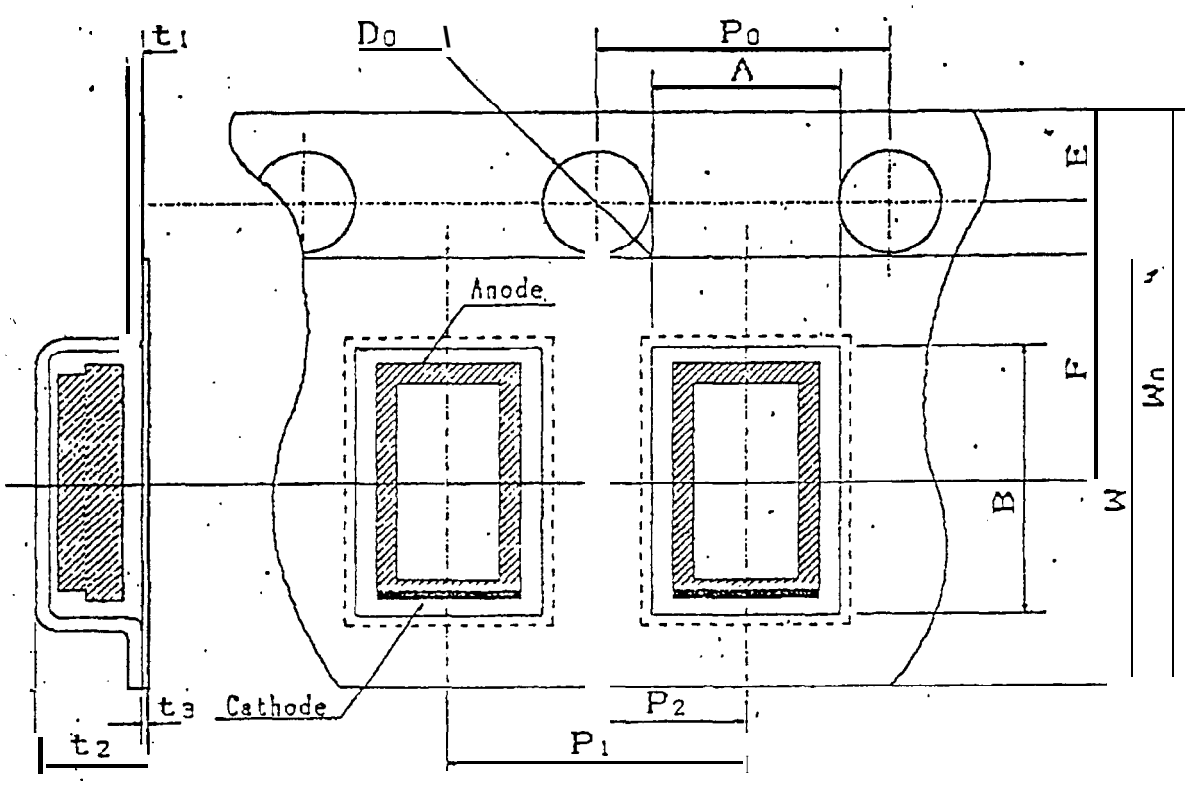

Item		ymbo I	Dimension	Remarks. ' , ,
Concave square hole for part insertion	Vertical	A	(2 . 9)	Dimension excludes corner R at inside bottom
	Horizontal	B	(3 . 9)	Dimension excludes corner R at inside bottom
	Pitch	P_1	4.0±0.1	
Round sprocket hole	Diameter	D_0	$1.5^{+0.1}_{0}$	
	Pitch	"P_0	4.0±0.1	Accumulated error ±0.5/10 pitch
	Position	E	1 .7530.1	Distanse 'between tape edge and' hole center
Center-to-cent. dimension	Vert.dire.	P_2	2-0.±0.1	Centerline of the concave square hole and round sprocket hole . ",
	Hori.dire.	F	3.5±0.1	
Cover tape	Width	w,	5.5±0.2	
	Thicknese	t_3	0.1MAX.	
Carrier tape	Width	W_0	8.0±0.3	
	Thickness	t_1	(0.25)	/
Thickness of the entire unit		t_2	1.9MAX	With cover tape and carrier tripe combined "

尺度 SCALE	材質 MATERIAL	仕上 FINISH	名称 NAME	Tape structure and dimensio
	Carrier tape:PET			
単 Q- UNIT.'			❑ %	5'0 50263$
1=1/1mm	Cover tape:PET etc		DRAWING tie.	

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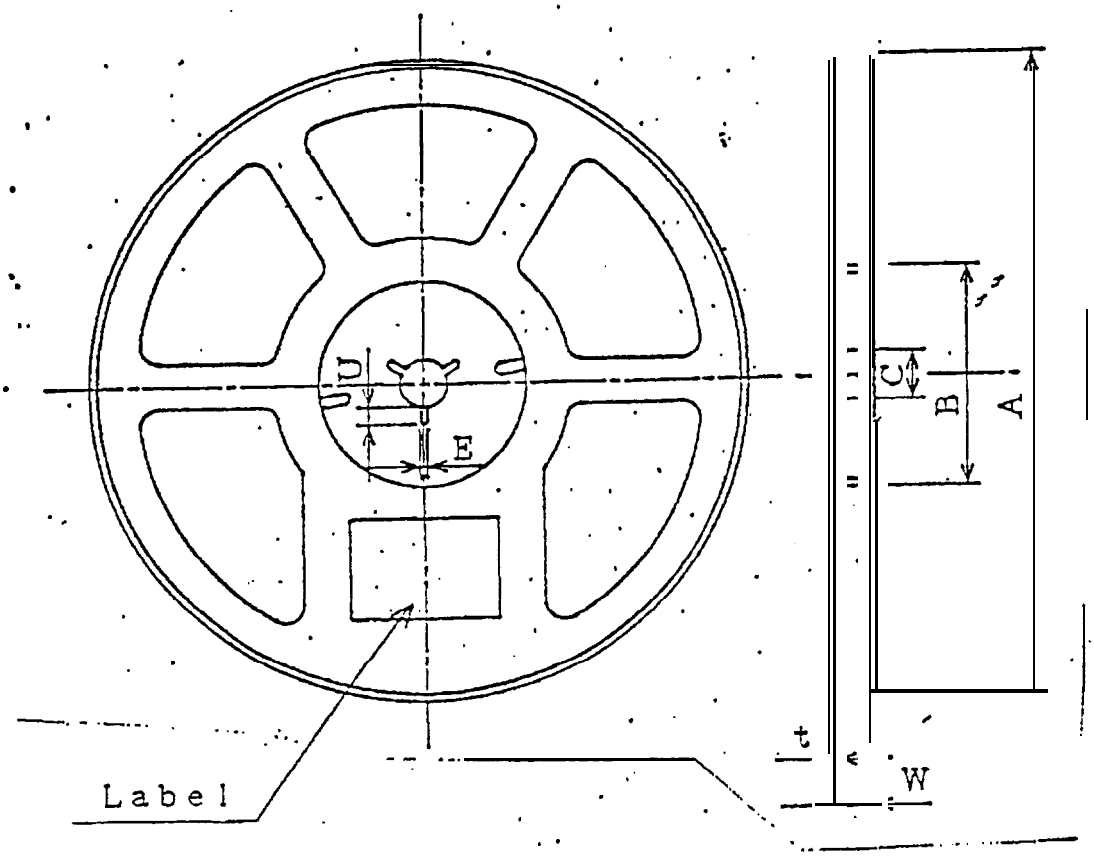

Item			Symbol	Dimension angle	Remarks
Flange	Diameter		A	φ17.8±2.0	
	Thickness		t	1.5±1.0	
	Inner space direction		W	10′.0±1.5	Dimension of shaft core
Hub	External diameter		B	(φ60)	
	Spindol hole diameter		C	φ13±0.5	
	Key slit	Wideth	E	2".0*0.5	
		Depth	U	4.5±0.7	
'Notation for part name etc.			Labeling on one side of flange(part name, quantity, lot No.)		

尺度 SCALE.	材質 MATERIAL	仕上 FINISH	名称 NAME	Reel structure and dimensi
単位 UNIT	Reel:PS.		図番 DRAWING No:	5 0 5 0 2 6 3 9
1=1/1mm				

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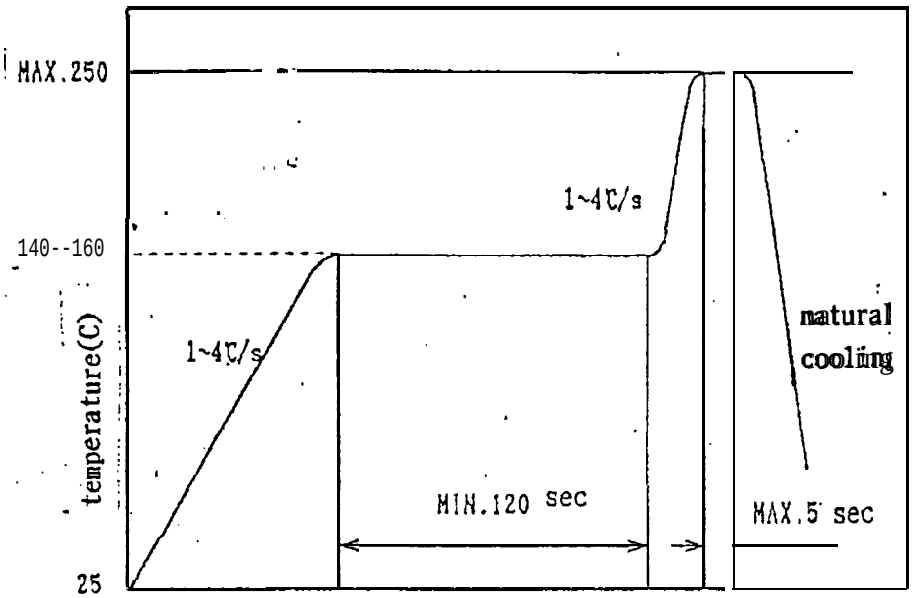
'Soldering method

1. Reflow soldering

To be done under the following condition,



Recommendable thermal model second

Precautions: It may be possible that the local temperature inside the resin will be ascending excessively in case of using infrared lamps for heating.
Please keep the condition of package temperature mentioned above.
Due to the structure of plated wiring into resin package, please pay attention not to allow undue stress or heat on package in order to avoid damaging.
Since the wire breaking in the package may be caused by mechanical stress like bend of PCB, please check the soldering equipments on your side carefully.

2, Soldering iron method

At 260C within 3 seconds

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