SHARP CORPORATION

TECHNICAL LITERATURE
FOR
GaP/GaP Green chip LED Device

MODEL NO. LT1K92A

DOC. NO. DG- 94X107

DATE Oct. 31. 1994

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

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

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

-Unit concerning control and safety of a vehicle (air plane, 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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LT1K92A

This data sheet is to introduce the light emitting diode device Model No. LT1K92A, 'delivered to "

1. Structure and characteristics

Structure : GaP/GaP green chip LED device

Outline dimensions and pin connections : See page 2

Taping specification : Seepage345 6

Soldering method : See page 7

2. Absolute maximum ratings (Ta=25℃)

Parameter	Symbol	Value	Unit
Power dissipation	P	84	mW
Continuous forward current	1?,	30	mA
Peak forward current(Note1)	I_{FM}	50	❑A
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	"C

(Note 1) Duty ratio = 1/10 , Pulse width = 0.1 ITIS

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)	Iv	I_F=20 mA	2.5	7.6	·	mcd
Peak emission wavelength	λp	I_F=20 mA	-	555	-	nm
Spectrum radiation bandwidth	△λ	I_F=20 mA	"	25	-	nm
Reverse current	I_R	V_R = 4 V	-	·	10	μA
Terminal capacitance	Ct	V=0V, f=1MHz	-	40	·	PF

(Note 2) Torelance: ±15%

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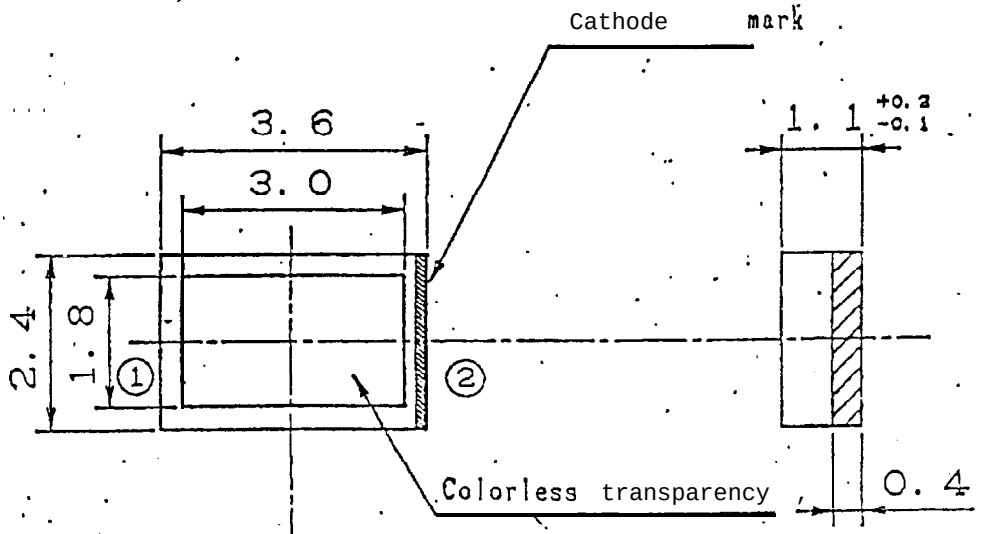
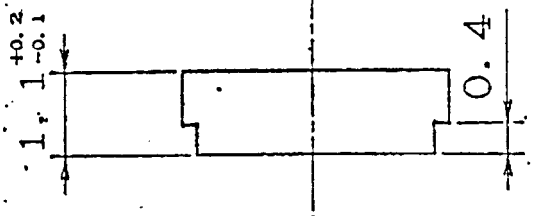
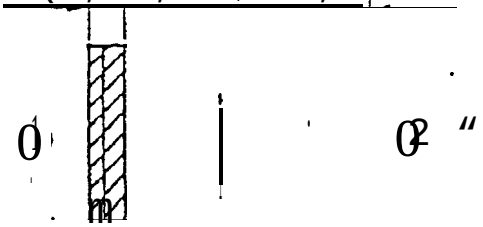




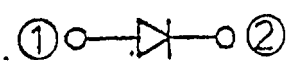
4." (0,5/; 2.6 ", (0.5)



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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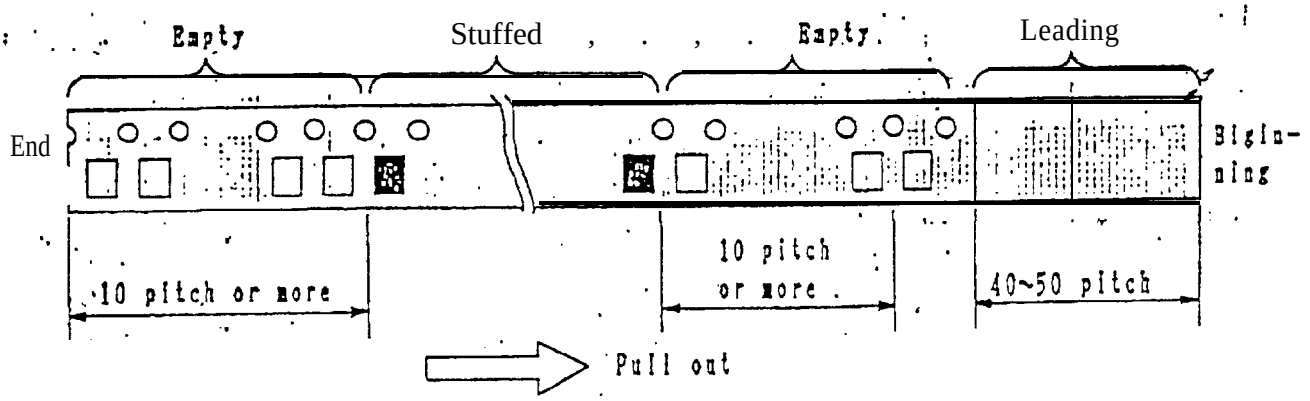
Taping Specification

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. (k)
LOT NO.

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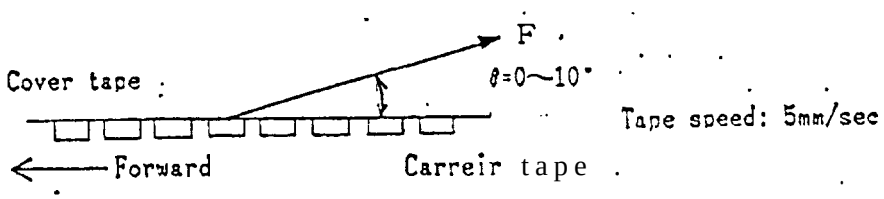
2.3 Related matters

2.3.1. Packing

There should not be missing above continuous three products."

2.3.2. Tape strength

I) 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)

Quantity per reel

Average: 3,000 pcs. per reel

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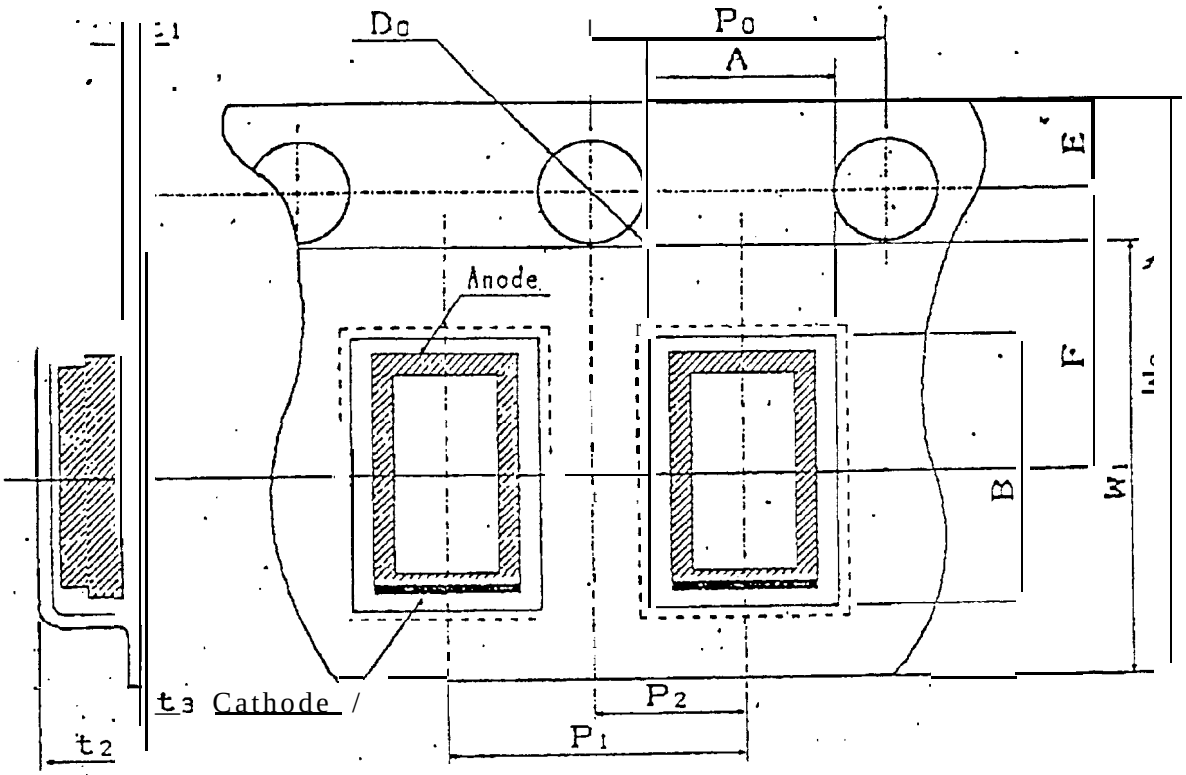

Item		Symbol	Dimension	Remarks
Concave square hole for part insertion	Vertical	A	(2.9)	Dimension excludes corner R at inside bottom
	Horizontal	B	(3.9)	Dimension excludes corner R at inside bottom
	Pitch	P,	4.0±0.1	
Round sprocket hole	Diameter	Do	$1.5^{+0.1}_{0}$	"
	Pitch	Po	4.0±0.1	Accumulated error ±0.5/10 pitch
	Position	E	1.75±0.1	Distanse between tape edge and hole center
Center-to-cent dimension	Vert.dire.	P2	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	t3	0.1MAX.	
Carrier tape	Width	Wo	8.0±0.3	
	Thickness	t1	(0.25)	
Thickness of the entire unit		t2	1.9MAX	With cover tape and carrier tape combined

尺度 SCALE	材質 MATERIAL	仕上 FINISH	名称 NAME	Tape structure and dimensi
単位 UNIT	Carrier tape: PET		❑ %	5 " 0 5 0 2 6 3 8
1=1/1mm "	Cover tape:PET etc		DRAWING No.	

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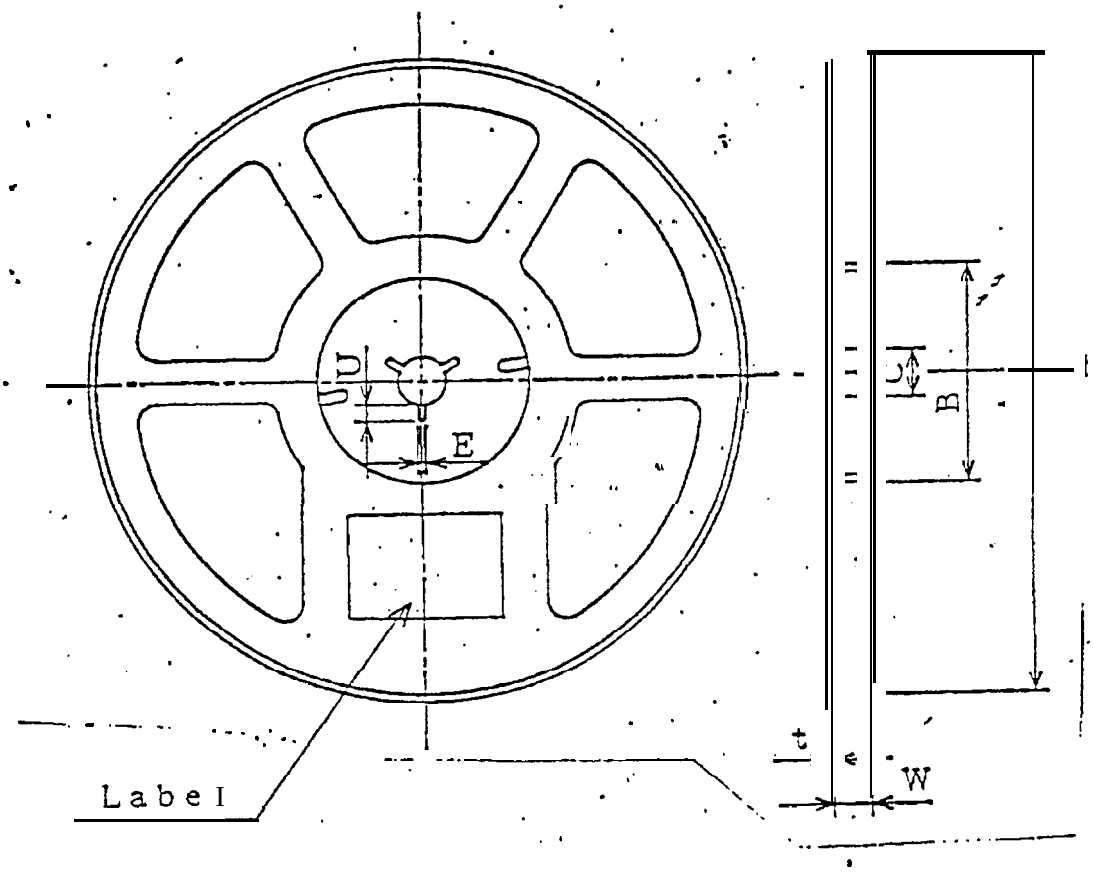

Item			Symbol	Dimension angle	Remarks . "
Flange	Diameter		A	φ17.8±2.0	
	Thickness		t	1.5±1.0	
	Inner space direction		W	10.0±1.5	Dimension of shaft cor
Hub	External diameter		B	(φ60)	
	Spindolhole diameter .		C	φ13±0.5	
	Key slit	Wideth	E	2".0±0.5	
		Depth	U	4.5±0.7	
Notation for part name etc.			Labeling on one side of flange(part name, quantity, lot No.)		

尺度 SCALE.	材質 MATERIAL	仕上 FINISH
	Reel:PS.	
単位 UNIT		
1=1/1mm		

名称 NAME	Reel structure and dimensic
❑番 DRAWING No:	50502639

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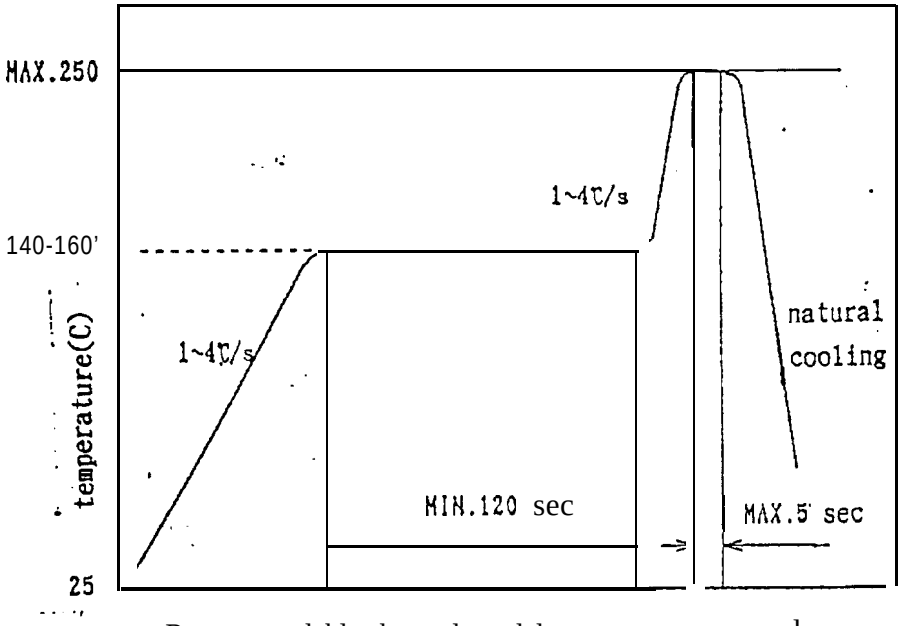
Soldering method

1. Reflow soldering

To be-done under the' following condition.



Recommendable thermal model

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.)