PREPARED BY:	DATE :
M. Abe	Nov. 24. 1995
APPROVED BY	DATE :
M. Abe	Nov. 24. 1995

SHARP

ELECTRONIC COMPONENTS GROUP

SHARP CORPORATION

SPECIFICATION

SPEC No.	DG-95Y036
FILE No.	
ISSUE	Nov. 22,1995
PAGE	6 Pages

REPRESENTATIVE DIVISION

OPTO-ELECTRONIC DEVICES DIV.

DEVICE SPECIFICATION FOR

GaP and GaAsP/GaP and SiC
Yellow-green and Red and Blue
Trichromatic Chip LED Device

MODEL No.

LT1W92A

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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 of the devices.

(1) This device is designed for general electronic equipment.
Main uses of this device are as follows;

[•OA equipment •AV equipment •Home appliance "Telecommunication equipment (Terminal) "Measuring equipment "Tooling ❑ achine "Computer, etc.]

1

(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(air plane, train, automobile etc.)
•Gas leak detection breaker "Traffic signal •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.

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

Contact a SHARP representative of sales office in advance when you intend to use SHARP devices for any applications other than those applications for general electronic equipment recommend by SHARP at (l).

CUSTOMER'S APPROVAL

DATE

B Y

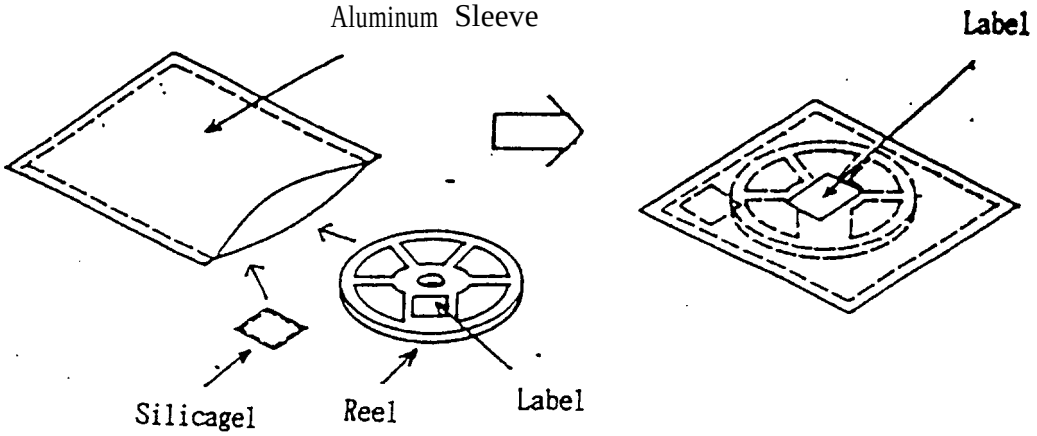
DATE PRESENTED Nov. 24. 1995

B Y M. Abe

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

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 makea 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 renditions of 2).

Recommendable Conditions:

① in taping

Temperature 60℃ Time90 to 100 Hours

② in individual (on PWB or metallic tray)

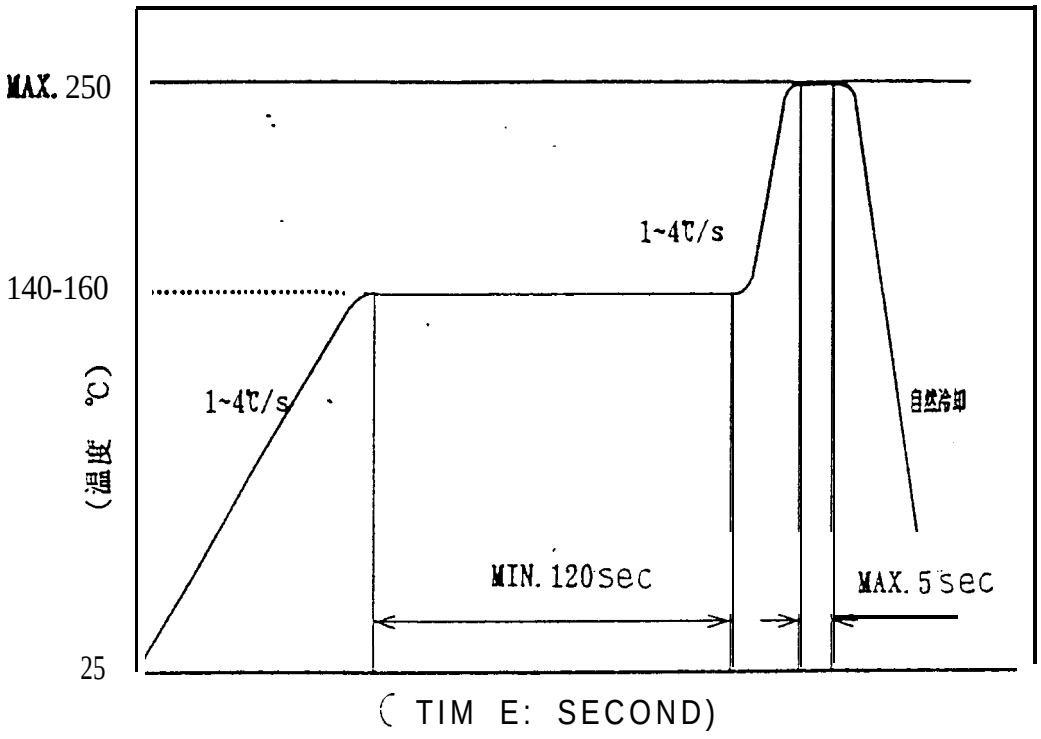
Temperature llOt Time 3 to 4 Hours

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.)

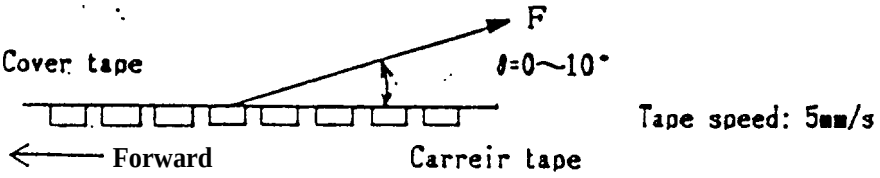
2.3 Related ● -tters

2.3.1. Packing,

There should not be ● issing -above continuous three products.

2.3.2. Tape strength

1)Cover tape strength against peeling: F = 0. 1~0. 8N (θ=10° or ess)



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.

3. Quantity per reel

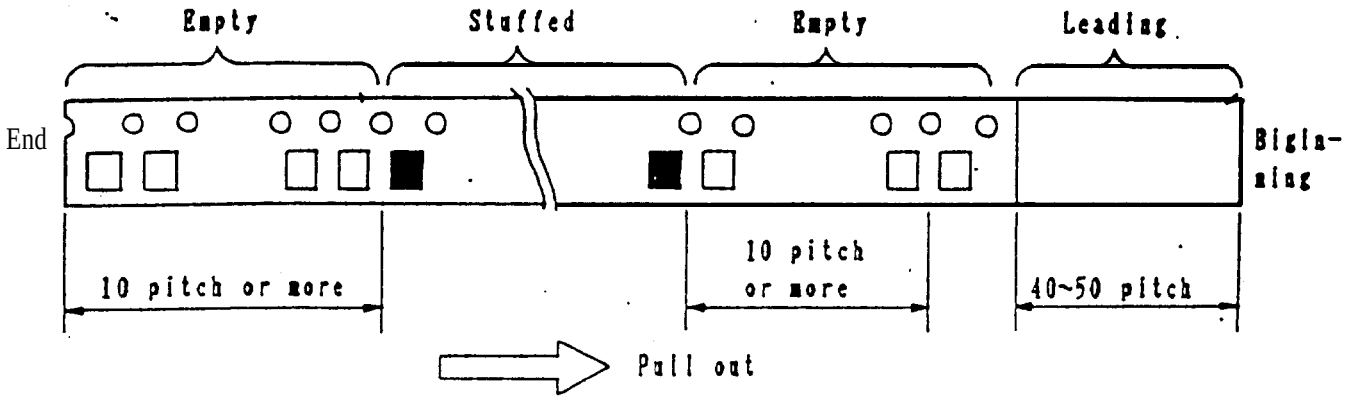
Average: **3,000 pcs.** per ree

Taping Specification

1. This data sheet is to introduce the taping specification of LRD device, model No. LT1W92A

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)

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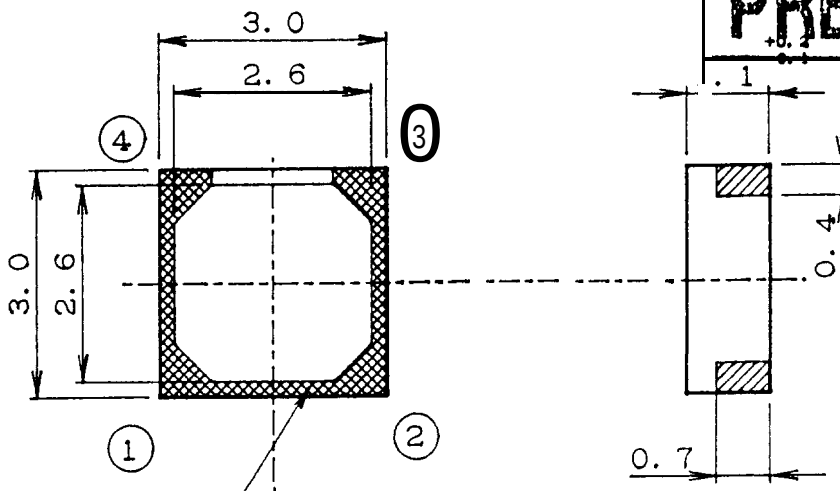
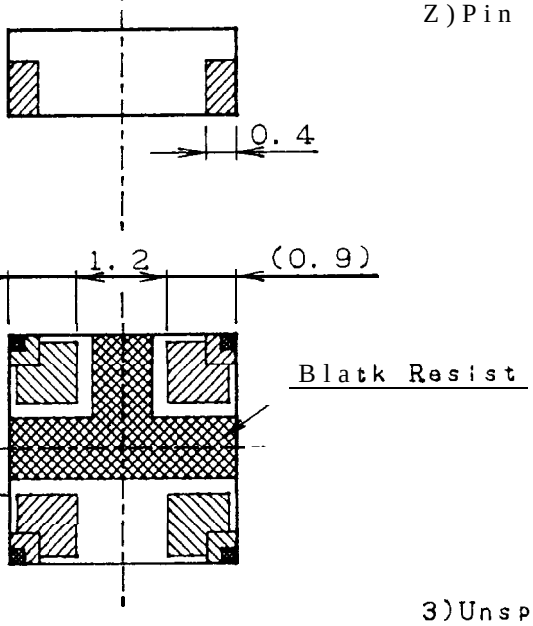
PRELIMINARY

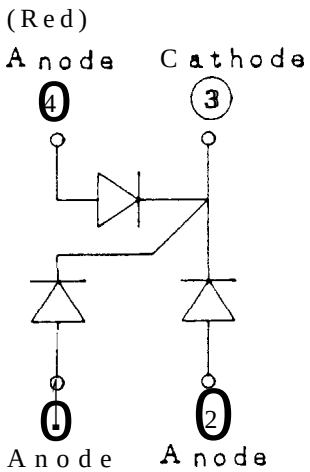


(Note)

I) Plated area

Z)Pin connection





3)Unspecified tol. to be ±0.2

適用機種 APPLICABLE MODEL	尺度 SCALE	単位 UNIT	△2			
LT1W92A	10/1	1'1=1/1mm	△1			
			改訂日 DATE	改訂記事 REVISE	担当CHNG	
反厚THICKNESS / 員数 PIECES	材質 MATERIAL	仕上 FINISH	名称 NAME	Outline Dimension		
日付 DATE	1994. 7. 27	シャープ株式会社電子部品事業本部	コード CODE	EP5 lt1w92a-c		
設計 DESIGN / 製図 DRAW / 検図 CHECK / 検図 CHECK / 承認 APPROVE	オプトデバイス(事)第三技術部 OPTO-ELECTRONIC DEVICES DIV. ELECOM GROUP					
岡崎			SHARP CORPORATION	図番 DRAWING No.	50604032-3	

SHARP CORPORATION

LT1W92A

This data sheet is to introduce the light emitting diode device Model No, LT1W92A, delivered to

I. Structure and characteristics

Structure : GaP yellow-green and GaAsP/GaP red and SiC blue chip LED device

Outline dimensions and pin connections : See page 2

Taping specification : See page 3 4

Packing specification : See page 5

Soldering method : See page 6

2. Absolute maximum ratings (Ta=25℃)

Parameter		Symbol	Value			Unit
			Yellow-green	Red	Blue	
Power dissipation(Note 1)		P	84	84	200	mW
Continuous forward current		I_F	30	30	30	mA
Peak forward current(Note 2)		I_{FM}	50	50	100	mA
Derating factor	DC	–	0.40	0.40	0.67	mA／℃
	Pulse	"	0.67	0.67	1.33	mA／℃
Reverse voltage		V_R	5	5	5	V
Operating temperature		T opr	−30～+85			″C
Storage temperature		T stg	−40～+100			″C

(Note 1) Each dissipation value of diode(Yellow-green, Red, Blue) is their own ratings at generatings independently and the dissipation at the time when every diodes simultaneously generating should be within 30%.

(Note 2) Duty ratio = 1/10 , Pulse width = O. 1 ms

3. Electro optical characteristics (Ta=25℃)

Parameter	Symbol	Conditions	Yellow-green			Red			Blue			Unit
			Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	
Forward voltage	V_F	I_F=20 mA	-	2.1	2.8	-	2.0	2.8	-	4.4	5.6	V
Luminous intensity (Note 3)	Iv	(Yellow-green: (Red)	12	32	-	6.0	16	-	(2. 6)	(8. 1)	-	mcd
Peak emission wavelength	λp	(Blue)	-	565	-	-	635	-	-	430	-	nm
Spectrum radiation bandwidth	△λ		-	30	-	-	35	-		70	-	nm
Reverse current	I_R	V_R= 4 V	-		10	-	-	10	-	10	-	μA
Terminal capacitance	Ct	V=0V, f=1MHz		35	-	-	20	-		50	-	pF

(Note 3) Torelance:±15%