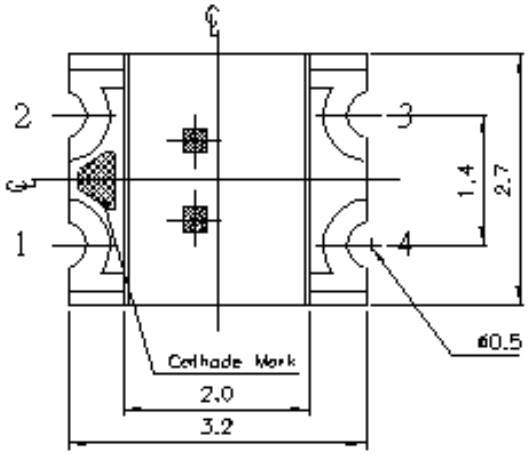
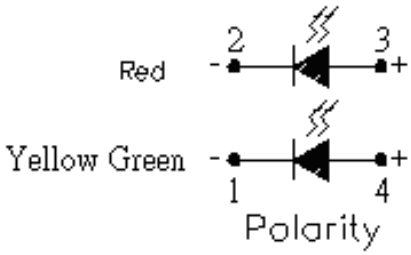
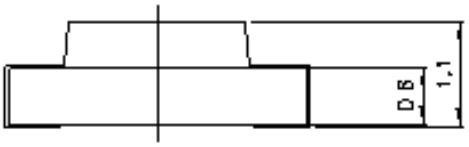
15-22SURSYGC/S530-A3/E2/TR8

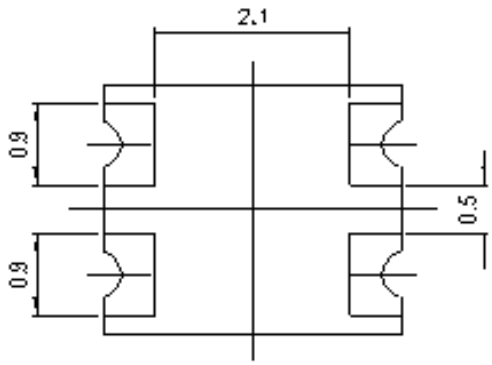
Package Outline Dimensions

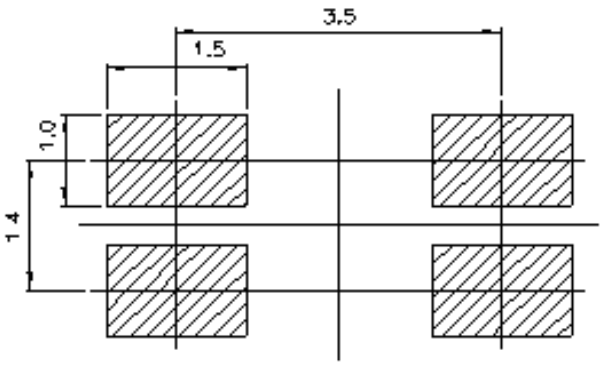






For Reflow Sodering





Note: The tolerances unless mentioned is ±0.1mm,Unit = mm

15-22SURSYGC/S530-A3/E2/TR8

Absolute Maximum Ratings (Ta=25℃)

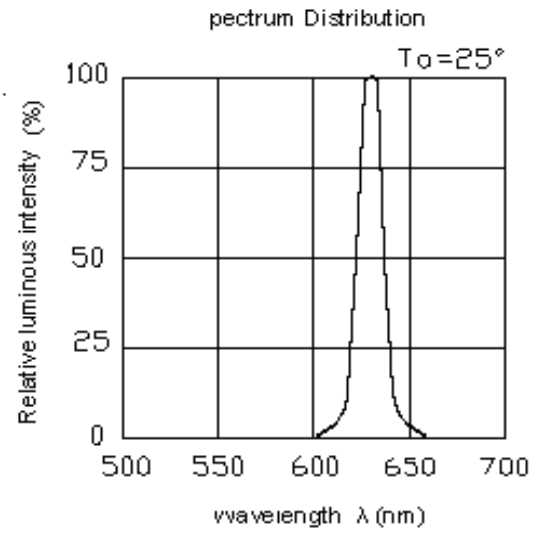
Parameter	Symbol	Rating	Unit
Reverse Voltage	V_R	5	V
Forward Current	I_F	SUR:25 SYG:25	mA
Operating Temperature	I_{FP}	SUR:60 SYG:60	mA
Storage Temperature	P_d	SUR:60 SYG:60	mW
Electrostatic Discharge(HBM)	ESD	2000	V
Power Dissipation	Topr	-40 ~ +85	℃
Peak Forward Current (Duty 1/10 @1KHz)	Tstg	-40~ +90	℃
Soldering Temperature	Tsol	Reflow Soldering : 260 ℃ for 10 sec. Hand Soldering : 350 ℃ for 3 sec.	

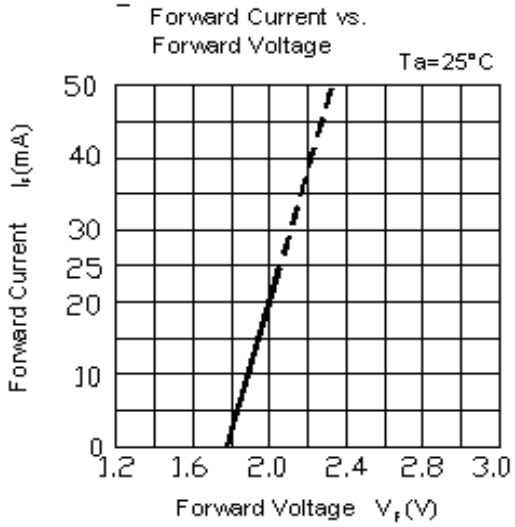
15-22SURSYGC/S530-A3/E2/TR8

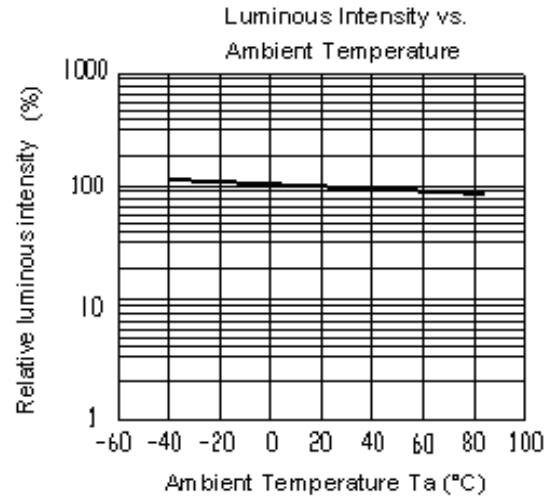
Electro-Optical Characteristics (Ta=25℃)

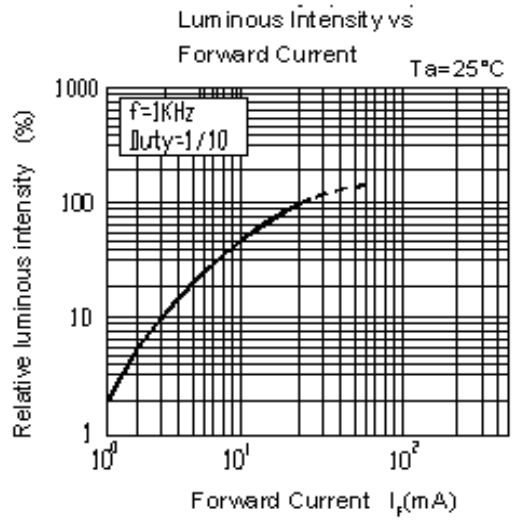
Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	Iv SUR SYG	15 10	36 15	-----	mcd	IF=20mA
Viewing Angle	$2\theta_{1/2}$	-----	140	-----	deg	
Peak Wavelength	λ_p SUR SYG	-----	632 575	-----	nm	
Dominant Wavelength	λ_d SUR SYG	-----	624 573	-----	nm	
Spectrum Radiation Bandwidth	$\triangle\lambda$ SUR SYG	-----	20 20	-----	nm	
Forward Voltage	V_F SUR SYG	1.7	2.0	2.4	V	
Reverse Current	I_R SUR SYG	-----	-----	10	μA	VR=5V

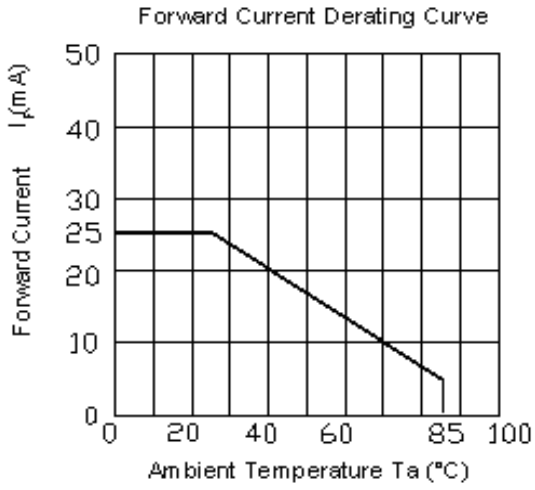
Typical Electro-Optical Characteristics Curves
R6

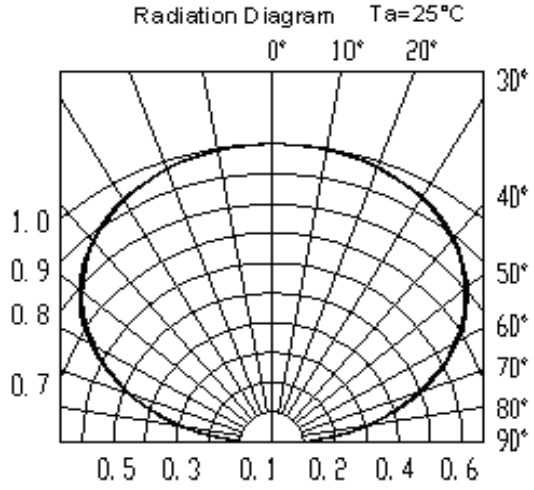








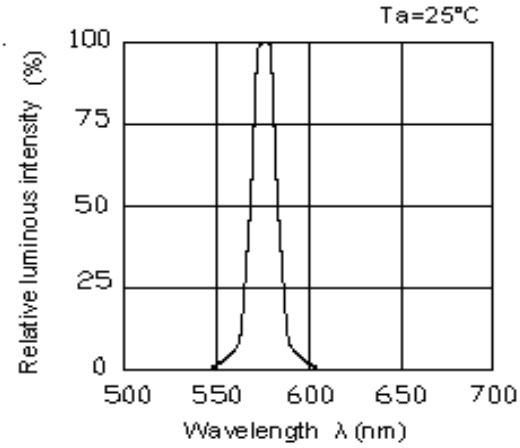




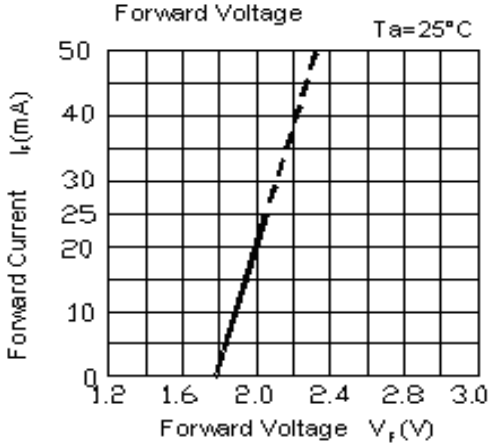
Typical Electro-Optical Characteristics Curves

G6

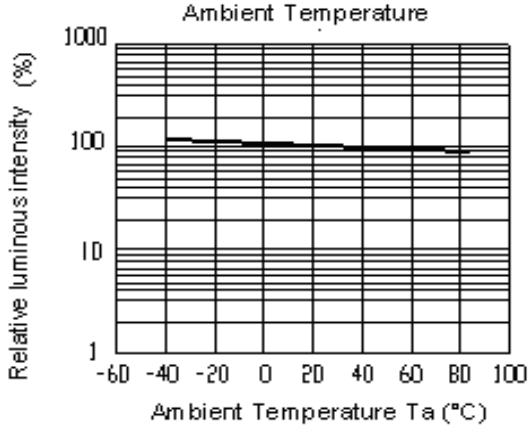
Spectrum Distribution



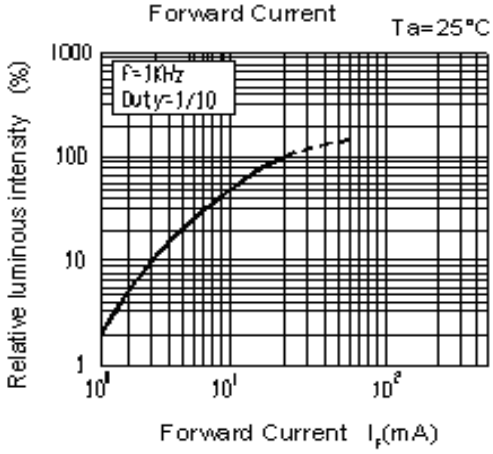
Forward Current vs. Forward Voltage



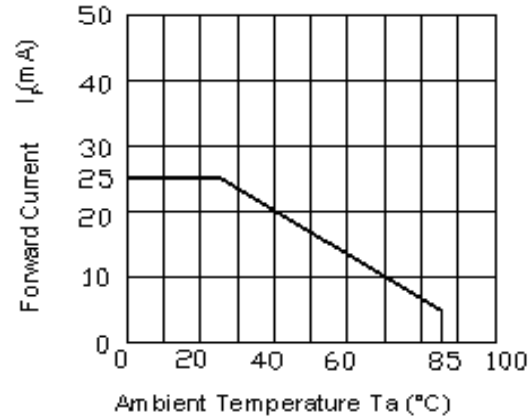
Luminous Intensity vs. Ambient Temperature



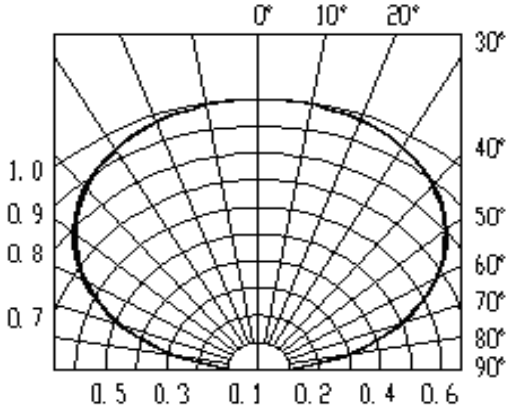
Luminous Intensity vs Forward Current



Forward Current Derating Curve



Radiation Diagram Ta=25°C



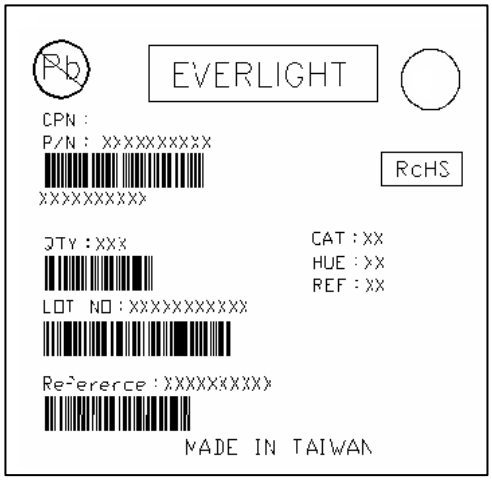
15-22SURSYGC/S530-A3/E2/TR8

Label explanation

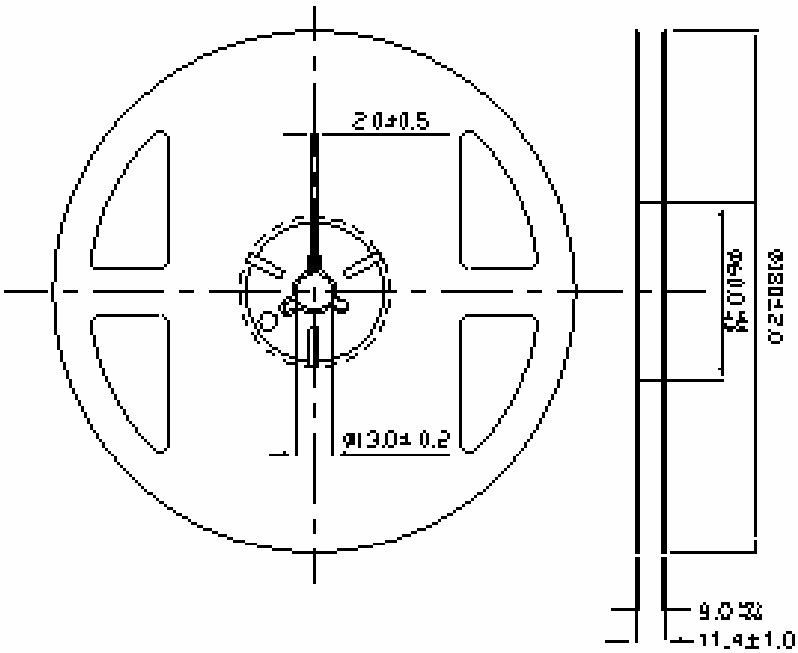
CAT: Luminous Intensity Rank

HUE: Dom. Wavelength Rank

REF: Forward Voltage Rank

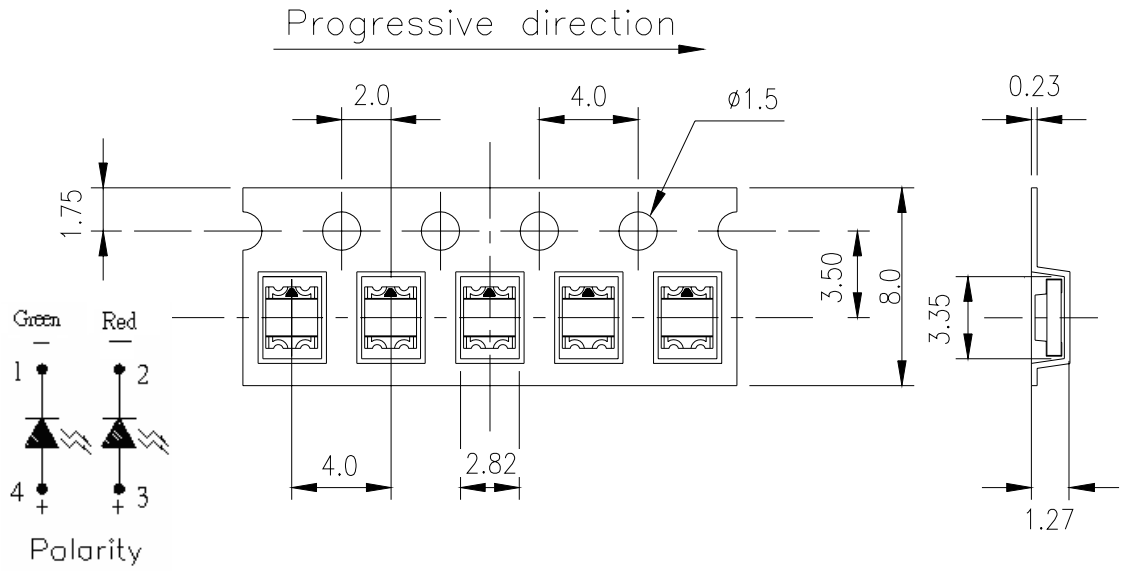


Reel Dimensions



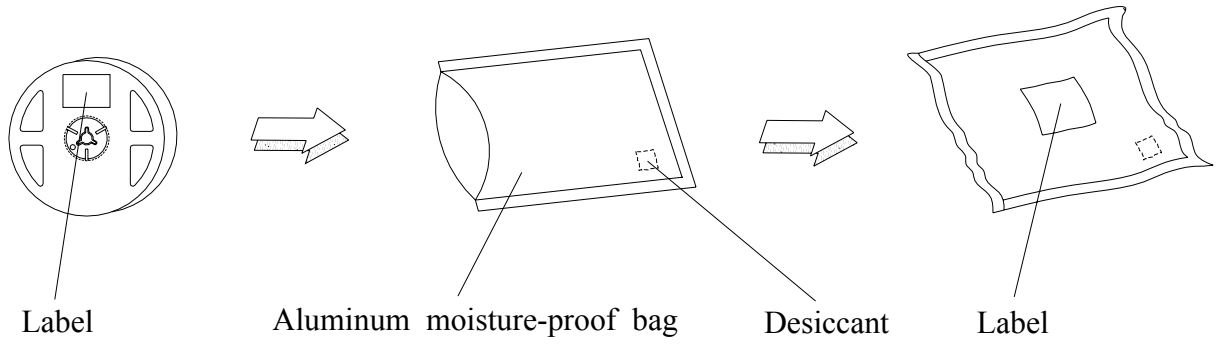
Note: The tolerances unless mentioned is ±0.1mm ,Unit = mm

Carrier Tape Dimensions: Loaded quantity 2000 PCS per reel



Note: Tolerances Unless Dimension ±0.1mm, Unit = mm

Moisture Resistant Packaging



Reliability Test Items And Conditions

The reliability of products shall be satisfied with items listed below.
Confidence level：90%
LTPD：10%

No.	Items	Test Condition	Test Hours/Cycles	Sample Size	Ac/Re
1	Reflow Soldering	Temp. : 260℃±5℃ Min. 5sec.	6 Min.	22 PCS.	0/1
2	Temperature Cycle	H : +100℃ 15min ∫ 5 min L : -40℃ 15min	300 Cycles	22 PCS.	0/1
3	Thermal Shock	H : +100℃ 5min ∫ 10 sec L : -10℃ 5min	300 Cycles	22 PCS.	0/1
4	High Temperature Storage	Temp. : 100℃	1000 Hrs.	22 PCS.	0/1
5	Low Temperature Storage	Temp. : -40℃	1000 Hrs.	22 PCS.	0/1
6	DC Operating Life	I_F = 20 mA	1000 Hrs.	22 PCS.	0/1
7	High Temperature / High Humidity	85℃/ 85%RH	1000 Hrs.	22 PCS.	0/1

Precautions For Use

1. Over-current-proof

   Customer must apply resistors for protection , otherwise slight voltage shift will cause big current change (Burn out will happen).

2. Storage

   2.1 Do not open moisture proof bag before the products are ready to use.

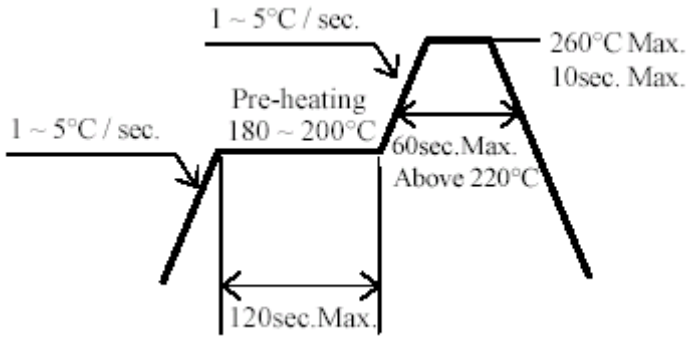
   2.2 Before opening the package: The LEDs should be kept at 30℃ or less and 90%RH or less.

   2.3 After opening the package: The LED's floor life is 1 year under 30℃ or less and 60% RH or less. If unused LEDs remain, it should be stored in moisture proof packages.

   2.4 If the moisture absorbent material (silica gel) has faded away or the LEDs have exceeded the storage time, baking treatment should be performed using the following conditions.
   Baking treatment : 60±5℃ for 24 hours.

3. Soldering Condition

   3.1 Pb-free solder temperature profile



   3.2 Reflow soldering should not be done more than two times.

   3.3 When soldering, do not put stress on the LEDs during heating.

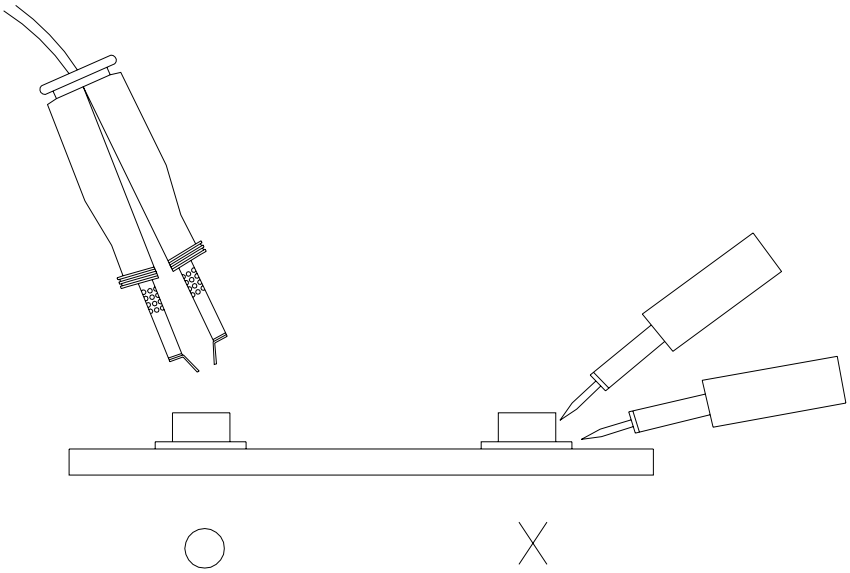
   3.4 After soldering, do not warp the circuit board.

4.Soldering Iron

Each terminal is to go to the tip of soldering iron temperature less than 350℃ for 3 seconds within once in less than the soldering iron capacity 25W. Leave two seconds and more intervals, and do soldering of each terminal. Be careful because the damage of the product is often started at the time of the hand solder.

5.Repairing

Repair should not be done after the LEDs have been soldered. When repairing is unavoidable, a double-head soldering iron should be used (as below figure). It should be confirmed beforehand whether the characteristics of the LEDs will or will not be damaged by repairing.



EVERLIGHT ELECTRONICS CO., LTD.
Office: No 25, Lane 76, Sec 3, Chung Yang Rd,
Tucheng, Taipei 236, Taiwan, R.O.C

Tel: 886-2-2267-2000, 2267-9936
Fax: 886-2267-6244, 2267-6189, 2267-6306
http://www.everlight.com