

Technical Data Sheet

Bi-Color (Multi-Color) Top View LEDs

67-22SYGUYC/S530-A3/TR8

Features

- P-LCC-4package.
- Optical indicator.
- Colorless clear window.
- Ideal for backlight and light pipe application.
- Inter reflector.
- Wide viewing angle.
- Computable with automatic placement equipment.
- Suitable for vapor-phase reflow.
- Available on tape and reel (8mm Tape).
- Pb-free.
- The product itself will remain within RoHS compliant version.



Descriptions

- The 67-22 series is available in soft orange, green, blue and yellow. Due to the package design, the LED has wide viewing angle and optimized light coupling by inter reflector, this feature makes the ideal for light pipe application. The low current requirement makes this device ideal for portable equipment or any other application where power is at a premium.

Applications

- Automotive: backlight in dashboards and switches.
- Telecommunication: indicator and backlight in telephone and fax.
- Indicator and backlight for audio and video equipment.
- Indicator and backlight in office and family equipment.
- Flat backlight for LCD's, switches and symbols.
- Light pipe application.
- General use.

Device Selection Guide

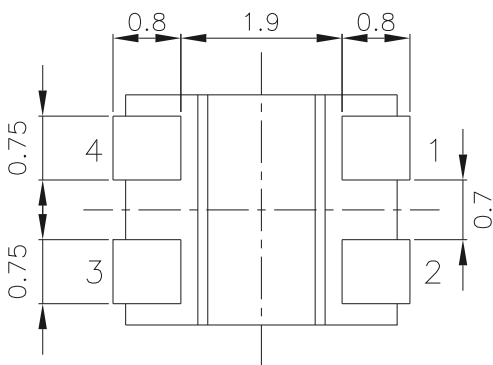
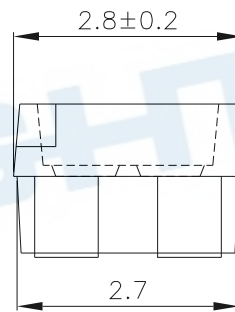
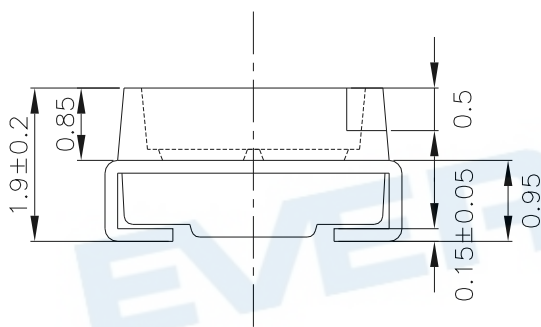
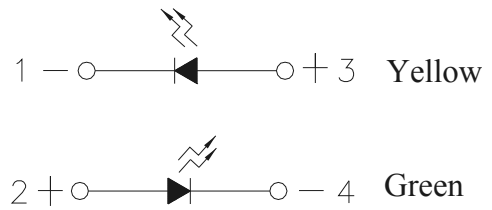
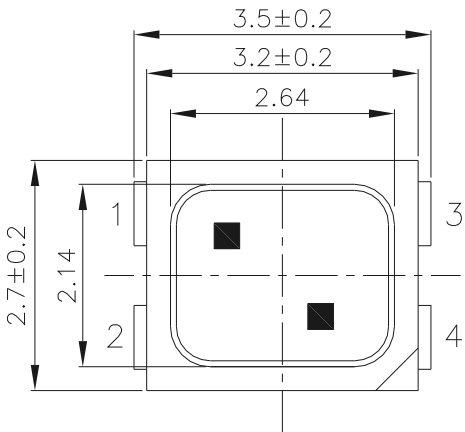
Chip		Emitted Color	Resin Color
Type	Material		
SYG	AlGaInP	Brilliant Yellow Green	Water Clear
UY	AlGaInP	Brilliant Yellow	

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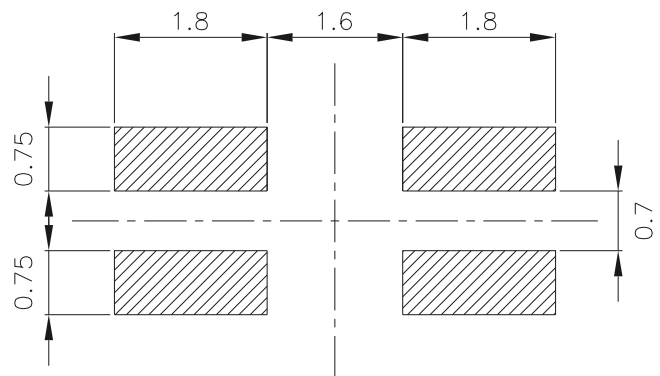
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Package Outline Dimensions



Recommended Solder Pad



Notes: Tolerances Unless Dimension $\pm 0.1\text{mm}$, Unit = mm

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Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating	Unit
Reverse Voltage	V _R	5	V
Forward Current	I _F	SYG	25
		UY	25
Peak Forward Current(Duty 1/10 @ 1KHz)	I _{FP}	SYG	60
		UY	60
Power Dissipation	P _d	SYG	60
		UY	60
Electrostatic Discharge(HBM)	ESD	SYG	2000
		UY	2000
Operating Temperature	T _{opr}	-40 ~ +85	°C
Storage Temperature	T _{stg}	-40~ +95	°C
Soldering Temperature	T _{sol}	Reflow Soldering : 260 °C for 10 sec. Hand Soldering : 350 °C for 3 sec.	

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Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition	
Luminous Intensity	I _v	SYG	25	-----	90	mcd	
		UY	24	-----	140		
Viewing Angle	2θ _{1/2}	-----	120	-----	deg	I _F =20mA	
Peak Wavelength	λ _p	SYG	-----	575	-----		nm
		UY	-----	591	-----		
Dominant Wavelength	λ _d	SYG	567.5	-----	575.5		nm
		UY	585.5	-----	594.5		
Spectrum Radiation Bandwidth	Δλ	SYG	-----	20	-----		nm
		UY	-----	15	-----		
Forward Voltage	V _F	SYG	1.7	2.0	2.4	V	
		UY	1.7	2.0	2.4		
Reverse Current	I _R	SYG	-----	-----	10	μA	
		UY	-----	-----	10		

Notes:

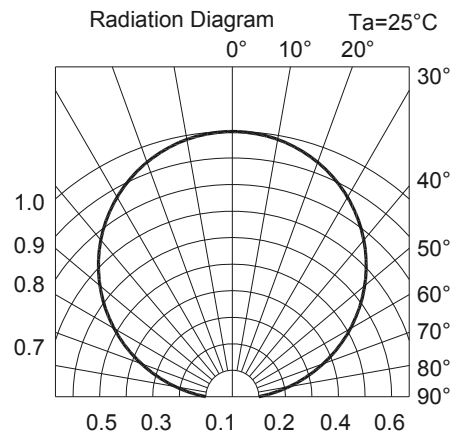
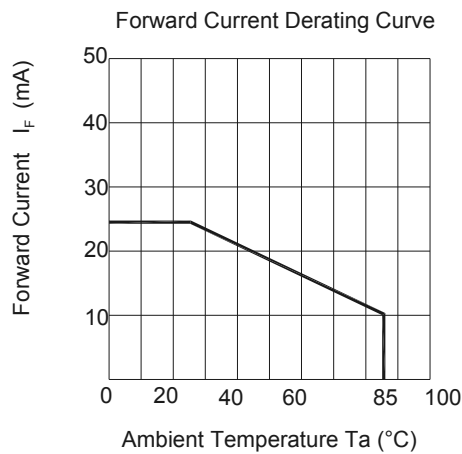
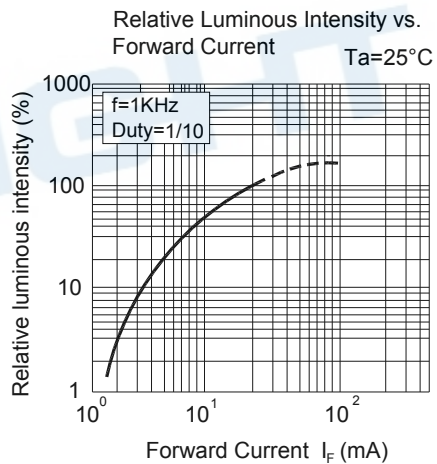
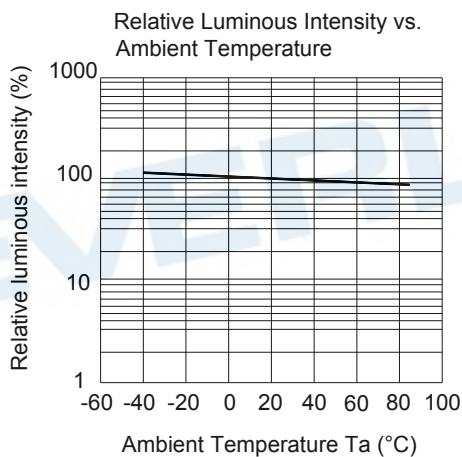
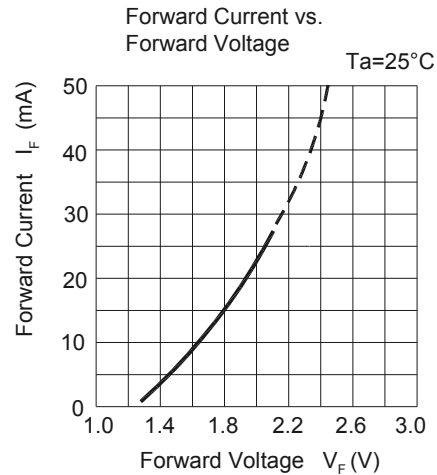
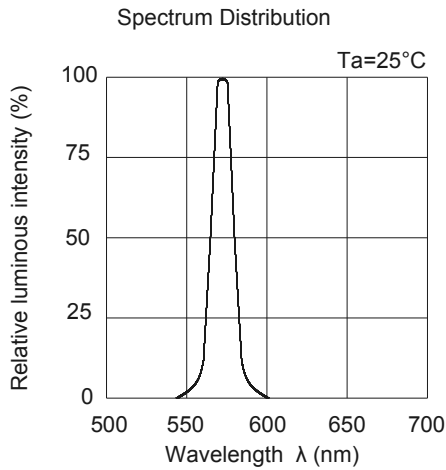
- 1.Tolerance of Luminous Intensity: ±11%
- 2.Tolerance of Dominant Wavelength: ±1nm
- 3.Tolerance of Forward Voltage: ±0.05V

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Typical Electro-Optical Characteristic Curves: (SYG)

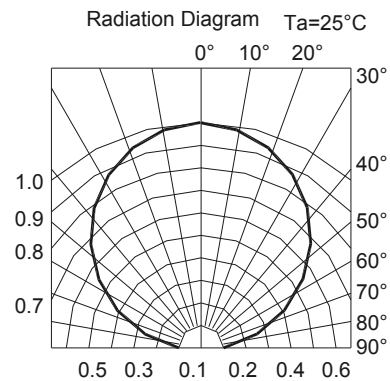
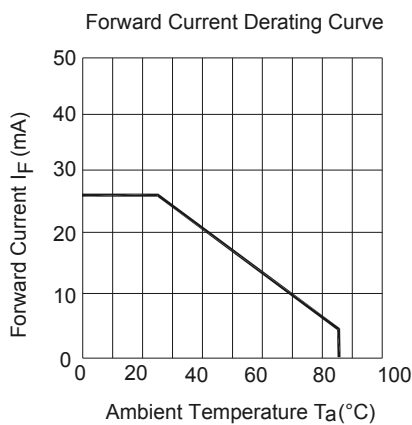
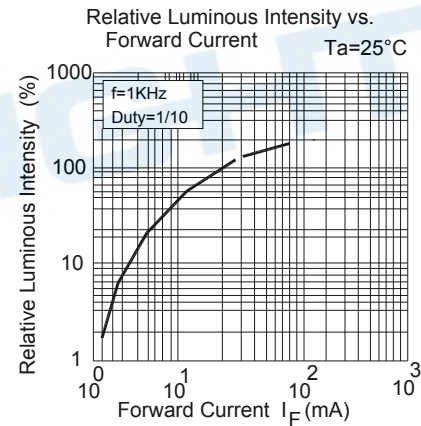
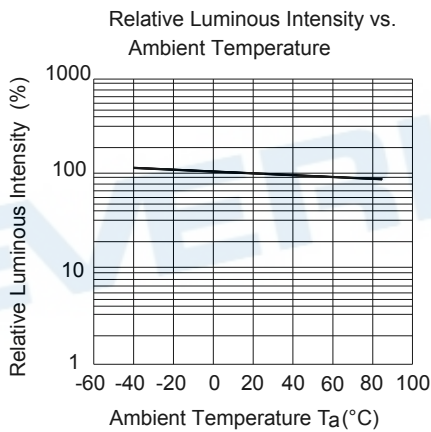
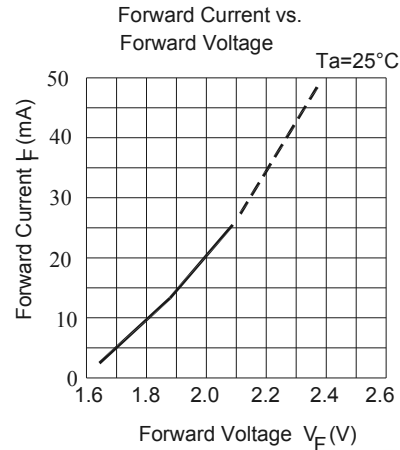
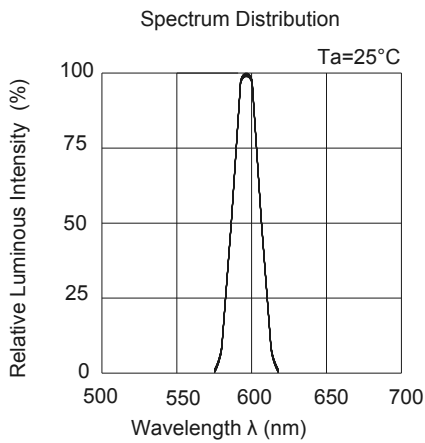


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Typical Electro-Optical Characteristic Curves: (UY)



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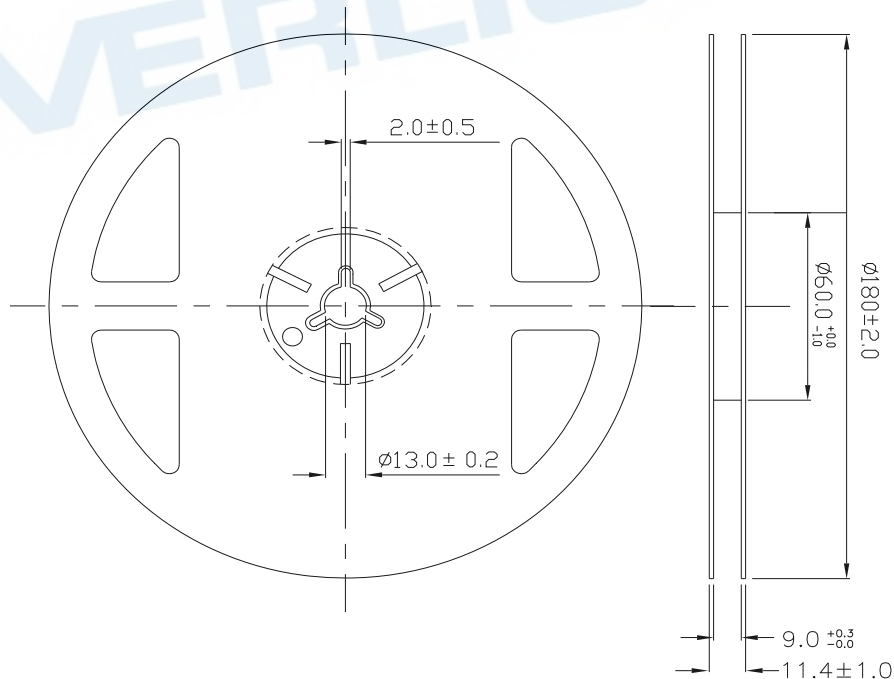
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Label Explanation

- CAT: Luminous Intensity Rank
- HUE: Dom. Wavelength Rank
- REF: Forward Voltage Rank



Reel Dimensions



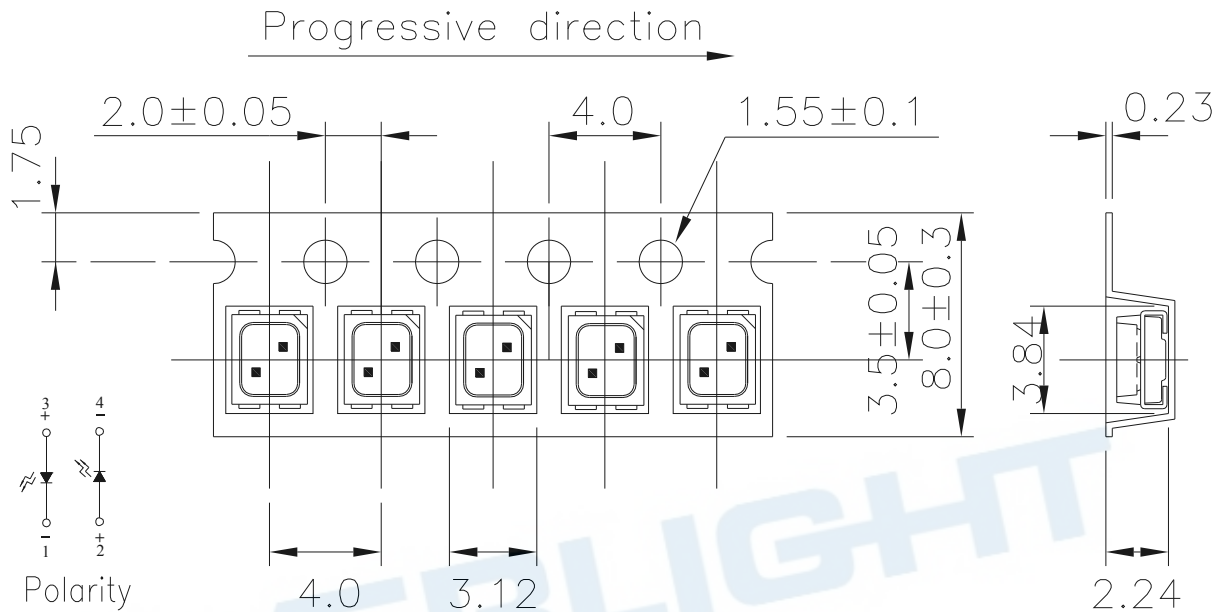
Note: Tolerance unless mentioned is ± 0.1 mm; Unit = mm

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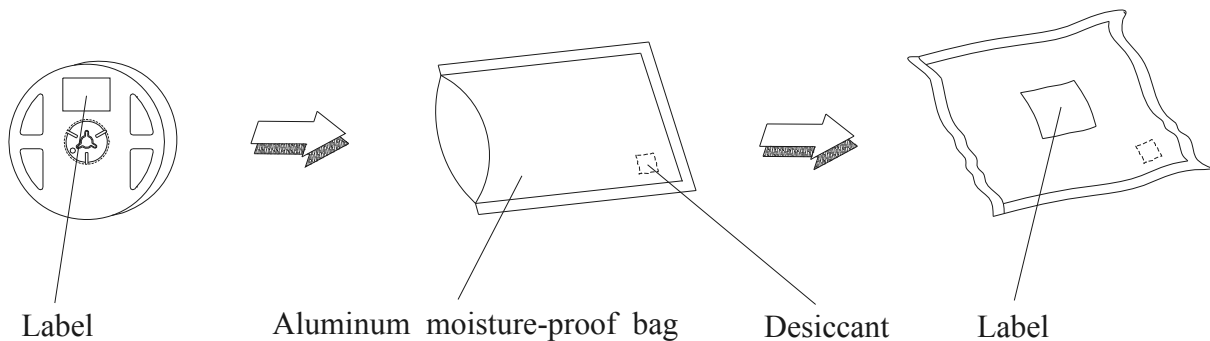
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Carrier Tape Dimensions; Loaded Quantity 2000 pcs Per Reel



Note: Tolerance unless mentioned is ±0.1mm; Unit = mm

Moisture Resistant Packaging



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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°C±5°C Max. 10 sec.	6 Min.	22 PCS	0/1
2	Temperature Cycle	H : +100°C 15min ∫ 5 min L : -40°C 15min	300 Cycles	22 PCS.	0/1
3	Thermal Shock	H : +100°C 5min ∫ 10 sec L : -10°C 5min	300 Cycles	22 PCS.	0/1
4	High Temperature Storage	Temp. : 100°C	1000 Hrs.	22 PCS.	0/1
5	Low Temperature Storage	Temp. : -40°C	1000 Hrs.	22 PCS.	0/1
6	DC Operating Life	I _F = 20 mA / 25°C	1000 Hrs.	22 PCS.	0/1
7	High Temperature / High Humidity	85°C/85%RH	1000 Hrs.	22 PCS.	0/1

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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°C or less and 90%RH or less.

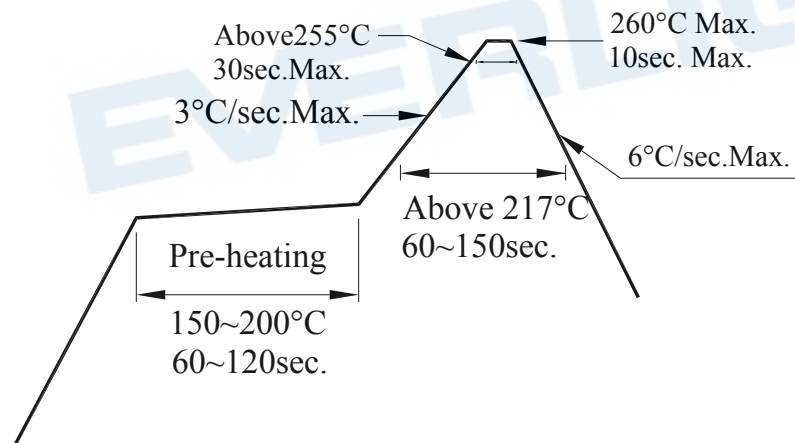
2.3 After opening the package: The LED's floor life is 168 hours under 30°C or less and 60% RH or less. If unused LEDs remain, it should be stored in moisture proof packages.

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°C 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.

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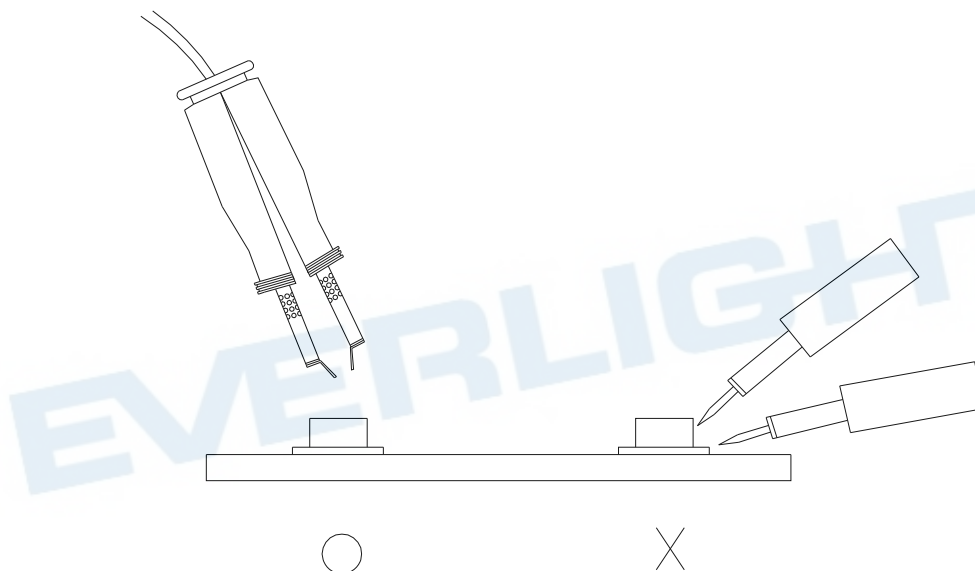
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4. Soldering Iron

Each terminal is to go to the tip of soldering iron temperature less than 350°C 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.





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2. The product meets EVERLIGHT published specification for a period of twelve (12) months from date of shipment.
3. The graphs shown in this datasheet are representing typical data only and do not show guaranteed values.
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