

▪ HIGH POWER LED XI3030P/RK3C-D1025PAR160681Z15/2N



Features

- Top view Red LED
- Wide viewing angle
- Pb-free
- The product itself will remain within RoHS compliant version.
- Compliance with EU REACH.
- Compliance Halogen Free .(Br<900ppm,Cl<900ppm,Br+Cl<1500ppm)

Description

The Everlight XI3030 package has high efficacy, mid power consumption, wide viewing angle and a compact form factor. These features make this package an ideal LED for all lighting applications.

Applications

- Decorative and Entertainment Lighting
- Agriculture Lighting
- General use

Absolute Maximum Ratings (T_{Soldering}=25°C)

Parameter	Symbol	Rating	Unit
Forward Current	I _F	200	mA
Peak Forward Current (Duty 1/10 @10ms)	I _{FP}	400	mA
Operating Temperature	T _{opr}	-40 ~ +85	°C
Storage Temperature	T _{stg}	-40 ~ +100	°C
Thermal Resistance (Junction / Soldering point)	R _{th J-S}	21	°C/W
Junction Temperature	T _j	125	°C
Soldering Temperature	T _{sol}	Reflow Soldering : 260 °C for 10 sec. Hand Soldering : 350 °C for 3 sec.	

Note:

The products are sensitive to static electricity and must be carefully taken when handling products

Electro-Optical Characteristics (T_{Soldering}=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Flux	Φ	36	-----	55	lm	I _F =150mA
Forward Voltage	V _F	6.0	-----	6.8	V	I _F =150mA
Viewing Angle	2θ _{1/2}	-----	120	-----	deg	I _F =150mA

Notes:

1. Tolerance of Radiometric Power: ±11%.
2. Tolerance of Forward Voltage: ±2%V.

Bin Range of Luminous Flux

Bin Code	Min.	Max.	Unit	Condition
PA	36	40	lm	I _F =150mA
PB	40	45		
QA	45	50		
R1	50	55		

Notes:
 Tolerance of Luminous flux: ±11%

Bin Range of Forward Voltage

Bin Code	Min.	Max.	Unit	Condition
6061	6.0	6.1	V	I _F =150mA
6162	6.1	6.2		
6263	6.2	6.3		
6364	6.3	6.4		
6465	6.4	6.5		
6566	6.5	6.6		
6667	6.6	6.7		
6768	6.7	6.8		

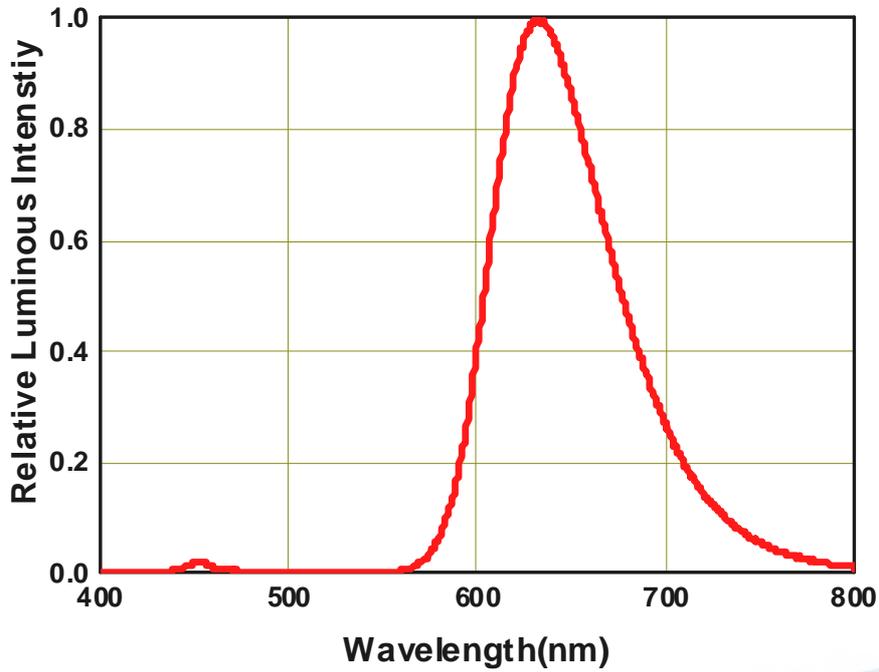
Note:
 Tolerance of Forward Voltage: ±2%V.

Dominant Wavelength Bins

Bin Code	Min.	Max.	Unit	Condition
R49	610	615	nm	I _F =150mA
R50	615	620		
R51	620	625		

Notes:
 Dominant / Peak wavelength measurement tolerance: ±1nm.

Spectrum Distribution



Typical Electro-Optical Characteristics Curves

Fig.1 – Forward Voltage Shift vs. Junction Temperature

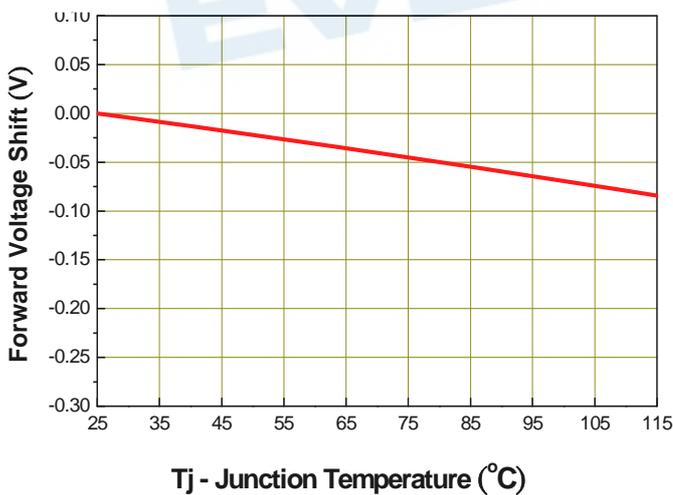
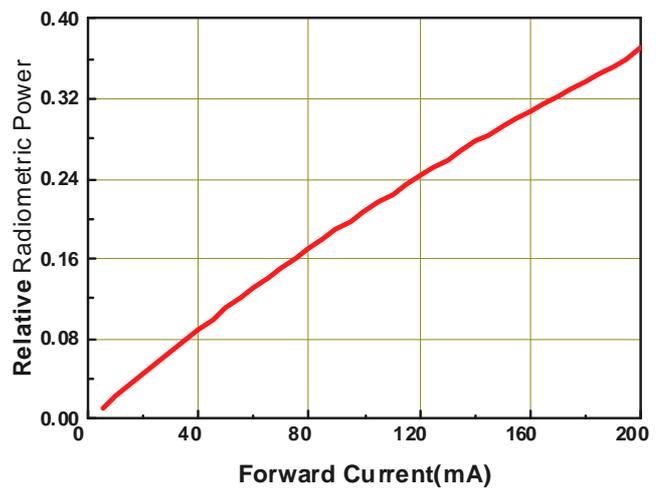


Fig.2 - Relative Radiometric Power vs. Forward Current



Typical Electro-Optical Characteristics Curves

Fig.3 -
 Typical Relative Luminous Flux
 vs. Forward Current

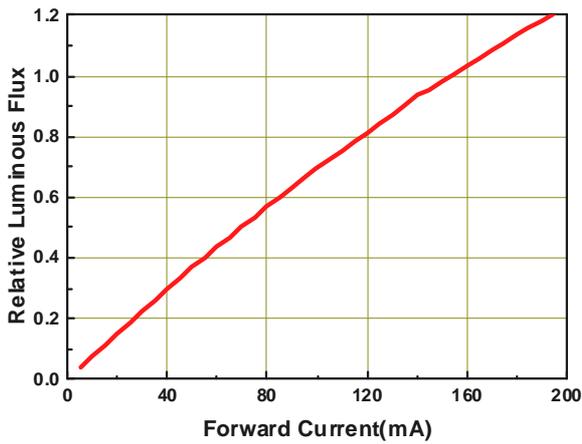


Fig.4 -
 Typical Forward Current
 vs. Forward Voltage

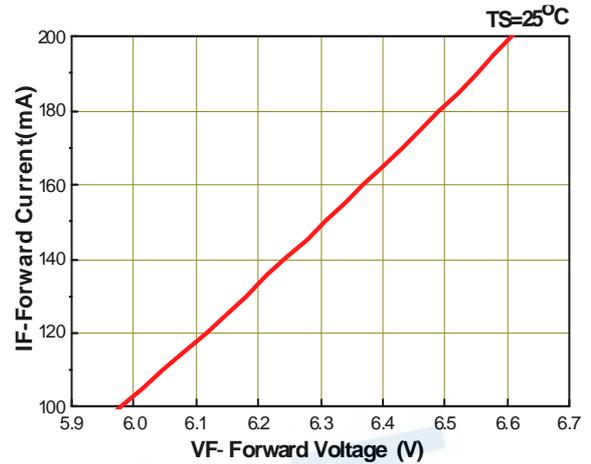


Fig.5 – Max. Driving Forward Current vs.
 Soldering Temperature
 $R_{th\ j-s}=21\ ^\circ\text{C/W}$

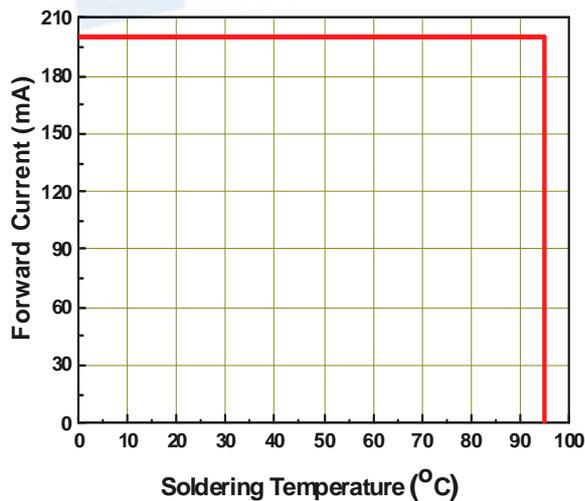
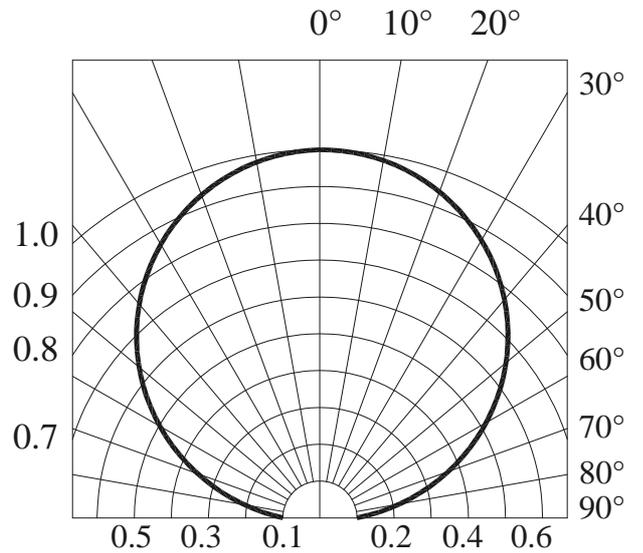
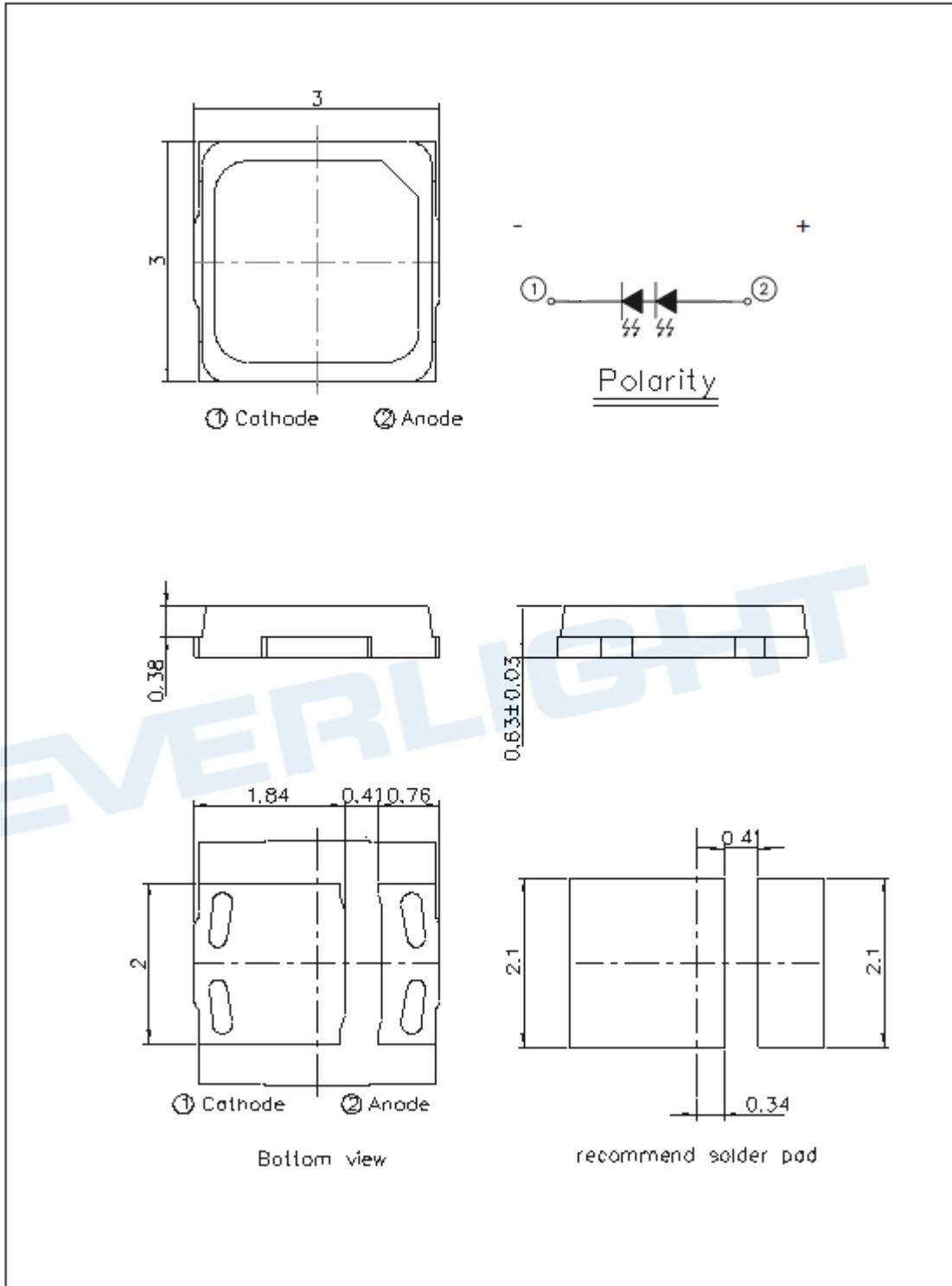


Fig.6 – Radiation Diagram



Package Dimension



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

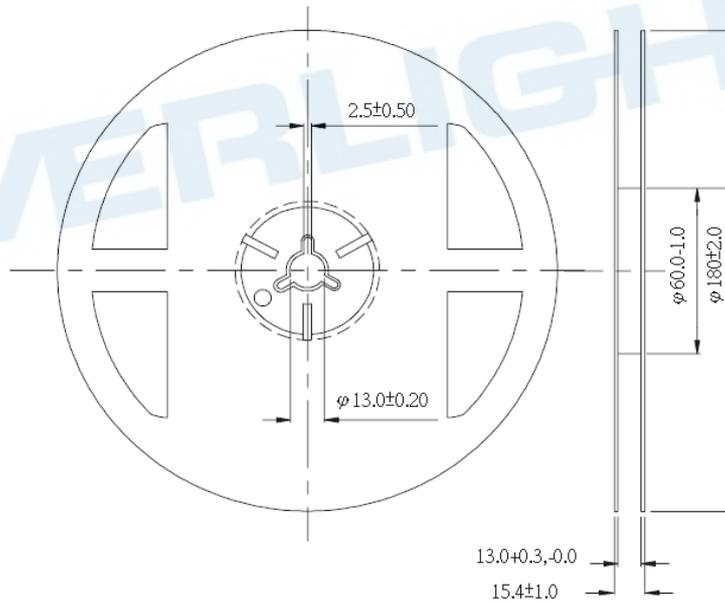
Moisture Resistant Packing Materials

Label Explanation



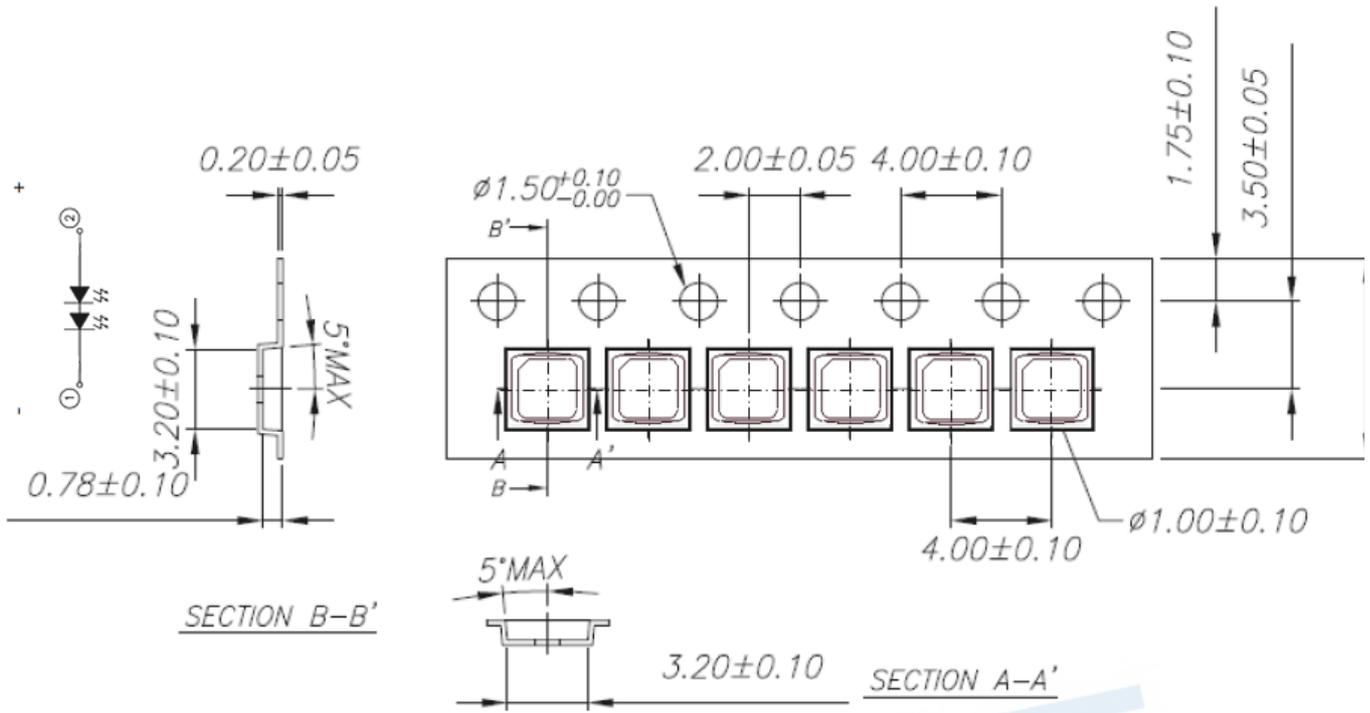
- CPN: Customer's Product Number
- P/N: Product Number
- QTY: Packing Quantity
- CAT: Luminous Intensity Rank
- HUE: Dom. Wavelength Rank
- REF: Forward Voltage Rank
- LOT No: Lot Number
- MADE IN TAIWAN: Production Place

Reel Dimensions



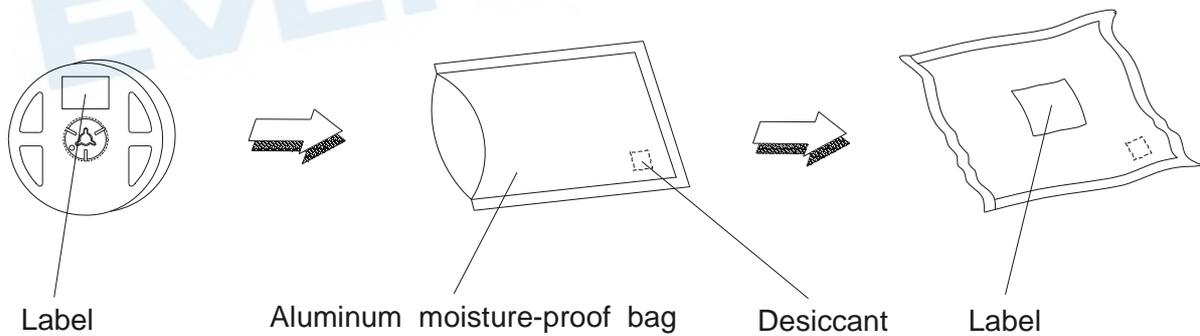
Note:
 Tolerances unless mentioned ± 0.1 mm. Unit = mm

Carrier Tape Dimensions: Loaded Quantity 2000 pcs. Per Reel



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

Moisture Resistant Packing Process



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.

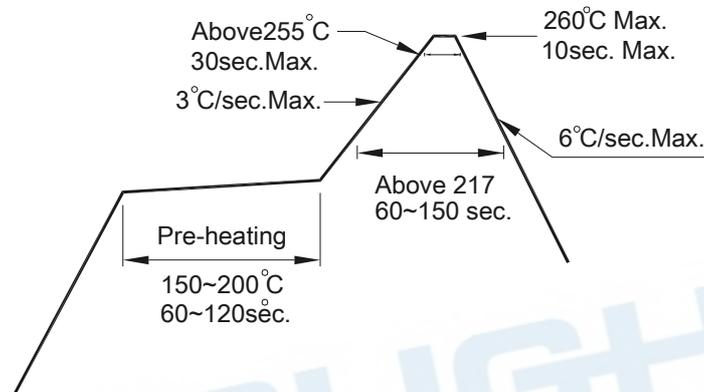
2.3 After opening the package: The LED's floor life is 168 Hrs under 30°C or less and 60% RH or less. If unused LEDs remain, it should be stored in moisture proof packages.

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.

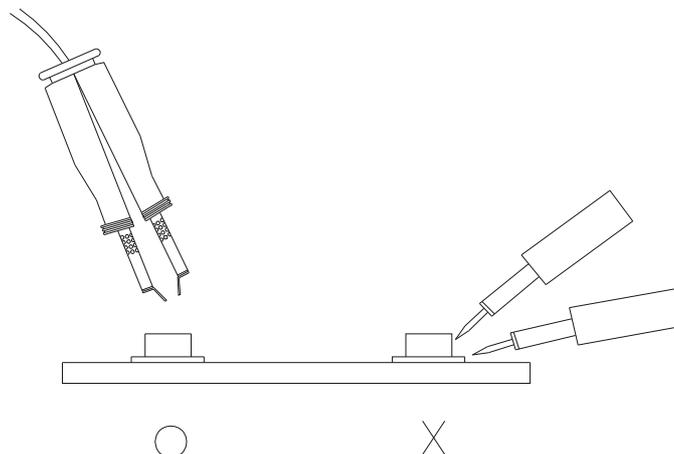
3.4 After soldering, do not warp the circuit board.

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.



Storage Conditions

- Before the package is opened. The LEDs should be stored at 30°C or less and 85%RH or less after being shipped from Everlight and the storage life limits are 1 year. The LEDs can be stored up to 3 years If in a sealed container with a nitrogen atmosphere and moisture absorbent material.
- After opening the package: The LED's floor life is 1 year under 30°C or less and 60%RH or less. The LED should be soldered with 168hrs (7days) after opening the package. If unused LEDs remain, it should be stored in moisture proof packages.
- 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.

DISCLAIMER

- EVERLIGHT reserves the right(s) on the adjustment of product material mix for the specification.
- The product meets EVERLIGHT published specification for a period of twelve (12) months from date of shipment.
- The graphs shown in this datasheet are representing typical data only and do not show guaranteed values.
- When using this product, please observe the absolute maximum ratings and the instructions for using outlined in these specification sheets. EVERLIGHT assumes no responsibility for any damage resulting from the use of the product which does not comply with the absolute maximum ratings and the instructions included in these specification sheets.
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