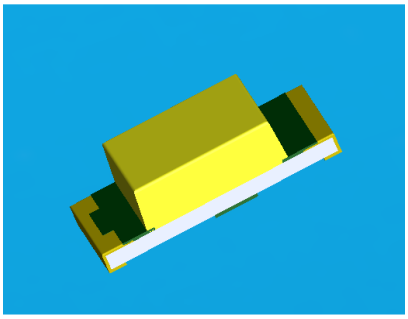
EVERLIGHT AMERICAS

DATASHEET

SMD ▪ B
EAST16084WA1



Features

- Package in 8mm tape on 7″ diameter reel.
- Compatible with automatic placement equipment.
- Compatible with infrared and vapor phase reflow solder process.
- Mono-color type.
- Pb-free.
- The product itself will remain within RoHS compliant version.
- Compliance with EU REACH
- Compliance Halogen Free .(Br <900 ppm ,Cl <900 ppm , Br+Cl < 1500 ppm).

Description

- The SMD LED is much smaller than lead frame type components, thus enable smaller board size, higher packing density, reduced storage space and finally smaller equipment to be obtained.
- Besides, lightweight makes them ideal for miniature applications. etc.

Applications

- Telecommunication: indicator and backlighting in telephone and fax.
- Flat backlight for LCD, switch and symbol.
- General use.

Copyright © 2010, Everlight All Rights Reserved. Release Date : August.26.2015
Issue No: DSE-0013887 Rev.1

Device Selection Guide

Chip Materials	Emitted Color	Resin Color
InGaN	Pure White	Yellow Diffused

Absolute Maximum Ratings (Ta=25℃)

Parameter	Symbol	Rating	Unit
Reverse Voltage	V_R	5	V
Forward Current	I_F	10	mA
eak Forward Current (Duty 1/10 @1KHz)	I_{FP}	100	mA
Power Dissipation	Pd	40	mW
Electrostatic Discharge	ESD_{HBM}	150	V
Operating Temperature	T_{opr}	-40 ~ +85	℃
Storage Temperature	Tstg	-40 ~ +90	℃
Soldering Temperature	Tsol	Reflow Soldering : 260 ℃ for 10 sec. Hand Soldering : 350 ℃ for 3 sec.	

Copyright © 2010, Everlight All Rights Reserved. Release Date : August.26.2015

Electro-Optical Characteristics (Ta=25℃)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	Iv	72.0	-----	180.0	mcd	I_F=5mA
Viewing Angle	$2\theta_{1/2}$	-----	130	-----	deg	
Forward Voltage	V_F	2.70	----	3.15	V	
Reverse Current	I_R	-----	-----	50	μA	V_R=5V

Note:
1. Tolerance of Luminous Intensity: ±11%
2. Tolerance of Forward Voltage: ±0.1V

Copyright © 2010, Everlight All Rights Reserved. Release Date : August.26.2015

Bin Range of Luminous Intensity

Bin Code	Min.	Max.	Unit	Condition
Q	72.0	112.0	mcd	I_F =5mA
R	112.0	180.0		

Bin Range Of Forward Voltage

Bin Code	Min.	Max.	Unit	Condition
15	2.70	2.85	V	I_F =5mA
16	2.85	3.00		
17	3.00	3.15		

Note:
1. Tolerance of Luminous Intensity: ±11%
2. Tolerance of Forward Voltage: ±0.1V

Copyright © 2010, Everlight All Rights Reserved. Release Date : August.26.2015

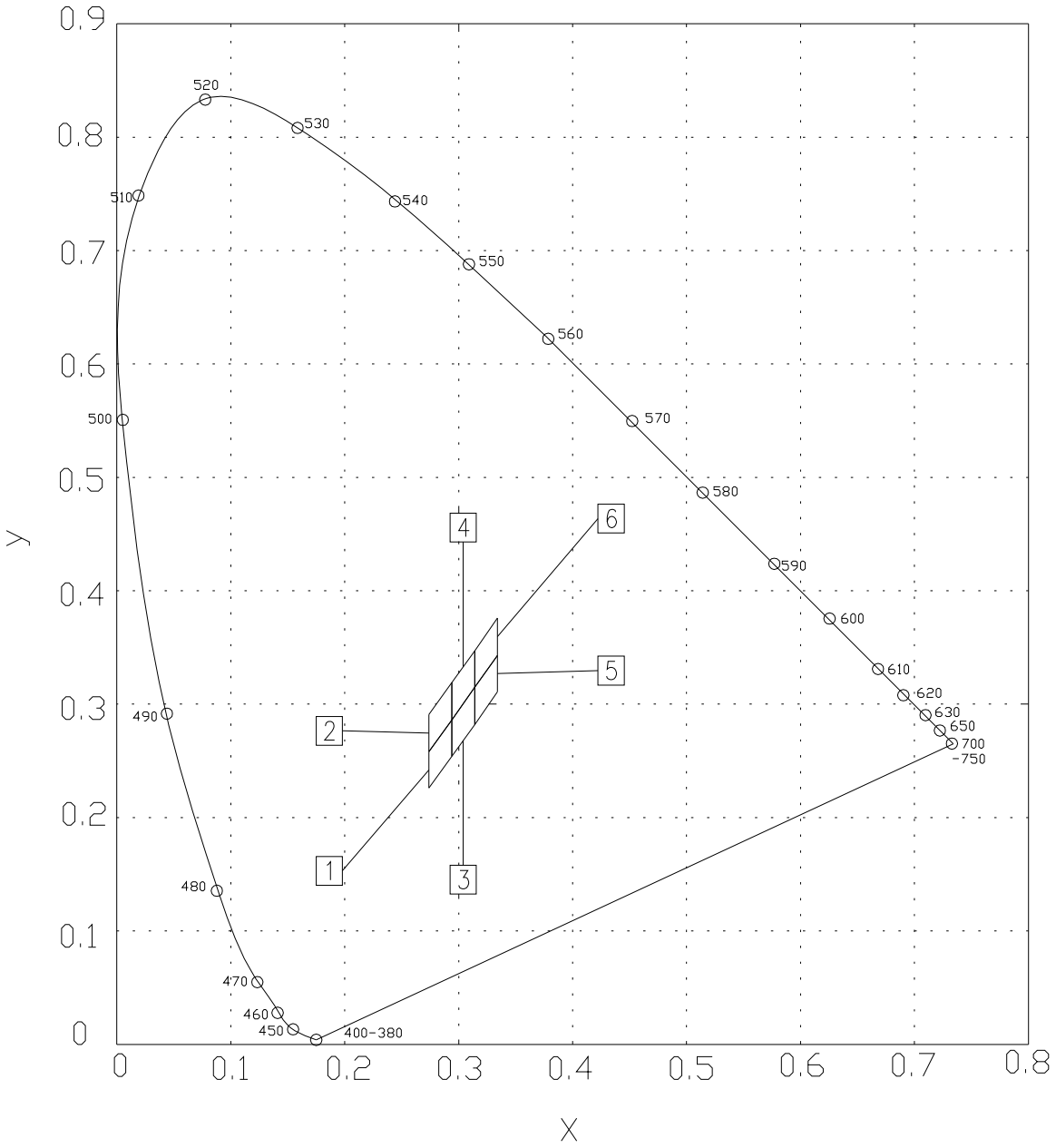
Chromaticity Coordinates Specifications for Bin Grading

Groups	Bin Code	CIE_x	CIE_y	Condition
A	1	0.274	0.226	I_F =5mA
		0.274	0.258	
		0.294	0.286	
		0.294	0.254	
	2	0.274	0.258	
		0.274	0.291	
		0.294	0.319	
		0.294	0.286	
	3	0.294	0.254	
		0.294	0.286	
		0.314	0.315	
		0.314	0.282	
	4	0.294	0.286	
		0.294	0.319	
		0.314	0.347	
		0.314	0.315	
	5	0.314	0.282	
		0.314	0.315	
		0.334	0.343	
		0.334	0.311	
	6	0.314	0.315	
		0.314	0.347	
		0.334	0.376	
		0.334	0.343	

1.The C.I.E. 1931 chromaticity diagram (Tolerance ±0.01).
2.The products are sensitive to static electricity and care must be fully taken when handling products.

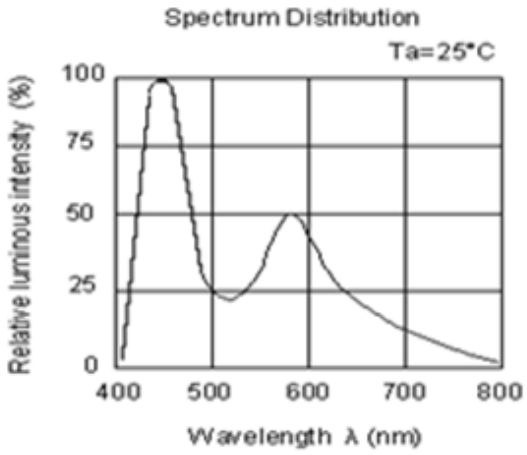
Copyright © 2010, Everlight All Rights Reserved. Release Date : August.26.2015

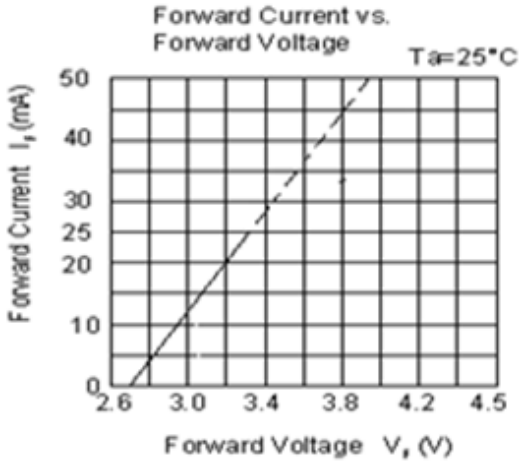
CIE Chromaticity Diagram

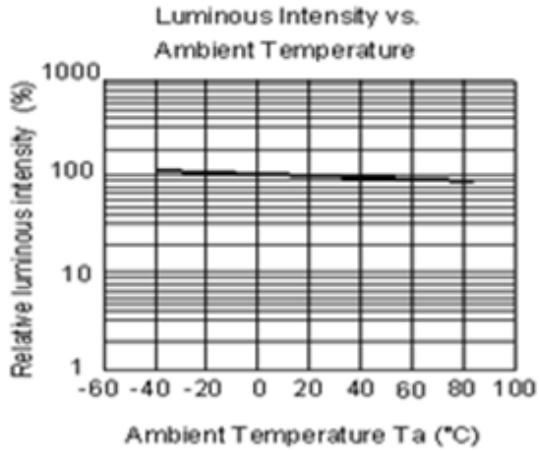


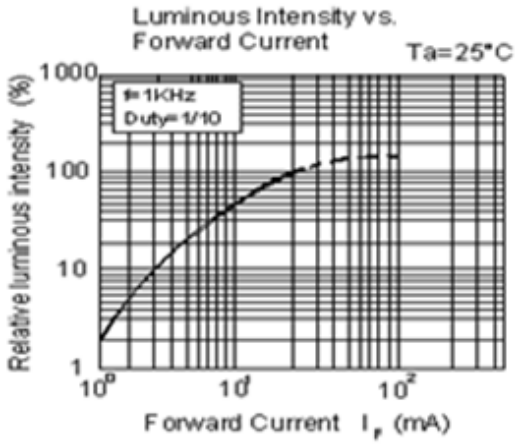
Copyright © 2010, Everlight All Rights Reserved. Release Date : August.26.2015

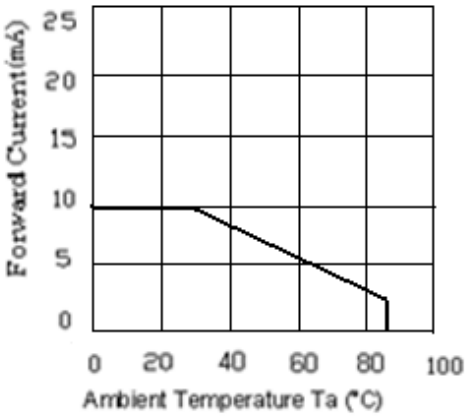
Typical Electro-Optical Characteristics Curves

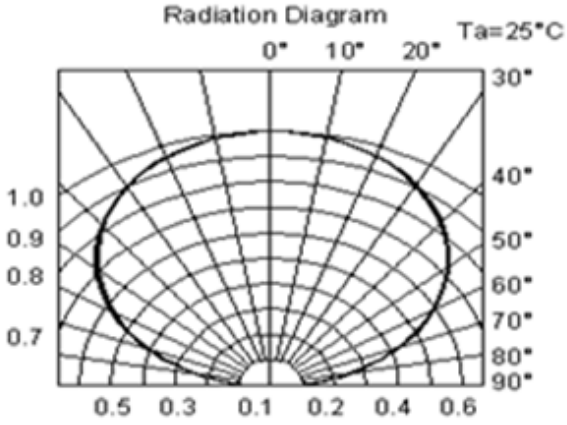






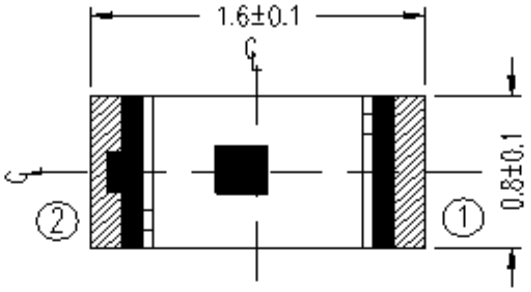




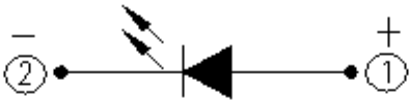


Copyright © 2010, Everlight All Rights Reserved. Release Date : August.26.2015

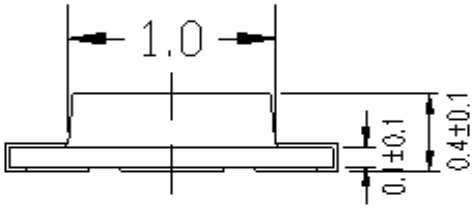
Package Dimension



Top

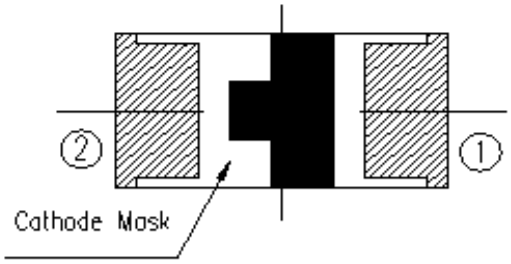


Polarity

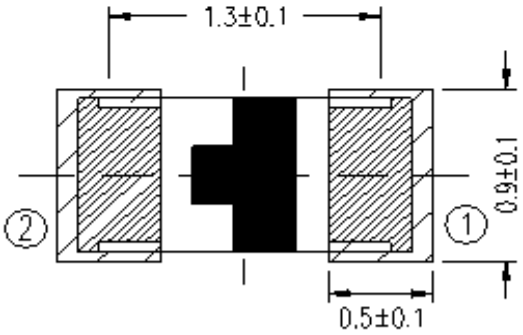


Side

Recommend Sodering Pad



Bottom

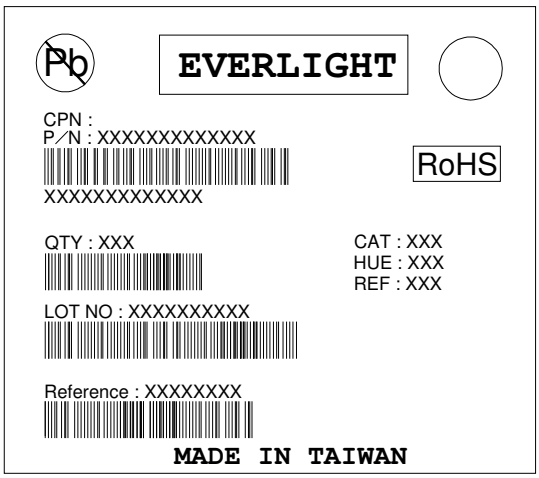


Suggested pad dimension is just for reference only.
Please modify the pad dimension based on individual need.

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

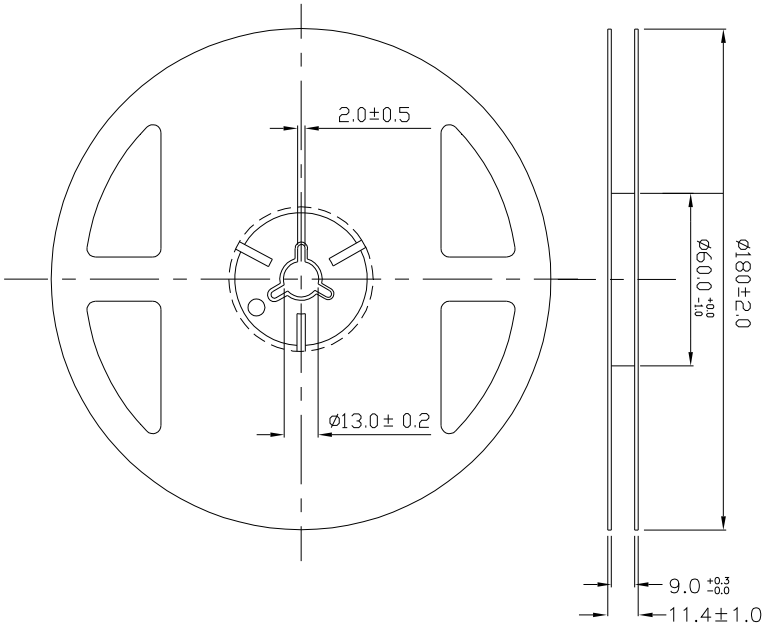
Copyright © 2010, Everlight All Rights Reserved. Release Date : August.26.2015

Label Explanation



- CPN: Customer's Product Number
- P/N: Product Number
- QTY: Packing Quantity
- CAT: Luminous Intensity Rank
- HUE: Chromaticity Coordinates & Dom. Wavelength Rank
- REF: Forward Voltage Rank
- LOT No: Lot Number

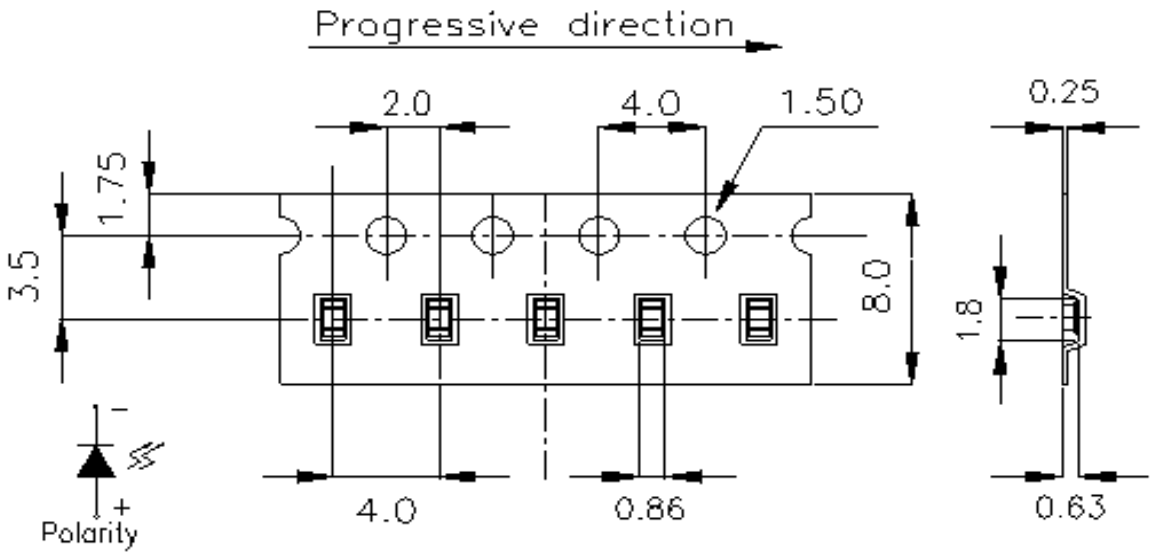
Reel Dimensions



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

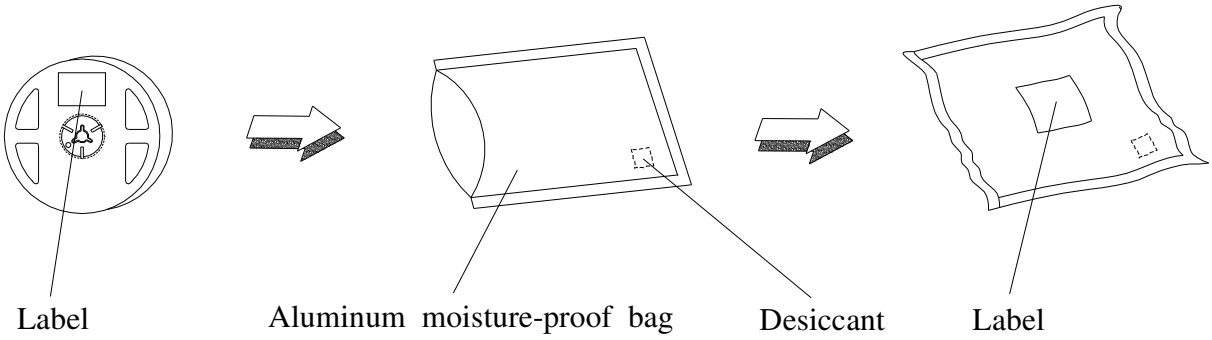
Copyright © 2010, Everlight All Rights Reserved. Release Date : August.26.2015

Carrier Tape Dimensions: Loaded quantity 3000 PCS per reel



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

Moisture Resistant Packaging



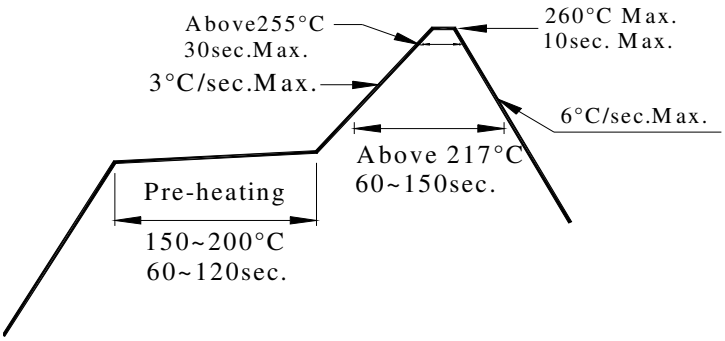
Copyright © 2010, Everlight All Rights Reserved. Release Date : August.26.2015

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.

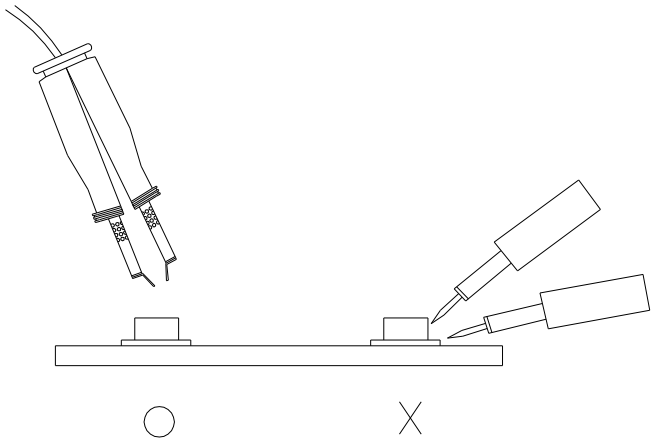
3. Soldering Condition
   3.1 Pb-free solder temperature profile



   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.



Copyright © 2010, Everlight All Rights Reserved. Release Date : August.26.2015

Application Restrictions

High reliability applications such as military/aerospace, automotive safety/security systems, and medical equipment may require different product. If you have any concerns, please contact everlightamericas before using this product in your application. This specification guarantees the quality and performance of the product as an individual component. Do not use this product beyond the specification described in this document.

Copyright © 2010, Everlight All Rights Reserved. Release Date : August.26.2015

Unikeyic Electronics

Global Electronic Components Distributor

Click to view pricing, inventory, delivery, and lifecycle information:

EVERLIGHT:

IR968-8P(X1-X4)XBY 15-21/BHC-AP1Q2/3T ALS-PDT243-3C/L451 EL817S2(C)(TU)-FG IR204C-A PT334-6B 103UYD/S530-A3 19-213/Y2C-CQ2R2L/3T(CY) 45-21UMC/404589E/TR8-T 6N137S(TA) 95-21SUGC/S400-A4/TR7 EL0631(TA) EL3H7(A)(TA)-G IR26-21C/L110/CT IRM-3638JF 12-21SURC/S530-A2/TR8 EL357N(A)(TA)-G ELM3052(TA)-V ELM406A(TA)-G PD204-6B/L3 ELM440A(TA)(BMS)-VG IR908-7C-F(E6) IR928-6C(6-2) ITR-20001/T 19-21SURC/S530-A2/4T EL3083 IR383-A ITR1205ST11A/TR 11-21SURC/S530-A2/3T 27-21/GHC-YR1S2M/3C