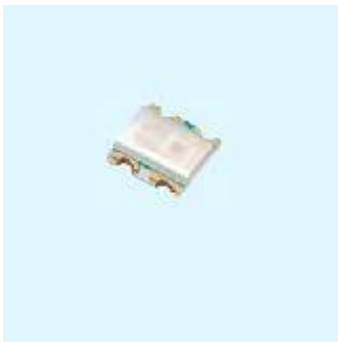


SMD ■ B EAST1616RGBB7



Features

- . Package in 8mm tape on 7" diameter reel.
- . Compatible with automatic placement equipment.
- . Compatible with infrared and vapor phase reflow solder process.
- . Full-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

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

Device Selection Guide

Code	Chip Materials	Emitted Color	Resin Color
R6	AlGaInP	Brilliant Red	Water Clear
GH	InGaN	Brilliant Green	
BH	InGaN	Blue	

Absolute Maximum Ratings (Ta=25℃)

Parameter	Symbol	Code	Rating	Unit
Reverse Voltage	V _R		5	V
Forward Current	I _F		25	mA
Peak Forward Current (Duty 1/10 @1KHz)	I _{FP}	R6	60	mA
		GH	100	
		BH	100	
Power Dissipation	P _d	R6	60	mW
		GH	95	
		BH	95	
Electrostatic Discharge(HBM)	ESD	R6	2000	V
		GH	150	
		BH	150	
Operating Temperature	T _{opr}		-40 ~ +85	℃
Storage Temperature	T _{stg}		-40 ~ +90	℃
Soldering Temperature	T _{sol}		Reflow Soldering : 260 ℃ for 10 sec. Hand Soldering : 350 ℃ for 3 sec.	

Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	Code	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	I _v	R6	18.0	-----	45.0	mcd	
		GH	45.0	-----	112		
		BH	11.5	-----	28.5		
Viewing Angle	2θ _{1/2}		-----	120	-----	Deg	
Peak Wavelength	λ _p	R6	-----	632	-----	nm	
		GH	-----	518	-----		
		BH	-----	468	-----		
Dominant Wavelength	λ _d	R6	618	-----	628	nm	I _F =5mA
		GH	520	-----	530		
		BH	465	-----	475		
Spectrum Radiation Bandwidth	Δλ	R6	-----	20	-----	nm	
		GH	-----	35	-----		
		BH	-----	25	-----		
Forward Voltage	V _F	R6	1.7	-----	2.2	V	
		GH	2.6	-----	3.2		
		BH	2.6	-----	3.2		
Reverse Current	I _R	R6			10	μA	V _R =5V
		GH			50		
		BH	-----	-----	50		

Note:

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

R6

Bin Range of Luminous Intensity

Bin Code	Min.	Max.	Unit	Condition
M	18.0	28.5	mcd	I _F =5mA
N	28.5	45.0		

GH

Bin Range of Luminous Intensity

Bin Code	Min.	Max.	Unit	Condition
P	45.0	72.0	mcd	I _F =5mA
Q	72.0	112.0		

Bin Range Of Forward Voltage

Bin Code	Min.	Max.	Unit	Condition
1	2.60	2.75	V	I _F =5mA
2	2.75	2.90		
3	2.90	3.05		
4	3.05	3.20		

BH

Bin Range of Luminous Intensity

Bin Code	Min.	Max.	Unit	Condition
L	11.5	18.0	mcd	I _F =5mA
M	18.0	28.5		

Bin Range Of Forward Voltage

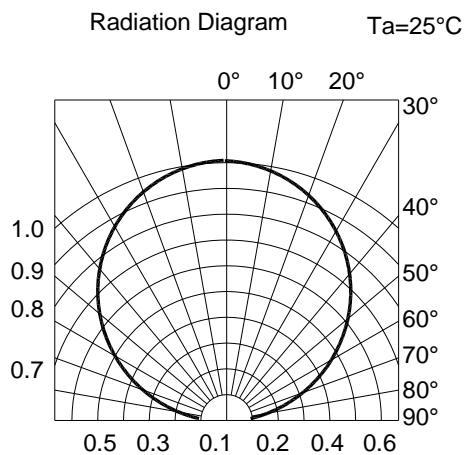
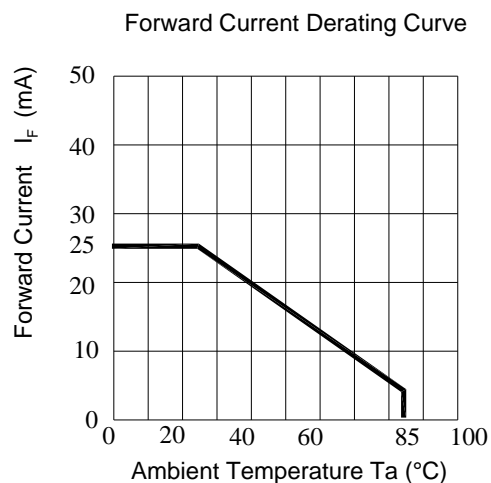
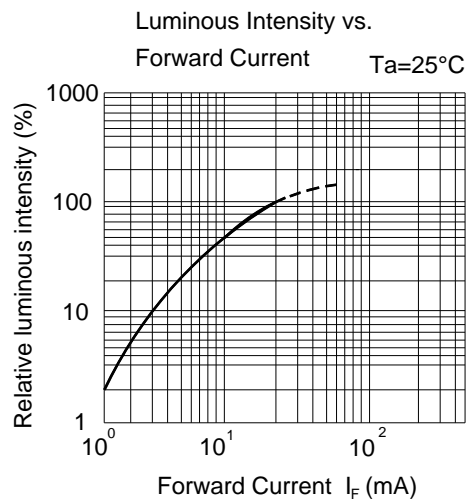
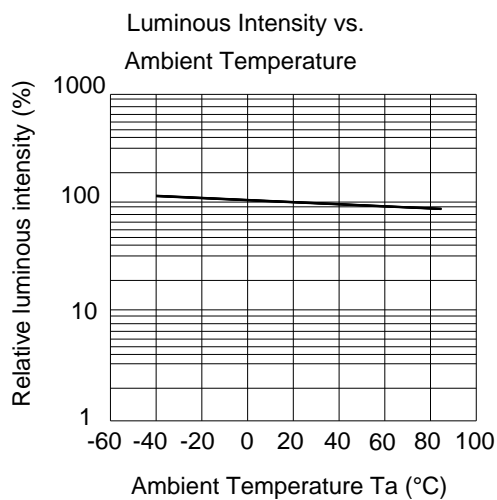
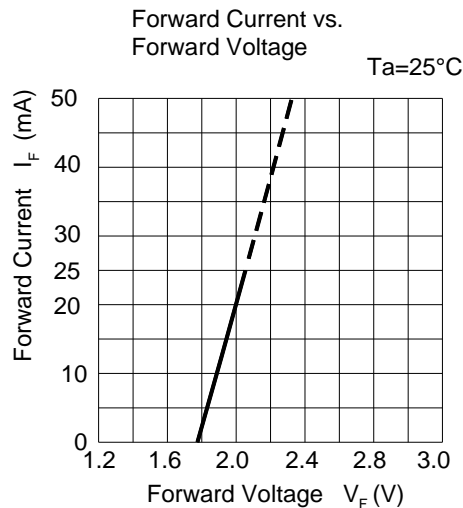
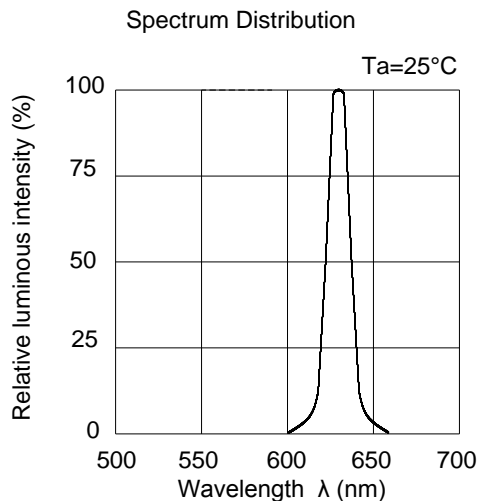
Bin Code	Min.	Max.	Unit	Condition
1	2.60	2.75	V	I _F =5mA
2	2.75	2.90		
3	2.90	3.05		
4	3.05	3.20		

Note:

1. Tolerance of Luminous Intensity: ±11%
2. Tolerance of Forward Voltage: ±0.05V

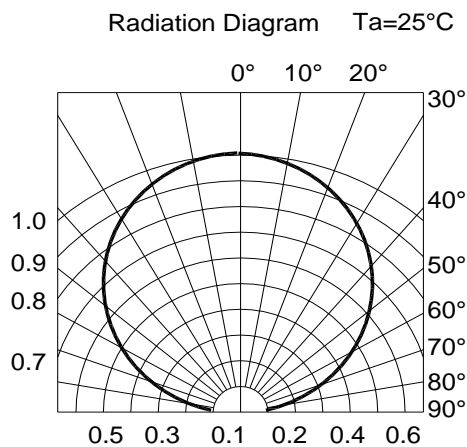
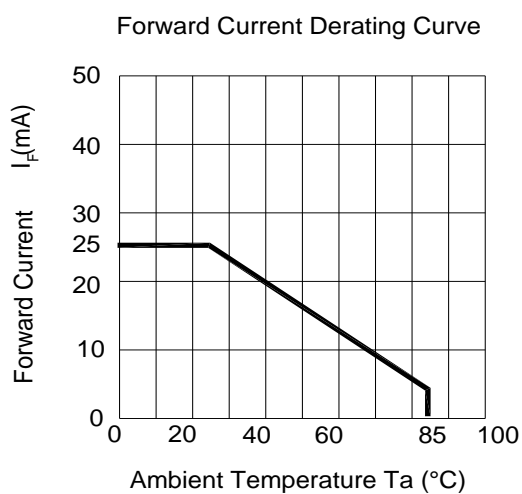
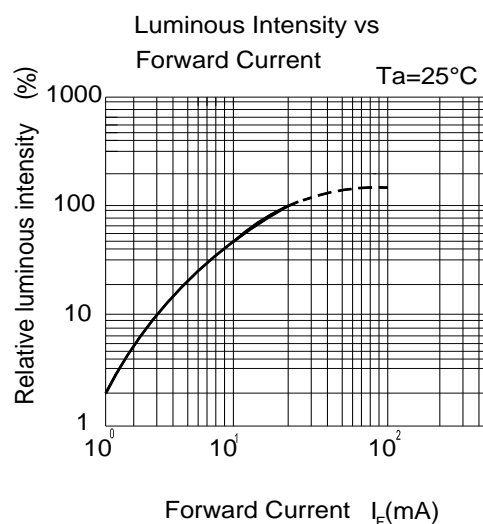
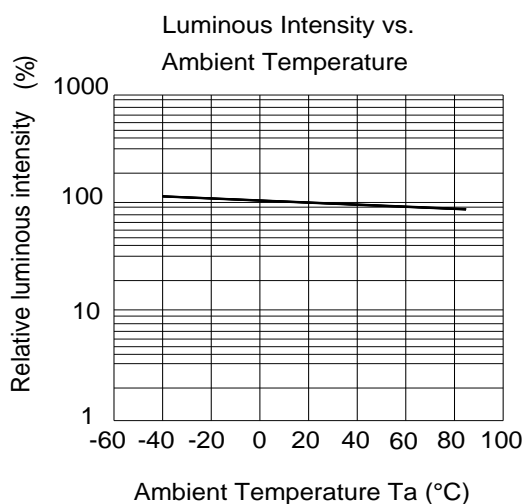
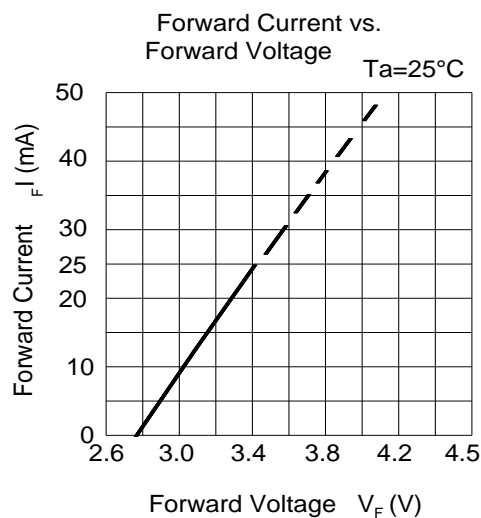
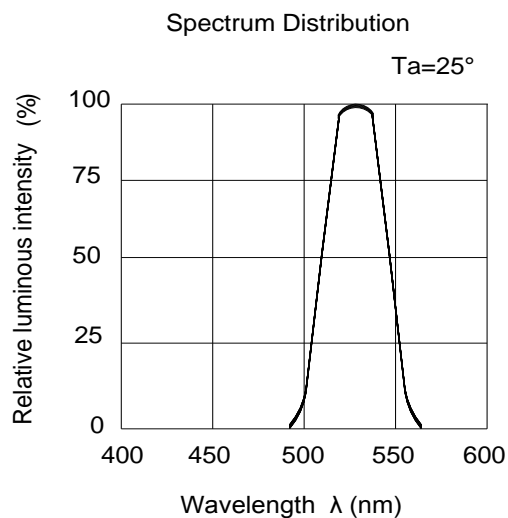
Typical Electro-Optical Characteristics Curves

R6



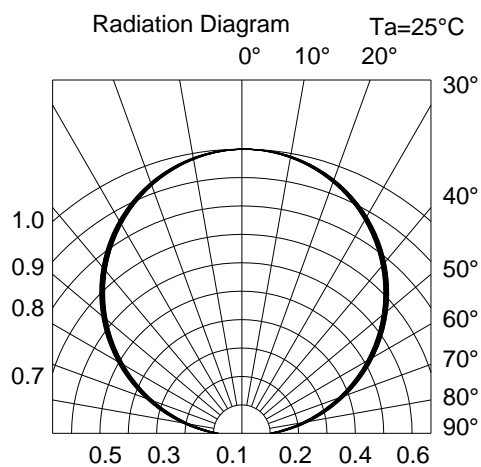
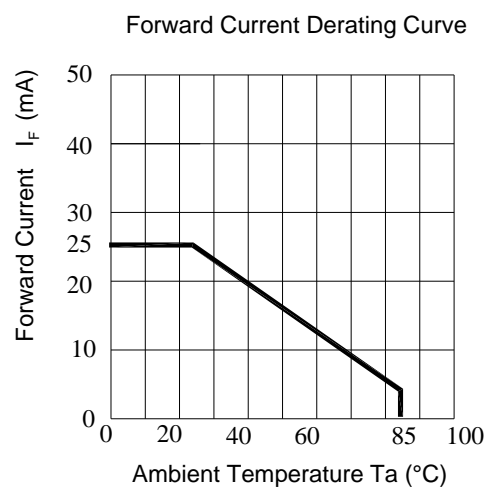
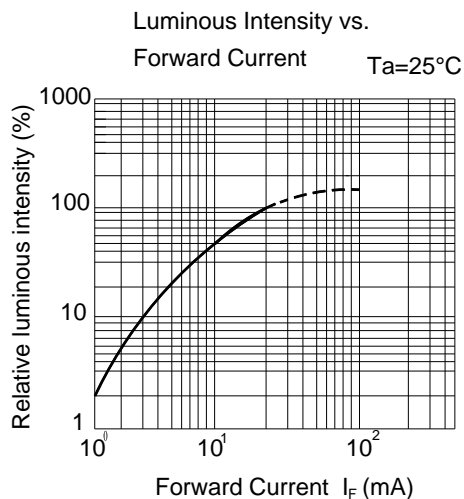
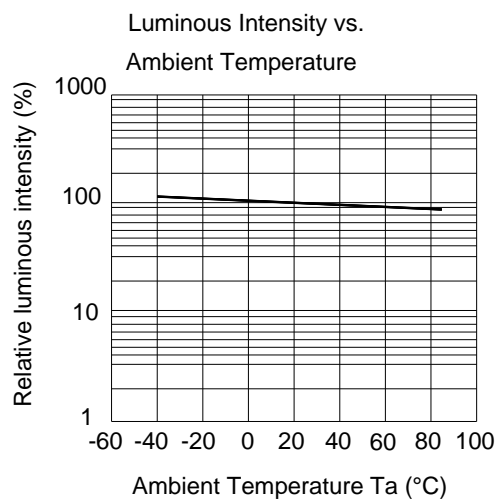
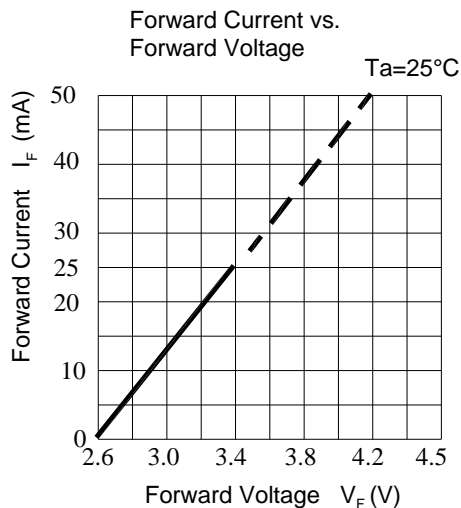
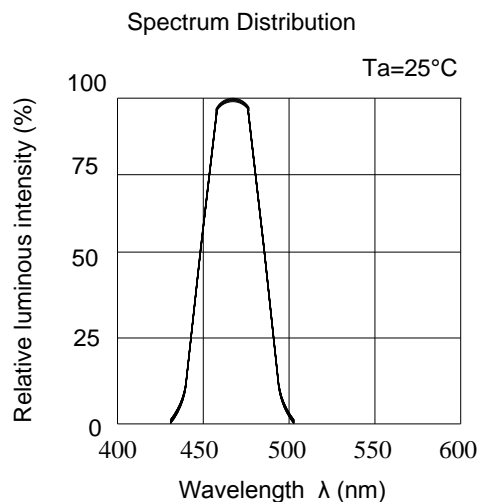
Typical Electro-Optical Characteristics Curves

GH



Typical Electro-Optical Characteristics Curves

BH

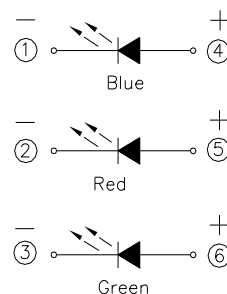


Technical drawings of a 1.6mm pitch SMD component, showing Top, Side, and Bottom views with dimensions and callouts.

Top View: Shows the component's footprint with a 1.6mm pitch. Dimensions include 1.6mm for the overall width and 1.6mm for the overall height. Callouts 1 through 6 identify specific features. A "Cathode Mark" is indicated on the right side.

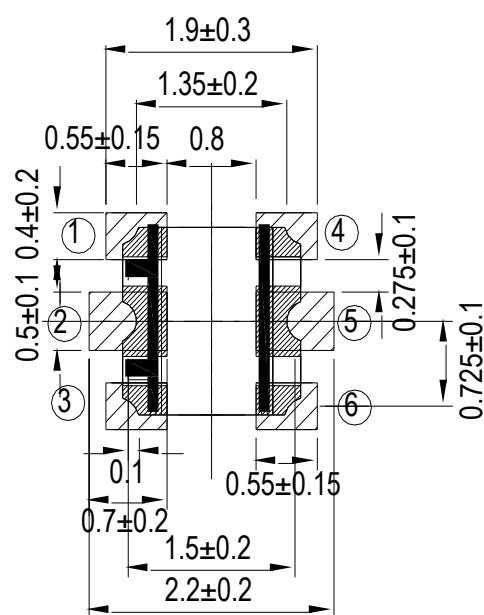
Side View: Shows the component's profile. Dimensions include 1.1mm for the top width, 1.0mm for the top width, 0.2mm for the top thickness, 1.6mm for the bottom width, and 0.35mm for the bottom thickness.

Bottom View: Shows the component's underside. Dimensions include 1.6mm for the overall width, 0.6±0.1mm for the top width, 0.8mm for the top width, 0.25±0.05mm for the top thickness, 0.25±0.05mm for the top thickness, 0.25±0.05mm for the top thickness, 0.4mm for the bottom width, and 0.4mm for the bottom width. Callouts 1 through 6 identify specific features. A "Solder Mask" is indicated on the right side.



Polarity

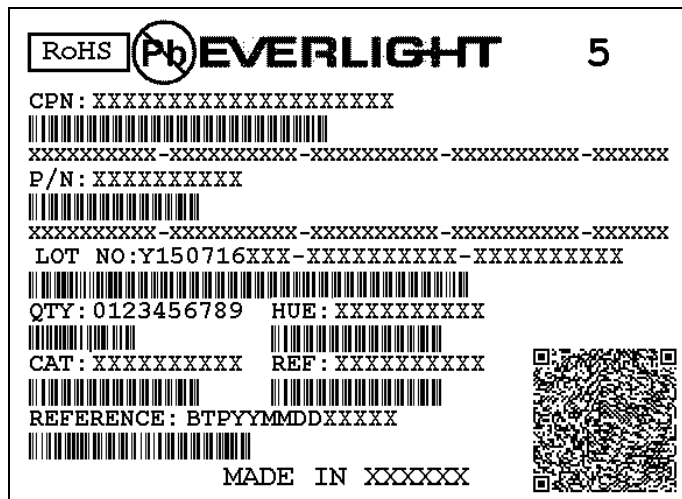
Recommend soldering pad



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

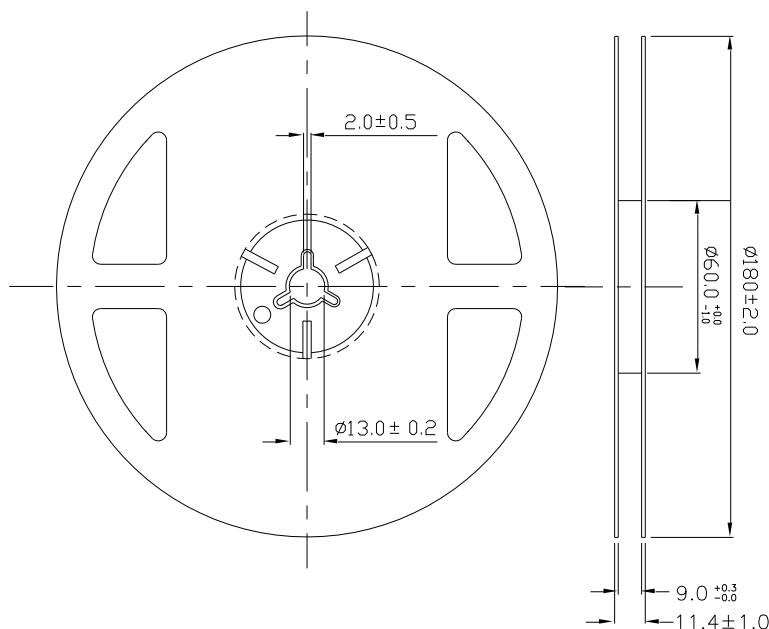
Moisture Resistant Packing Materials

Label Explanation



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

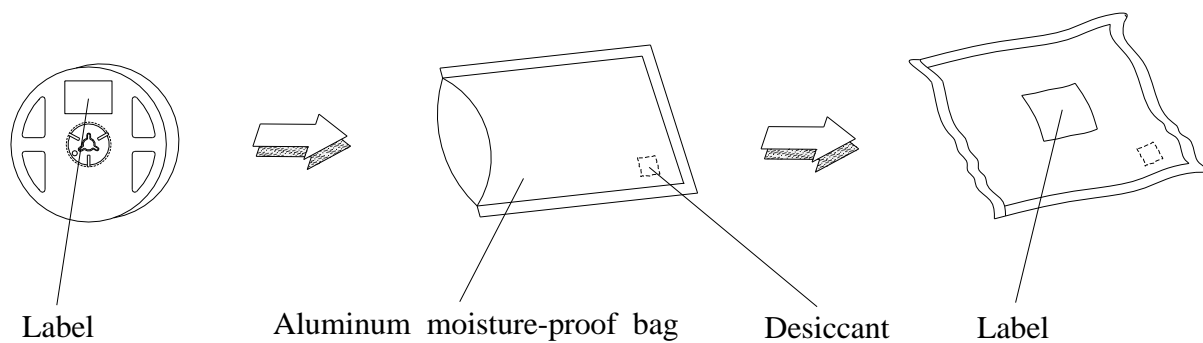
Reel Dimensions



Note: The tolerances unless mentioned is $\pm 0.1\text{mm}$,Unit = mm

Technical drawing of a 5-pin connector. The drawing includes a top view, a side view, and a cross-section view. The top view shows a rectangular connector with a central slot and five pins. Dimensions include a total width of 8.0 ± 0.3, a pin pitch of 2.0, and a pin diameter of 1.5. The side view shows a height of 1.8 and a pin diameter of 0.65. The cross-section view shows the internal structure of the pins. The drawing also includes a polarity diagram with six pins labeled 1 through 6, with pins 1, 2, and 3 marked with a minus sign (-) and pins 4, 5, and 6 marked with a plus sign (+). The text 'Progressive direction' is written above the top view with an arrow pointing to the right.

Moisture Resistant Packaging



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 1 year under 30°C or less and 60% RH or less.

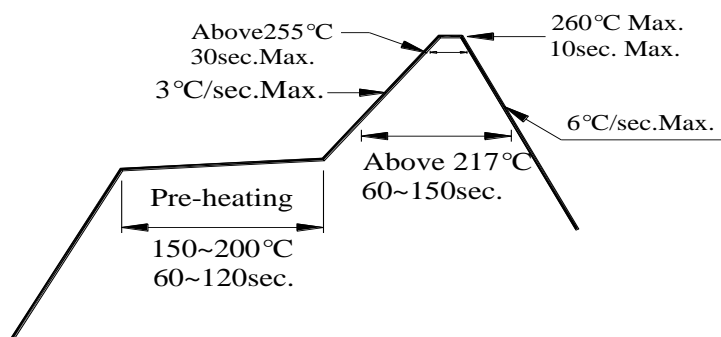
If unused LEDs remain, it should be stored in moisture proof packages.

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 profile, frequency are based on IPC/JEDEC J-STD-20D

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

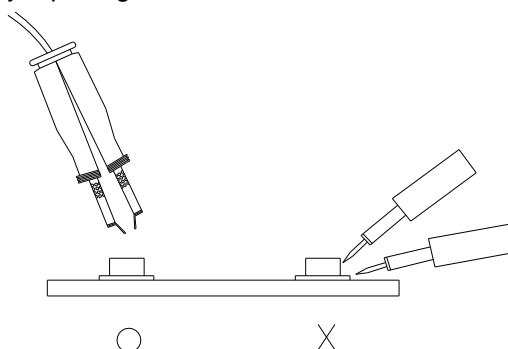
3.4 After soldering, do not warp the circuit board.

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.



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 Everlight 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.

DISCLAIMER

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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.
4. 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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