

Top LED With 3 Wavelengths BM67-23C/L443/TR8(MEI)



Features

- Lead frame package with individual 4 pins
- Small package
- Pb-free
- RoHS Compliance
- The product itself will remain within RoHS compliant version.

Description

BM67-23C/L443/TR8(MEI) is an emitting diode with combined visible with infrared light. It's a miniature SMD package which is molded in a water clear plastic flat top view lens.

The device is spectrally matched with silicon photodiode and phototransistor.

Applications

- Sensor

Device Selection Guide

Chip				Resin Color
Type	Material	Emitted Color	Wavelength(λ c)	
LED1	InGaN	Green	525 nm	Water clear
LED2	GaAlAs	RED	660 nm	
LED3	GaAs	Infrared	940 nm	

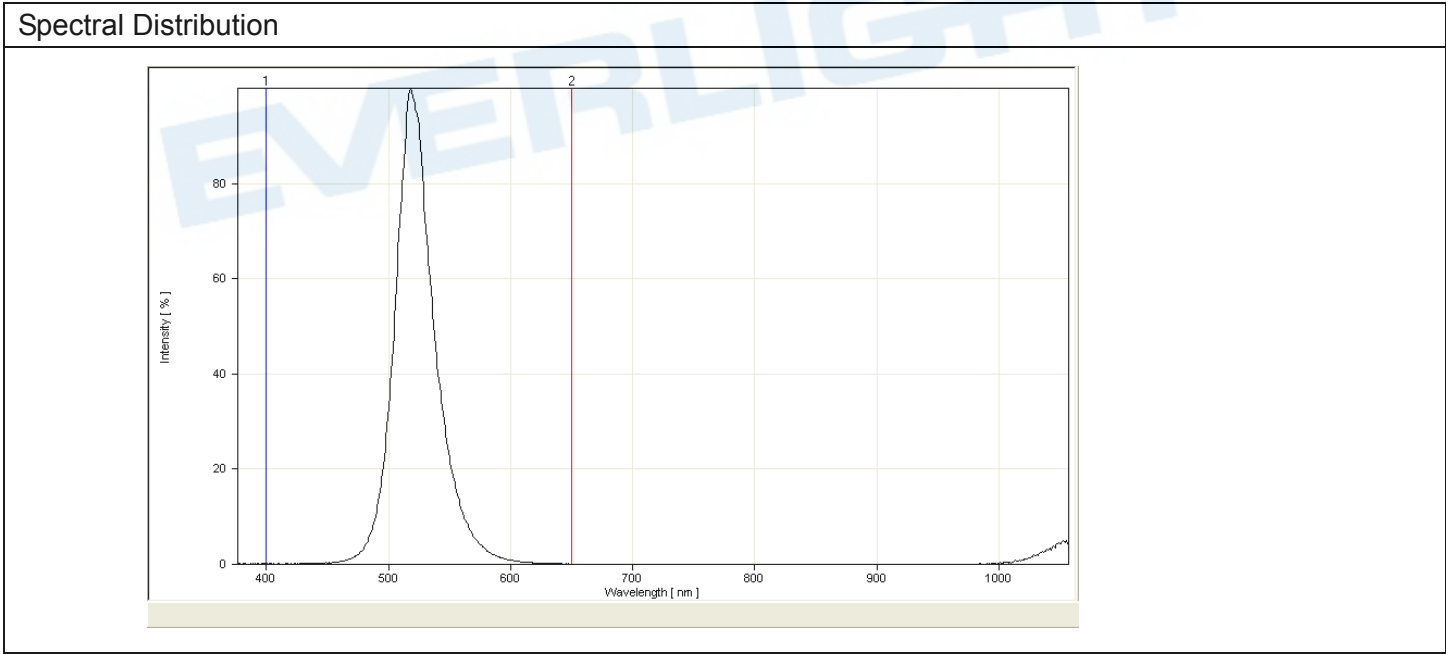
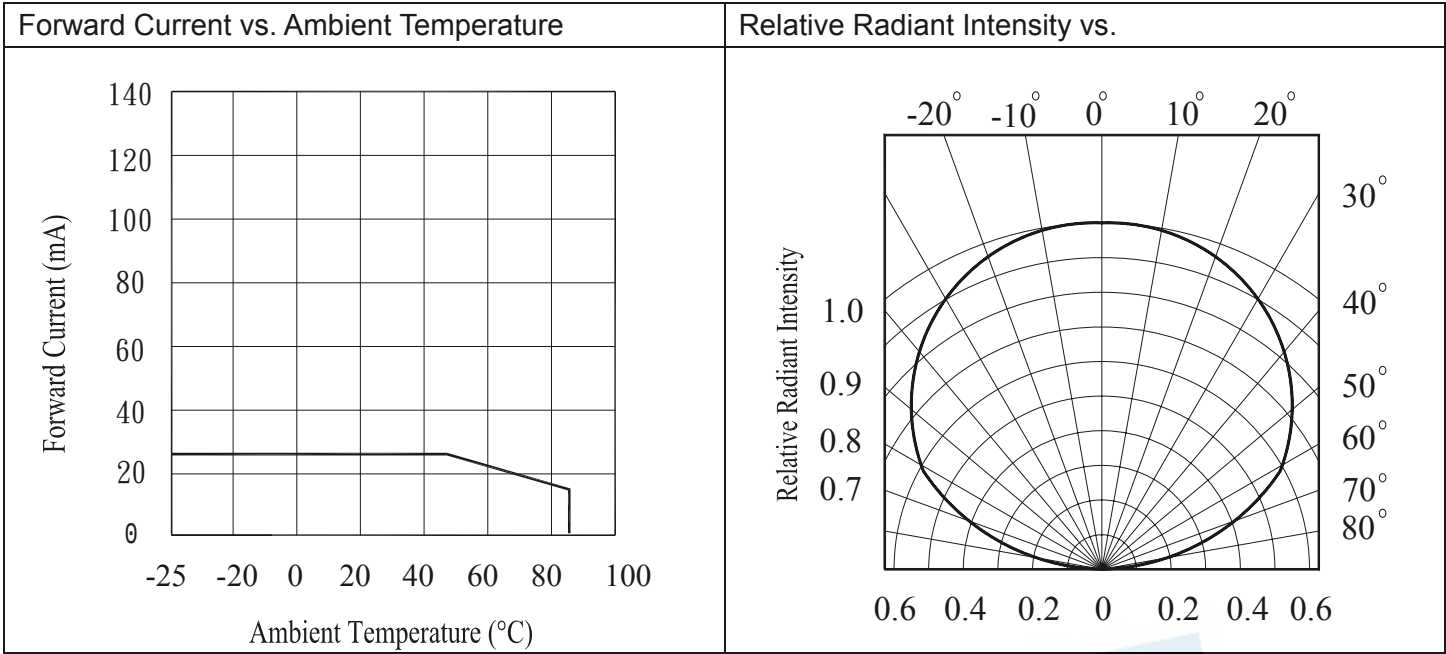
Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating		Unit
Reverse Voltage	VR	5		V
Operating Temperature	Topr	-30 ~ +85		°C
Storage Temperature	Tstg	-40~ +100		°C
Junction Temperature	Tj	100		°C
Soldering Temperature	Tsol	260 (for 5 second)		°C
Electrostatic Discharge	ESD	2000		V
Forward Current	IF	LED1	25	mA
		LED2	50	
		LED3	50	
Power Dissipation at(or below) 25°C Free Air Temperature	Pd	LED1	80	mW
		LED2	130	
		LED3	70	

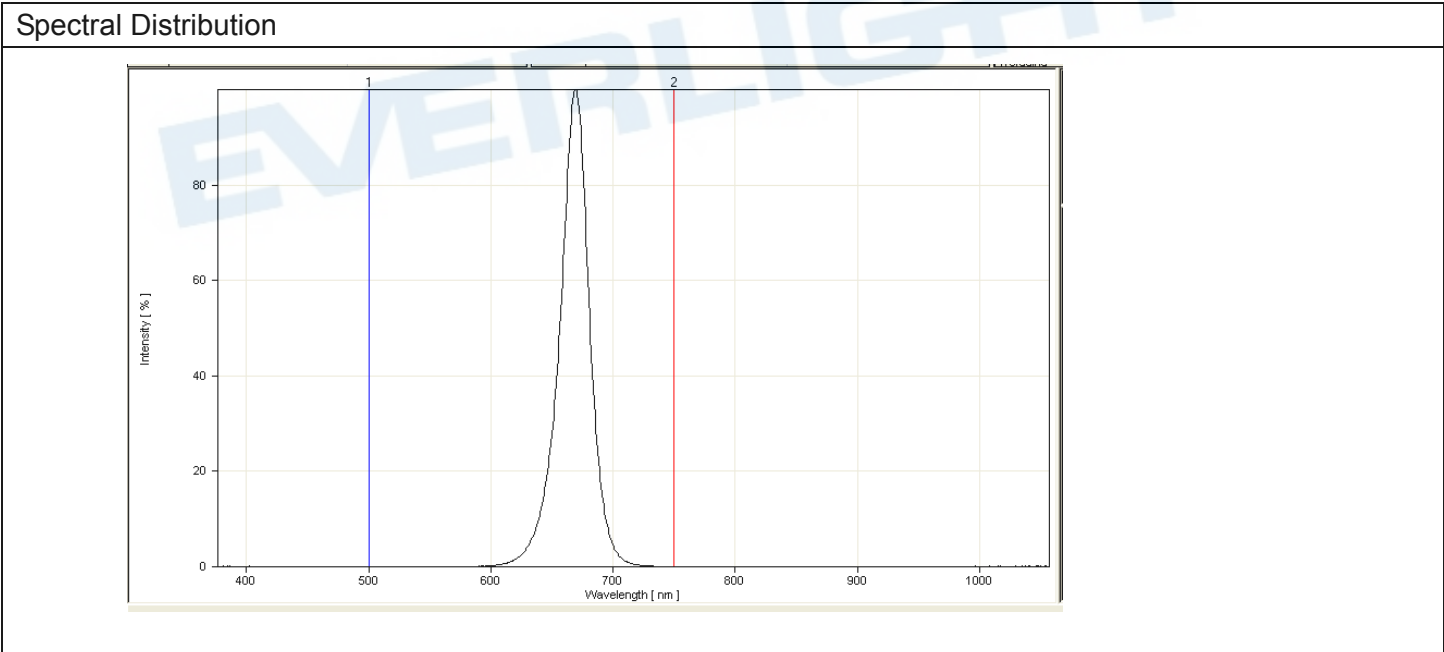
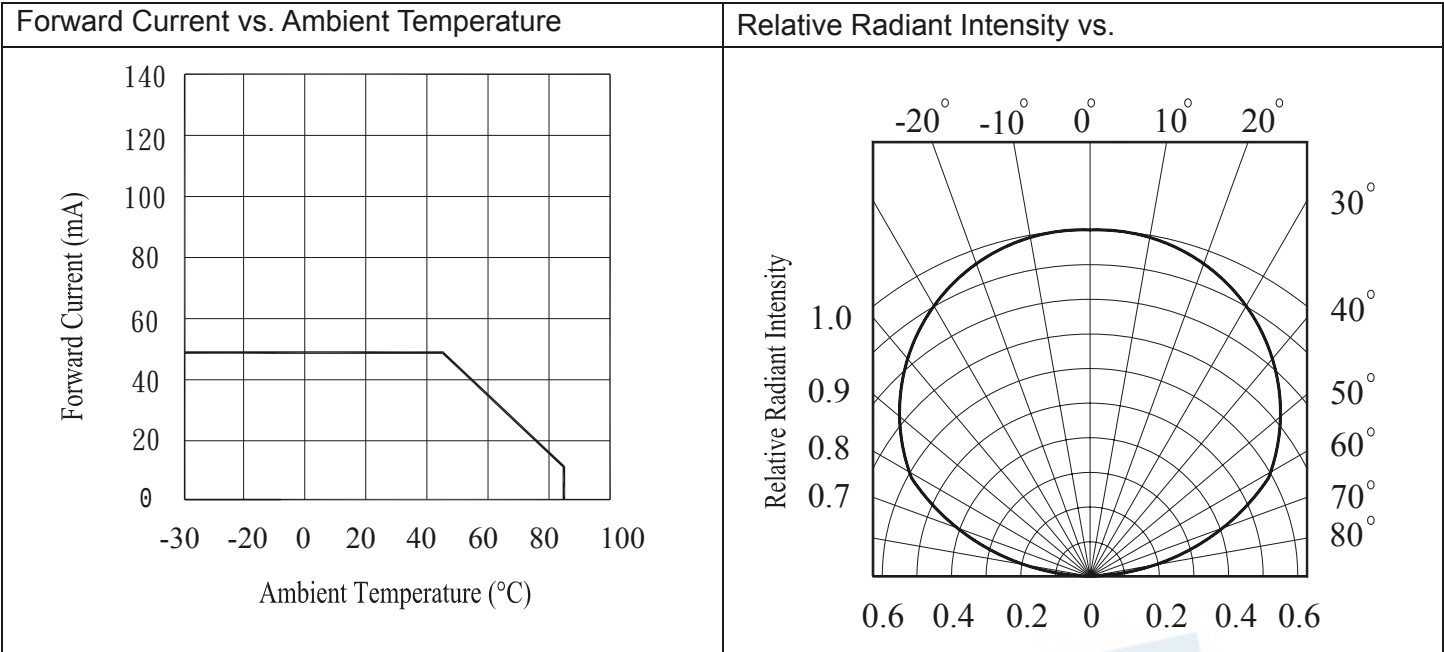
Electro-Optical Characteristics (Ta=25°C.)

Parameter	Symbol		Conditions	MIN.	TYP.	MAX.	Unit
Radiant Intensity	I _e	LED1	I _F =20mA, tp=20ms	0.54	0.85	0.95	mW/sr
		LED2		0.41	0.82	0.95	
		LED3		0.25	0.48	0.70	
Centroid Wavelength	λ _c	LED1	I _F =20mA, tp=20ms Scan range=400nm~650nm	519	522	529	nm
		LED2	I _F =20mA, tp=20ms Scan range=500nm~750nm	664	669	674	
		LED3	I _F =20mA, tp=20ms Scan range=800nm~1050nm	938	943	948	
Spectrum Radiation Bandwidth	Δλ	LED1	I _F =20mA	---	35	---	nm
		LED2	I _F =20mA	---	30	---	
		LED3	I _F =20mA	---	45	---	
Forward Voltage	V _F	LED1	I _F =20mA	1.0	3.2	3.7	V
		LED2	I _F =20mA	1.0	1.8	2.3	
		LED3	I _F =20mA	1.0	1.2	1.6	
Reverse Current	I _R	LED1	V _R =5V	--	--	10	μA
		LED2		--	--	10	
		LED3		--	--	10	
View Angle	2θ1/2	LED1	I _F =20mA	--	130	--	deg
		LED2	I _F =20mA	--	130	--	
		LED3	I _F =20mA	--	130	--	
Secondary Emission	I _{eSE}	LED1	I _F =20mA	--	--	2	%
		LED2	I _F =20mA	--	--	0.5	
		LED3	I _F =20mA	--	--	0.5	

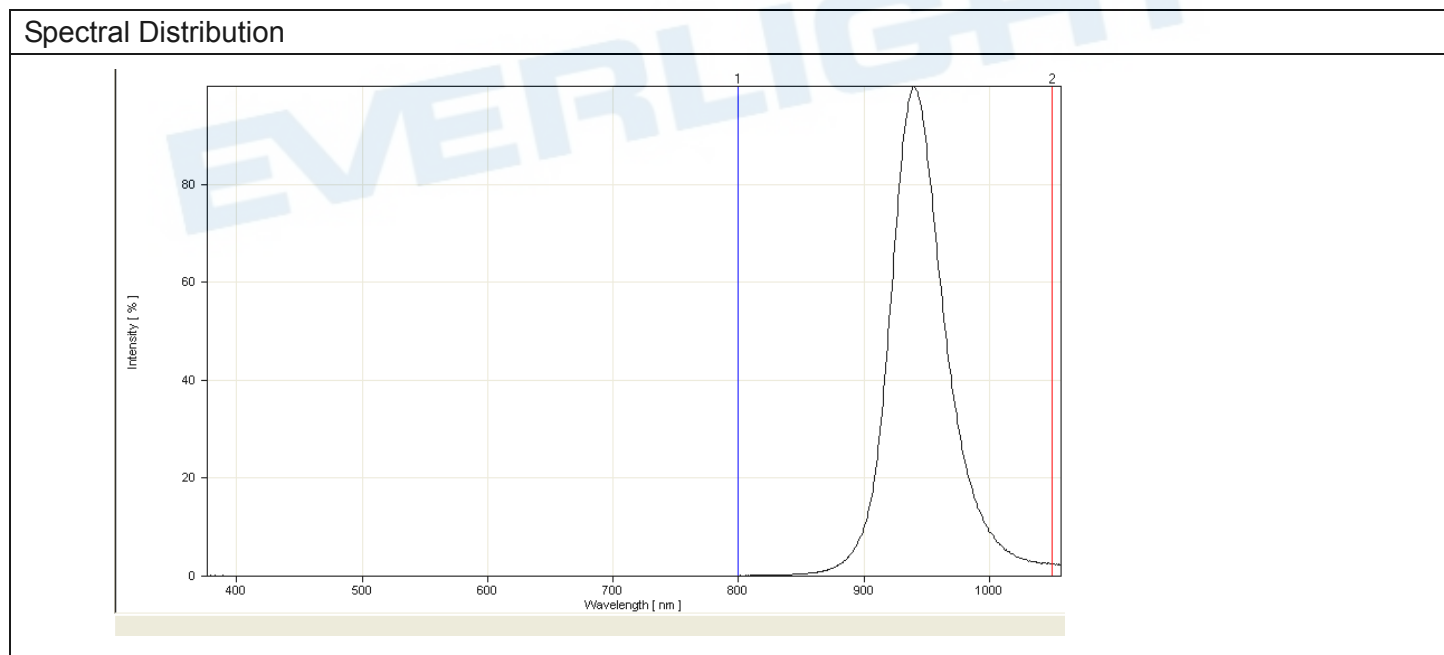
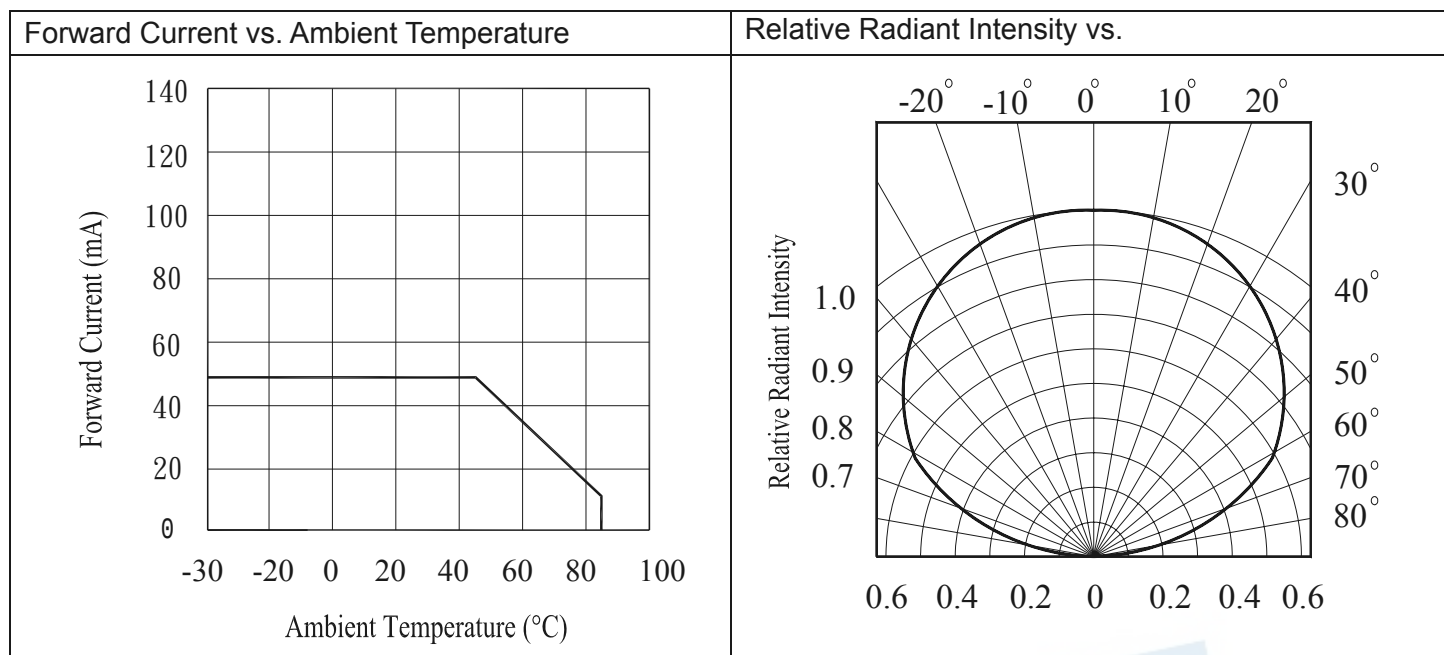
Typical Electrical/Optical/Characteristics Curves for LED1



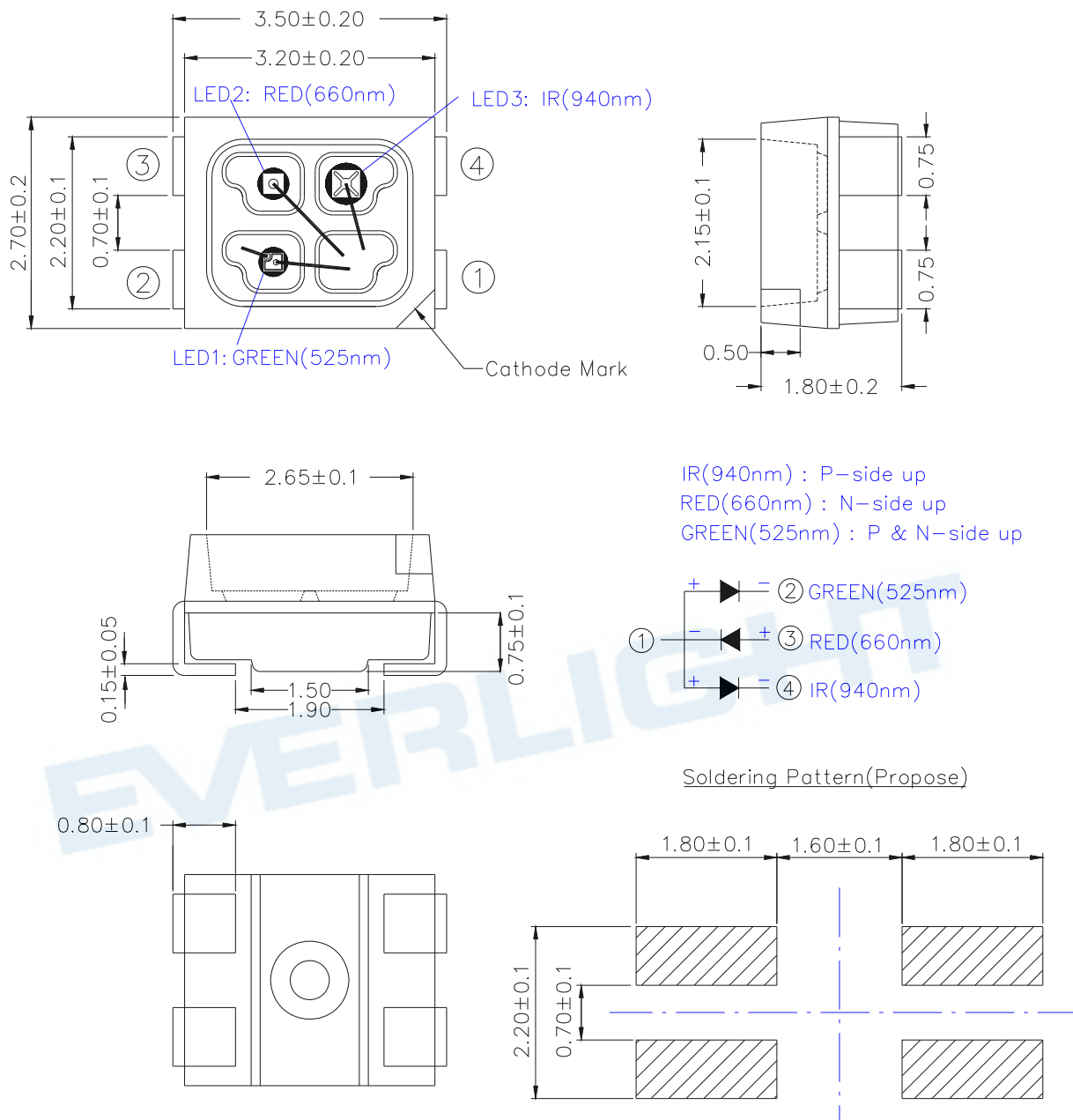
Typical Electrical/Optical/Characteristics Curves for LED2



Typical Electrical/Optical/Characteristics Curves for LED3



Package Dimension



Note:

- 1.All dimensions are in millimeters.
- 2.Tolerances unspecified are ± 0.1 mm.

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.

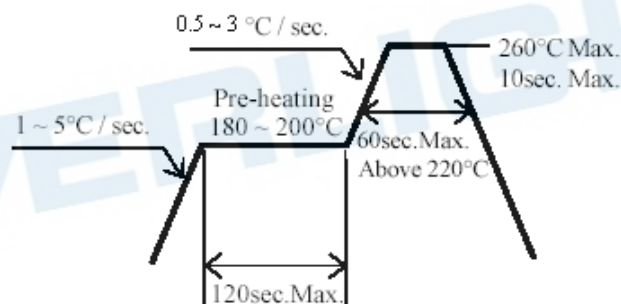
2.2 Before opening the package: The LEDs should be kept at 30°C or less and 90%RH or less.

2.3 After opening the package: The LED's floor life are 168hr 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.

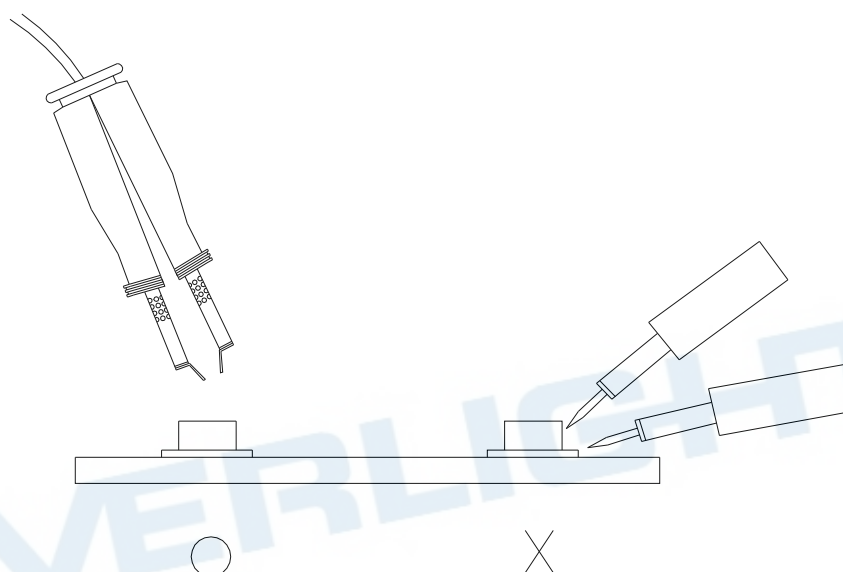
3.4 After soldering, do not warp the circuit board.

4. Soldering Iron

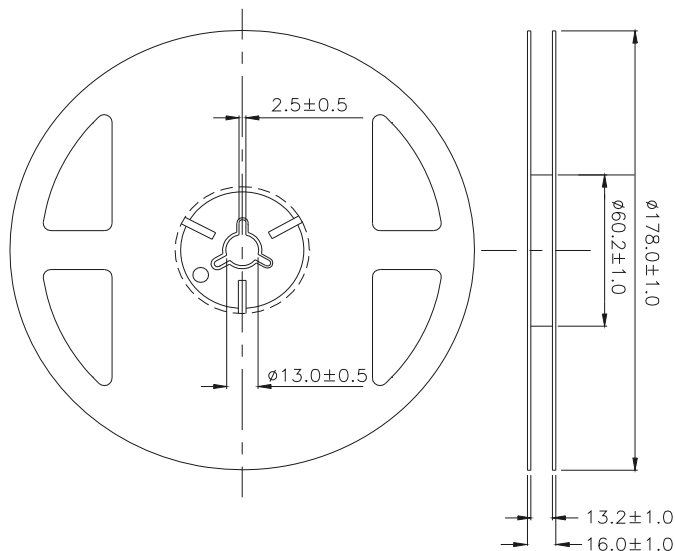
Each terminal is to go to the tip of soldering iron temperature less than 350°C for 3 seconds within once in less than the soldering iron capacity 25W. Leave two seconds and more intervals, and do soldering of each terminal. Be careful because the damage of the product is often started at the time of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

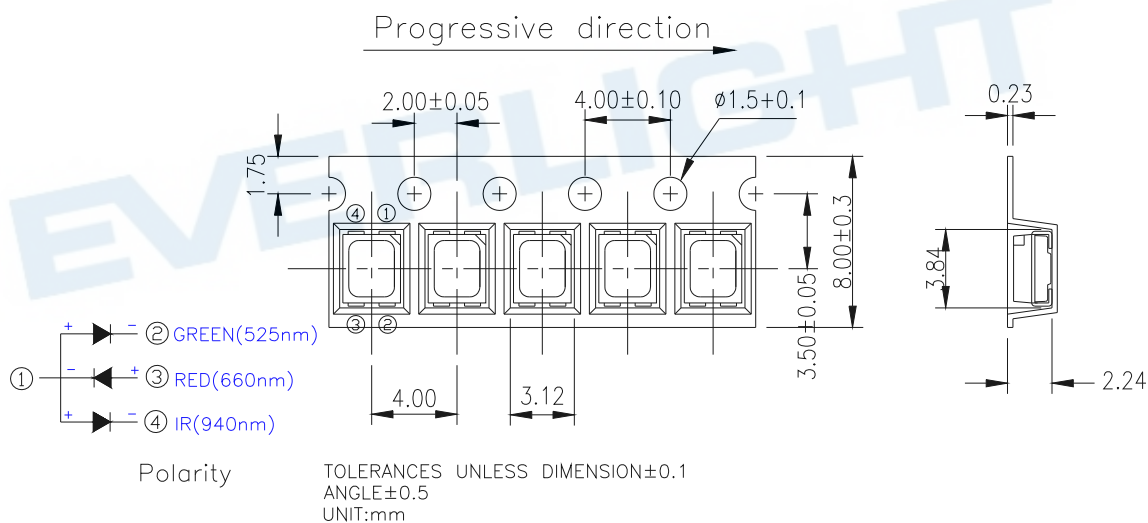


Reel Dimensions



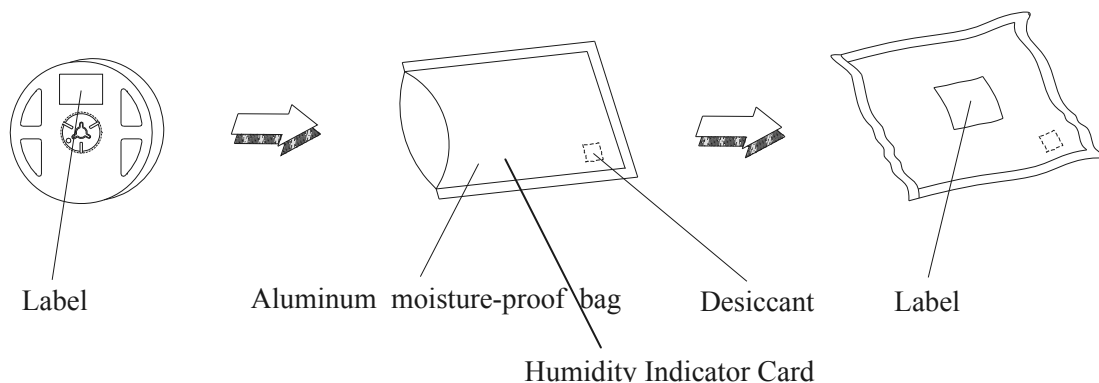
Notes: 1.Tolerances Unless Dimension $\pm 0.1\text{mm}$, Unit = mm.
2.Tapping Quantity =2000 pcs / Reel.

Carrier Tape Dimensions:

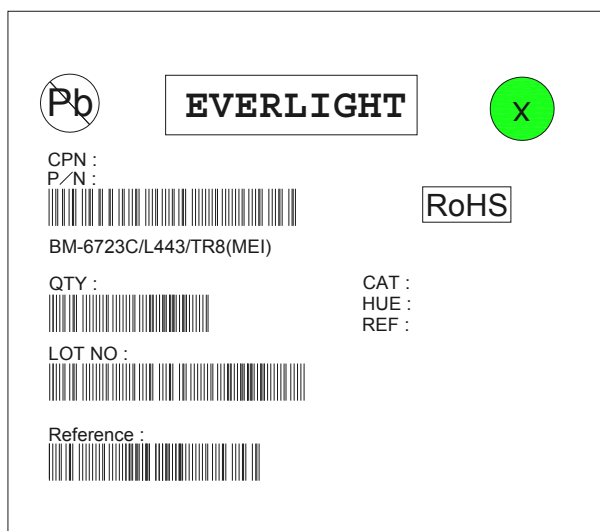


Note: Tolerances Unless Dimension $\pm 0.1\text{mm}$, Unit = mm

Moisture Resistant Packaging



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
- X: Month
- Reference: Identify Label Number

Notes

1. 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 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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EVERLIGHT ELECTRONICS CO., LTD.

Office: No 6-8, Zhonghua Rd., Shulin Dist.,
New Taipei City 23860, Taiwan, R.O.C

Tel: 886-2-2685-6688

Fax: 886-2-2685-6897

<http://www.everlight.com>