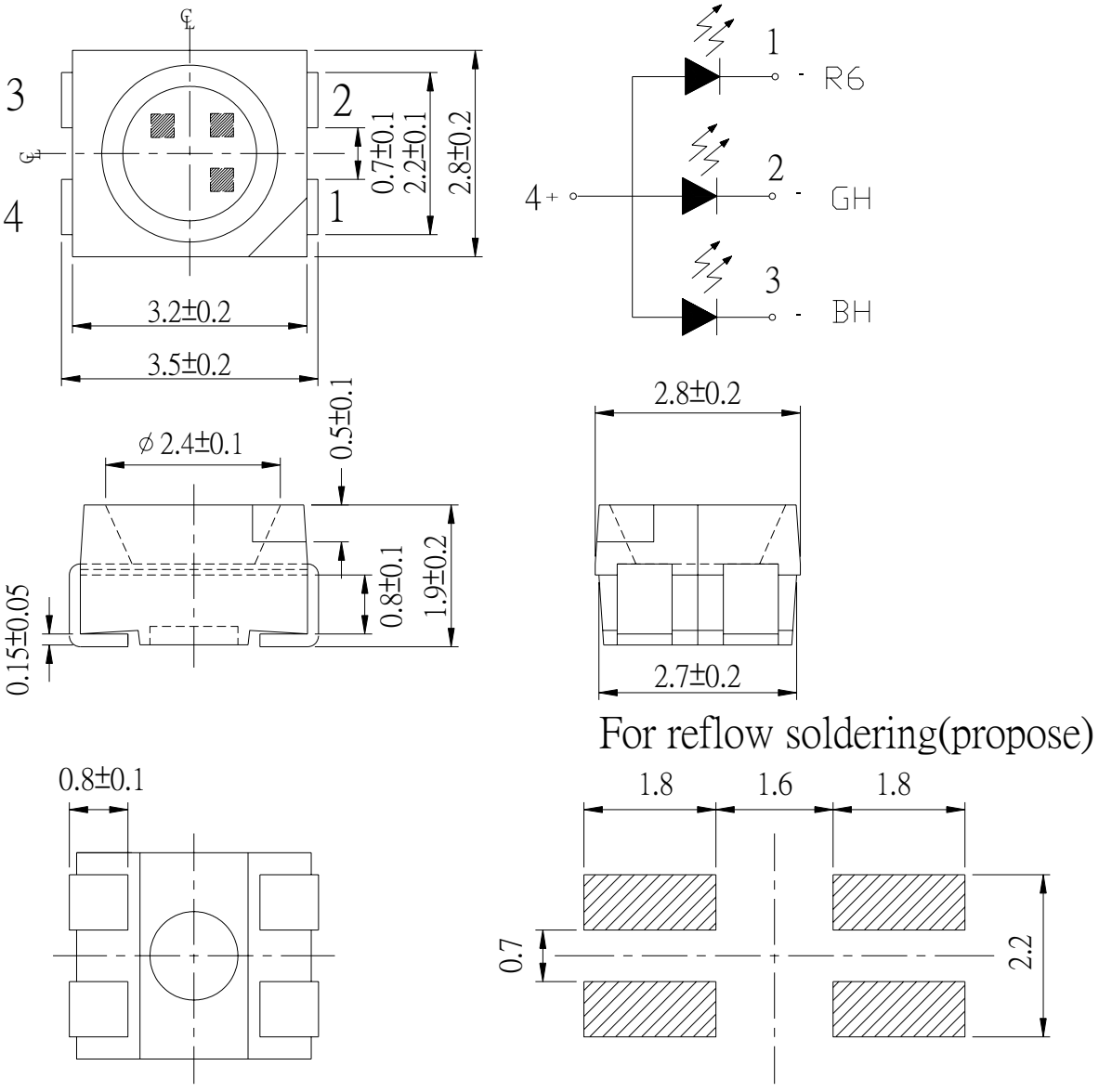
Package Outline Dimensions



Notes: All dimensions are in millimeters.

Absolute Maximum Ratings (Ta=25℃)

Parameter	Symbol	Rating		Unit
Reverse Voltage	V_R	5		V
Forward Current	I_F	R6	25	mA
		GH	25	
		BH	25	
Operating Temperature	Topr	-40 ~ +85		℃
Storage Temperature	Tstg	-40~ +100		℃
Electrostatic Discharge(HBM)	ESD	R6	2000	V
		GH	150	
		BH	150	
Power Dissipation	Pd	R6	120	mW
		GH	110	
		BH	110	
Peak Forward Current(Duty 1/10 @ 1KHz)	I_{FP}	R6	100	mA
		GH	100	
		BH	100	
Soldering Temperature	Tsol	Reflow Soldering : 260 ℃ for 10 sec. Hand Soldering : 350 ℃ for 3 sec.		

Electro-Optical Characteristics (Ta=25℃)

Parameter	Symbol		Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	Iv	R6	57	-----	112	mcd	IF=10mA
		GH	225	-----	450		
		BH	36	-----	72		
Peak Wavelength	λ p	R6	-----	632	-----	nm	IF=10mA
		GH	-----	518	-----		
		BH	-----	468	-----		
Dominant Wavelength	λ d	R6	620	-----	625	nm	IF=10mA
		GH	530	-----	535		
		BH	470	-----	475		
Spectrum Radiation Bandwidth	△ λ	R6	-----	20	-----	nm	IF=10mA
		GH	-----	35	-----		
		BH	-----	35	-----		
Forward Voltage	VF	R6	-----	2.0	2.4	V	IF=10mA
		GH	-----	3.5	3.9		
		BH	-----	3.5	3.9		
Viewing Angle	2θ 1/2		-----	120	-----	deg	IF=10mA
Reverse Current	IR	R6	-----	-----	10	μA	VR=5V
		GH	-----	-----	50		
		BH	-----	-----	50		

*The luminous intensity data did not including ±10% testing tolerance.

*Tolerance of Dominate Wavelength±0.1V.

Bin Range Of Luminous Intensity

Symbol		Bin Code	Min.	Max.	Unit	Condition
Iv	R6	P2	57	72	mcd	I_F =10mA
		Q1	72	90		
		Q2	90	112		
	GH	S2	225	285		
		T1	285	360		
		T2	360	450		
	BH	N2	36	45		
		P1	45	57		
		P2	57	72		

Notes:

*The luminous intensity data did not including ±10% testing tolerance.

*Tolerance of Dominate Wavelength±0.1V.

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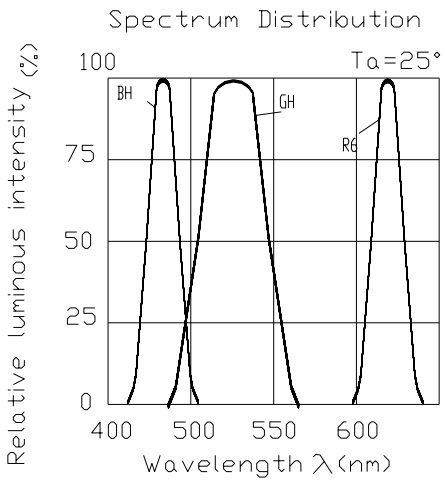
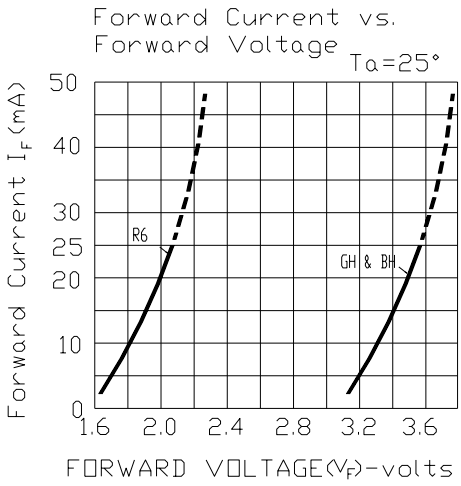
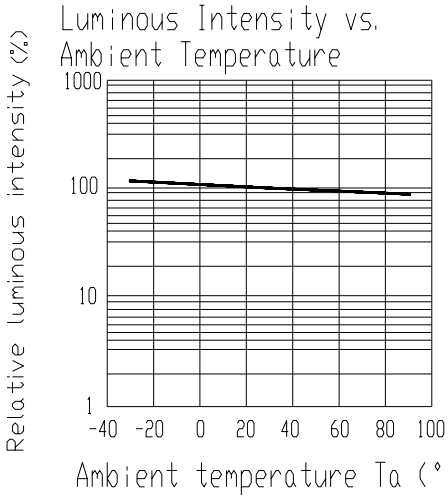
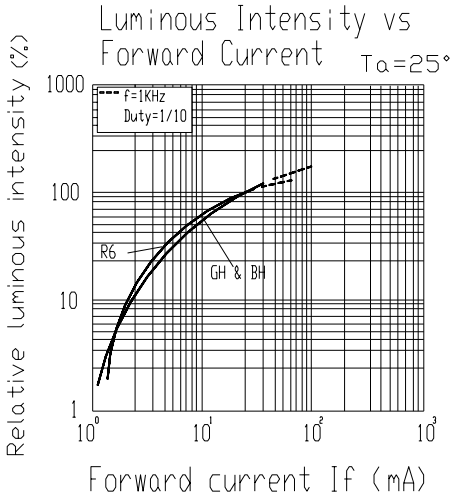
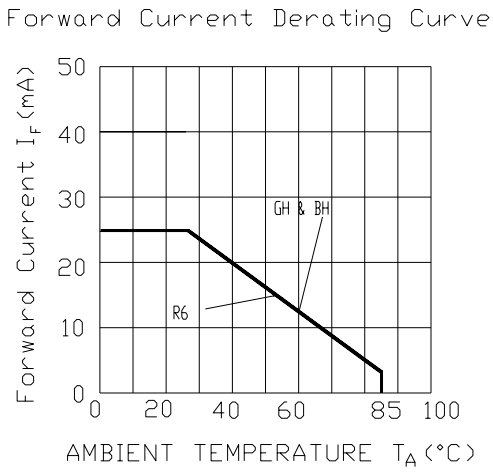
Typical Electro-Optical Characteristics Curves

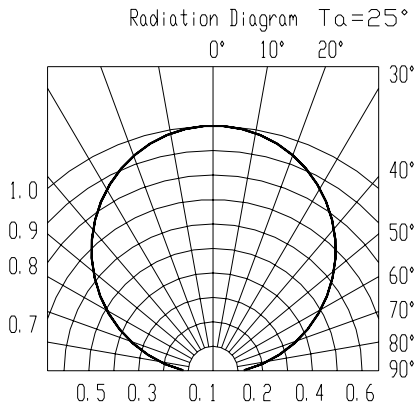












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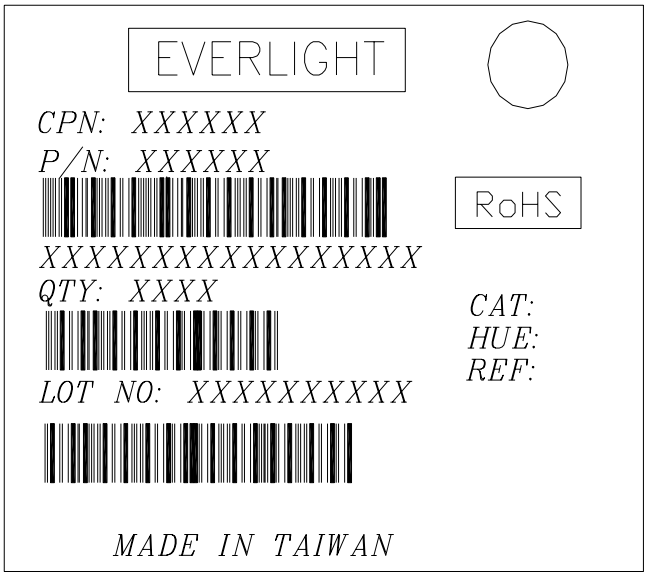
Label explanation

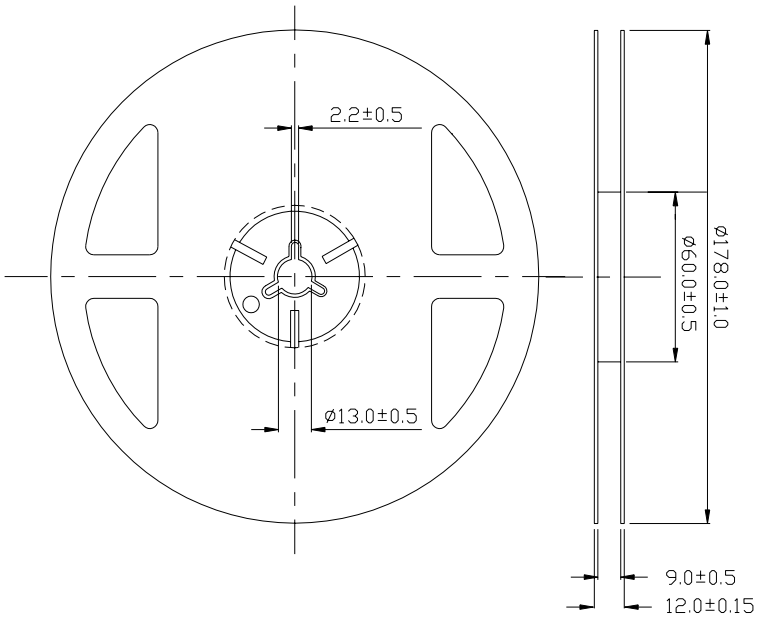
CAT: Luminous Intensity Rank

HUE: Dom. Wavelength Rank

REF: Forward Voltage Rank



Reel Dimensions



Note: Tolerances Unless Dimension ±0.1mm ,Unit = mm

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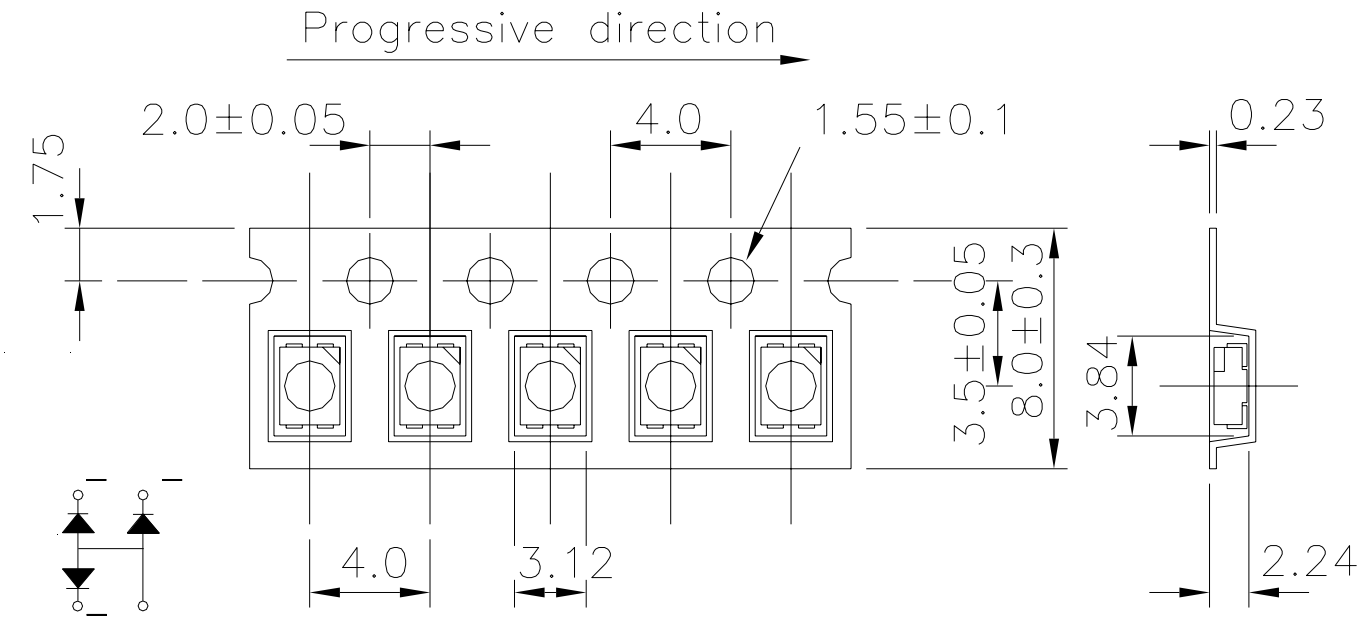
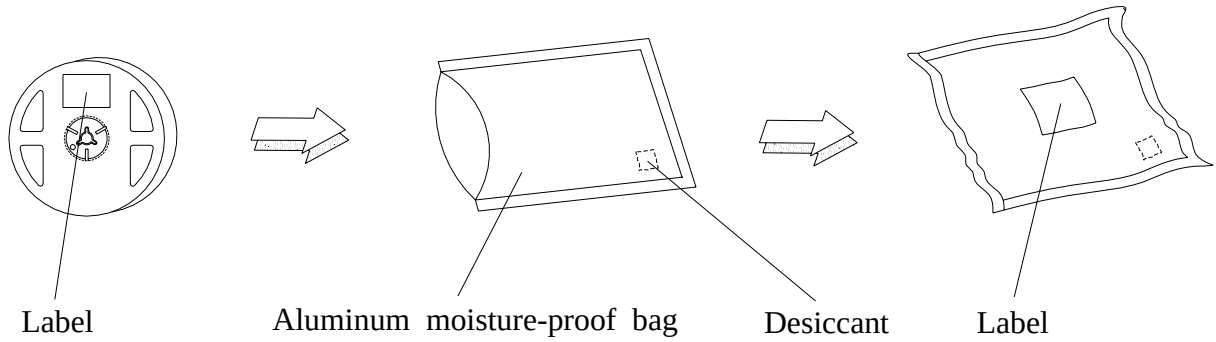
Carrier Tape Dimensions: Loaded quantity 2000 PCS per reel.



Note: Tolerances Unless Dimension ±0.1mm , Unit = mm

Moisture Resistant Packaging



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

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.

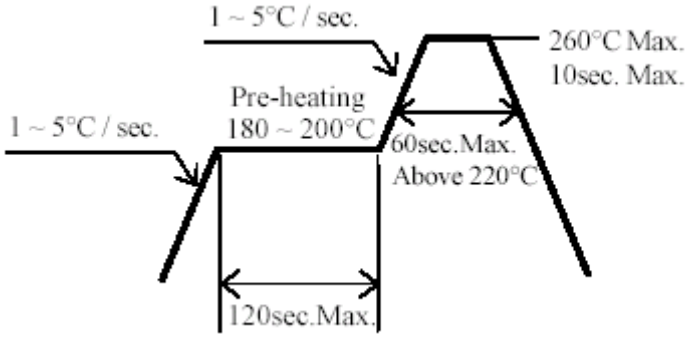
2.2 Before opening the package: The LEDs should be kept at 30℃ or less and 90%RH or less.

2.3 After opening the package: The LED's floor life is 1 year under 30 deg 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℃ for 24 hours.

3. Soldering Condition

3.1 Pb-free solder temperature profile



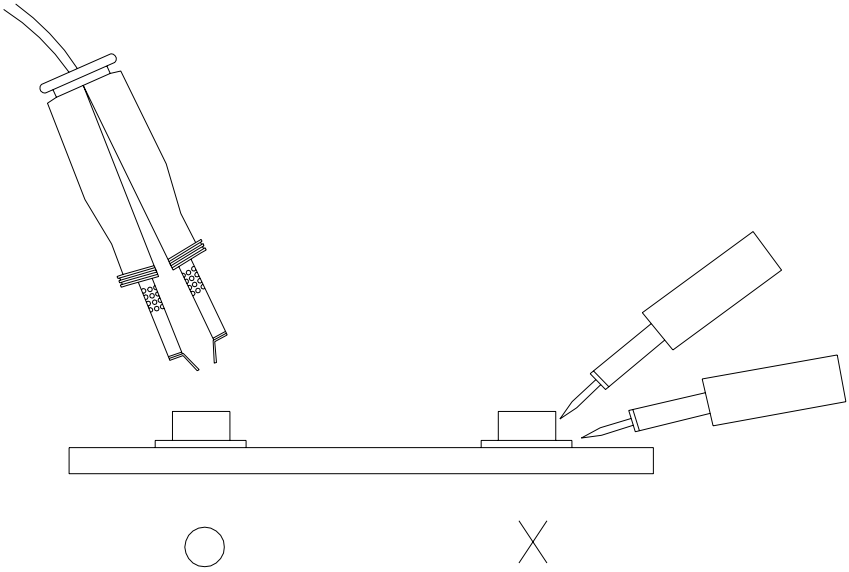
3.2 Reflow soldering should not be done more than two times.
3.3 When soldering, do not put stress on the LEDs during heating.
3.4 After soldering, do not warp the circuit board.

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.



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