Technical Data Sheet
Top View LEDs

67-22/R6Y2C-B31/2T

Features

.P-LCC-4 package
.Optical indicator
.Colorless clear window
.Ideal for backlight and light pipe application
.Inter reflector
.Wide viewing angle
.Suitable for vapor-phase reflow.
.Computable with automatic placement equipment
.Available on tape and reel (8mm Tape)
.Pb-free
.The product itself will remain within RoHS compliant version

Descriptions

.The 67-22 series is available in soft orange, green,blue and yellow. Due to the package design, the LED has wide viewing angle and optimized light coupling by inter reflector. This feature makes ideal for light pipe application. The low current requirement makes this device ideal for portable equipment or any other application where power is at a premium.

Applications

.Telecommunication: indicator and backlighting in telephone and fax
.Flat backlight for LCD's, switches and symbols
.Light pipe application
.General use

Device Selection Guide

Chip		Emitted Color	Resin Color
Type	Material		
R6	AlGaInP	Brilliant Red	Water Clear
Y2	AlGaInP	Brilliant Yellow	

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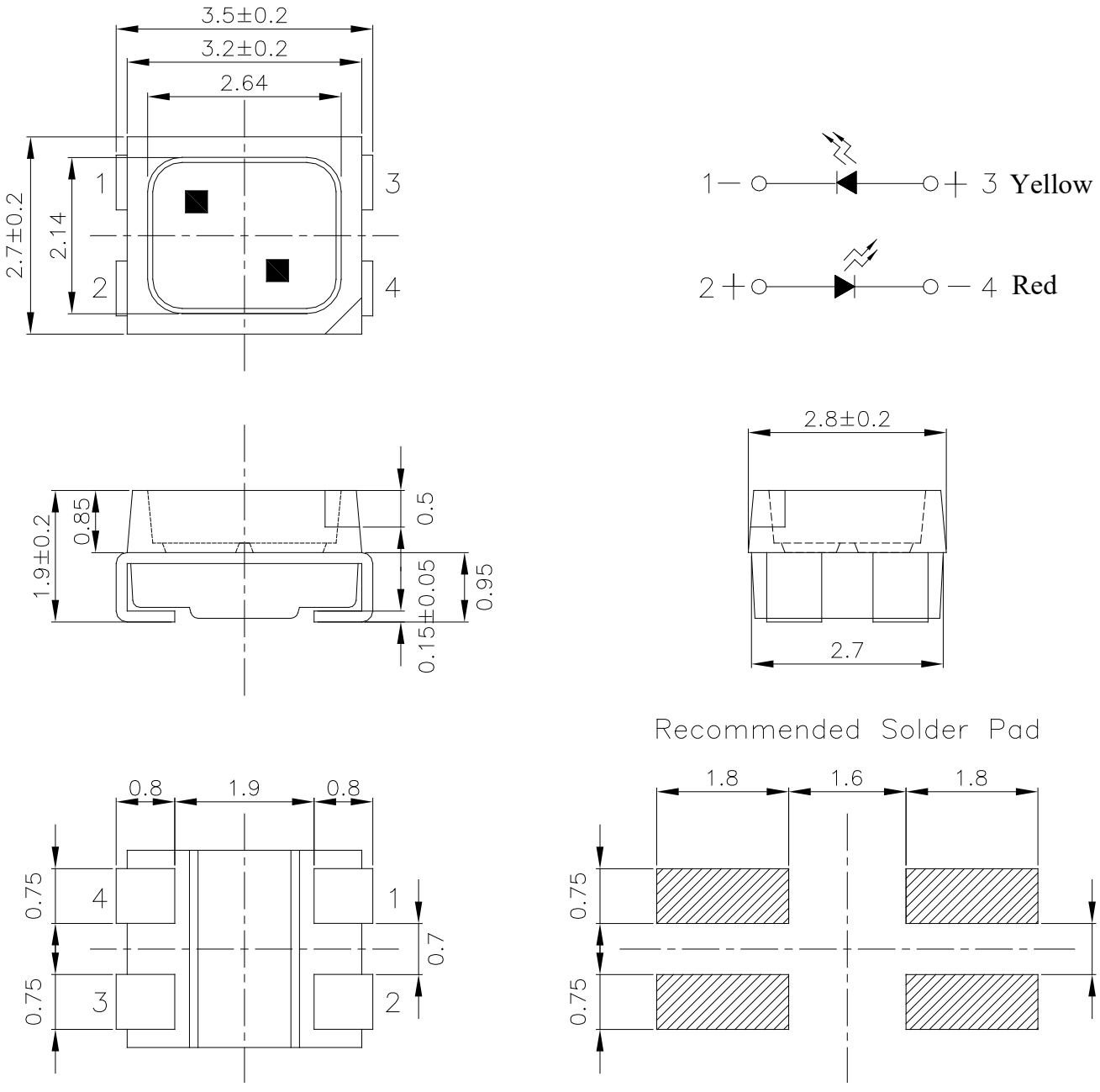
Package Dimensions



Note: The tolerance unless mentioned is ±0.1mm.

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Absolute Maximum Ratings (Ta=25℃)

Parameter	Symbol		Rating	Unit
Reverse Voltage	V_R		5	V
Forward Current	I_F	R6	25	mA
		Y2	25	
Peak Forward Current(Duty 1/10 @ 1KHz)	I_{FP}	R6	60	mA
		Y2	60	
Power Dissipation	Pd	R6	60	mW
		Y2	60	
Electrostatic Discharge(HBM)	ESD	R6	2000	V
		Y2	2000	
Operating Temperature	Topr		-40 ~ +85	℃
Storage Temperature	Tstg		-40~ +95	℃
Soldering Temperature	Tsol		Reflow soldering：260 ℃ for 10 sec. Hand soldering：350 ℃ for 3 sec.	

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Electro-Optical Characteristics (Ta=25℃)

Parameter	Symbol		Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	I_V	R6	72	------	285	mcd	I_F=20mA
		Y2		------			
Viewing Angle	2θ1/2		-----	120	-----	deg	
Peak Wavelength	λp	R6	-----	632	-----	nm	
		Y2	-----	591	-----		
Dominant Wavelength	λd	R6	621	-----	631	nm	
		Y2	586	-----	594		
Spectrum Radiation Bandwidth	Δλ	R6	-----	20	-----	nm	
		Y2	-----	15	-----		
Forward Voltage	V_F	R6	1.75	-----	2.35	V	
		Y2					
Reverse Current	I_R	R6	-----	-----	10	μA	V_R=5V
		Y2					

Notes:

1. Tolerance of Luminous Intensity：±11%
2. Tolerance of Dominant Wavelength：±1nm
3. Tolerance of Forward Voltage：±0.1V

Bin Range of Luminous Intensity

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Symbol	Bin Code	Min.	Max.	Unit	Condition
R6	Q1	72	90	mcd	I_F=20mA
	Q2	90	112		
	R1	112	140		
	R2	140	180		
	S1	180	225		
	S2	225	285		
Y2	Q1	72	90		
	Q2	90	112		
	R1	112	140		
	R2	140	180		
	S1	180	225		
	S2	225	285		

Bin Range of Dominant Wavelength

Symbol	Bin Code	Min.	Max.	Unit	Condition
R6	FF1	621	626	nm	I_F=20mA
	FF2	626	631		
Y2	DD1	586	588		
	DD2	588	590		
	DD3	590	592		
	DD4	592	594		

Notes:

1. Tolerance of Luminous Intensity：±11%
2. Tolerance of Dominant Wavelength：±1nm

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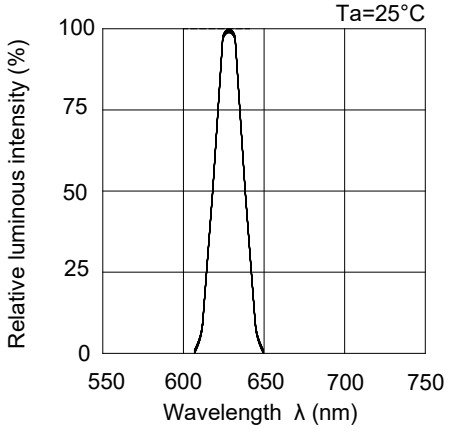
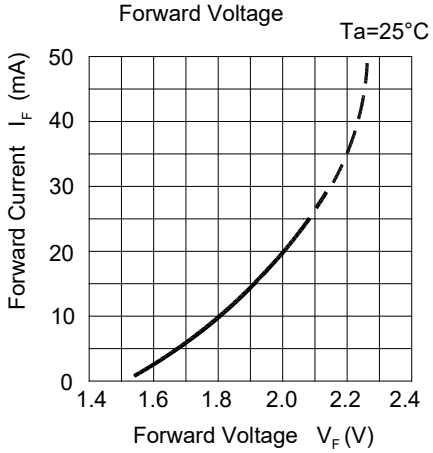
Typical Electro-Optical Characteristics Curve (R6)

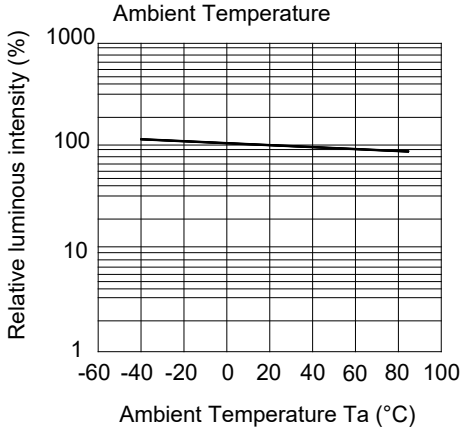
Spectrum Distribution



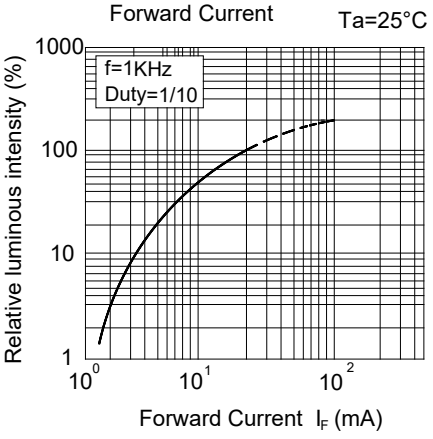
Forward Current vs. Forward Voltage



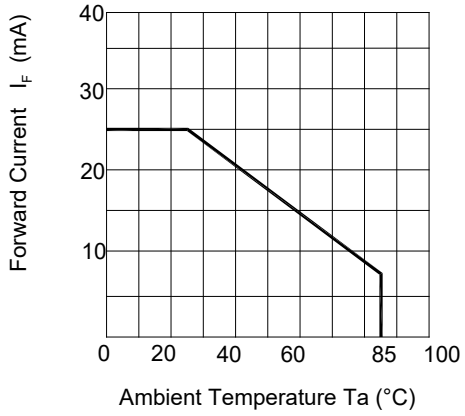
Relative Luminous Intensity vs. Ambient Temperature



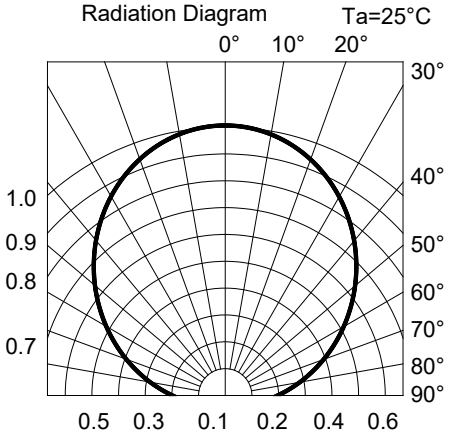
Relative Luminous Intensity vs. Forward Current



Forward Current Derating Curve



Radiation Diagram



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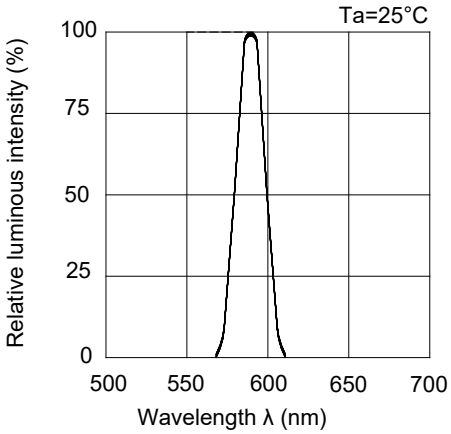
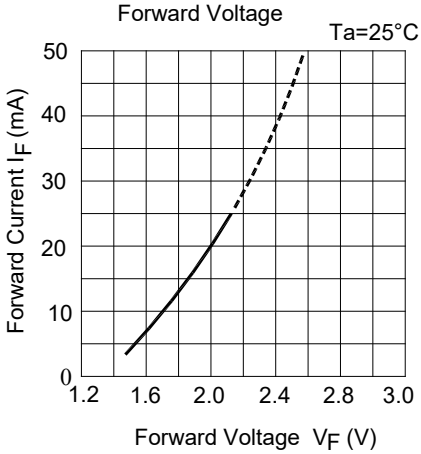
Typical Electro-Optical Characteristics Curves (Y2)

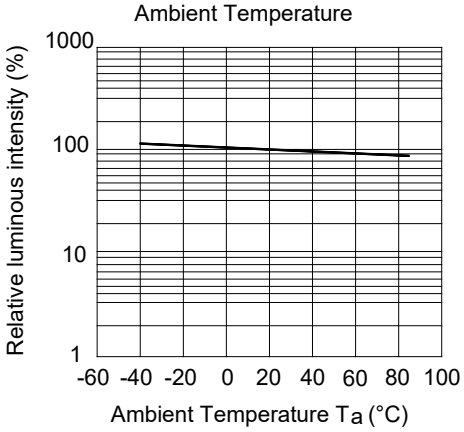
Spectrum Distribution



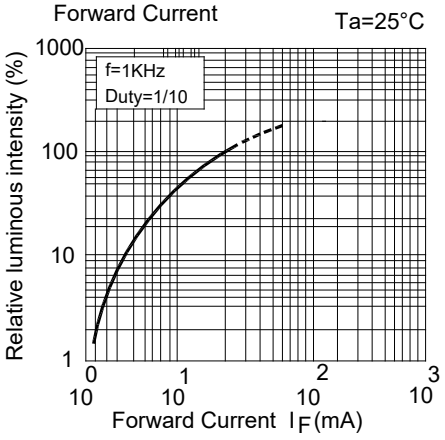
Forward Current vs. Forward Voltage



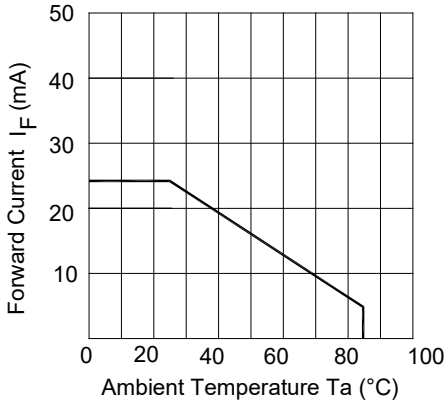
Relative Luminous Intensity vs. Ambient Temperature



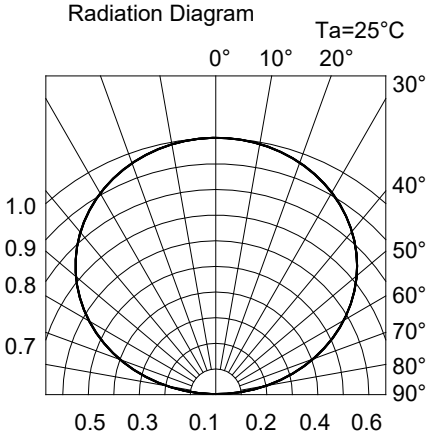
Relative Luminous Intensity vs. Forward Current



Forward Current Derating Curve



Radiation Diagram



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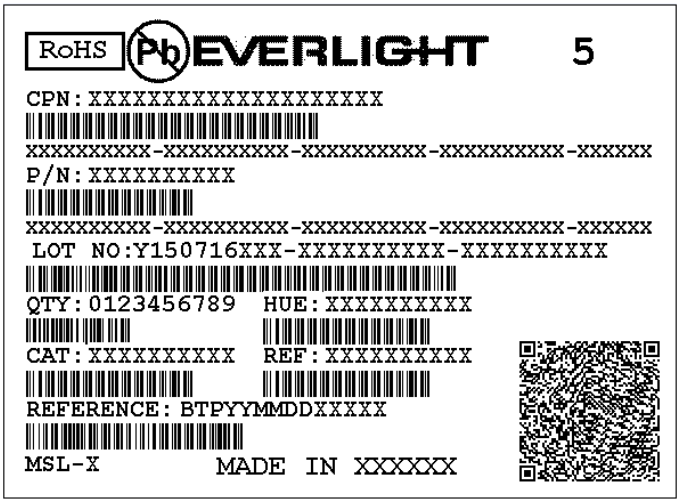
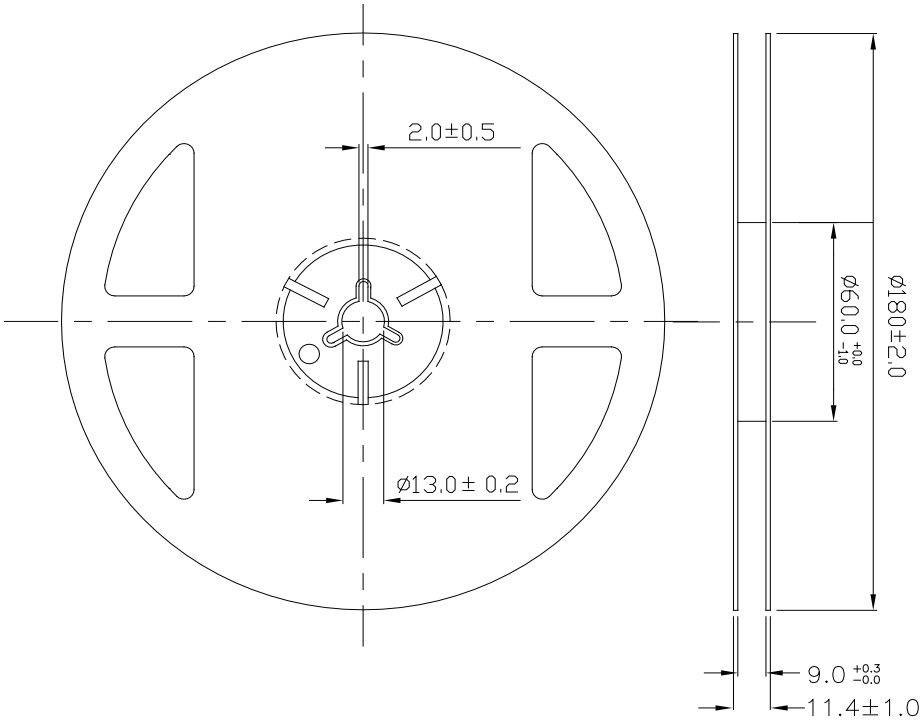
Label Explanation

CAT: Luminous Intensity Rank
HUE: Dom. Wavelength Rank
REF: Forward Voltage Rank



Reel Dimensions



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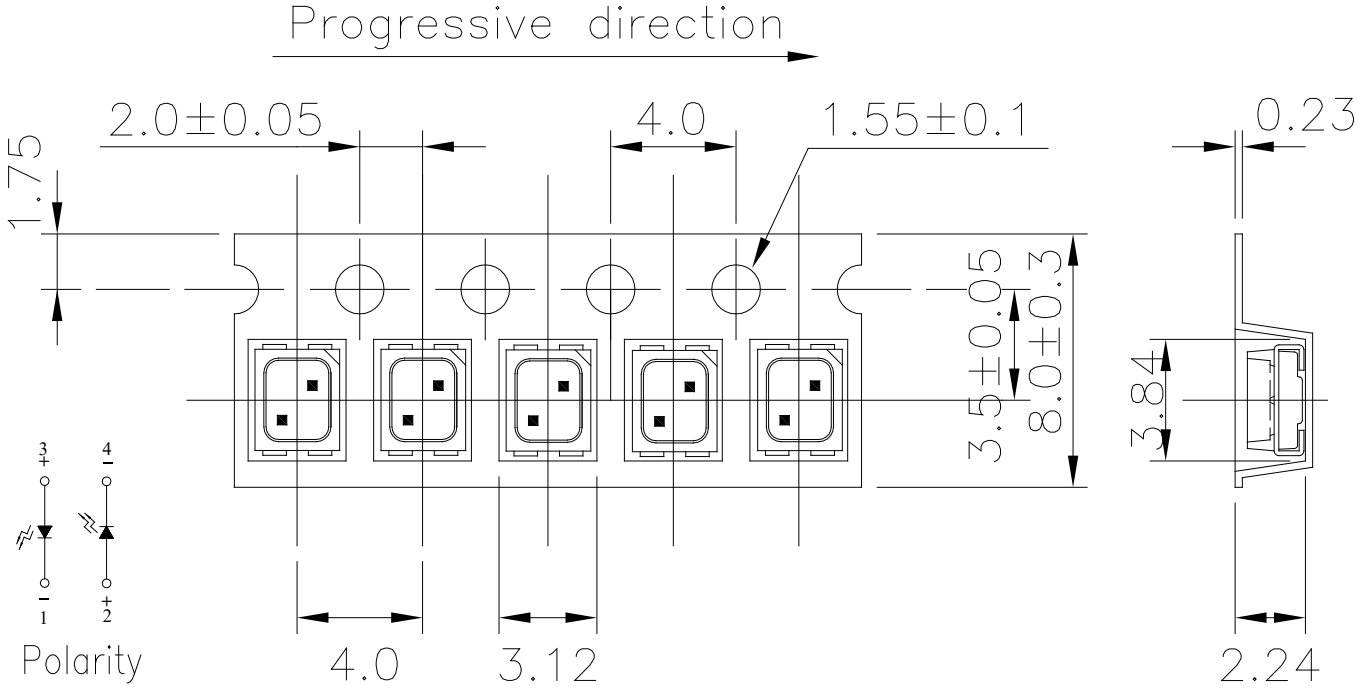
Carrier Tape Dimensions: Loaded Quantity 2000 pcs Per Reel



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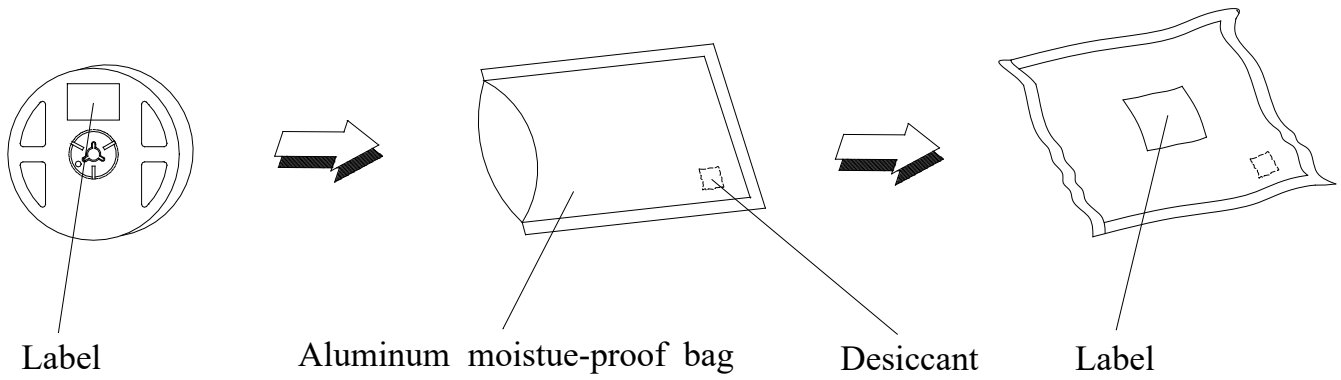
Moisture Resistant Packaging



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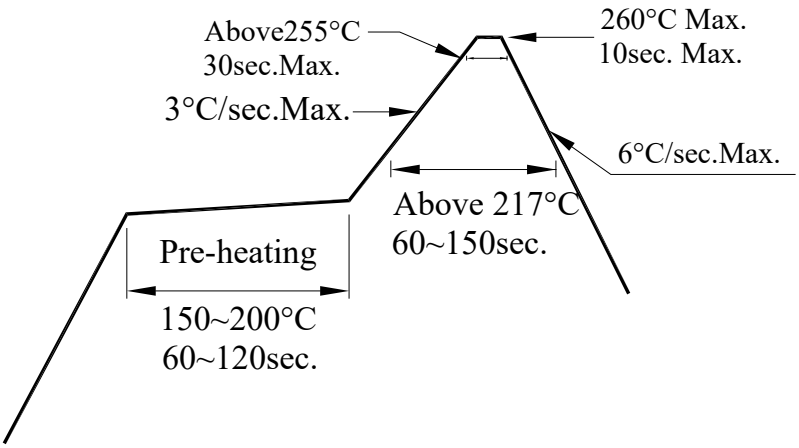
Precautions for Use

1. Over-current-proof

1.1 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 168 hours 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.

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.

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DISCLAIMER

1. EVERLIGHT reserves the right(s) on the adjustment of product material mix for the specification.
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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6. This product is not intended to be used for military, aircraft, automotive, medical, life sustaining or life saving applications or any other application which can result in human injury or death. Please contact authorized Everlight sales agent for special application request.

Revision History

Rev.	Modified date	File modified contents
1	2007/08/22	New Spec
2	2016/08/25	To add the QR code
3	2016/11/25	To add the Disclaimer