

客户 (Customer) : _____

承认书

Approval Sheet

谨致执事者：兹提供敝公司之有关详细规格及图面数据, 敬请给予办理试认定手续。
同时敬请送返一份附有贵公司签认之测试认定后之样品承认书。

We are pleased in sending you herewith on specification and drawings for your approval.
Please return to us one copy "Approval sheet" with your approved signature.

型号 (Model No.) : A-SC6302R6AS1C-A01-2T

发文日期 (Issue Date) : 2017/12/26 承认日期 (Approved Date) : _____

Checking signature of Amicc

Designer	Checker	Approver
Gesuyun	Tommy	

Approval signature of customer

Designer	Checker	Approver

江苏欧密格光电科技股份有限公司

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Top view LED Type ■ PLCC Package

A-SC6302R6AS1C-A01-2T



Features

- PLCC package
- Top view white LED
- High luminous intensity output
- Wide viewing angle
- Pb-free
- RoHS compliant

Description

The Amicc 6302 package has high efficacy, high power consumption, wide viewing angle and a compact form factor. These features make this package an ideal LED for all lighting applications.

Applications

- General lighting
- Decorative and Entertainment Lighting
- Indicators
- Illumination
- Switch lights

Device Selection Guide

Type	Chip Materials	Emitted Color	Resin Color
R6A	AlGaInP	Brilliant Red	Water Clear
S1	AlGaInP	Orange	

Absolute Maximum Ratings (T_{Soldering}=25°C)

Parameter	Symbol	Color	Rating	Unit
Forward Current	I _F	R6A	30	mA
		S1	25	
Peak Forward Current (Duty 1/10 @1ms)	I _{FP}	R6A	90	mA
		S1	60	
Power Dissipation	P _d	R6A	180	mW
		S1	120	
Operating Temperature	Topr		-40 ~ +85	°C
Storage Temperature	Tstg		-40 ~ +100	°C
Electrostatic Discharge(HBM)	ESD		2000	V
Soldering Temperature	Tsol		Reflow Soldering : 260 °C for 10 sec. Hand Soldering : 350 °C for 3 sec.	

Electro-Optical Characteristics (T_{Soldering}=25°C)

Parameter	Symbol	Color	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	I _v	R6A	450	-----	900	mcd	I _F =20mA
		S1	180	-----	360		
Peak Wavelength	λ _p	R6A	-----	631	-----	nm	I _F =20mA
		S1	-----	609	-----		
Dominant Wavelength	λ _d	R6A	617	-----	625	nm	I _F =20mA
		S1	600	-----	608		
Forward Voltage	V _F	R6A	1.75	-----	2.35	V	I _F =20mA
		S1	1.75	-----	2.35		
Viewing Angle	2θ _{1/2}		-----	120	-----	deg	I _F =20mA
Reverse Current	I _R		-----	-----	10	μA	V _R =5V

Notes:

- 1.Tolerance of Luminous Intensity: ±10%.
- 2.Tolerance of Dominant Wavelength: ±1nm
- 3.Tolerance of Forward Voltage : ±0.1V.

Bin Range of Luminous Intensity

R6A:

Bin Code	Min.	Max.	Unit	Condition
AU1	450	565	mcd	I _F =20mA
AU2	565	715		
AV1	715	900		

Note:
Tolerance of Luminous Intensity: ±10%.

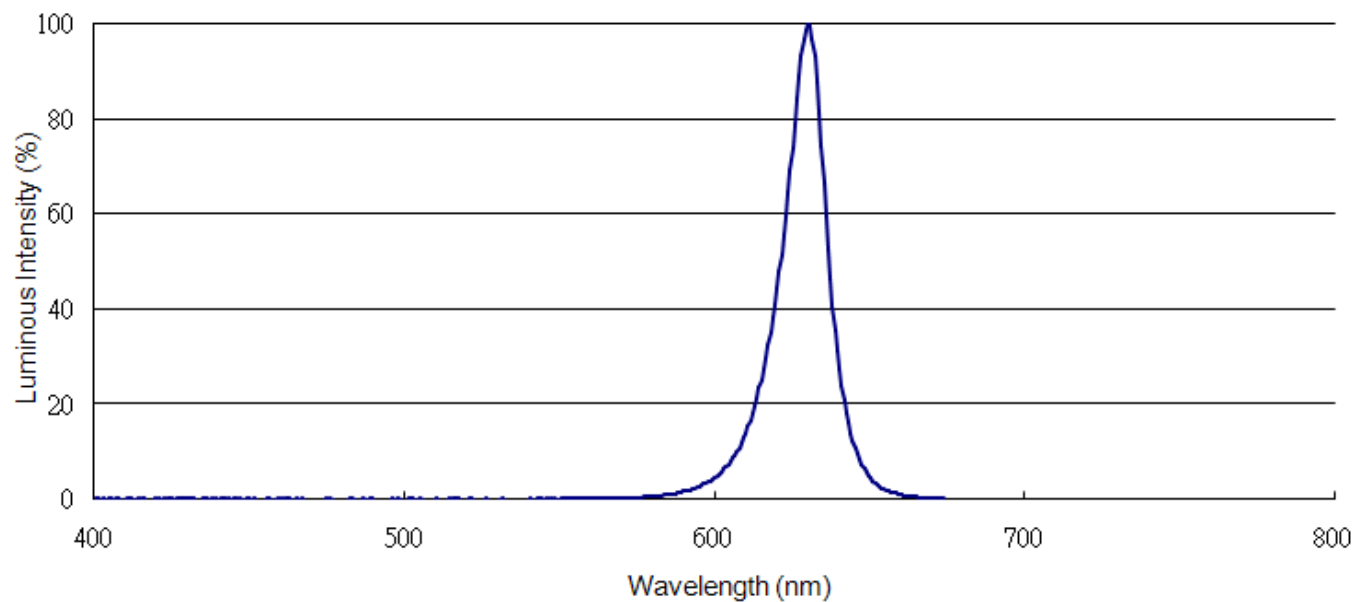
S1:

Bin Code	Min.	Max.	Unit	Condition
AS1	180	225	mcd	I _F =20mA
AS2	225	285		
AT1	285	360		

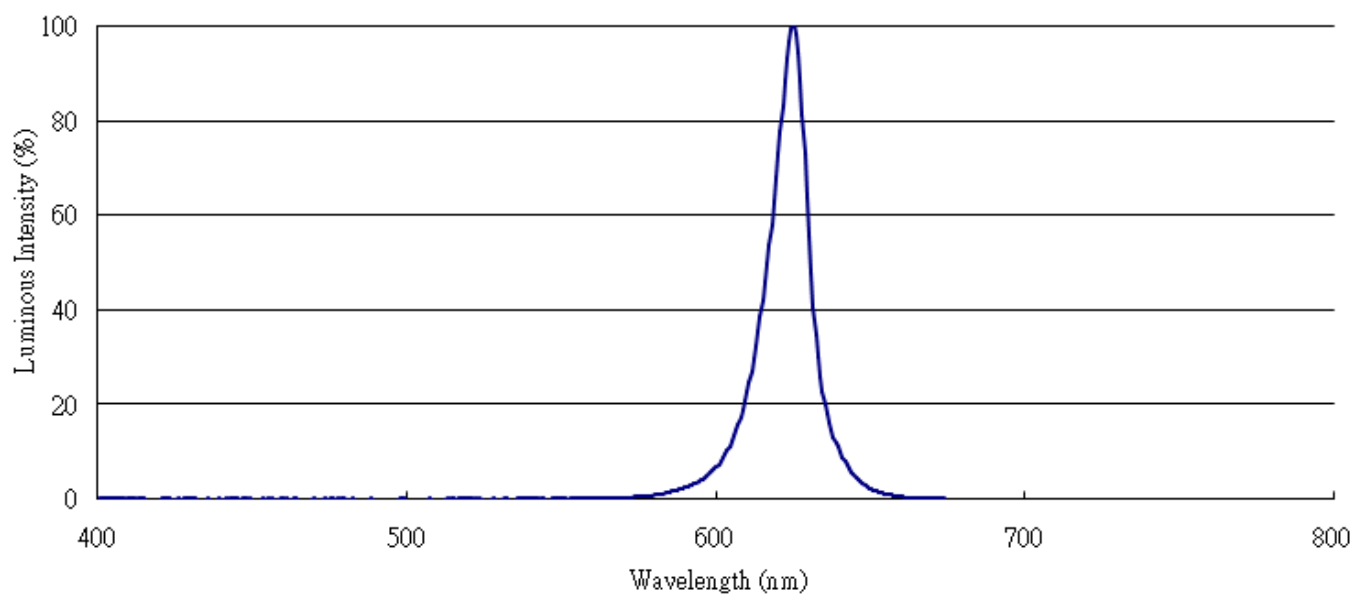
Note:
Tolerance of Luminous Intensity: ±10%.

Spectrum Distribution

R6A:



S1: Spectrum Distribution



Typical Electro-Optical Characteristics Curves

R6A:

Fig.1-Forward Voltage Shift vs. Junction Temperature

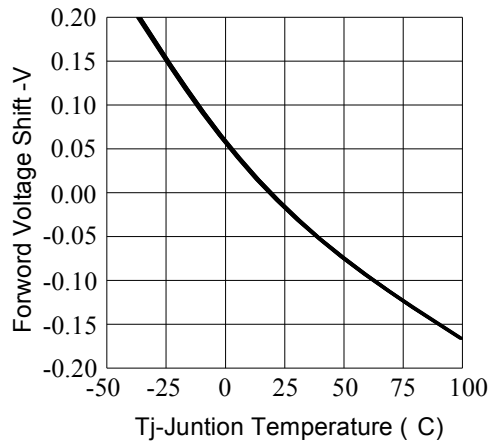


Fig.2-Relative Luminous Intensity vs. Forward Current

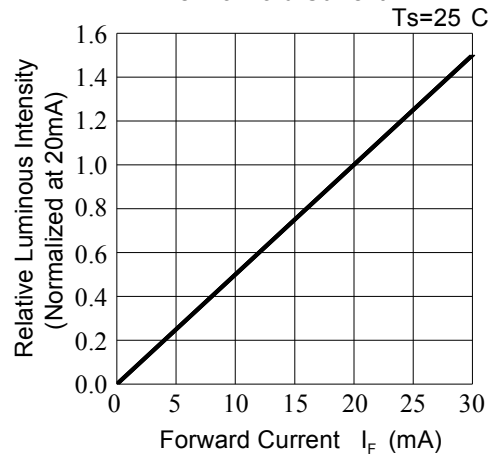


Fig.3-Relative Luminous Intensity vs. Junction Temperature

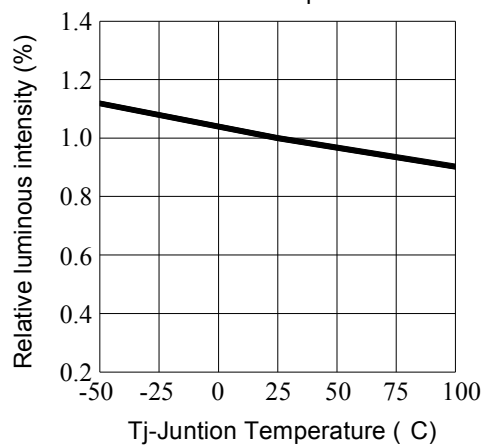


Fig.4-Forward Current vs. Forward Voltage

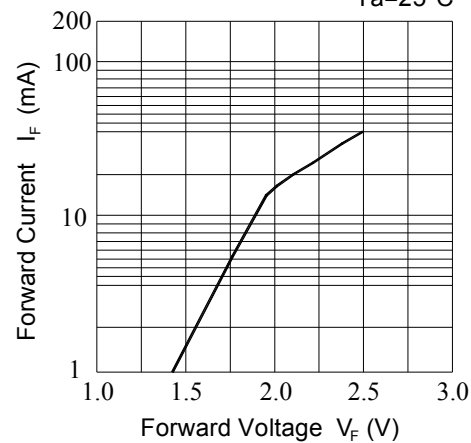


Fig.5-Max. Driving Forward Current vs. Soldering Temperature

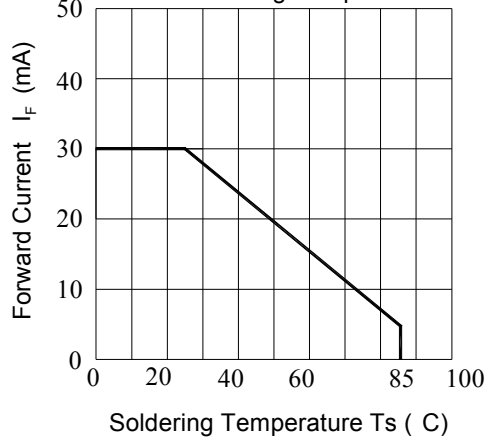
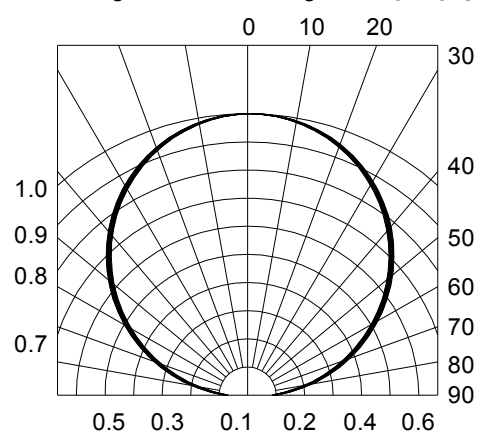


Fig.6-Radiation Diagram



Typical Electro-Optical Characteristics Curves

S1:

Fig.1-Forward Voltage Shift vs. Junction Temperature

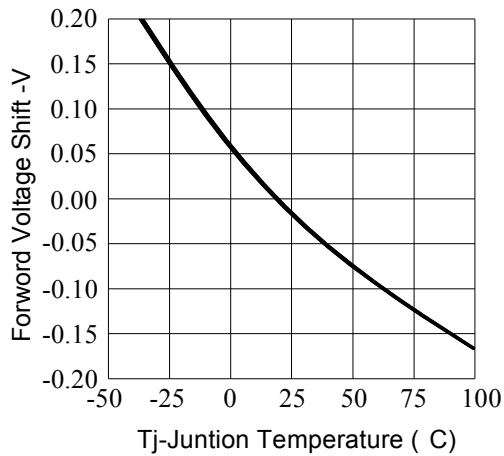


Fig.2-Relative Luminous Intensity vs. Forward Current

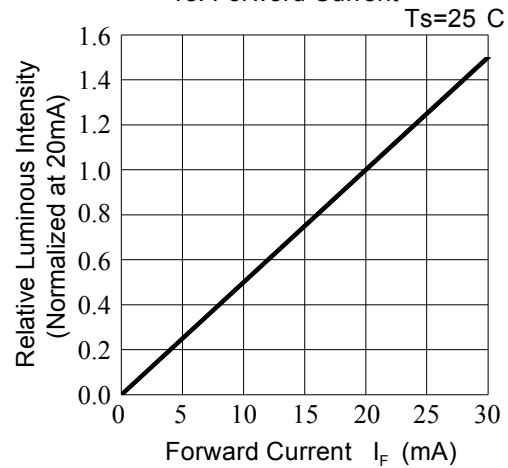


Fig.3-Relative Luminous Intensity vs. Junction Temperature

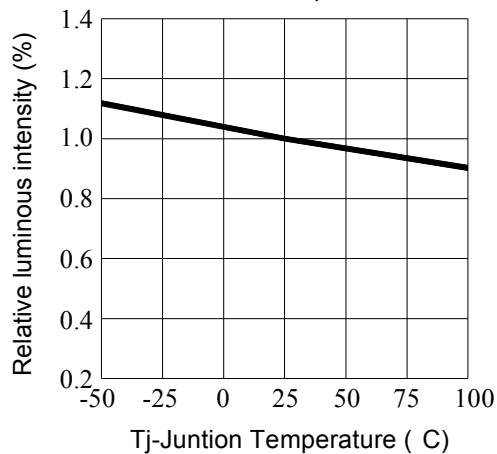


Fig.4-Forward Current vs. Forward Voltage

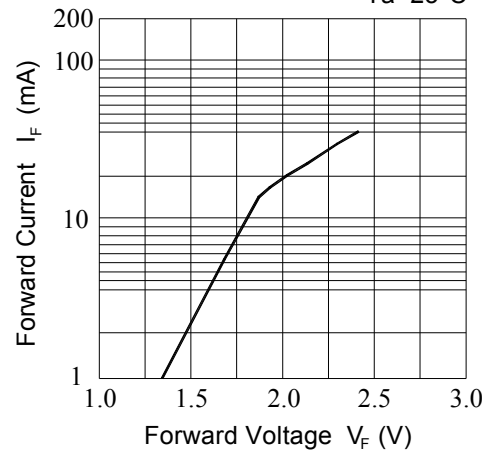


Fig.5-Max.Driving Forward Current vs. Soldering Temperature

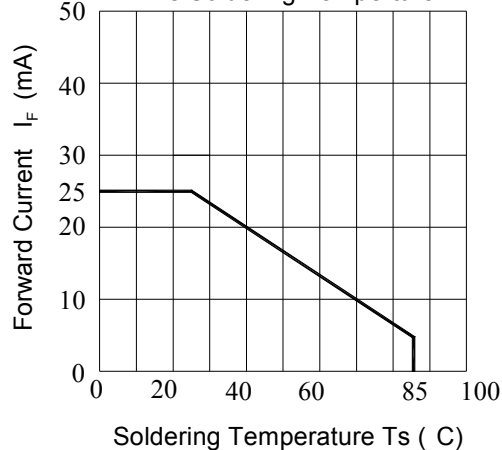
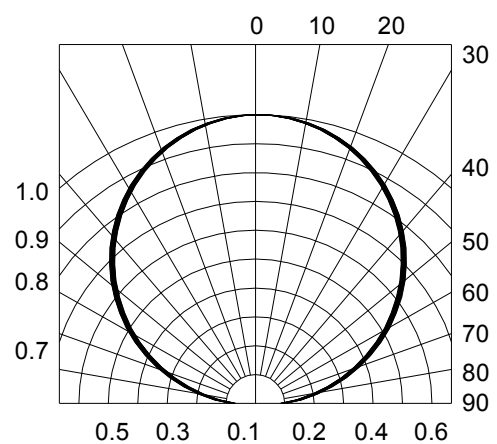
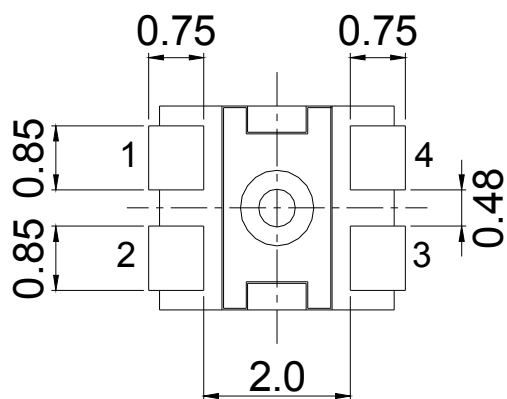
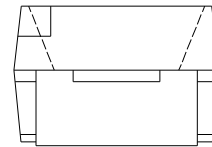
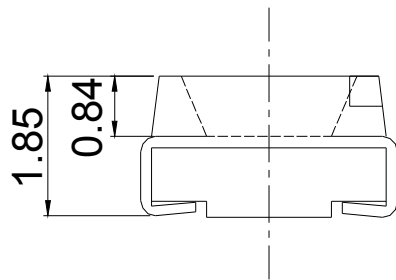
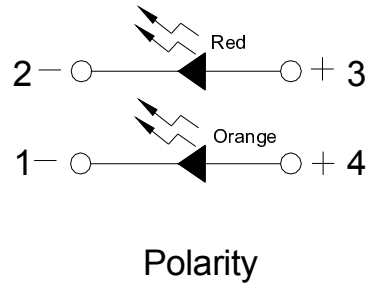
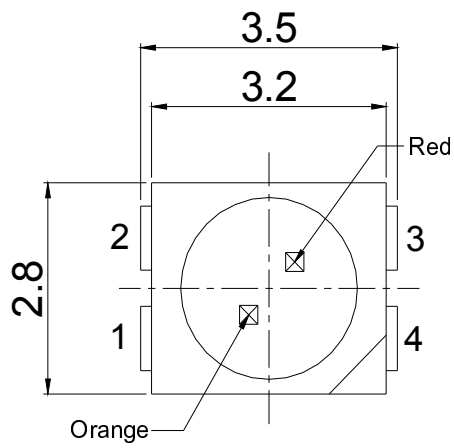


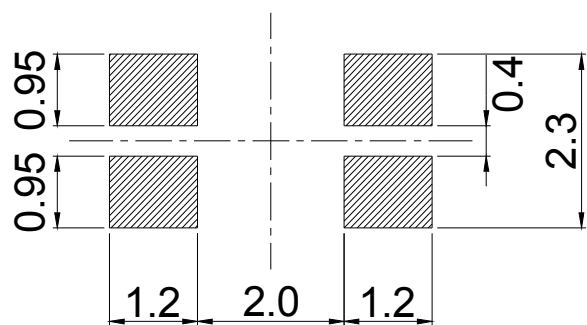
Fig.6-Radiation Diagram



Package Dimension



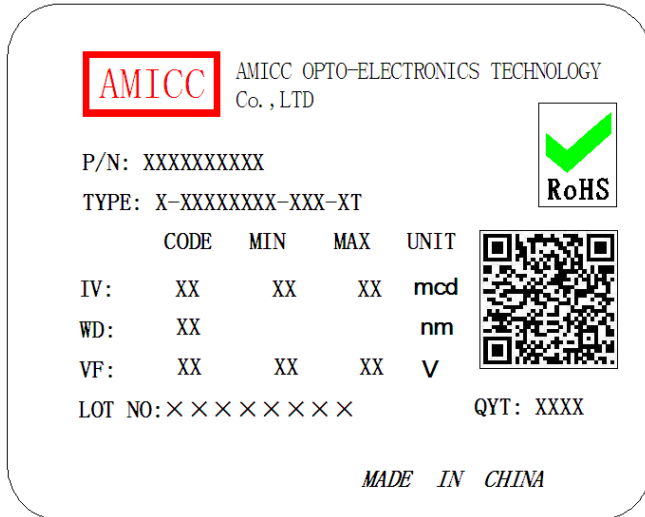
Recommended solder pad



Note:
Tolerance unless mentioned is ± 0.1 mm, Unit = mm

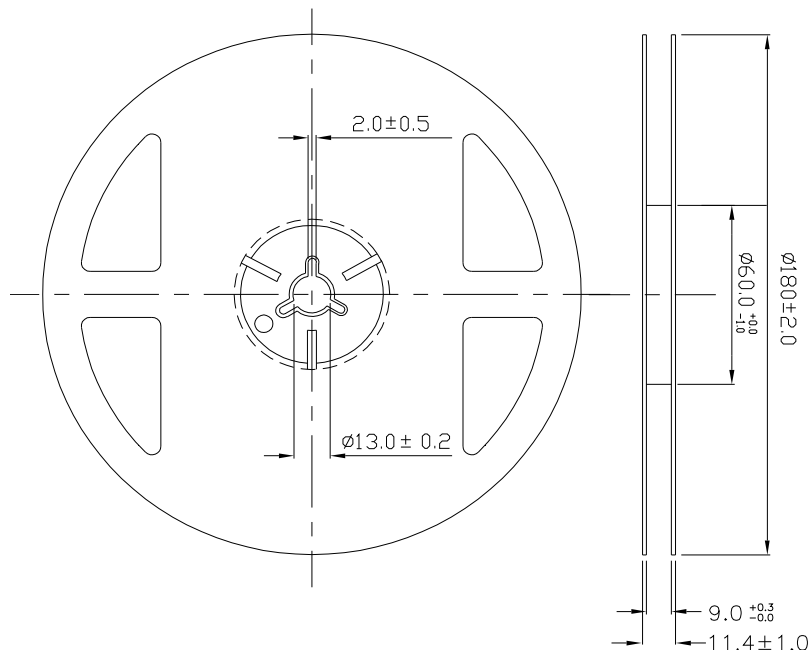
Moisture Resistant Packing Materials

Label Explanation



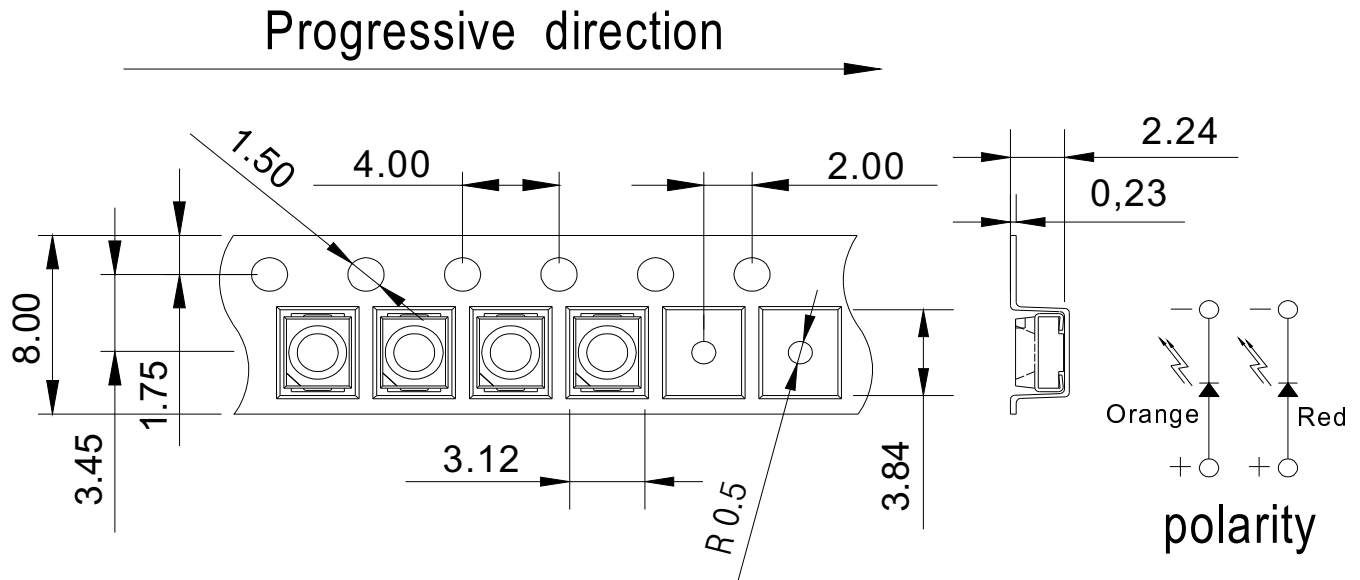
- CPN: Customer's Product Number
- P/N: Product Number
- TYPE :Part NO.
- IV: Luminous Intensity Rank
- WD: Dom. Wavelength Rank
- VF: Forward Voltage Rank
- LOT NO.: Lot Number
- QTY: Packing Quantity

Reel Dimensions



Note:
Tolerances unless mentioned $\pm 0.1\text{mm}$, Unit = mm

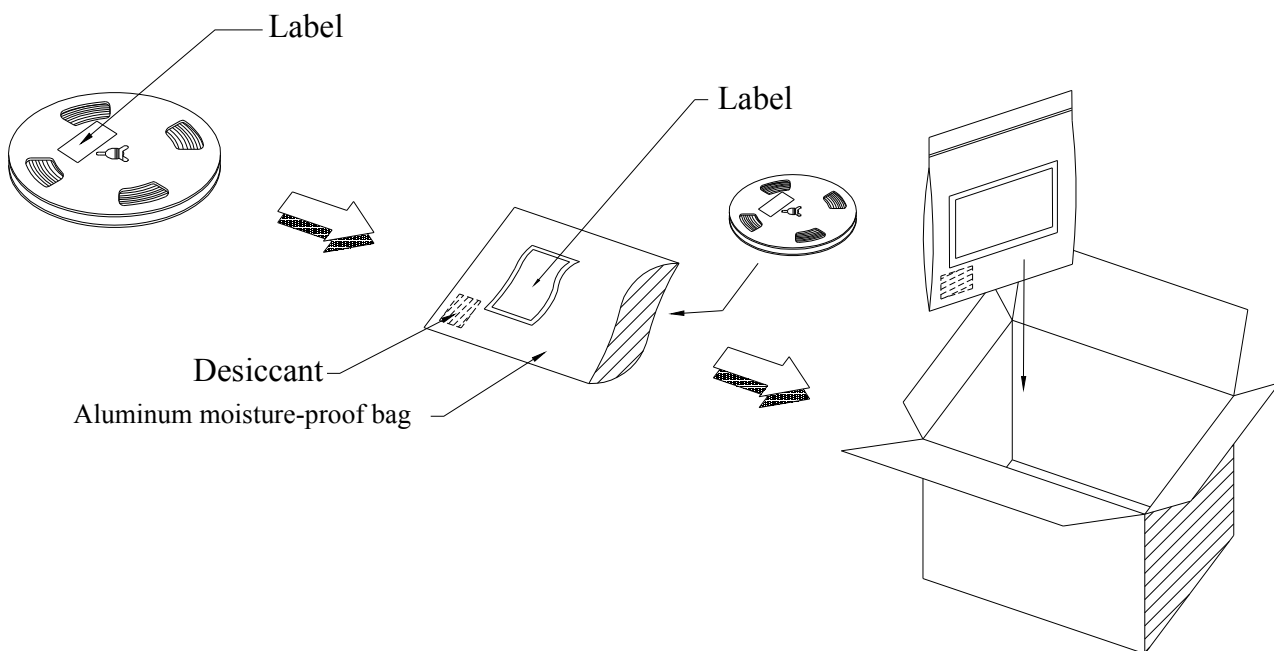
Carrier Tape Dimensions: Loaded Quantity 2000 pcs Per Reel



Notes:

1. Tolerance unless mentioned is ± 0.1 mm, Unit = mm.
2. Minimum packing amount is 1000 pcs per reel.

Moisture Resistant Packing Process



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°C/10sec.	6 Min.	22 PCS.	0/1
2	Thermal Shock	H : +100°C 5min ┆ 10 sec L : -10°C 5min	300 Cycles	22 PCS.	0/1
3	Temperature Cycle	H : +100°C 15min ┆ 5 min L : -40°C 15min	300 Cycles	22 PCS.	0/1
4	High Temperature/Humidity Reverse Bias	Ta=85°C,85%RH	1000 Hrs.	22 PCS.	0/1
5	Low Temperature Storage	Ta=-40°C	1000 Hrs.	22 PCS.	0/1
6	High Temperature Storage	Ta=100°C	1000 Hrs.	22 PCS.	0/1
7	DC Operation Life	Ta=25°C I _F = 20 mA(per diece)	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°C or less and 90%RH or less.

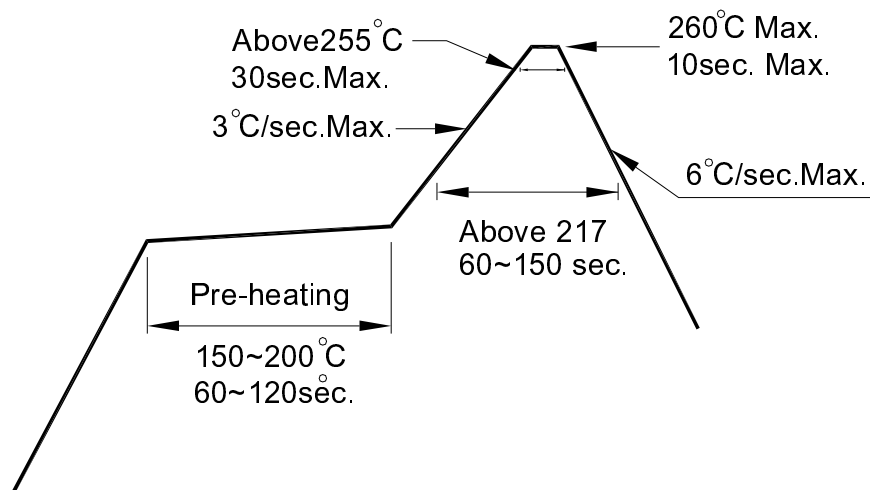
2.3 After opening the package: The LED's floor life is 168 Hrs under 30°C or less and 60% RH or less. If unused LEDs remain, it should be stored in moisture proof packages.

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.