



Technical Data Sheet(Preminary)

Side View SMD LEDs

57-21SUBC/B015/TR8

Features

- High Luminous Intensity
- High Efficiency
- Pb-free.
- The product itself will remain with RoHS compliant version
- Preconditioning: acc. to JEDEC Level 2
- ESD: up to 2KV acc. to JESD22-A114-B



Descriptions

The 57-21series 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

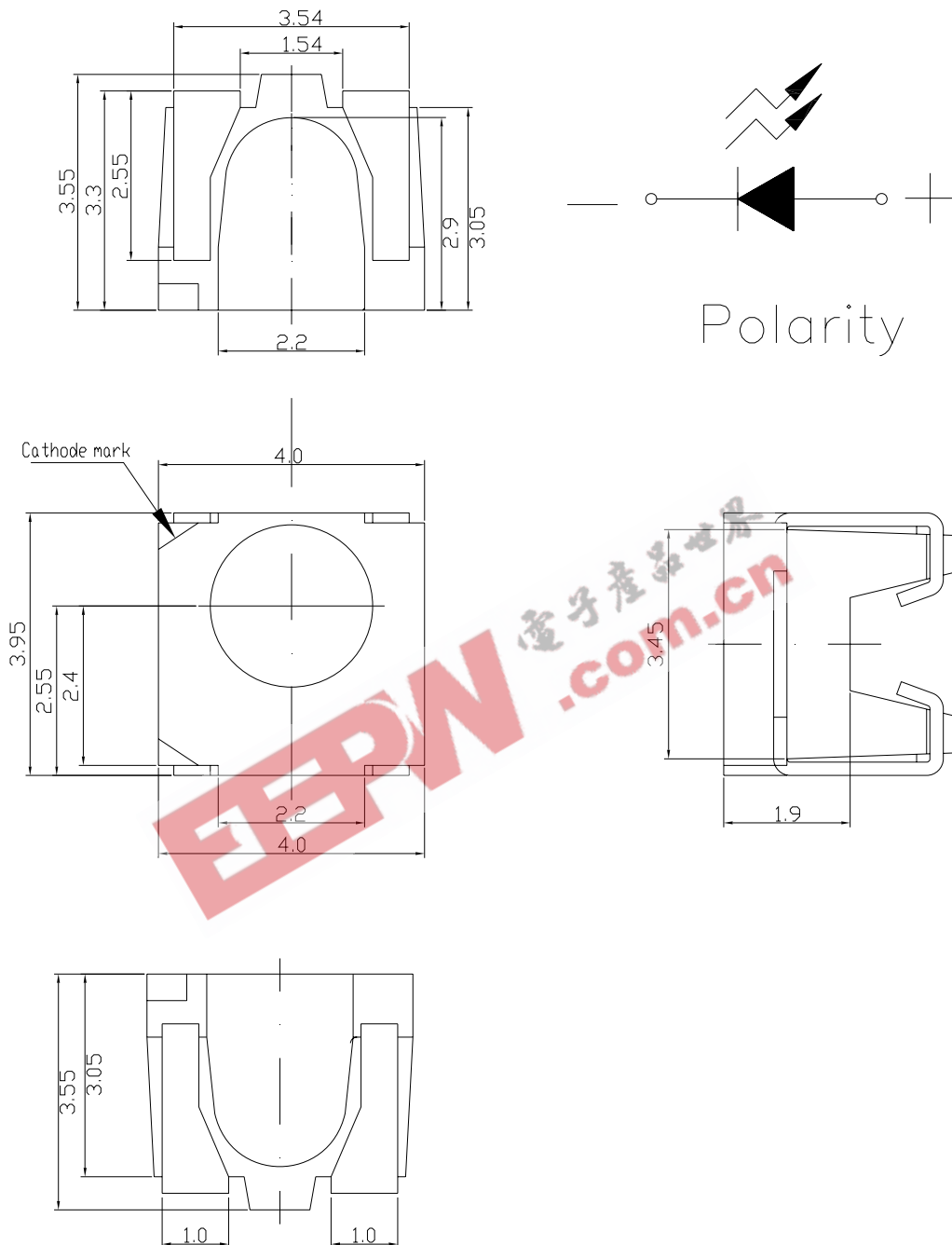
- OA Equipment
- Backlighting of Full Color LCD
- Automotive Equipment
- Replacement of Conventional Light Bulbs and Fluorescent Lamps

Device Selection Guide

Chip		Lens Color
Material	Emitted Color	
InGaN/SiC	Blue	Water Clear

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Package Dimensions



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

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Absolute Maximum Ratings (Ta=25℃)

Parameter	Symbol	Rating	Unit
Reverse Voltage	V _R	12	V
Forward Current	I _F	30	mA
Peak Forward Current (Duty 1/10 @1KHz)	I _{FP}	100	mA
Power Dissipation	P _d	130	mW
Electrostatic Discharge(HBM)	ESD	2000	V
Junction Temperature	T _j	125	℃
Operating Temperature	Topr	-40 ~ +100	℃
Storage Temperature	Tstg	-40 ~ +110	℃
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	I _v	150	-----	300	mcd	I _F =20mA
Viewing Angle	2θ _{1/2}	-----	120	-----	deg	I _F =20mA
Peak Wavelength	λ _p	-----	470	-----	nm	I _F =20mA
Spectrum Radiation Bandwidth	△λ	-----	26	-----	nm	I _F =20mA
Forward Voltage	V _F	2.7	-----	3.7	V	I _F =20mA
Reverse Current	I _R	-----	-----	10	μA	V _R =12V

Notes:

1.Tolerance of Luminous Intensity ±11%

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Bin Range Of Luminous Intensity

Rank	Min	Max	Unit	Condition
T	150	213	mcd	I _F =20mA
U	213	300		

Notes:

1.Tolerance of Luminous Intensity $\pm 11\%$

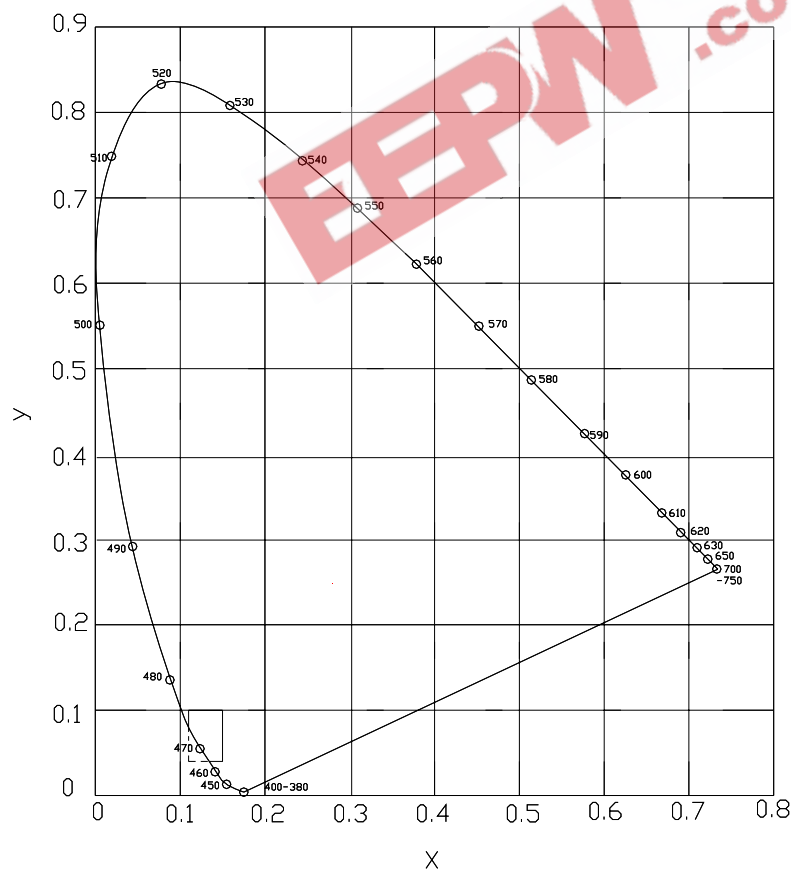
Chromaticity Coordinates Specifications for Bin Grading

I_F=20mA

CIE_x	CIE_y
0.2960	0.2590
0.2910	0.2680
0.3100	0.2970
0.3130	0.2840

Notes:

1. The C.I.E. 1931 chromaticity diagram (Tolerance ± 0.01).



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Typical Electro-Optical Characteristics Curves

Typical curve of spectral distribution:

$V(\lambda)$ =Standard eye response curve

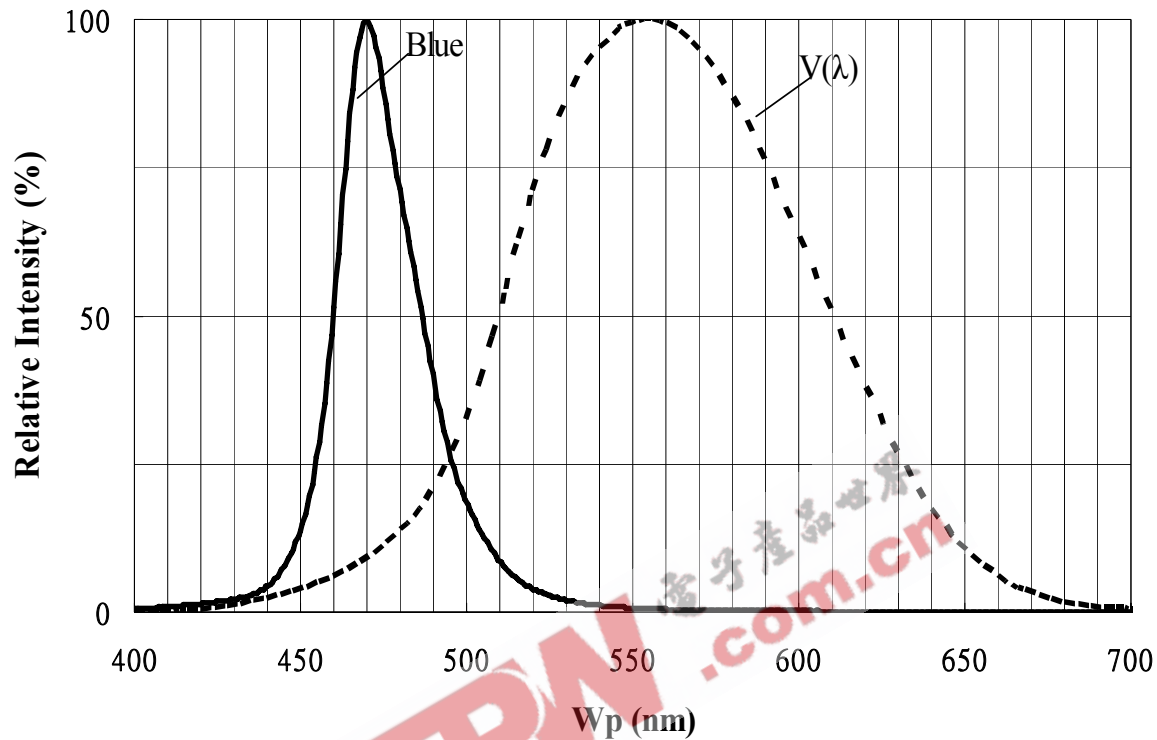
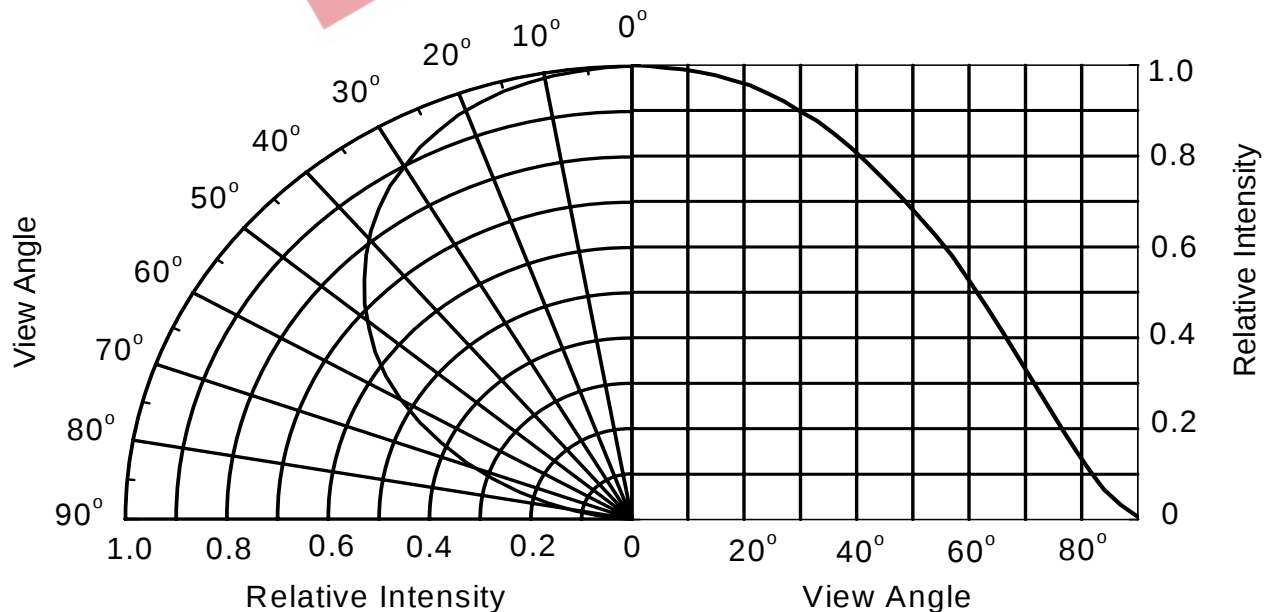
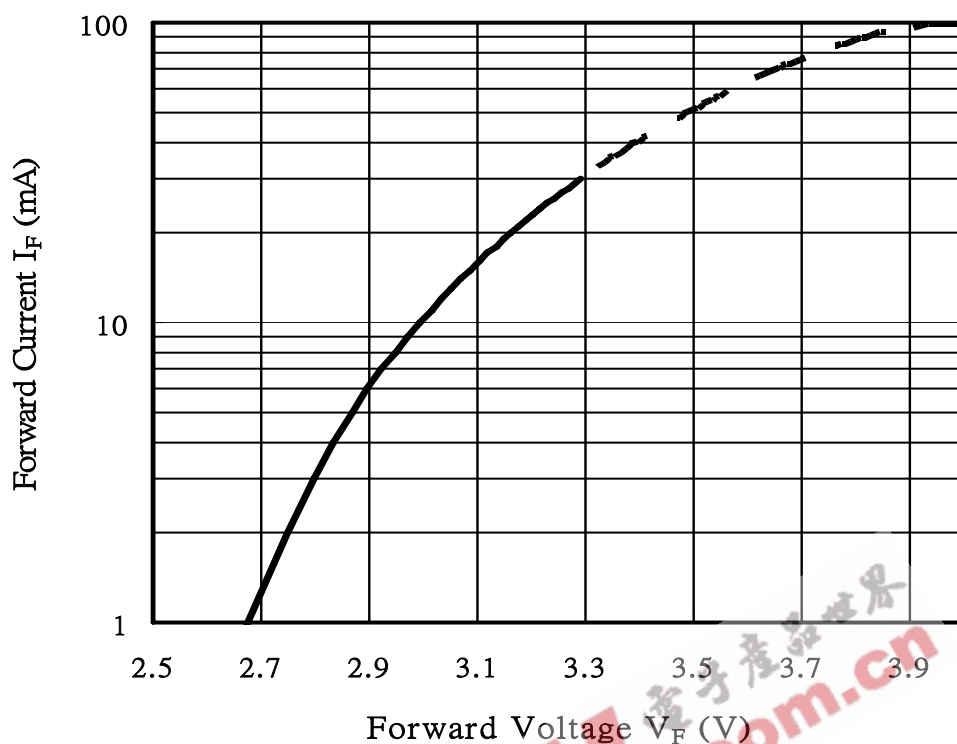


Diagram characteristics of radiation:

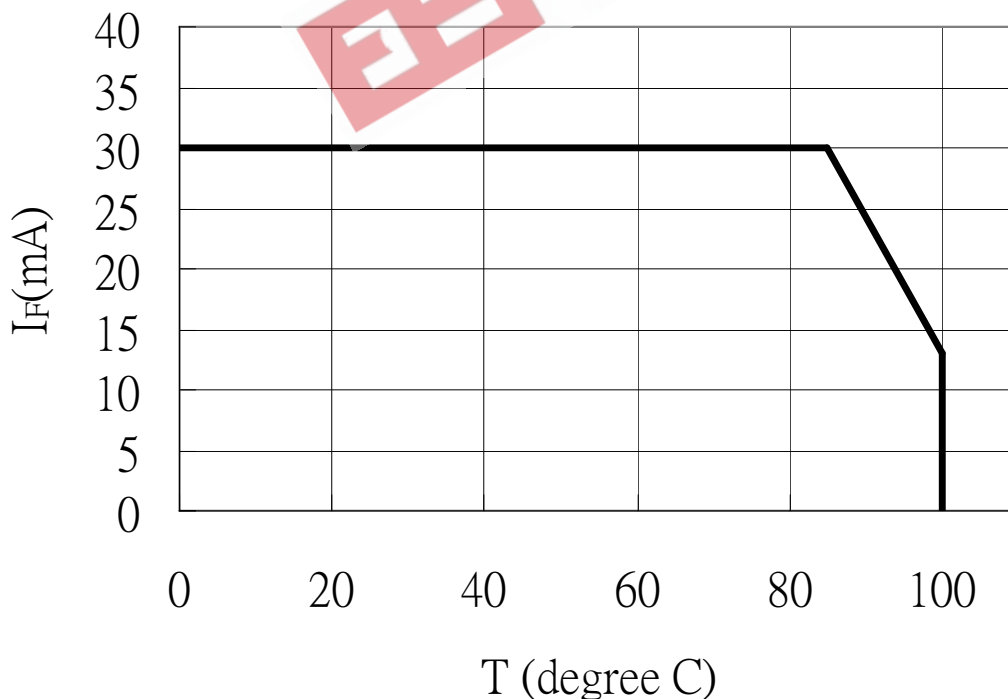


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Forward Current vs. Forward Voltage $T_a=25^\circ\text{C}$



Forward current v.s. ambient temp.



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Label explanation

CAT: Luminous Intensity Rank

HUE: Chromaticity Coordinates

REF: Forward Voltage Rank

EVERLIGHT

CPN :

P/N: XXXXXXXXXXXX



RoHS

XX-XXXXXXXX

QTY: XXXX

CAT: XX



HUE: XX

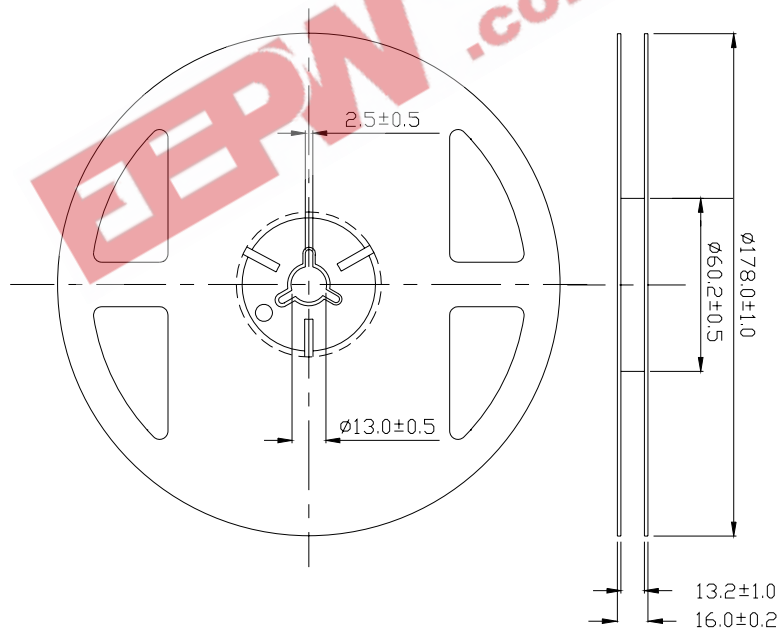
REF:

LOT NO: XXXXXXXXXX



MADE IN TAIWAN

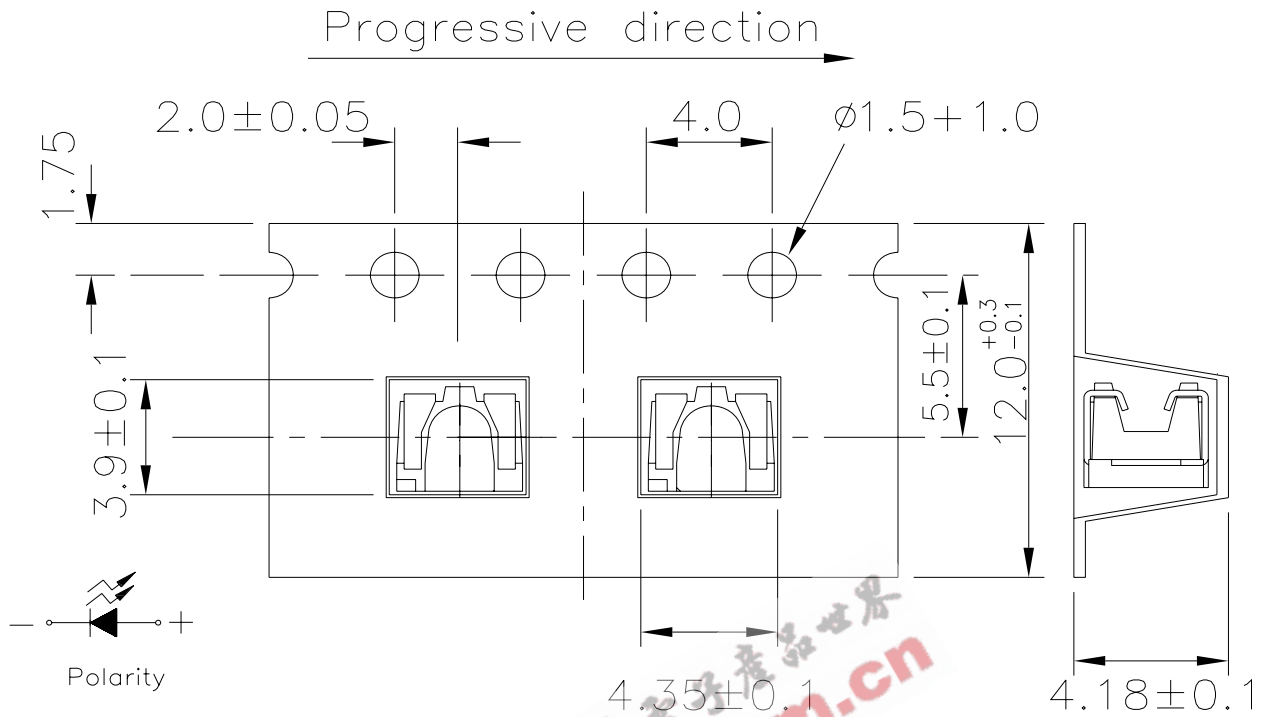
Reel Dimensions



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

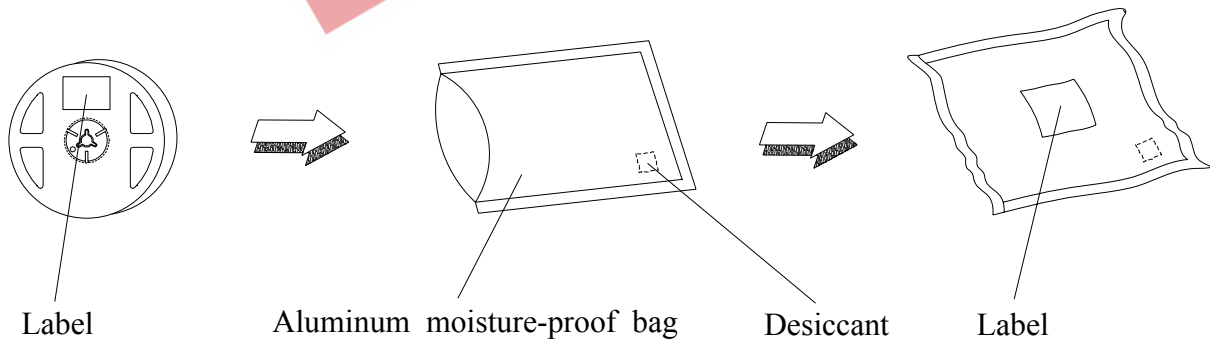
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Carrier Tape Dimensions: Loaded quantity 800 PCS per reel.



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

Moisture Resistant Packaging



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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 deg C or less and 60% RH or less.

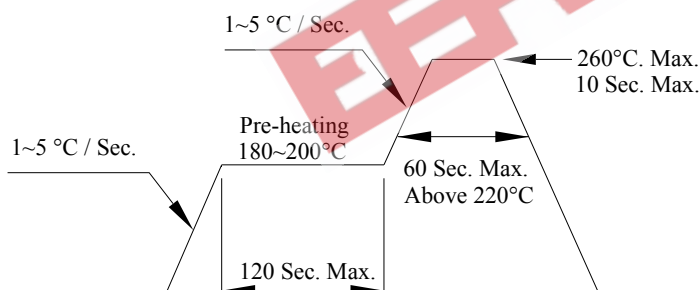
If unused LEDs remain, it should be stored in moisture proof packages.

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.

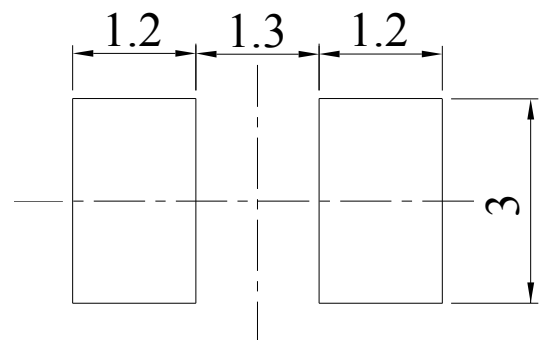
Baking treatment : 60±5°C for 24 hours.

3. Soldering Condition

3.1 A. Pb-free solder temperature profile



B. Recommend soldering pad



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.