

Technical Data Sheet(Preliminary)**Side View SMD LEDs**

57-21SUGC/B013/TR8**Features**

- High Luminous Intensity
- High Efficiency
- Pb-free.
- The product itself will remain with RoHS compliant version

**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.

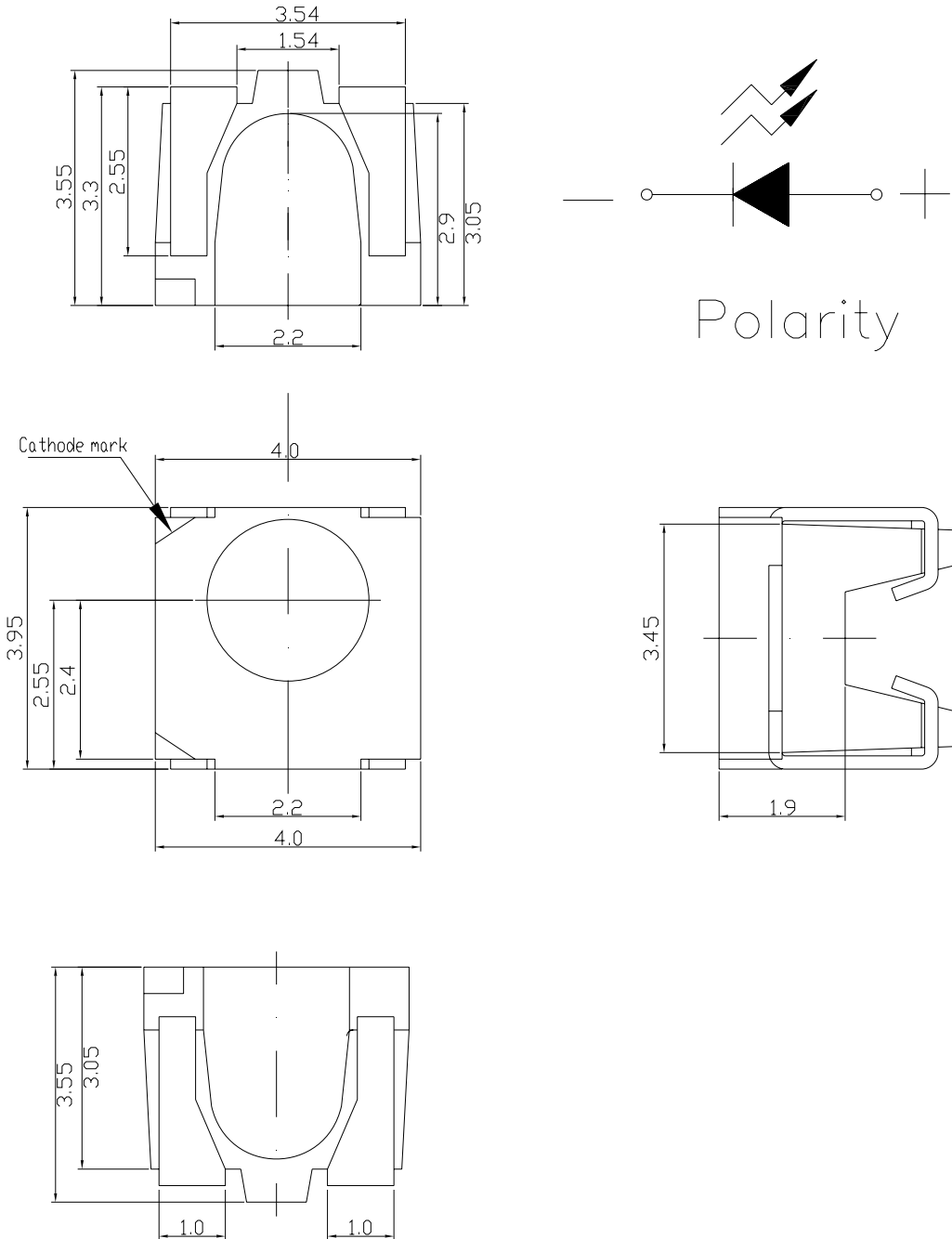
Applications

- 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	Brilliant Green	Water Clear

Package Dimensions



Note: The tolerances unless mentioned is ± 0.1 mm ,Unit = mm

57-21SUGC/B013/TR8**Absolute Maximum Ratings (Ta=25°C)**

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	°C
Operating Temperature	T _{opr}	-40 ~ +100	°C
Storage Temperature	T _{stg}	-40 ~ +110	°C
Soldering Temperature	T _{sol}	Reflow Soldering : 260 °C for 10 sec. Hand Soldering : 350 °C for 3 sec.	

Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	I _v	90	-----	180	mcd	I _F =20mA
Viewing Angle	2θ _{1/2}	-----	120	-----	deg	I _F =20mA
Peak Wavelength	λ _p	-----	518	-----	nm	I _F =20mA
Dominant Wavelength	λ _d	519	-----	537	nm	I _F =20mA
Spectrum Radiation Bandwidth	Δλ	-----	36	-----	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%
- 2.Tolerance of Dominant Wavelength ±1nm
- 3.Tolerance of Forward Voltage ±0.1V

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Bin Range Of Dominant Wavelength

Bin Code	Min	Max	Unit	Condition
3	519	525	nm	I _F =20mA
4	525	531		
5	531	537		

Bin Range Of Luminous Intensity

Bin Code	Min	Max	Unit	Condition
Q2	90	112	mcd	I _F =20mA
R1	112	140		
R2	140	180		

Notes:

- 1.Tolerance of Luminous Intensity $\pm 11\%$
- 2.Tolerance of Dominant Wavelength $\pm 1\text{nm}$

Typical Electro-Optical Characteristics Curves

Typical curve of spectral distribution:

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

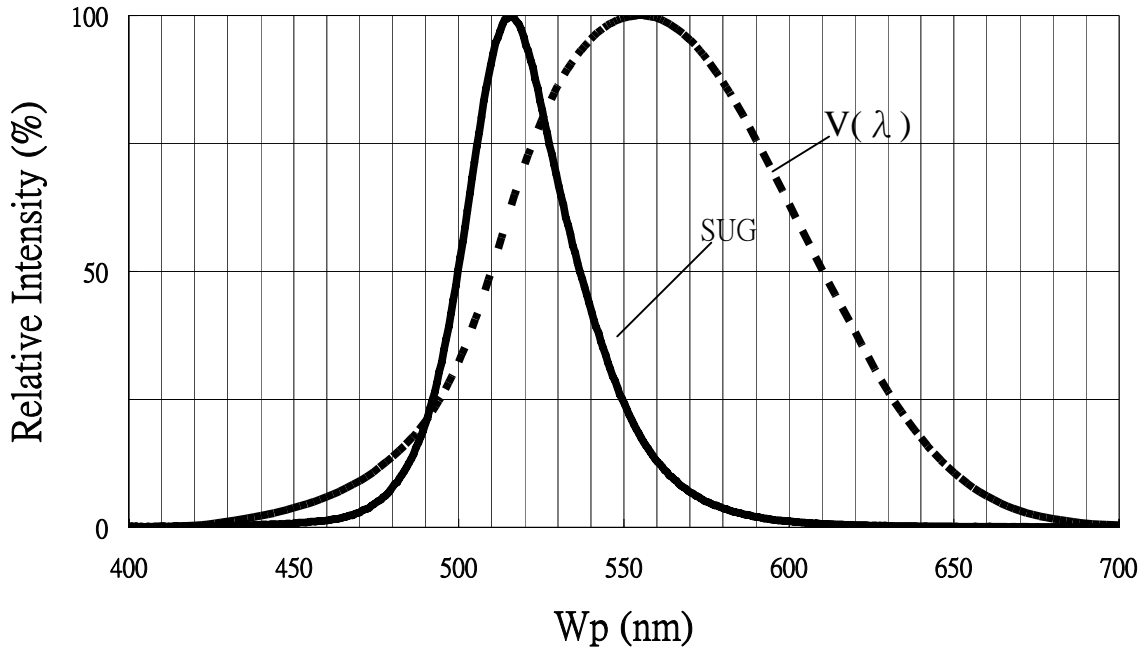
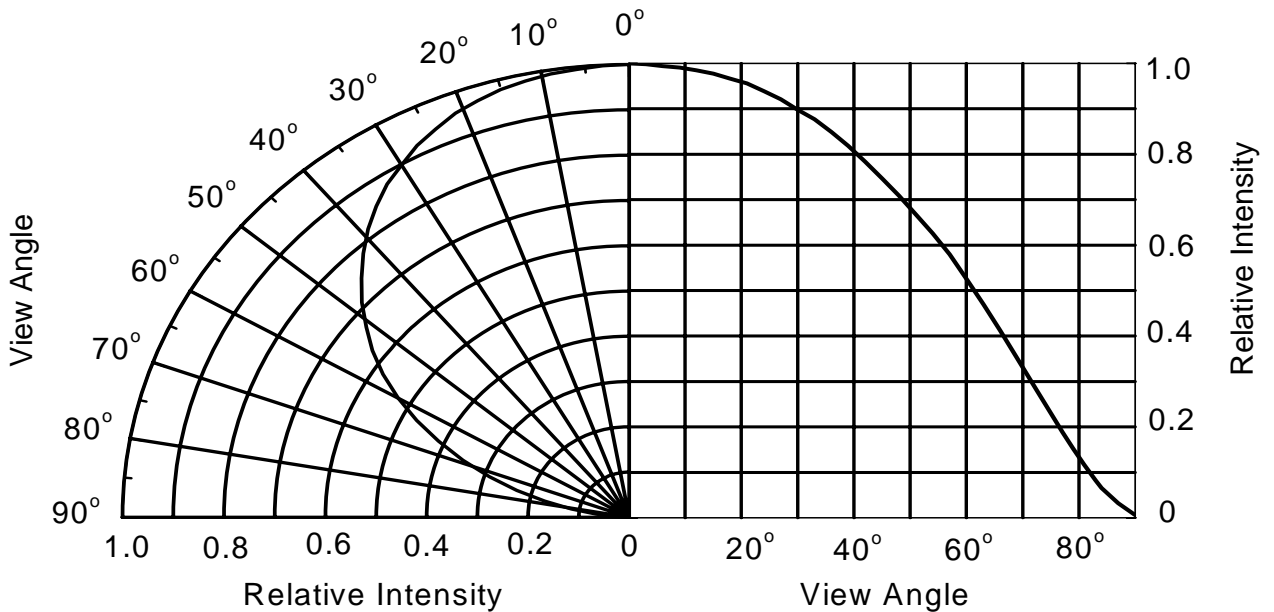
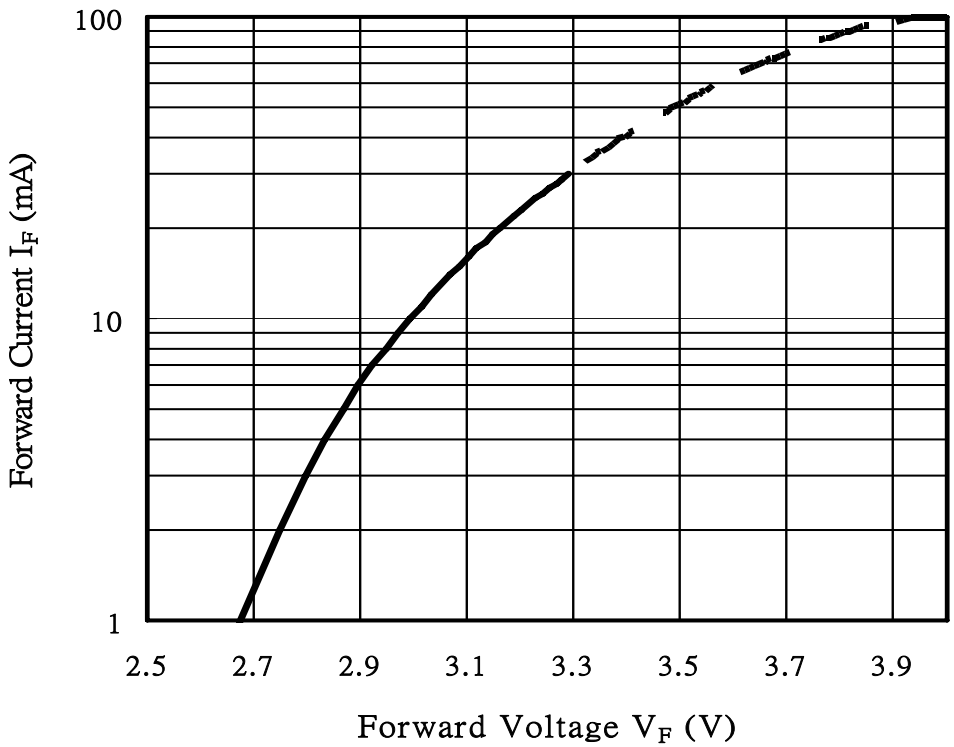


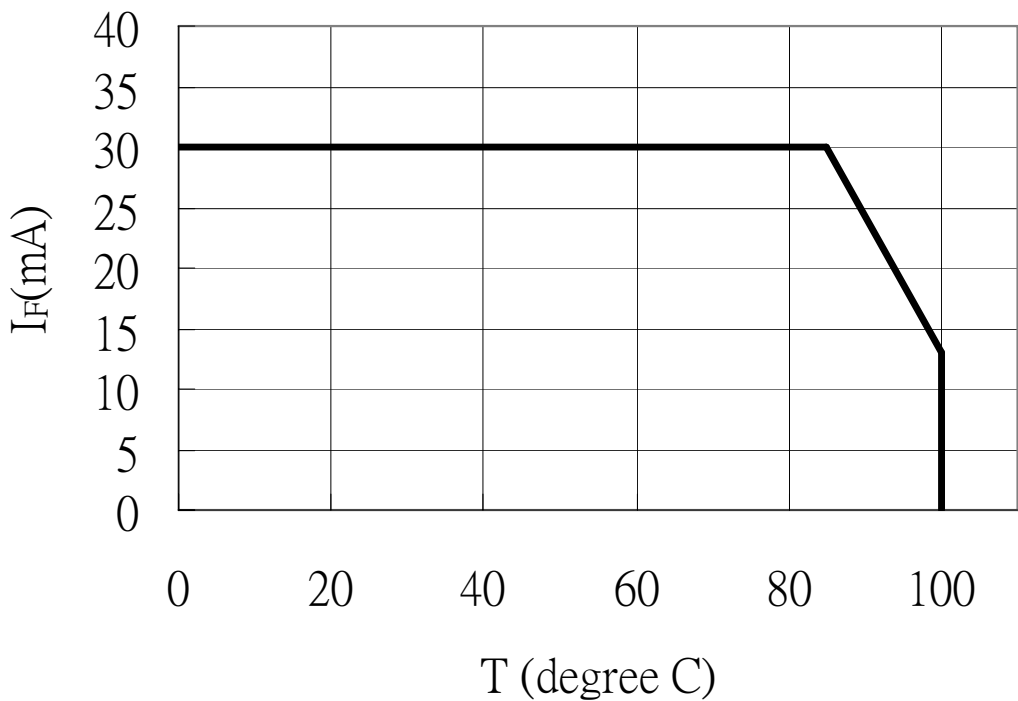
Diagram characteristics of radiation:



Forward Current vs. Forward Voltage Ta=25°C



Forward current v.s. ambient temp.



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Label explanation


CAT: Luminous Intensity Rank

HUE: Dom. Wavelength Rank

REF: Forward Voltage Rank

EVERLIGHT


CPN :
P/N: XXXXXXXXXXXX



RoHS

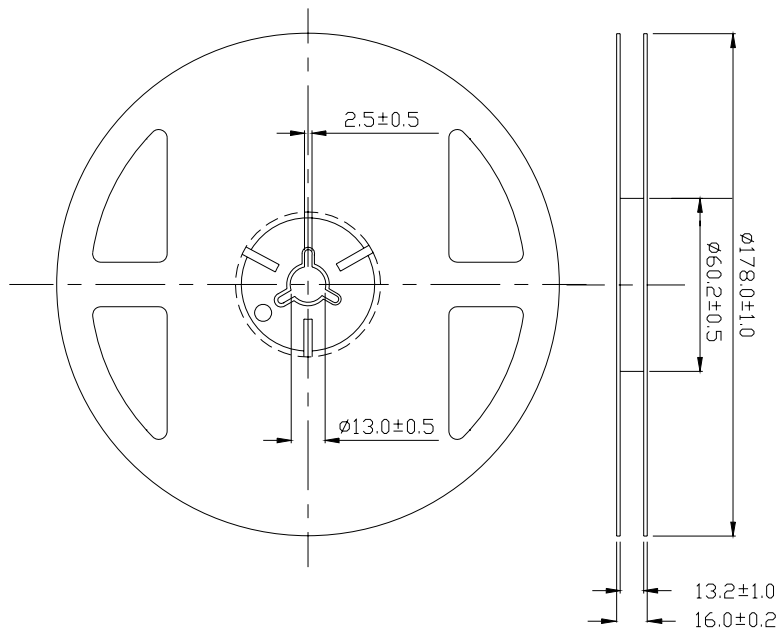
XX-XXXXXXXX
QTY: XXXX CAT: XX
HUE: XX
REF:

LOT NO: XXXXXXXX



MADE IN TAIWAN

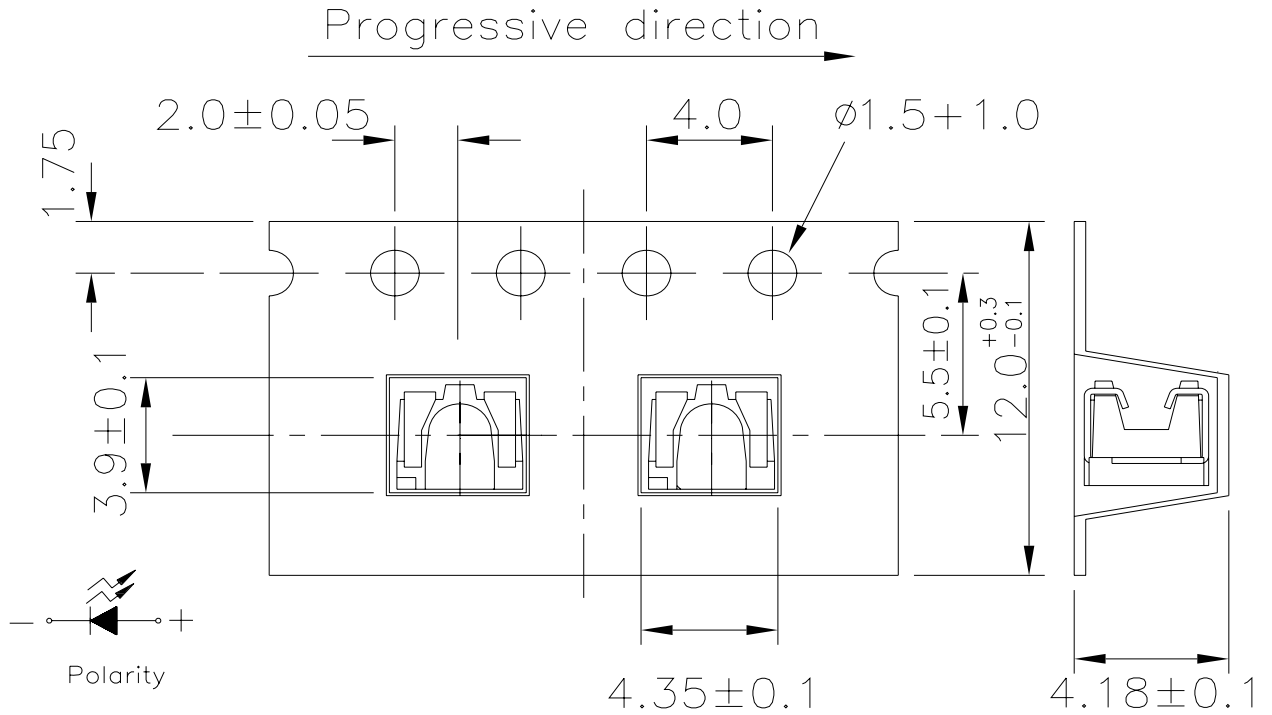
Reel Dimensions



Note: The tolerances unless mentioned is ± 0.1 mm ,Unit = mm

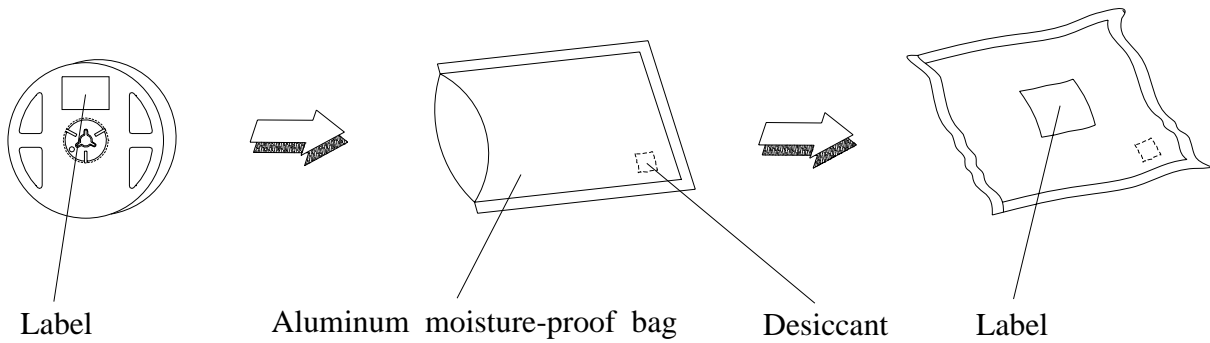
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Carrier Tape Dimensions: Loaded quantity 800 PCS per reel.



Note: The tolerances unless mentioned is ±0.1mm ,Unit = mm

Moisture Resistant Packaging



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.

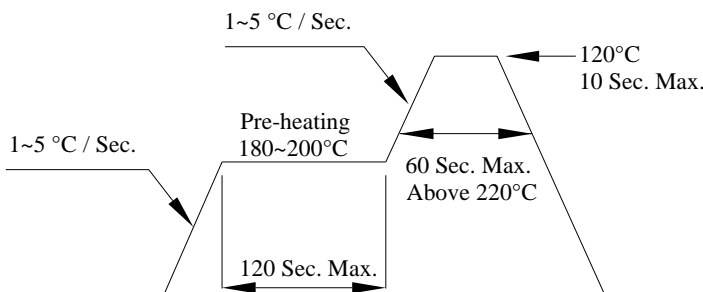
If unused LEDs remain, it should be stored in moisture proof packages.

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.

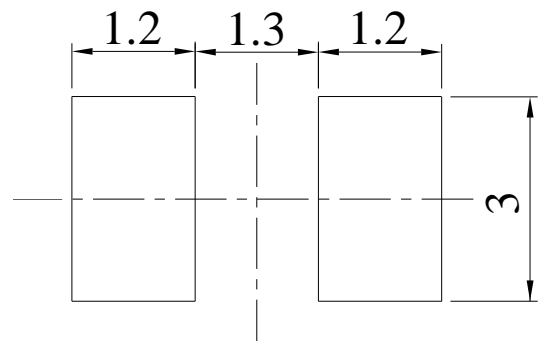
Baking treatment : 60±5°C for 24 hours.

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.