Planck Shenzhen Opto-Electronic Technology Co.,Ltd

SPECIFICATION FOR PRODUCTION

Custome:

Product Name: PL-P3030U-B9-C2

Version number:

Deliver date:

Customer confirm and sign		
TESTED BY	CHECKED BY	APPROVED BY
INSPECT RESULT	ACCEPT	REJECT

(REMARK): _____

_____

Add: 3/F building A,Henchao Ind,Shiyan Town,Shenzhen,China
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Fax: +86-755-29002359
Zip: 518108
http://www.planckled.com

Features

- Package Size: 3.0(L) ×3.0(W) ×0.65(T) mm
- Silicone Packed
- Suitable for different working environment
- Super long lifetime: 30000HRs
- Anti UV
- White colors are available in(2300K- 25000K)
- Wide viewing angle (2 θ 1/2=120°)

Applications

- Indoor lighting: Fluorescent lamp, tube
- Commercial illumination and displays: Advertising words, light box
- LCD Backlighting
- Decorative lighting: light strip
- Automotive interior auxiliary lighting
- Other illumination and displays

Device Selection Guide

ITEM	MATERIALS
Resin	Silicon
Bonding wire	23∓m Au
Lens color	Water Clear
Dice	InGaN

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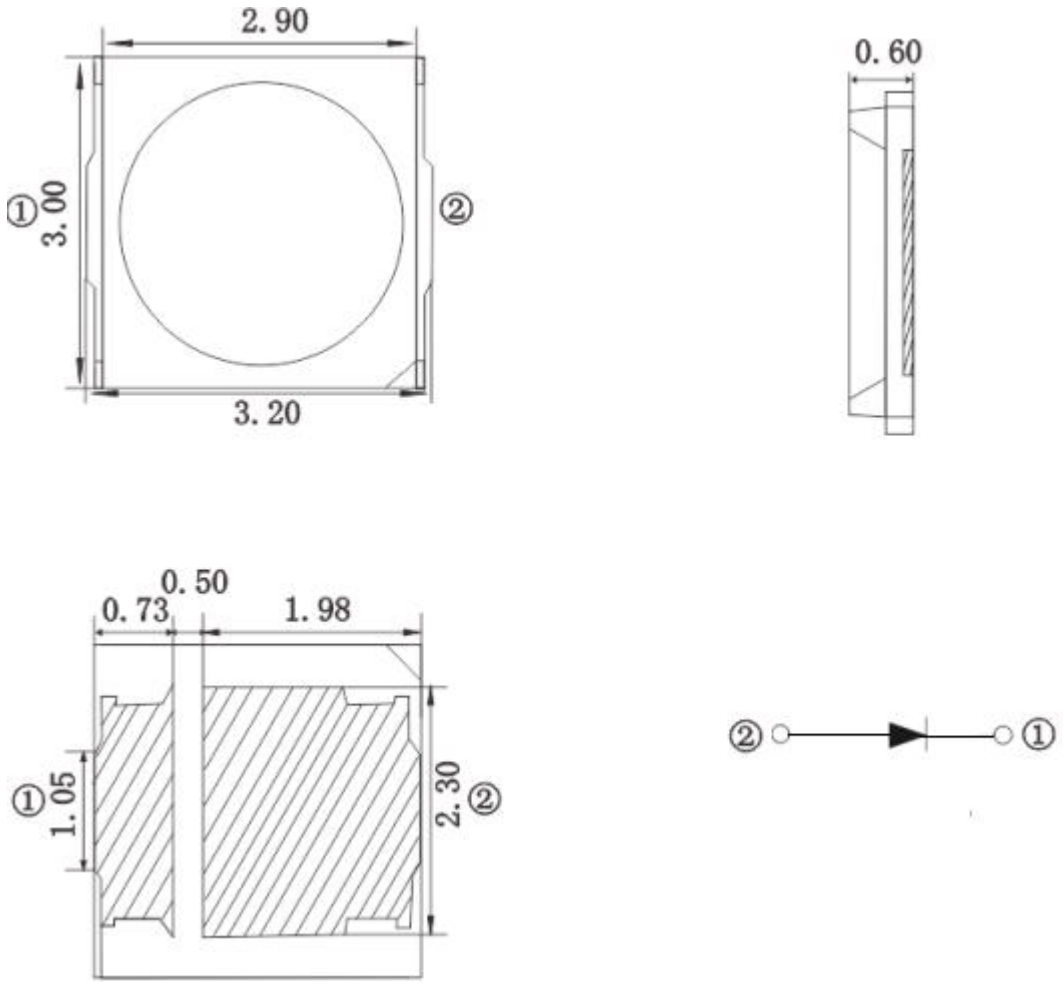
REFLECTOR COATING TYPE HIGH-PERFORMANCE LEDS

High Performance SMD Single-Color Top LEDs

Part Number:PL-P3030U-B9-C2



NOTES:

1、 All dimensions are in millimeters (inches);

2、Tolerances are ~0.2mm (0.008inch) unless otherwise noted。

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Part Number: PL-P3030U-B9-C2

Absolute maximum ratings (TA=25℃)

Parameter	Symbol	Rat	Unit
Forward current	I_F	150	mA
Reverse voltage	Vr	5	V
Power dissipation	Pd	500	mW
Operating Temperature	Top	-20 ~+80	℃
Storage Temperature	Tstg	-40 ~+80	℃
Peak Forward Current (Duty 1/10 @ 1KHz)	IFP	150	mA
Lead Soldering Temperature (5mm From Body)	Tsol	260℃ For 5 Seconds)/℃	

Electro-optical characteristics (T_A=25℃)

Parameter	Test Condition	Symbol	Value			Unit
			Min	Avg	Max	
Main Wave Length	I_F =150mA	λD	620	622.5	625	nm
Peak Emission Wavelength	I_F =150mA	λP	---	622.5	---	nm
Forward voltage	I_F =150mA	Vf	2.0	---	2.2	V
Luminous Flux	I_F =150mA	Φ	15	--	20	lm
Luminous intensity	I_F =150mA	Iv	4000	--	5000	mcd
Viewing Angle	----	2θ1/2	---	120	---	deg
Reverse Current	----	IR	--	--	10	∓A

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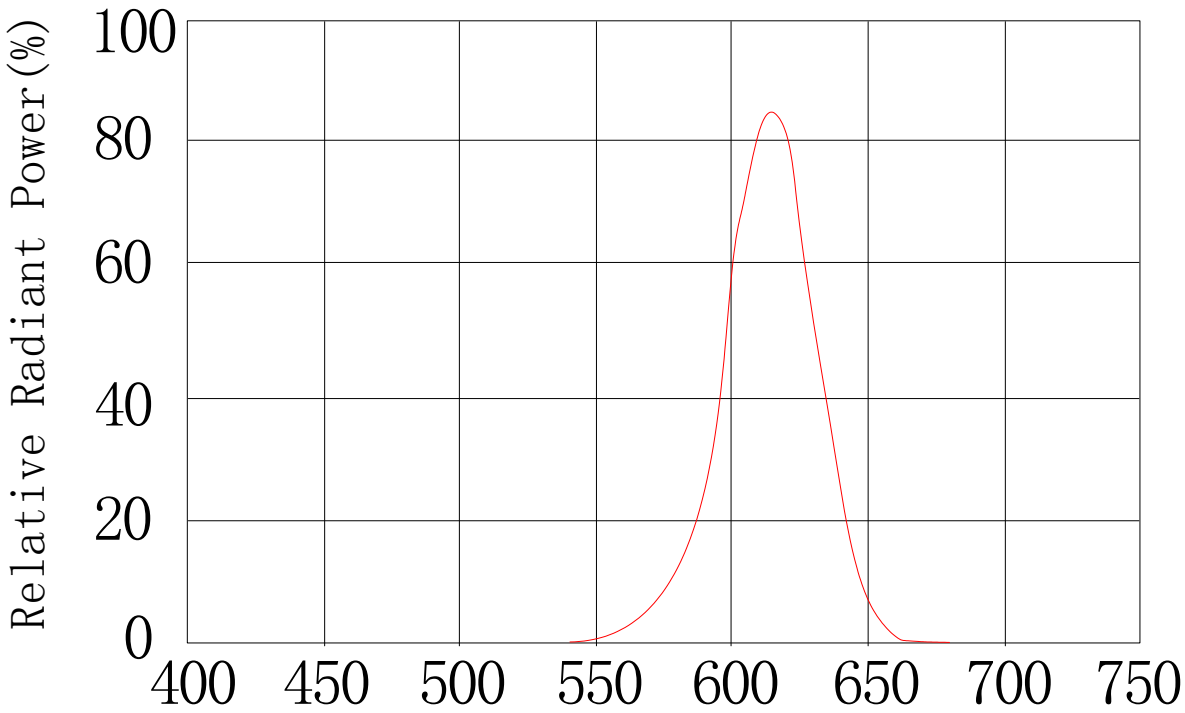
Spectrum test graph for Blue color (150mA)



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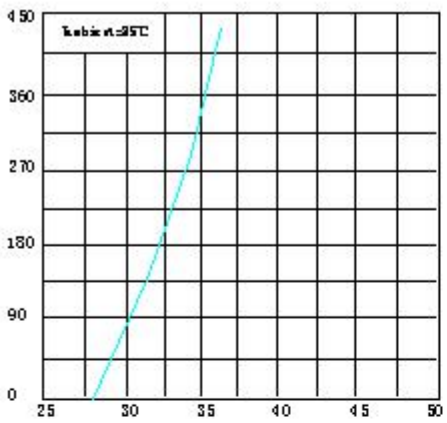
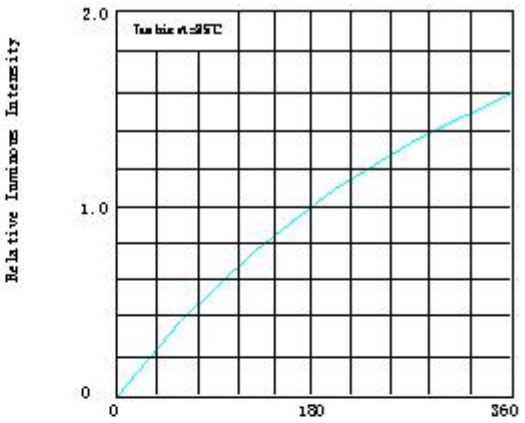
Optical-Electrical Characteristic

Volt-Ampere Characienistics



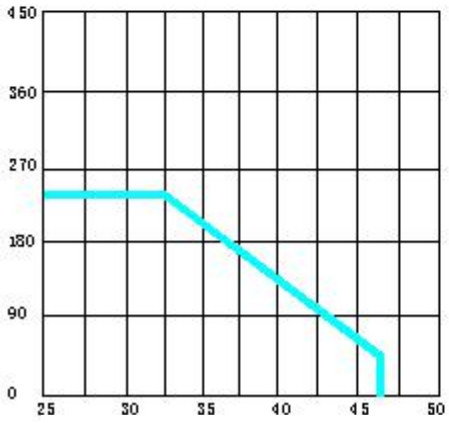
Forward Voltage(V)

Relative Luminous VS Forward Current



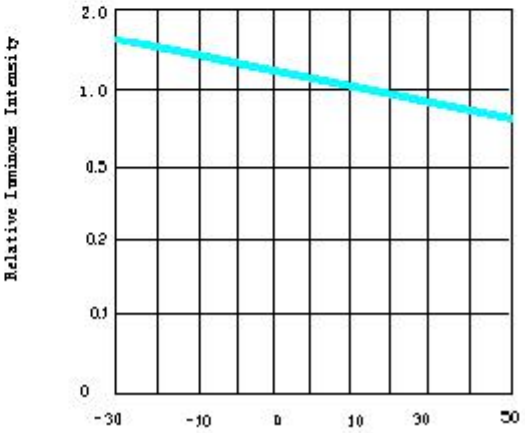
Forward Current(ma)

Forward Current Derating Curve



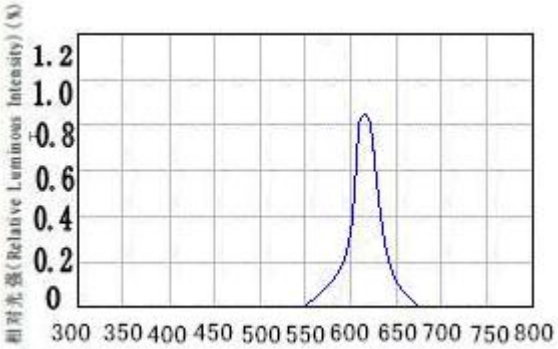
Ambient Temperrature(℃)

Luminous Intensity VS Ambient Temperature



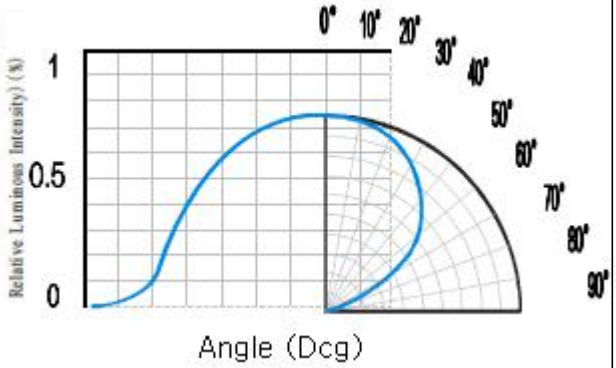
Ambient Temperrature(℃)

Relative Spectral Distribution



Wavelcngth (nm)

Relative Spectral Distribution



Angle (Dcg)

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Reliability Test Items And Conditions

Test Items	Reference	Test Conditions	Time	Quantity	Criterion
Thermal Shock	MIL-STD-202G	-40℃(30min) -100℃ (30min)	100 Cycles	22	0/22
Temperature And Humidity Cyclic	JEITA ED-4701 200 203	-10℃~65℃; 0%~90%RH	10cycles	22	0/22
High Temperature Storage	JEITA ED -4071 200 201	Ta=100℃	1000H	22	0/22
Low Temperature Storage	JEITA ED -4071 200 202	Ta=-40℃	1000H	22	0/22
High Temperature High Humidity Storage	JEITA ED -4071 100 103	Ta=60℃; RH=90%	1000H	22	0/22
High Temperature Life Test	JESD22-A108D	Ta=80℃	1000H	22	0/22
Life Test	JESD22-A108D	Ta=25℃ IF=150mA	1000H	22	0/22
Resistance to Sodering Heat	GB/T 4937, Ⅱ, 2.2&2.3	Tsol*=(240±5)℃10secs	2 times	22	0/22

Criteria For Judging Damage

Test Items	Symbol	Test Conditions	Criteria For Judging Damage
Forward Voltage	V_F	$I_F=I_{FT}$	Initial Data±10%
Recerse Current	I_R	V_R=5V	$I_R \leqslant$10uA
Luminous Intensity	IV	$I_F=I_{FT}$	Average I_V degradation≤30%; Single LED I_V degradation≤50%
Resistance to Soldering Heat			Meterial without internal cracks,no meterial between stripped,no deaded light

*Note Tsol-Temperature of tin liquid

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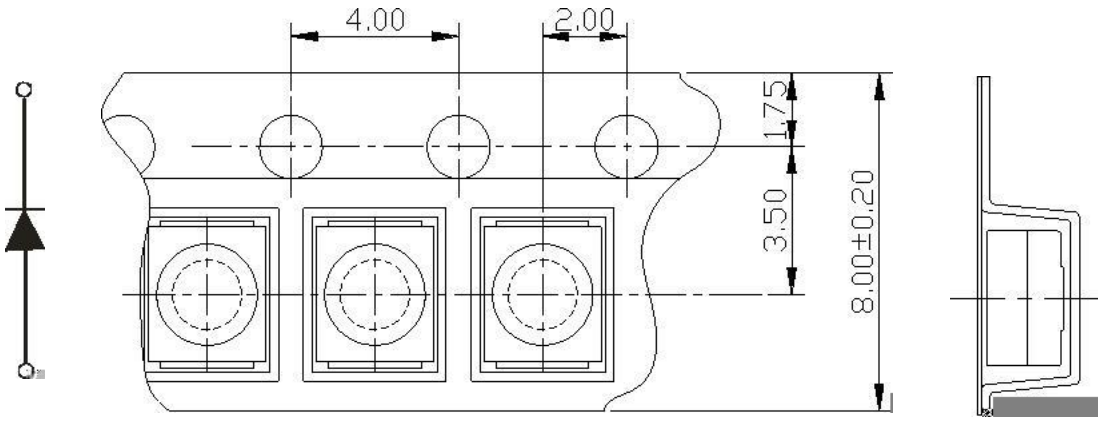
Packing(1)

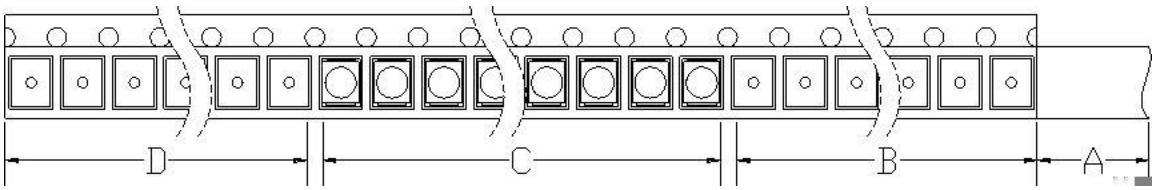
Carrier Tape



All dimensions in mm,tolerances unless mentioned is ±0.1mm

Details Of Carrier Tape

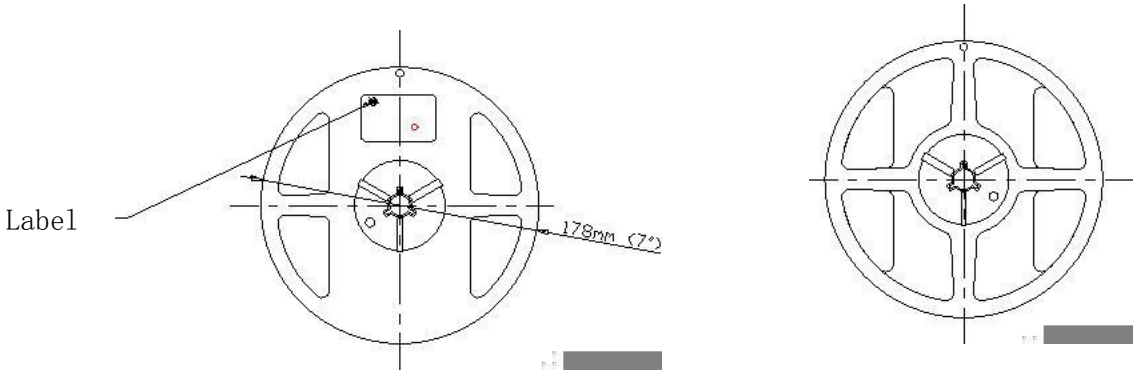
Progressive Direction



A:Top Cover Tape 300mm; B:Leader Empty 200mm; C:4000 Lamps Loaded; D:Trailer Empty 200mm

Reel Dimension

Progressive Direction



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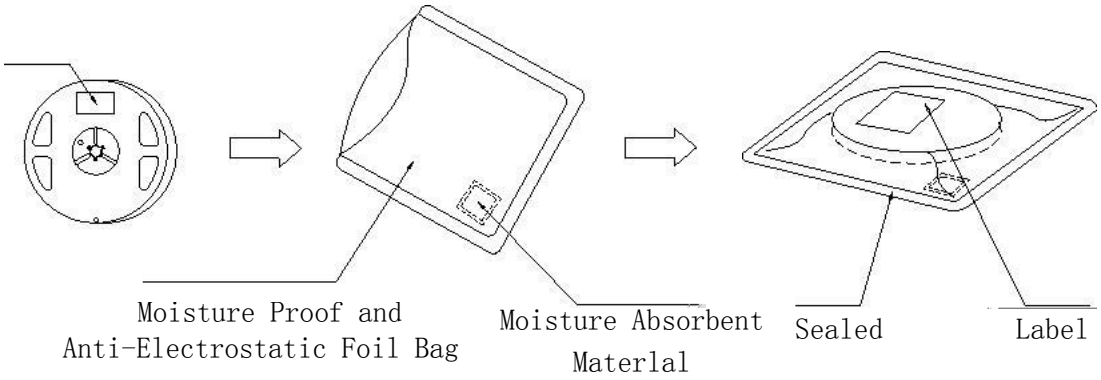
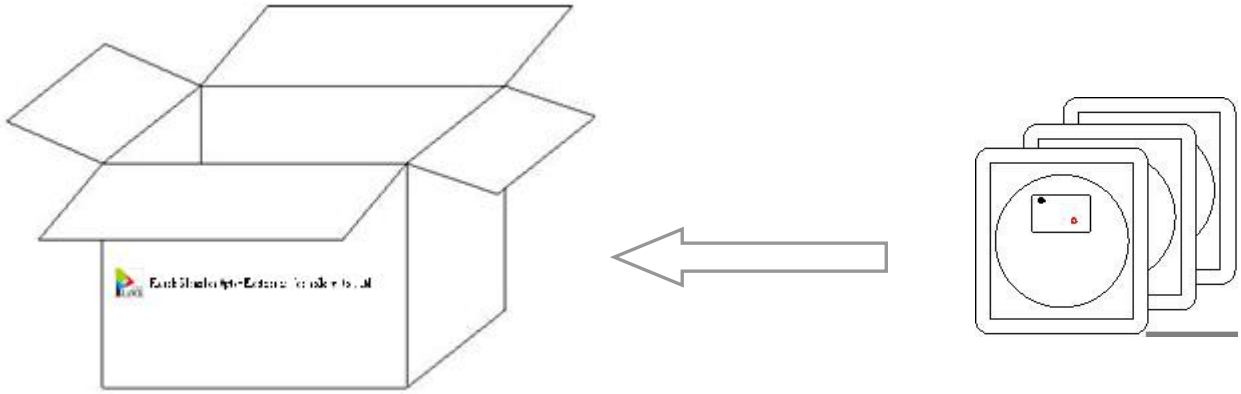
Packing(2)

Moisture Proof and Anti-Electrostatic Foil Bag



Cardboard Box



Label

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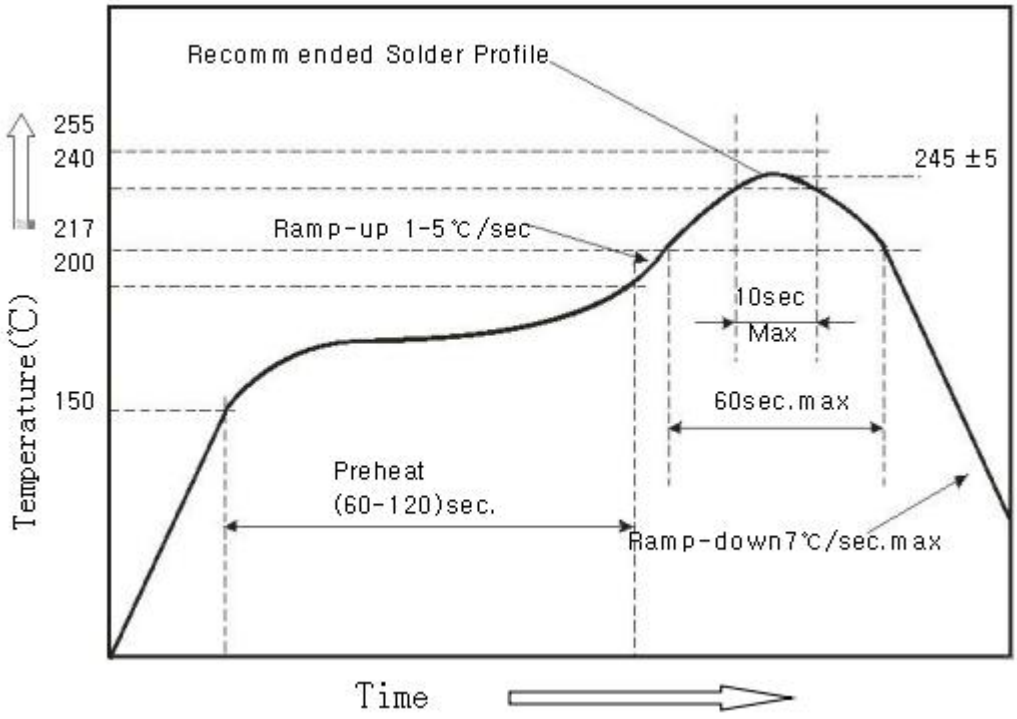
Useful hint:

1、Hand Soldering

A soldering iron of less than 20W is recommended to be used in Hand Soldering. Please keepthe temperature fo the soldering iron under 360℃ while soldering. Each terminal fo the LED is to go for less than 3 second and for one time only.

Be careful because the damage of the product is often started at the time of the hand soldering.

2、Reflow Soldering:Use the conditions shown in the under Figure of Pb-Free Reflow Soldering



- Reflow soldering should not be done more than two times
- Stress on the LEDs should be avoided during heating in soldering process
- After soldering, do not deal with the product before its temperature drop down to room Temperature.

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Precautions(1)

1. Storage

●Moisture proof and anti-electrostatic package with moisture absorbent material is used, to keep moisture to aminimum.

●Before opening the package, the product should be kept at 30℃ or less and humidity less than 60% RH, and beused within a year.

●After opening the package, the product should be stored at 30℃ or less and humidity less than 10%RH, and besoldered within 24 hours (1day). It is recommended that the product be operated at the workshop condition of 30℃ or less and humidity less than 60%RH.

●If the moisture absorbent material has fade away or the LEDs have exceeded the storage time, baking treatment should be performed based on the following condition: (70±5)℃ for 24 hours.

2. Static Electricity

Static electricity or surge voltage damages the LEDs. Damaged LEDs will show some unusual characteristic such as the forward voltage becomes lower, or the LEDs do not light at the low current. even not light.

All devices, equipment and machinery must be properly grounded. At the same time, it is recommended that wrist bands or anti-electrostatic gloves, anti-electrostatic containers be used when dealing with the LEDs.

3. Vulcanization

LED curing is due to sulfur being in bracket and the +1 price of silver in the chemical reaction generated Ag2S in the process. It will lead to the capacity of reflecting of silver layer reducing, light color temperature drift and serious decline ,seriously affecting the performance of the product.So we should take corresponding measures to avioding vulcanization, such as to avoid using sulphur volatile substances and keeping away from high sulphur content of the material.

4. Safety Advice For Human Eyes

Viewing direct to the light emitting center of the LEDs, especially those of great Luminous Intensity will cause great hazard to human eyes. Please be careful.

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