PCT3030 SPECIFICATION

Model. P/N NO.: S-Y3 10 12 N4 370B N

Documents. NO.:

深圳市同一方光电			Customer（Official seal） Company：		
Maker	Checked	Approved	Engineering	Quality	Approved
Henry Liu		Jianqiang Liu			

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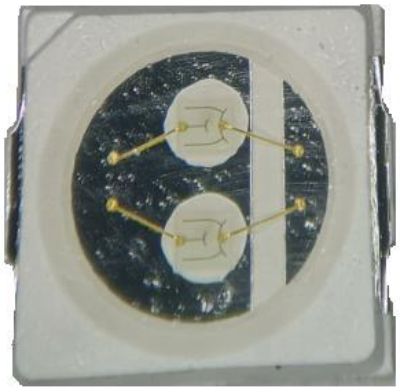
Catalogue

1. Product Information

Appearance



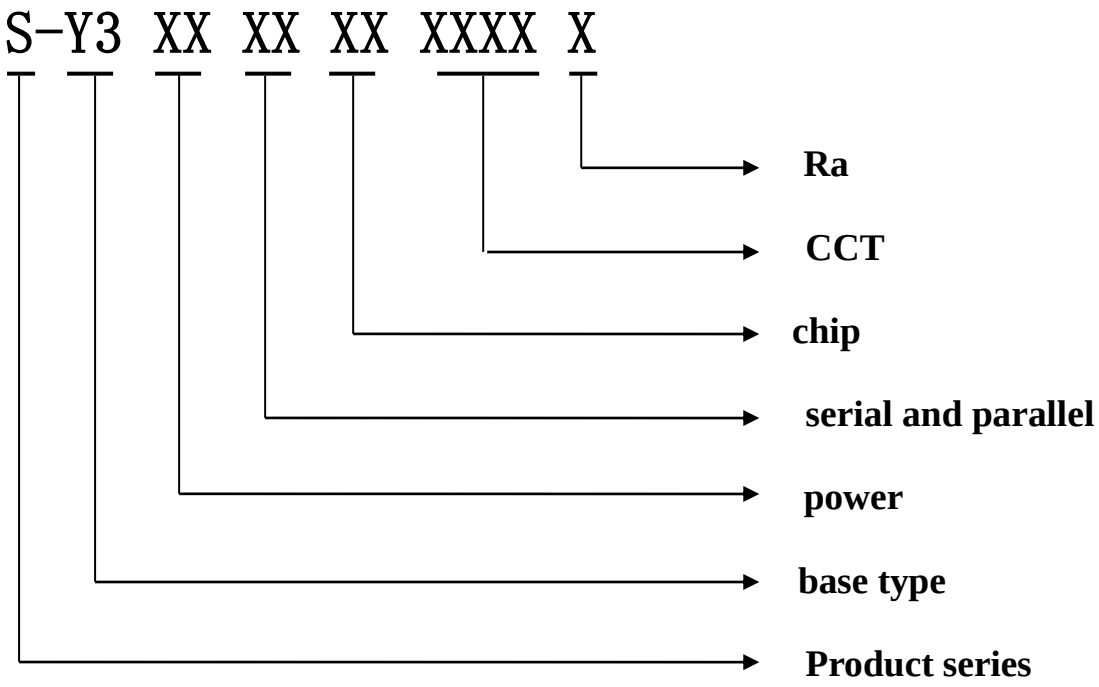
Features

- ●PCT package
- ●Package Dimension: 3.0mm×3.0mm×0.65mm
- ●Viewing Angle: 120°
- ●ROHS Approved

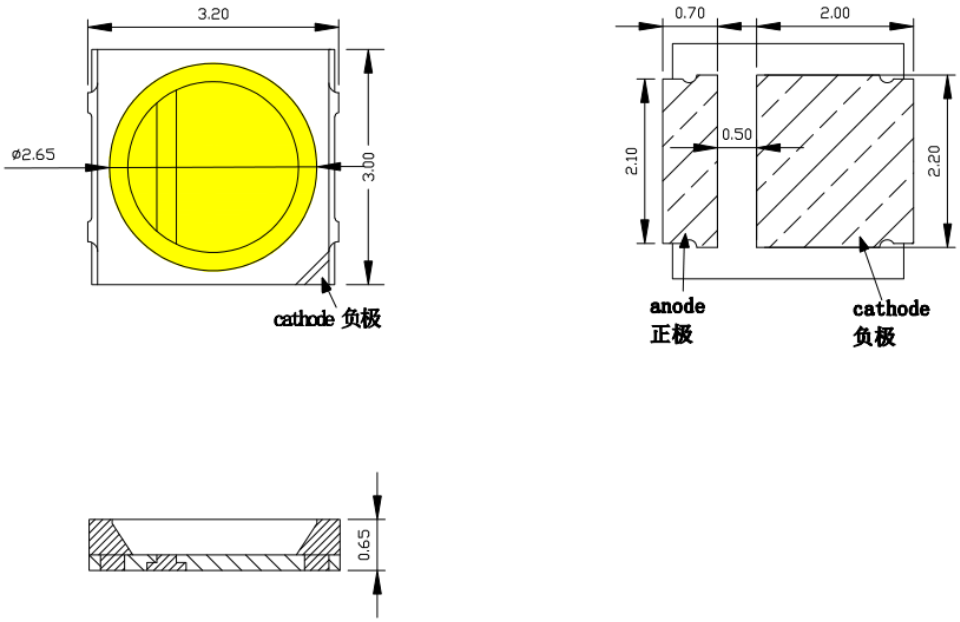
Applications

- ● UV Curing
- ● UV Printing
- ● UV Exposure

2. Product Number



3. Dimensions



Postscript：

- All dimensions area in mm tolerance is ±0.2mm unless otherwise noted。

4. Absolute Maximum Ratings

Item	Symbol	Value	Unit
Limiting power	P	1.0	W
Forward Current	IF	300	mA
Operating Temperature	Topr	-40°C To +105°C	°C
Junction Temperature	Tj	120	°C
Storage Temperature	Tstg	-40°C To +85°C	°C
ESD Sensitivity	ESD	2,000V HBM	V
Reverse Voltage	VR	5	V
Reverse Current	IR	10	uA
Soldering Temperature	Tsld	260°C/3-5sec.	℃/S
Moisture Sensitivity Rating	MSR	MSL3	℃/RH/H

Explain:

• Max power and positive current mean the maximum setting value of the bottom temperature of led light source by using the appropriate heat sink.

• Connection error and off-limits voltage may damage LED chip.

• Different temperatures(temperature test point Tj), said LED light should operate follow derating curve on the text

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5.Electrical-Optical Characteristics

Parameter	Symbol	Condition	colour	Min	Typ	Max	Unit
voltage	VF	IF=300mA Tc=25 ℃	U	3.4	3.6	3.8	V
Domi Wavelength	λd	IF=300mA Tc=25 ℃	U	370		375	nm
Luminous flux	Φv	IF=300mA Tc=25 ℃	U	0		10	Lm
Radiation flux	Φe	IF=300mA Tc=25 ℃	U	200		250	mw

Explain:

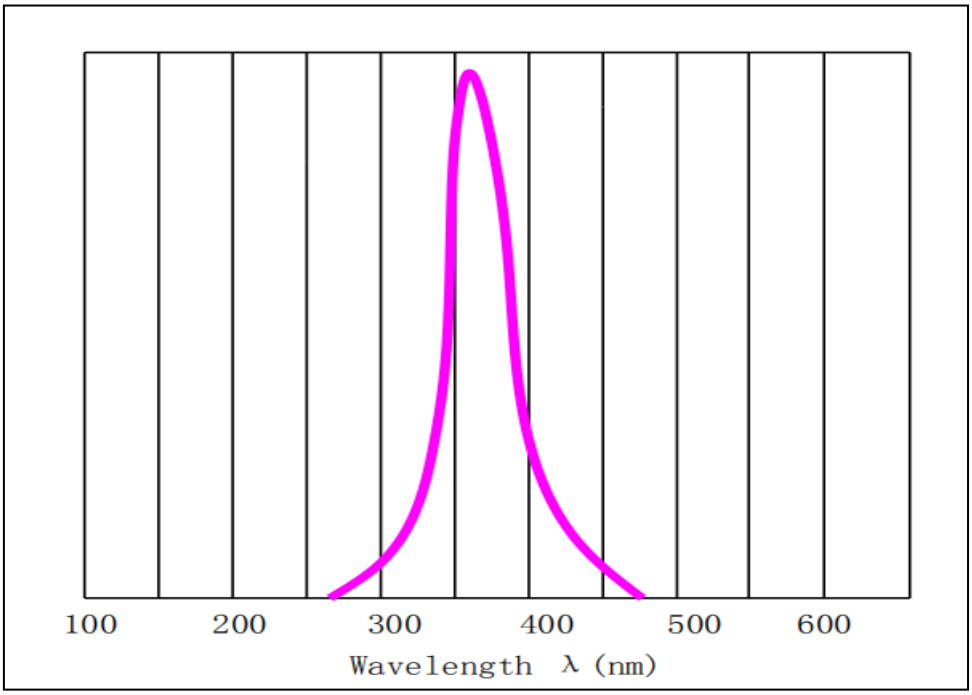
- Chip code: N4 stands for JN20 chip;

Attention:

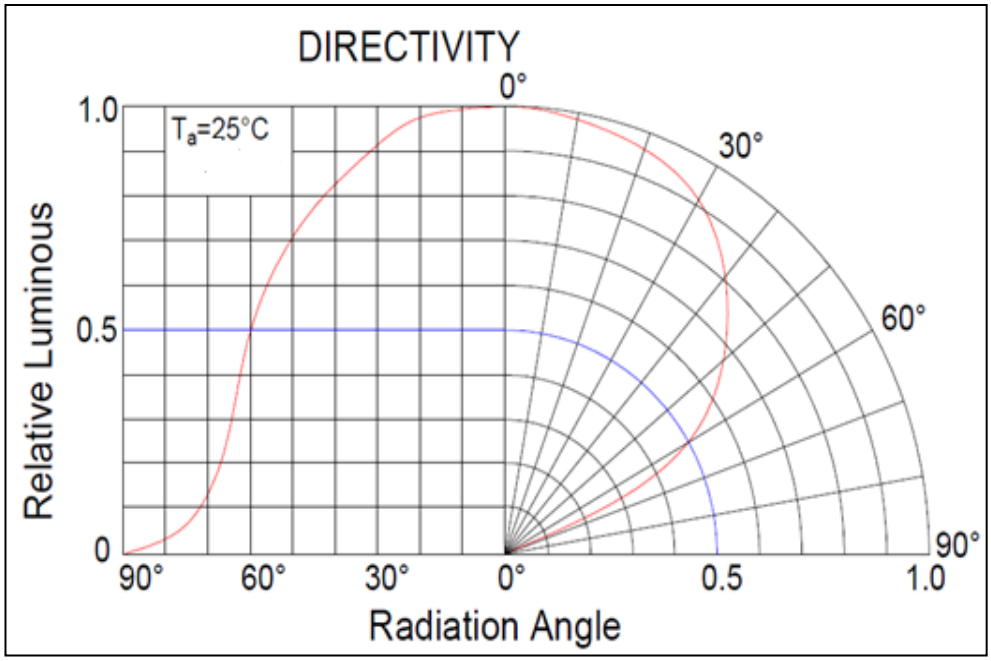
- Testing environment temperature25 ℃,and CCT and voltage will changed if tested in different current and environment temperature.
- Tolerance among different testing machine: Voltage:±0.1V, Lumen±5%, CRI±2, Color coordinate ±0.005.

6. Typical Characteristic Curves

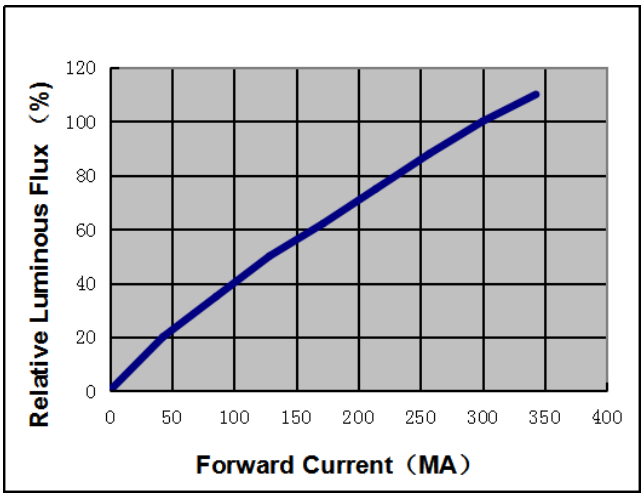
1. Relative Spectral Distribution Graph:



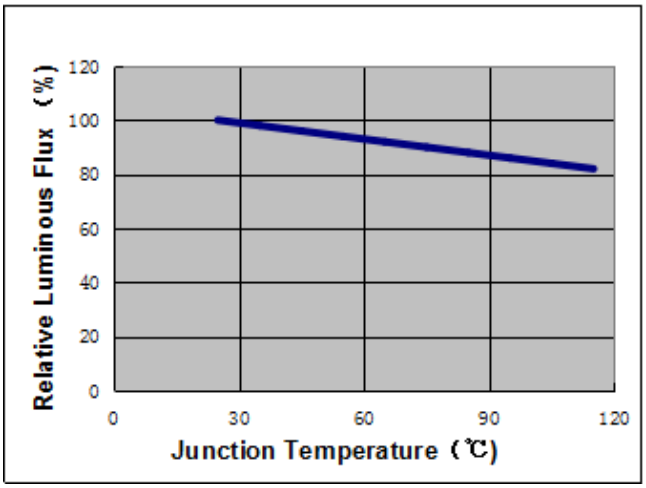
2. Radiation Angle Distribution Graph:



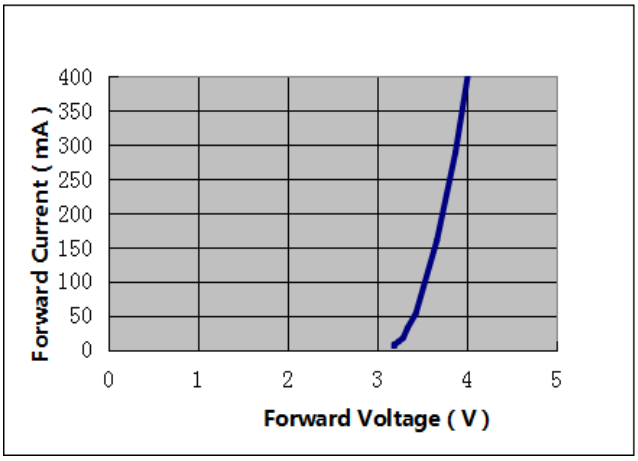
3. Relative Luminous Intensity VS Forward Current



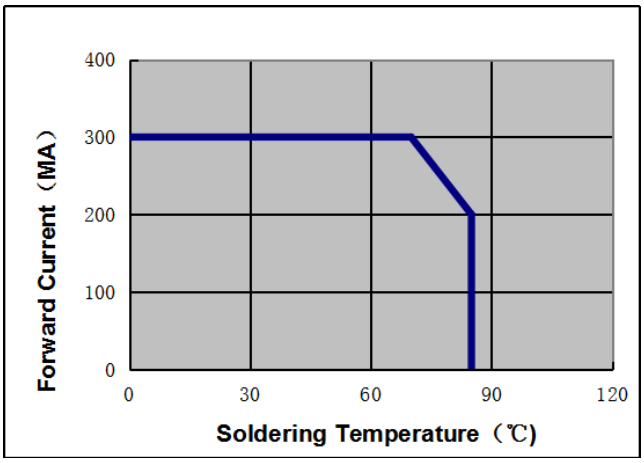
4. Relative Luminous Intensity VS Junction Temperature



5. Forward Current VS Forward Voltage



6. Forward Current VS Soldering Temperature



7. Voltage Grading

• PCT3030 led test forward voltage and classification, forward voltage file is defined as follows

Forward voltage Group	Minimum Forward voltage (v) @ 300mA	Maximum Forward voltage (v) @ 300mA
34B	3.4	3.6
36B	3.6	3.8

Postscript:

• Voltage sub-standard: 0.2V / file, luminous flux sub-standard: 10LM / file.

8. Reliability Test Items And Conditions

1. Testing items and testing conditions

Serial No.	Test Item	Reference standard	Test condition	Sample Quantity	Failure Quantity
1	Thermal shock	JESD22-A104E	(-40℃15min)-----+120℃ (15min), ↑ ↓ 10 mins,200cycles	22pcs	0
2	HighTemperature Storage	JESD22-A103D	+100℃, 1000h	22pcs	0
3	Low Temperature Storage	JESD22-A119	-40℃, 1000h	22pcs	0
4	High Temperature,High Humidity,Aging Test	JESD22-A101C	T=+85℃,RH=85% IF=300MA 1000h	22pcs	0
5	High-temperature operation	IES LM80-2015	T=+105℃, IF=300MA 1000h	22pcs	0
6	Low temperature operation	JESD22-A108D	T=-40℃, IF=300MA 1000h	22pcs	0
7	Moisture/Reflow Sensitivity Test	J-STD-020E	Precondition: 60℃.60%RH.168H Tsld=260℃.10sec. 3 Reflows	22pcs	0

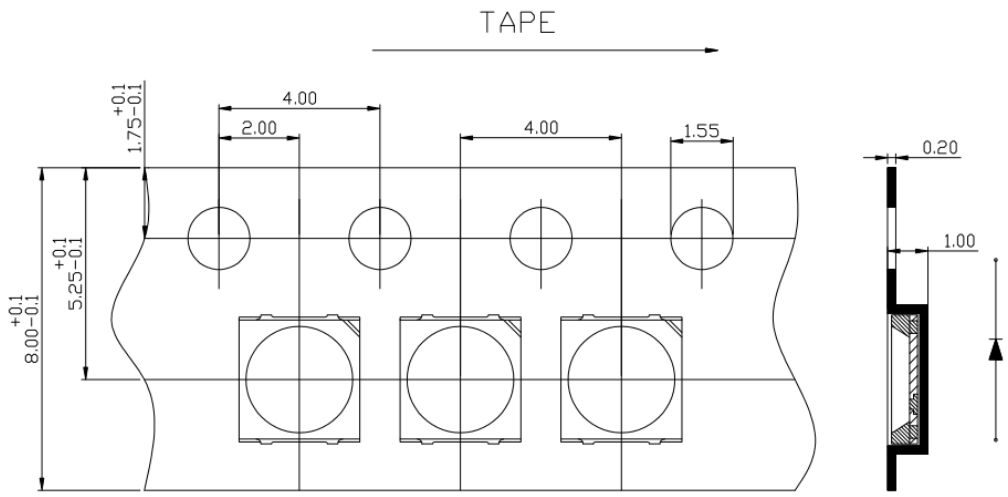
2. Criteria For Judging Damage

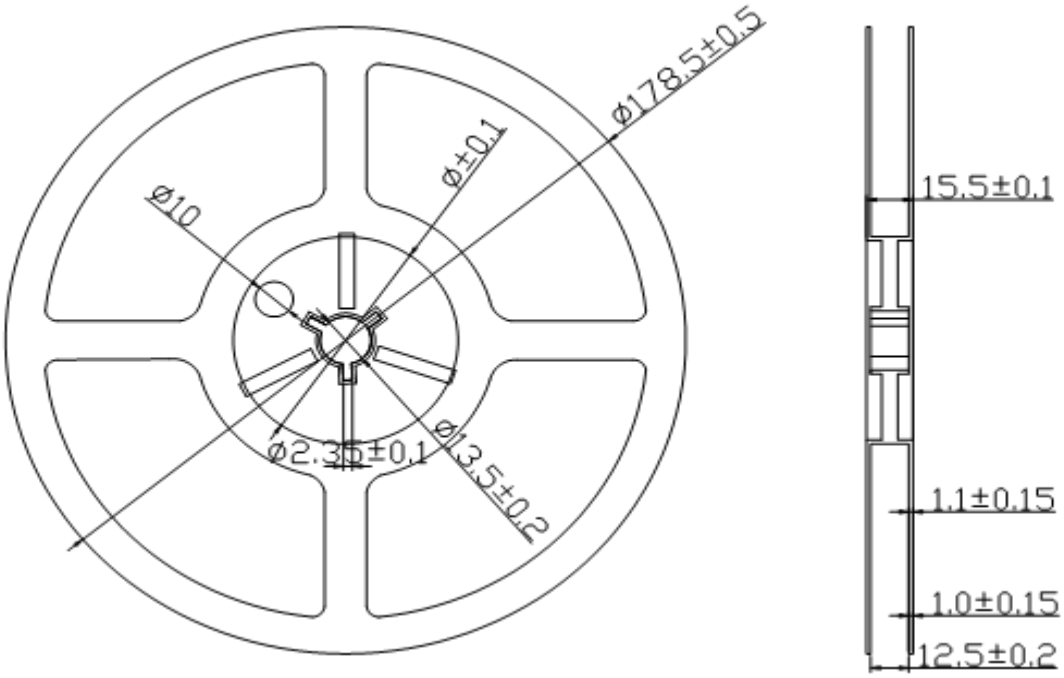
Test Items	Test Condition	Criteria For Judgement	
		Min	Max
Forward Voltage	IF=300mA	/	U.S.L*)x1.1
Reverse Current	VR=5V	/	U.S.L*)x2.0
Radiation Flux	IF=300mA	L.S.L*)x0.3	/

9. Packaging

1. Aluminum foil bag label

2. Taping Specifications (Units:mm)





Package: 5000Pcs/Reel

Explain:

• After the LED is braided, it is placed in a vacuum package in an aluminum foil bag, with a built-in humidity card. The LED is packed in a carton after being braided.

• The label on the minimum packing unit shows ; Part Number, Lot Number, Ranking, Quantity.

• Keep away from water, moisture in order to protect the LEDs.

• The LEDS may be damaged if the boxes are dropped or receive a strong impact against them. so precautions must be taken to prevent any damage.

10. Caution

1. Storage conditions

• Before open: temperature is 5 ~ 30 ℃, relative humidity below 60%.(the module should be used within 24H when opens), if not, please dehumidification and vacuum sealing .Humidity card changes color or bags leak must dehumidifier, dehumidifier conditions: 60° C±5° C, 24 h.The effective use period of product seal is 3 months.

2. Attention

• During use and assembly,please do not press light-emitting colloid surface, pay attention to the choice of suction nozzle SMT , to prevent chip die.

3. Electrostatic protection

• LED belong to grade I electrostatic sensitive device, please do ESD protection when touch and use

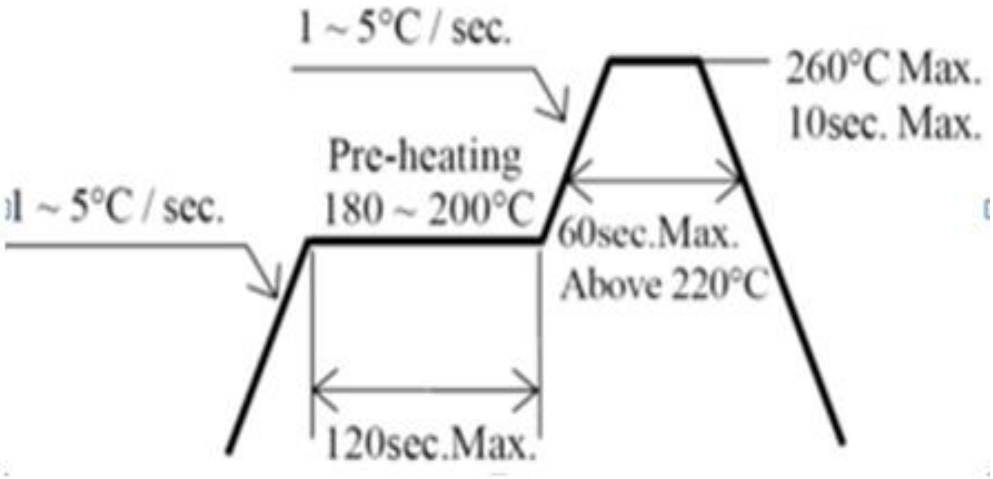
4. Clean condition

• If LED colloid surface dirt, use alcohol to clean.Can't use acetone or corrosive to clean.

5. Welding conditions

• Heating units or reflow welding machine are available to weld.Heat welding machine: 260 ℃ or less and molten tin, 3-6 seconds after maximum welding 2 times, natural cooling to room temperature, before packing.Reflow soldering is shown in figure:

Preheat temperature	Lead free
	180-200℃
Preheating time	＜120S
Peak temperature	＜260℃
Peak temperature welding time	＜10S



Explain:LEDS can be welded twice at most,it can be welded again only after the LEDS are cooled as room temparature.

6.The electrical test

• Unit chip voltage can not higher than 5 v, chip has positive and negative pad,the chip can not light up if weld wrong.

7.Design of circuit and heat dissipation

• Normal operating temperature: TS point (negative pad) is less than 85 ℃, if exceeded, customer needs to make reliability assessment, customer takes the risk.

• Power Supply Select: This product is powered by using a constant current driver, and the output current of the power range meets the requirement of specifications book, if use constant voltage source or other conditions, please do risk assessment.

8.Environmental requirements

• This product can not use under below situations, if use the product in any of the below conditions,please make sure the performance and reliability;Such as: wet , frost, salt air, corrosive gases (C1, H2S, where NH3, SO2, NOX); Exposure under the sun, exposure outdoor, dusty. Water, oil,liquid medical and organic solvent.

9.Using Compatibility

• The chemical composition of gas in lamps and surrounding environment of light source are essential to the life of the lamps, especially when you choose to use chemical composition, it is particularly important in lighting design. Before considering the use of any material, be sure to consult the product supplier or LED manufacturer. The more information obtained before using some material, the higher the performance of the lamp.

• Color difference matters needing attention

• The different Bin led has different photoelectric data,before use, please assess carefully

• Specific please check the <<**Notice of the point light source products**>> for reference