XL-2016UWC-05

技术数据表 Technical Data Sheet

2016白光0.5W 贴片式发光二极管

特点（characteristic）：

* L/W/H :2.0*1.6*0.5mm

Outline Dimensions (si

目录
Catalogue

Electrical Characteristics.....3

Typical Characteristic Curves.....6

Reliability Test Items And Conditions.....7

Outline Dimensions.....9

Packaging.....10

Guideline for Soldering.....12

Precautions.....14

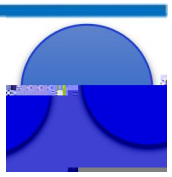
Electrical Characteristics

Absolute Maximum Ratings Ta=25

Parameter	Symbol	Value	Unit
Max Power Dissipation	PD	500	mW
Max Continuous Forward Current	IF	150	mA
Peak Forward Current	IFP	200	mA
Max Reverse Voltage	VR	5	V
Antistatic ability	ESD	2000	V
Operating Temperature Range	TOPR	-40 ~ +85 C	
Storage Temperature Range	TSTR	-40 ~ +85 C	
/ Lead Soldering Temperature/Time	TSOL	260 ≤6S	/

Initial Electrical Optical Characteristics Ta=25

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test conditions
Luminous Intensity	Φ	39		60	LM	IF=150mA
Color temperature	TC	6000		6500	K	IF=150mA
Coordinate value	X					IF=150mA
	Y					IF=150mA
Forward Voltage	VF	2.8		3.4	V	IF=150mA
Color rendering index	Ra		70			IF=150mA
Viewing Angle	2θ1/2		120		Deg	IF=150mA
Reverse Current	IR			1	μA	VR=5V



亮度分档:

Brightness grading:

代码 Code	最小值 Min	最大值 Max	单位 Unit	测试条件 Test conditions
J5	39	45	LM	IF=150mA
J6	45	52		
J7	52	60		

电压分档:

Voltage grading:

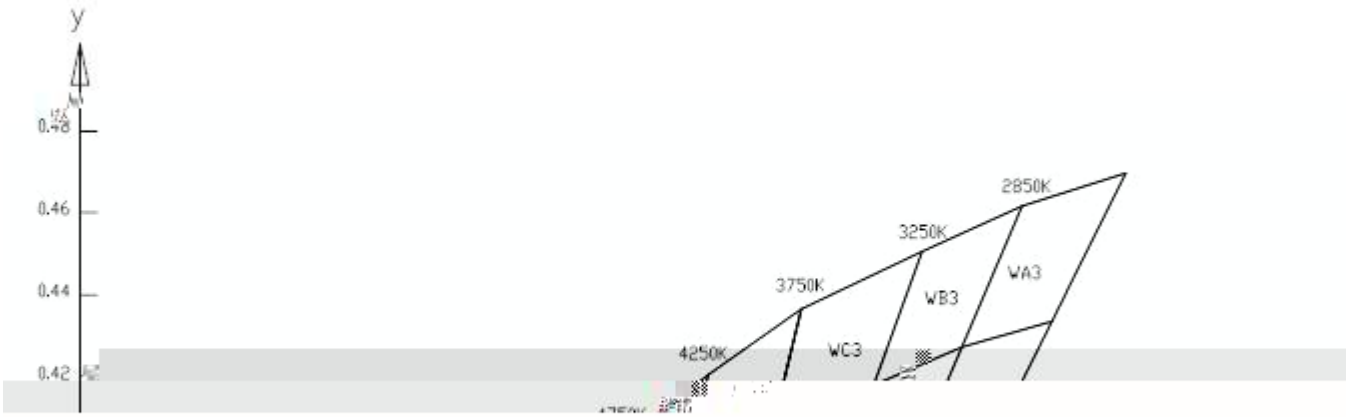
代码 Code	最小值 Min	最大值 Max	单位 Unit	测试条件 Test conditions
N13-3	2.8	3.0	V	IF=150mA
N13-4	3.0	3.2		
N13-5	3.2	3.4		

色温分档:

Color Temperature grading:

代码 Code	最小值 Min	最大值 Max	单位 Unit	测试条件 Test conditions
UW9-10	6000	6500	K	IF=150mA

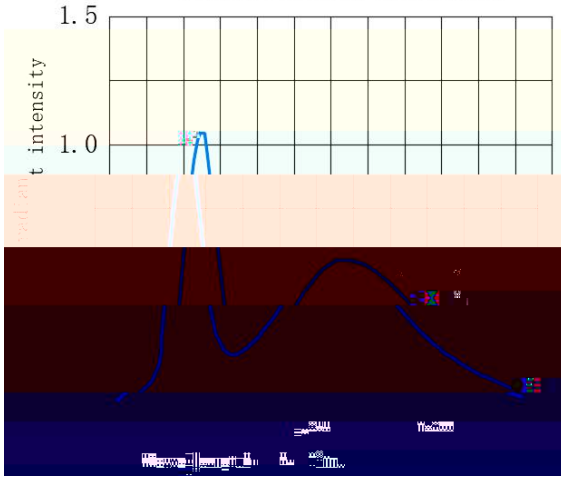
CIE 1931 xy CHROMATICETY DIAGRAM



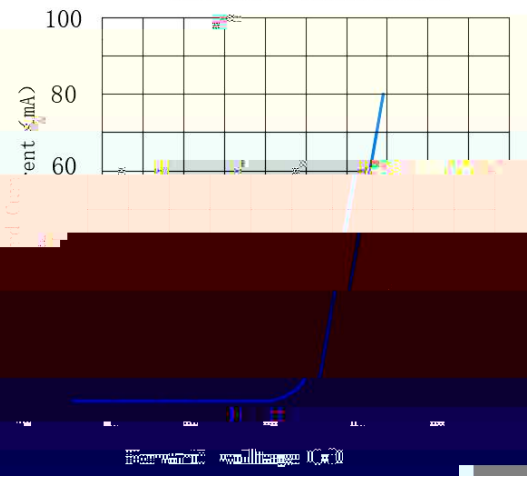
曲形特性曲线

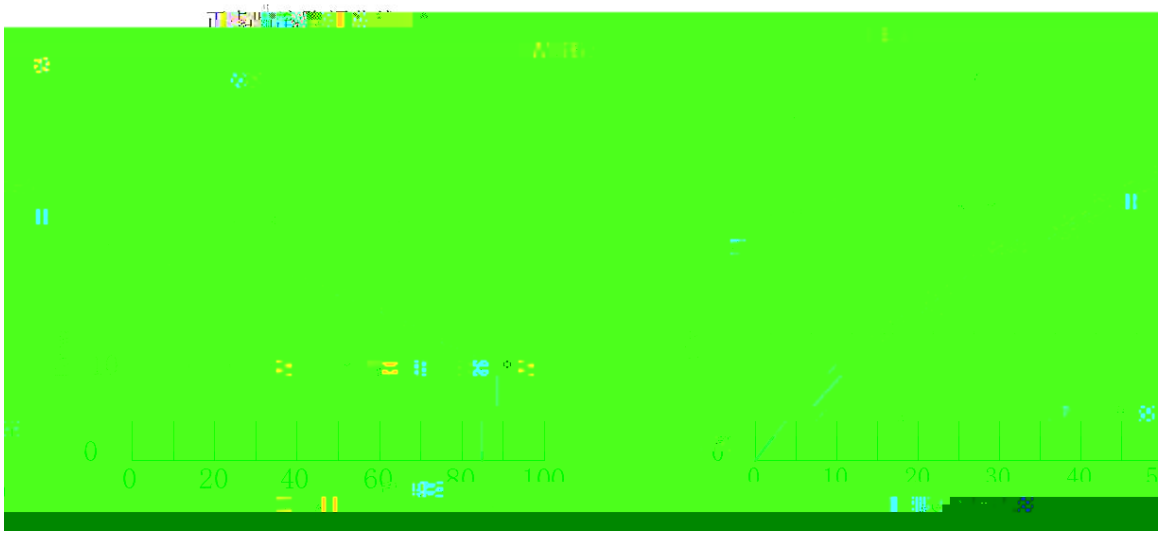
Typical Characteristics Curves

光谱分布曲线
Relative Spectral Distrbution

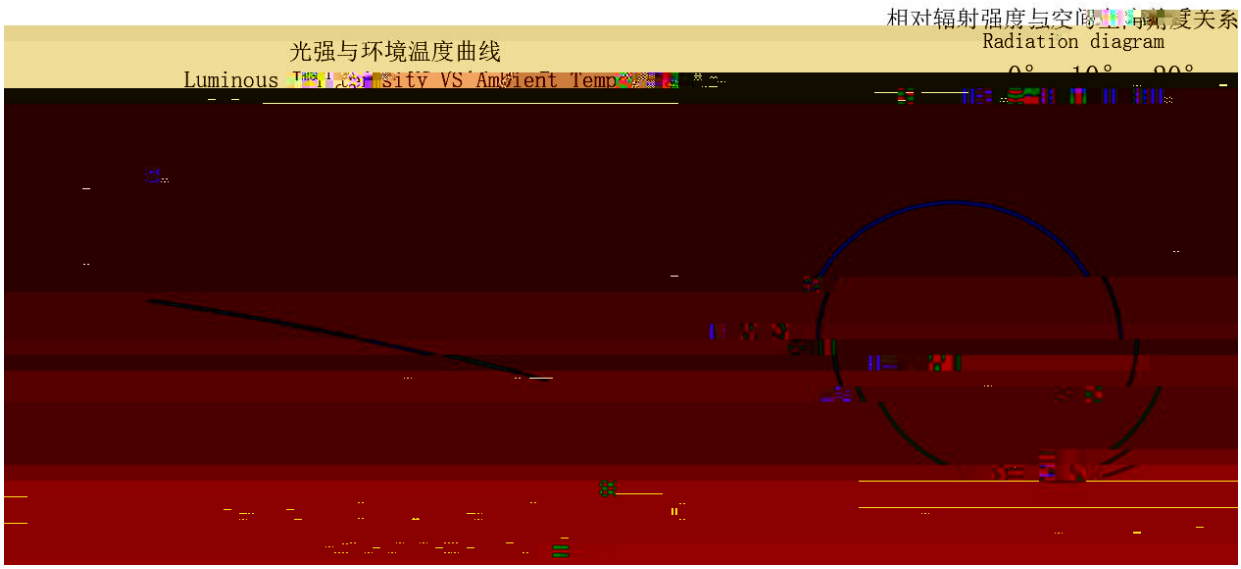


伏安特性
Volt ampere characteristic





光强与环境温度曲线
Luminous Intensity VS Ambient Temp



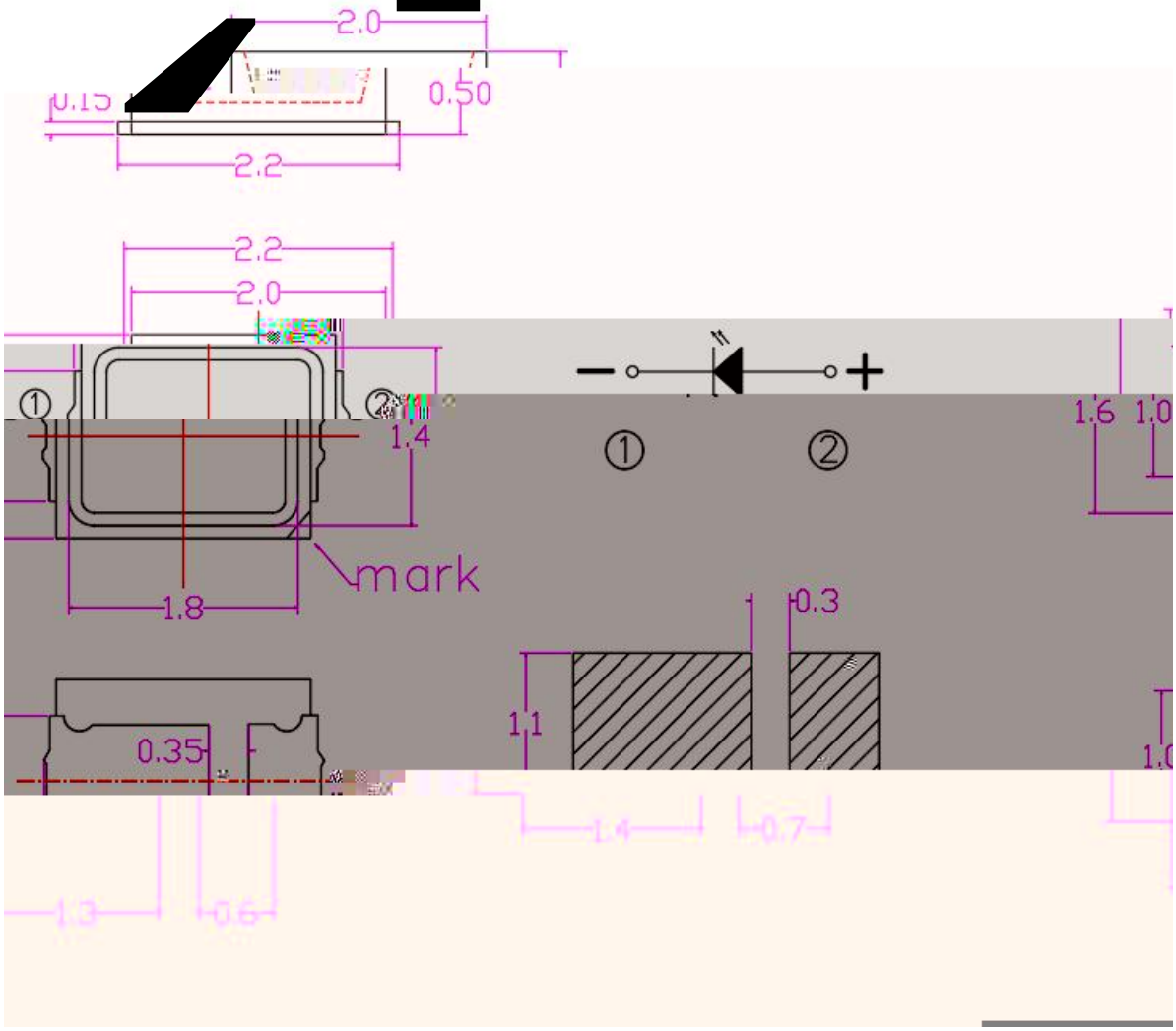
相对辐射强度与空间角度关系
Radiation diagram

25Ñ5 /Note If not otherwise indicated the test environment temp erature is 25Ñ5

T project	Test conditions	Number of tests	Reference standard	Failure criteria	LED PCS LED	PC

G

LD



1. mm

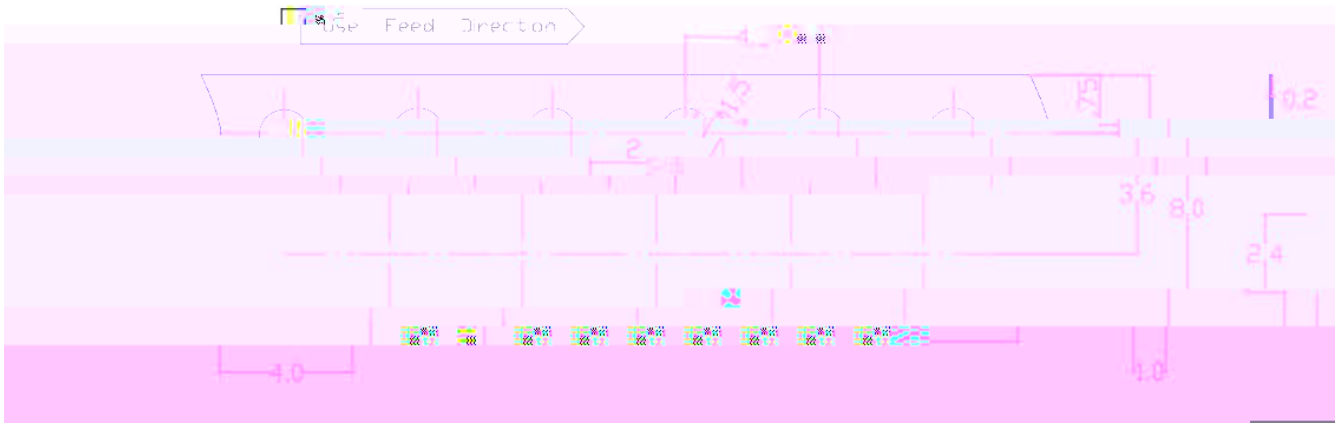
Remarks: All dimensions are in millimeters.

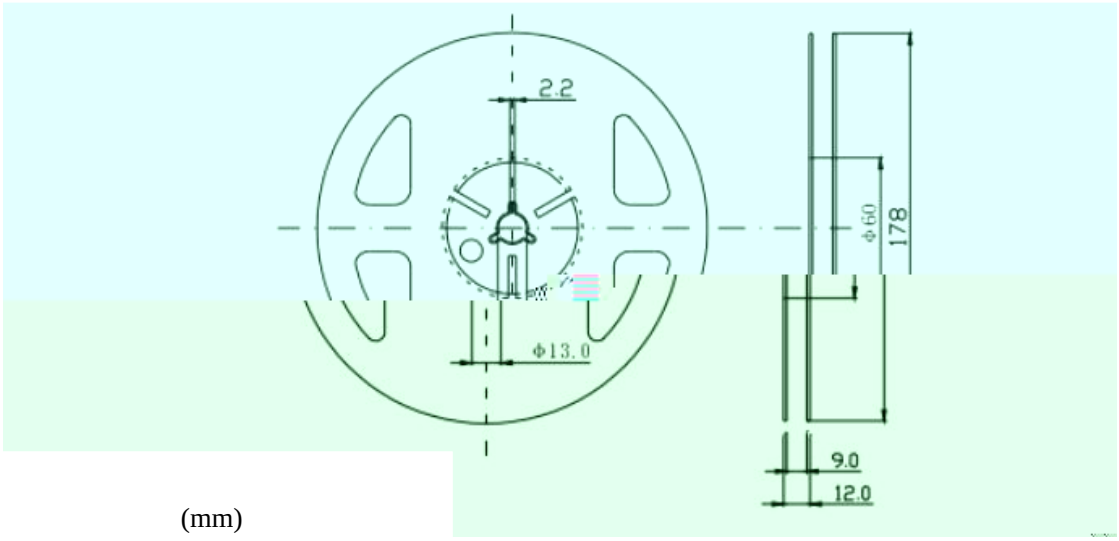
2. ±

包装（1）

Packaging (1)

载带与圆盘尺寸 Belt and disk dimensions





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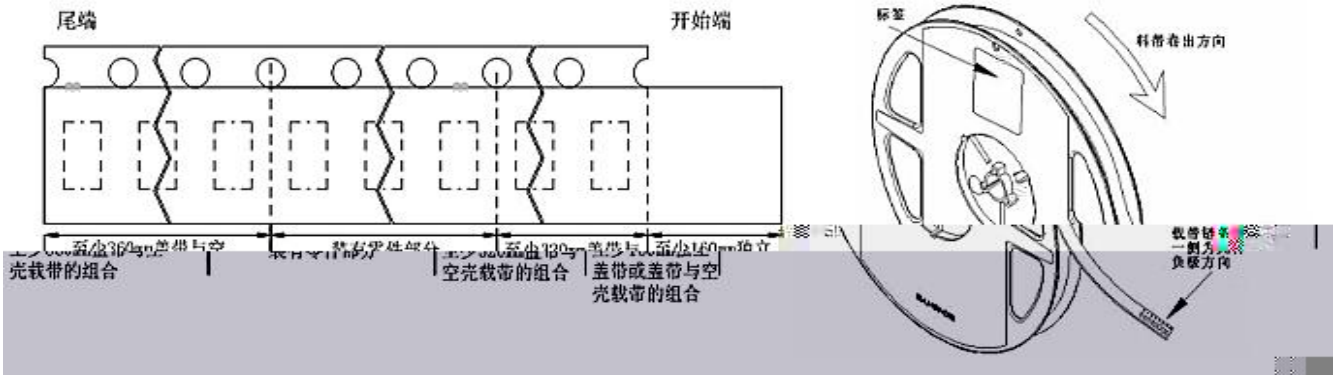
1. (mm)

1. Size unit is mm (mm).

2. Ñ0.1mm

2. The dimensional tolerance is Ñ 0.1mm.

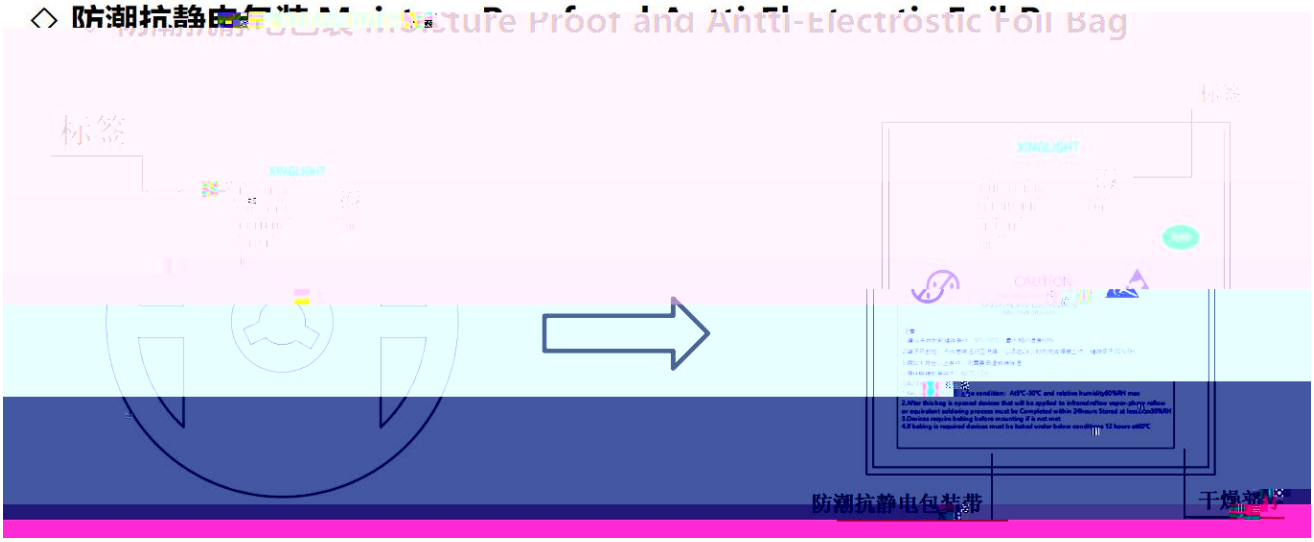
圆盘及载带卷出方向及空穴规格 Disk and carrier belt direction of roll and hole dimensions



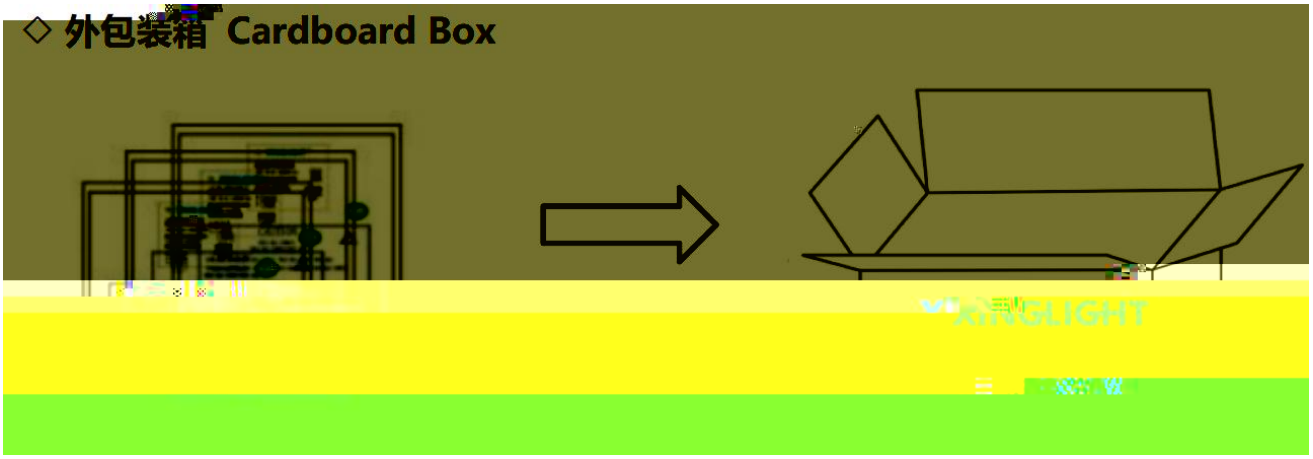
包装（2）

Packaging (2)

◇ 防潮抗静电包装 Moisture Proof and Anti-Electrostic Foil Bag



◇ 外包装箱 Cardboard Box



◇ 标签说明

焊接指导（1）

Guideline for Soldering (1)

1. 使用烙铁人手焊接

Hand Soldering

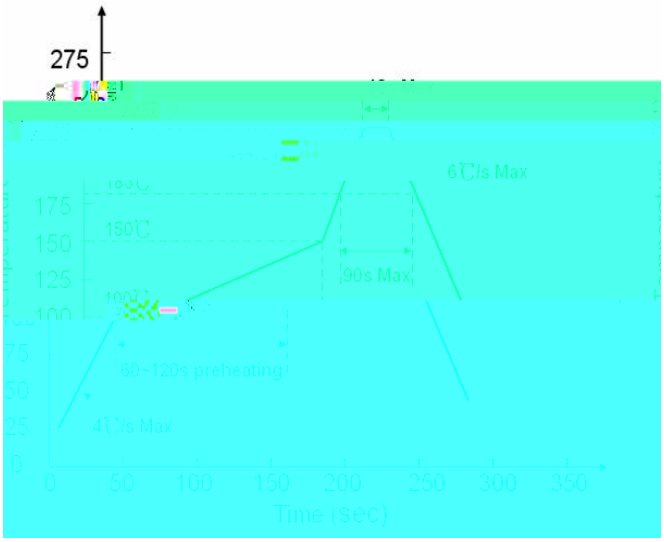
20W 300

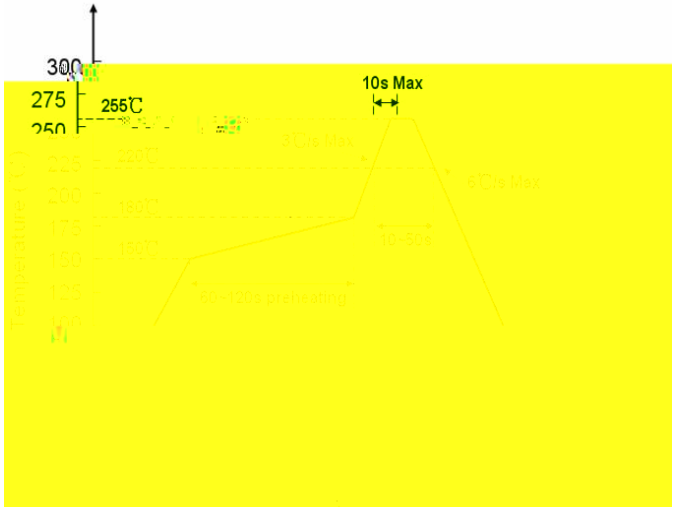
3 LED

A soldering iron of less than 20W is recommended to be used in Hand Soldering. Please keep the temperature of the soldering iron under 300 while soldering. Each terminal of 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. 回流焊接：

Reflow Soldering: Use the conditions shown in the under Figure ofPb-Free Reflow Soldering.





Lead process lead free

Reflow soldering should not be done more than two times.

LED

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.

240 ± 5 /6S

The recommended maximum welding temperature for the product is 240 ± 5 /6s

Part No.:

3、设计建议

Design Consideration

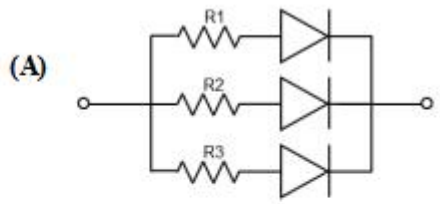
* LED

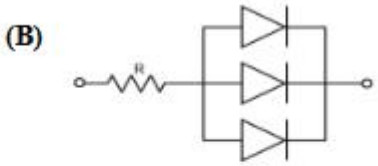
A LED B

LED V_F LED

* In designing a circuit, the current through each LED must not exceed the absolute maximum rating specified for each LED. In the meanwhile, resistors for protection should be applied, otherwise slight voltage shift will cause big current change, burn out may happen.

It is recommended to use Circuit A which regulates the current flowing through each LED rather than Circuit B. When driving LEDs with a constant voltage in Circuit B, the current through the LEDs may vary due to the variation in Forward Voltage (V_F) of the LEDs. In the worst case, some LED may be subjected to stresses in excess of the Absolute Maximum Rating.





* LED LED

* Thermal Design is paramount importance because heat generation may result in the Characteristics decline, such as brightness decreased, Color changed and so on. Please consider the heat generation of the LEDs when

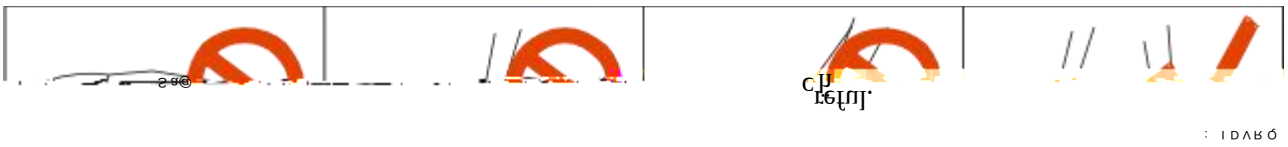
使用注意事项（ ）

4、其他事项：

Others

*

*When handling the product, touching the encapsulant with bare hands will not only contaminate its surface, but also affect on its optical characteristics. Excessive force to the encapsulant might result in catastrophic failure of the LEDs due to die breakage or wire deformation. For this reason, please do not put excessive stress on LEDs, especially when the LEDs are heated such as during Reflow Soldering.



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*The epoxy resin of encapsulant is fragile, so please avoid scratch or friction over the epoxy resin surface. While handling the product with tweezers, do not hold by the epoxy resin, be careful.

5、眼睛保护忠告：

Safety Advice For Human Eyes

*LED