



# 深圳市伟宸光电科技有限公司

Shenzhen wesing optoelectronic technology co., LTD

## 产 品 规 格 书

SPECIFICATION FOR PRODUCTION

客户名称 Customer Name:

产品型号 Product Name : W-P3030B-B9-C2

样品单号 Version number :

日 期 Deliver date : 2018.07.23

客 户 承 认 签 章		
Customer confirm and sign		
检 查 TESTED BY	核 对 CHECKED BY	承 认 APPROVED BY
审 核 结 果 INSPECT RESULT	<input type="checkbox"/> 合 格 ACCEPT	<input type="checkbox"/> 不 合 格 REJECT
说明 (REMARK) : _____ _____		

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Add : Building 72,SanZhuLi Industrial zone ,ShiYan Town,BaoAn District,ShenZhen City,GuangDong

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## 产品型号 Part Number: W-P3030B-B9-C2

### Features

- Package Size: 3.0(L) × 3.0(W) × 0.65(T) mm
- Silicone Packed
- Suitable for all SMT assembly and solder processes
- Available on tape and reel
- Suitable for different working environment
- Super long lifetime: 30000HRs
- Anti UV
- White colors are available in(1600K- 25000K)
- Wide viewing angle ( $2\theta 1/2=120^\circ$ )
- Package: 4000pcs/reel

### 产品特征

- 封装尺寸：3.0(长) × 3.0 (宽) × 0.65(高) mm
- 采用硅胶封装
- 适用于所有的SMT组装和焊接工艺
- 适用于载带及卷轴
- 适应多种工作环境
- 超长寿命：30000 小时
- 防紫外线
- 可供白光(1600K- 25000K)
- 宽角度 ( $2\theta 1/2=120^\circ$ )
- 包装：4000PCS/包

### Device Selection Guide 物料选用指南

ITEM项目	MATERIALS物料
Resin胶体	Silicon硅胶
Bonding wire焊线	23 $\mu$ m Au
Lens color胶体颜色	Water Clear水清透明
Dice晶片	InGaN

### 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



**ATTENTION**  
OBSERVE PRECAUTIONS  
FOR HANDLING  
ELECTROSTATIC  
DISCHARGE  
SENSITIVE  
DEVICES

注意：操作时应注意静电敏感  
释放设备装置

### 产品应用

- 室内照明：日光灯管、灯条
- 商业照明显示：广告字、广告灯箱
- LCD 背光源
- 装饰照明：柔性灯条
- 汽车内部辅助照明
- 其它照明和显示类

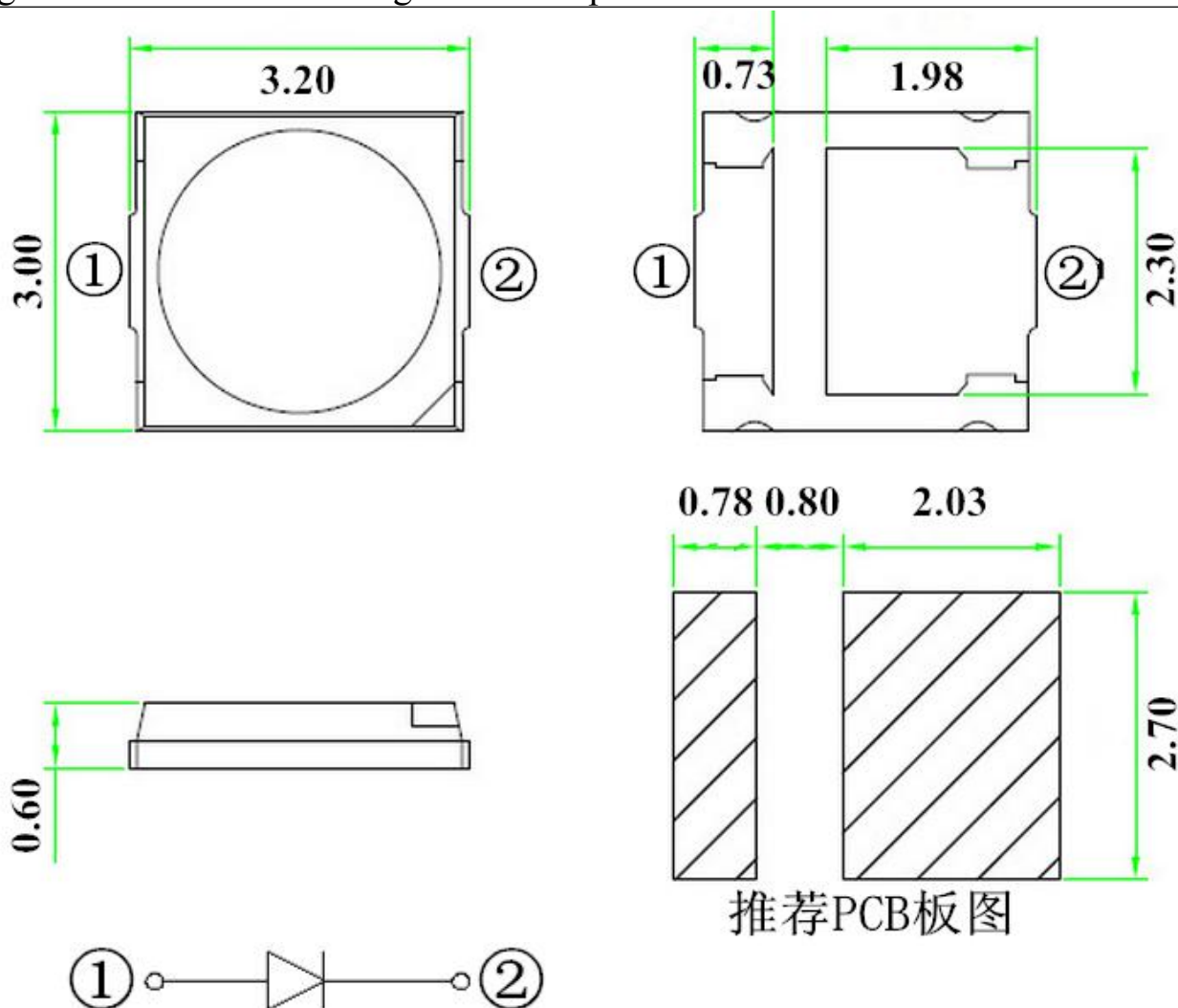
产品型号 Part Number: W-P3030B-B9-C2

反射盖灌注型高效率发光二极管

REFLECTOR COATING TYPE HIGH-PERFORMANCE LEDs

高性能 SMD 单色顶级 LED

High Performance SMD Single-Color Top LEDs



注释 NOTES :

- 1、所有的尺寸均以毫米(英寸) All dimensions are in millimeters (inches) ;
- 2、除特别标注外,所有尺寸允许公差 $\pm 0.15\text{mm}$  All dimension tolerance is  $\pm 0.15\text{mm}$  unless otherwise noted.

产品型号 Part Number: W-P3030B-B9-C2

极限参数 Absolute maximum ratings (TA=25℃)

参数 Parameter	符号 Symbol	额定值 Rat	Unit (单位)
正向电流 Forward current	I <sub>F</sub>	150	mA
反向电压 Reverse voltage	V <sub>r</sub>	5	V
功耗 Power dissipation	P <sub>d</sub>	500	mW
工作温度 Operating Temperature	T <sub>op</sub>	-20 ~+80	℃
储存温度 Storage Temperature	T <sub>stg</sub>	-40 ~+80	℃
峰值正向电流 Peak Forward Current ( Duty 1/10 @ 1KHz)	I <sub>FP</sub>	400	mA
焊接温度 Lead Soldering Temperature (5mm From Body)	T <sub>sol</sub>	260℃ For 5 Seconds)/℃	

光电特性 Electro-optical characteristics (T<sub>A</sub>=25℃)

参数 Parameter	测试条件 Test Condition	符号 Symbol	数值 Value			单位 Unit
			Min	Avg	Max	
主波长 Main Wave Length	I <sub>F</sub> =150mA	λ <sub>D</sub>	450	----	470	nm
正向电压 Forward voltage	I <sub>F</sub> =150mA	V <sub>f</sub>	2.8	----	3.4	V
光通量 Luminous Flux	I <sub>F</sub> =150mA	φ	8	----	10	lm
发光强度 Luminous intensity	I <sub>F</sub> =150mA	I <sub>v</sub>	2000	----	2500	mcd
角度 Viewing Angle	----	2θ1/2	---	120	---	deg
反向电流 Reverse Current	V <sub>R</sub> =5V	I <sub>R</sub>	--	--	10	μA

产品型号 Part Number: W-P3030B-B9-C2

发光强度范围 Luminous Intensity Ranking (TA=25°C) :

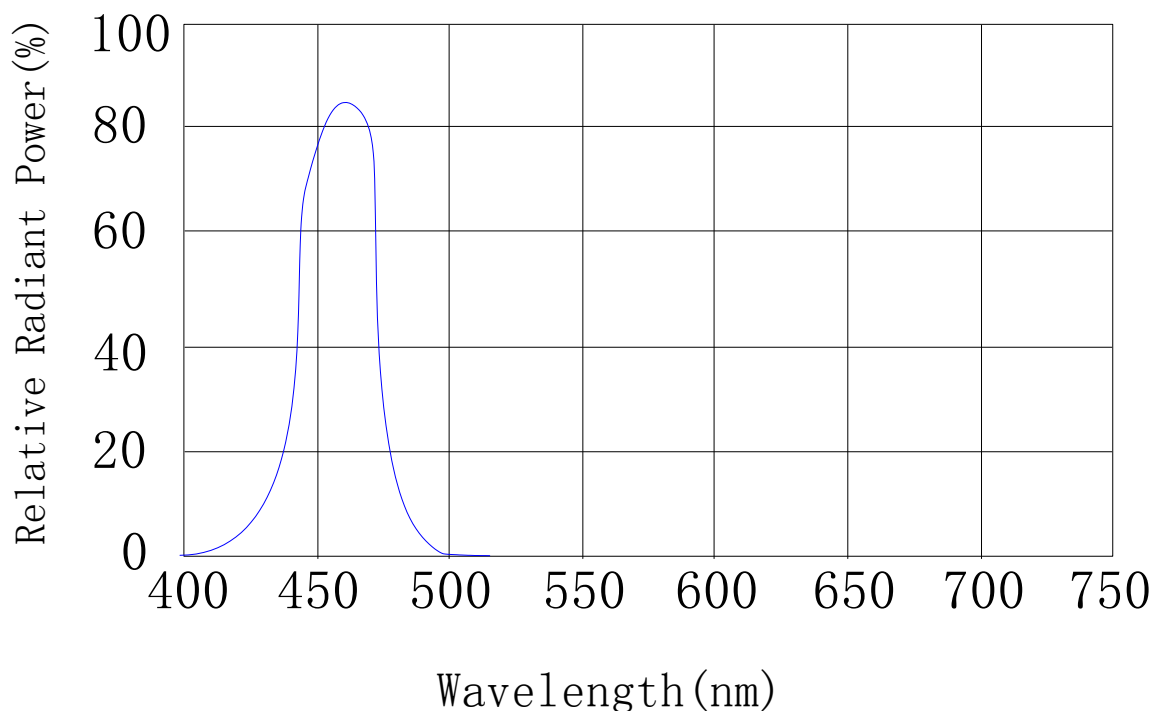
主波长 Main Wave Length(nm)	450-470
发光强度 Iv@ 150mA Luminous intensity ( mcd )	2000-2500
光通量 Φ@ 150mA Luminous Flux(lm)	8-10
正向电压 Vf@ 150mA Voltage(V)	2.8-3.4
发光颜色Color	Blue 蓝光

Note:

1. 正向电压的公差为±0.1V Tolerance of Forward Voltage is.
2. 光通量的公差为±15% Tolerance of Luminous Flux is.

典型光学特性曲线 Typical optical characteristics curves

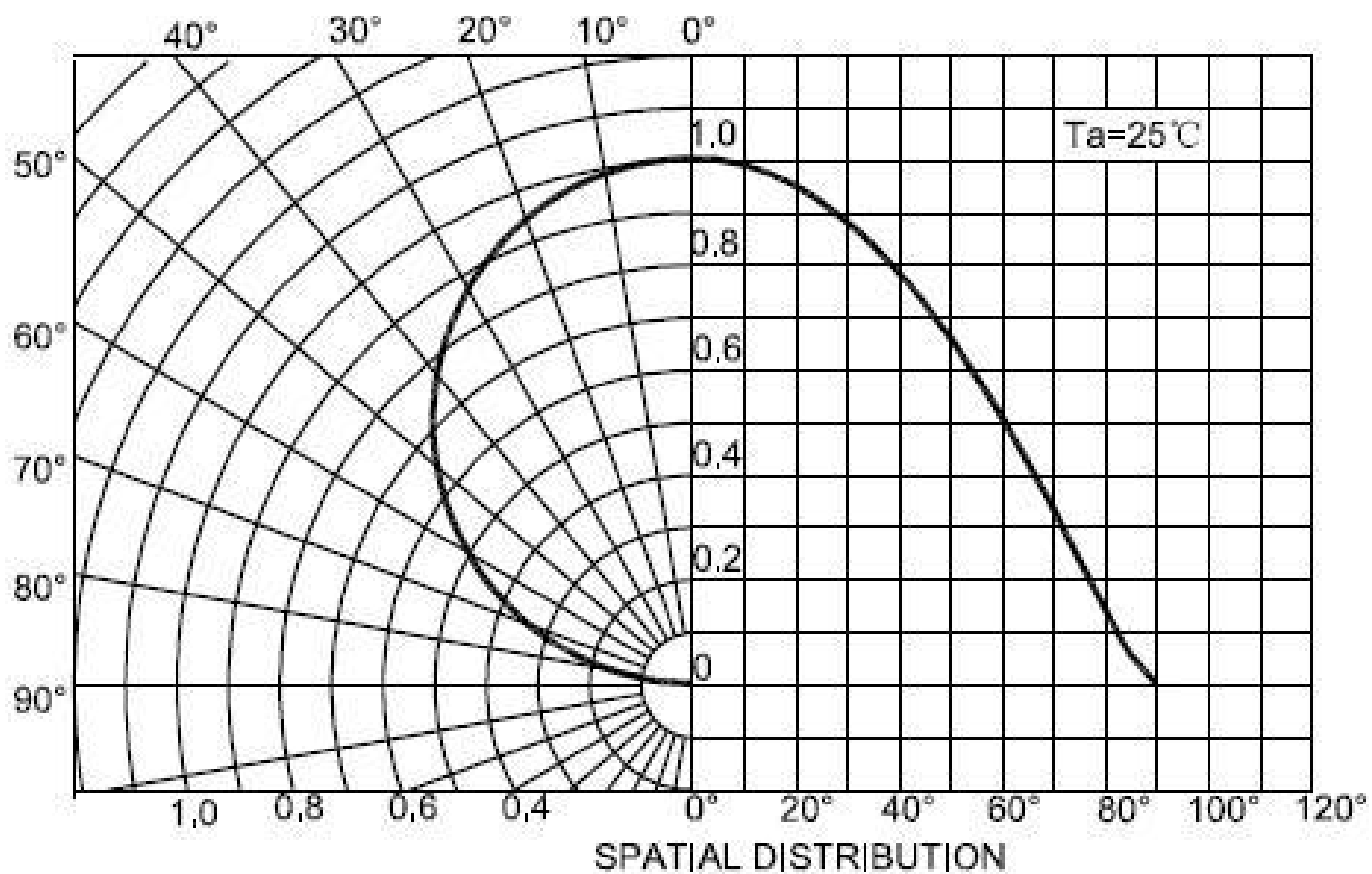
相对光谱分布特性曲线 Relative spectral emission (150mA):



产品型号 Part Number: W-P3030B-B9-C2

典型光学特性曲线 Typical optical characteristics curves

辐射图特性曲线 Radiation diagram

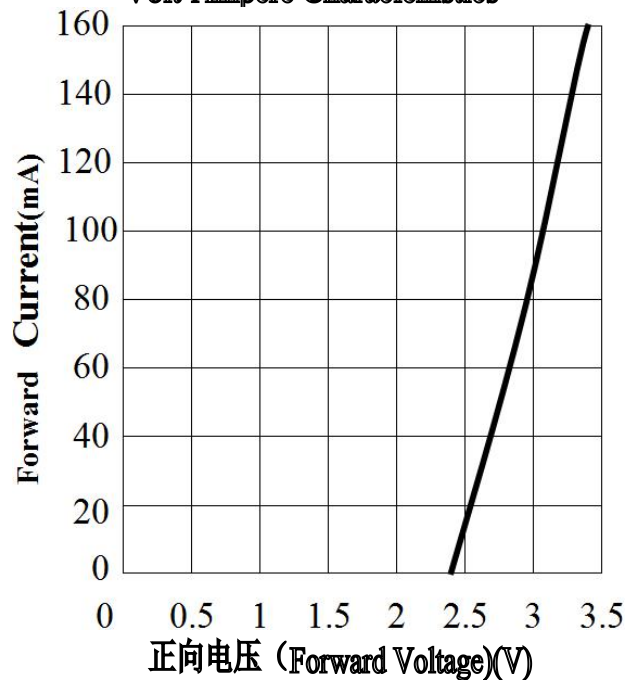


产品型号 Part Number: W-P3030B-B9-C2

## 典型光学特性曲线 Typical optical characteristics curves

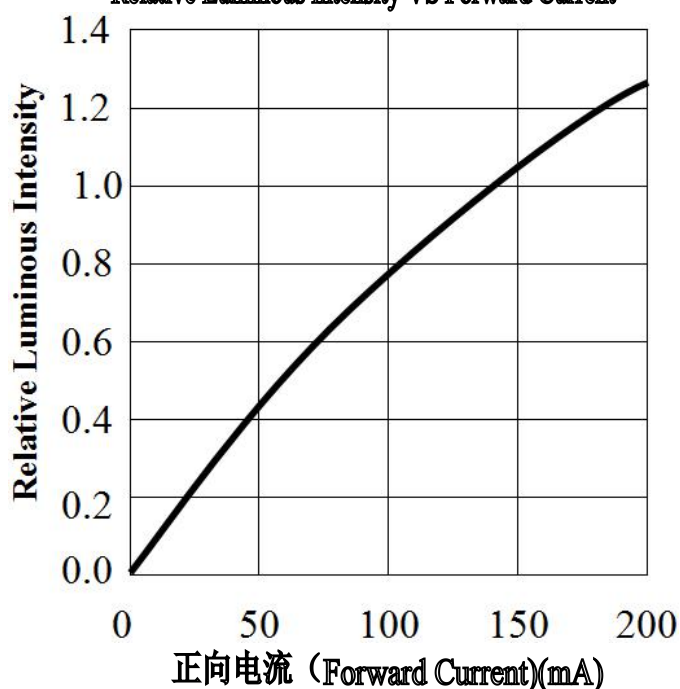
伏安特性

Volt-Ampere Characteristics



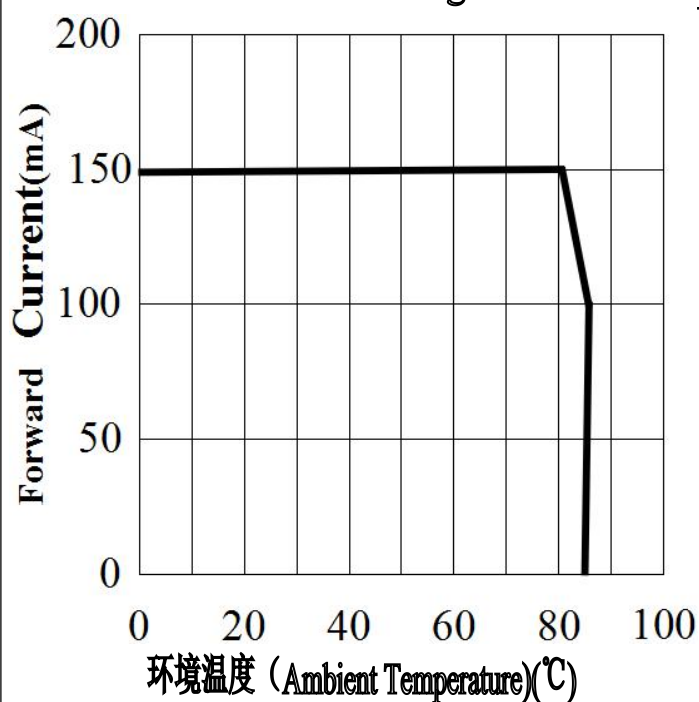
相对光强与正向电流特性

Relative Luminous Intensity VS Forward Current



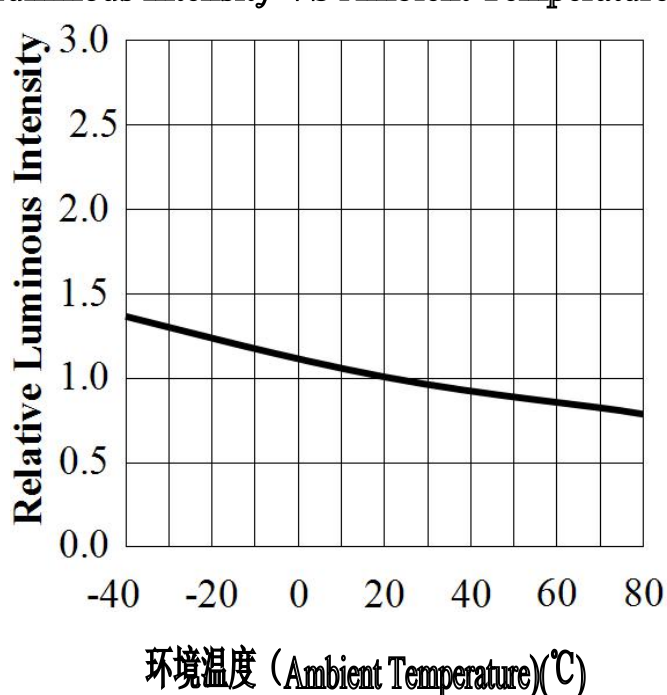
正向电流降额曲线

Forward Current Derating Curve



光强与环境温度曲线

Luminous Intensity VS Ambient Temperature



## 产品型号Part Number:W-P3030B-B9-C2

### 可靠性实验 Reliability Test Items And Conditions :

实验项目 Test Items	参考标准 Reference	实验条件 Test Conditions	时间 Time	样品数 Quantity	判据 Criterion
冷热冲击 Thermal Shock	MIL-STD-202G	-20℃ (30min) +80℃ (30min)	100循环 100 Cycles	22	0/22
湿热循环 Temperature And Humidity Cyclic	JEITA ED-4701 200 203	-10℃~65℃; 0%~90%RH	10循环 10cycles	22	0/22
高温储存 High Temperature Storage	JEITA ED -4071 200 201	Ta=100℃	1000H	22	0/22
低温储存 Low Temperature Storage	JEITA ED -4071 200 202	Ta=-40℃	1000H	22	0/22
高温高湿储存 High Temperature High Humidity Storage	JEITA ED -4071 100 103	Ta=60℃; RH=90%	1000H	22	0/22
高温寿命 High Temperature Life Test	JESD22-A108D	Ta=80℃	1000H	22	0/22
常温寿命试验 Life Test	JESD22-A108D	Ta=25℃ IF=150mA	1000H	22	0/22
耐焊接热 Resistance to Sodering Heat	GB/T 4937, II , 2.2&2.3	Tsol*=(240±5) ℃ 10secs	2次 2 times	22	0/22

### 失效判断标准 Criteria For Judging Damage

测试项目 Test Items	符号 Symbol	测试条件 Test Conditions	判定标准 Criteria For Judging Damage
正向电压 Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =I <sub>FT</sub>	初始值±10% Initial Data±10%
反向电流 Recerse Current	I <sub>R</sub>	V <sub>R</sub> =5V	I <sub>R</sub> ≤10uA
光强 Luminous Intensity	IV	I <sub>F</sub> =I <sub>FT</sub>	平均I <sub>V</sub> 衰减≤30%; 单个I <sub>V</sub> 衰减≤50% Average I <sub>V</sub> degradation≤30%; Single LED I <sub>V</sub> degradation≤50%
耐焊接热 Resistance to Soldering Heat			材料内部无裂痕、无材料间爆裂、剥离、无死灯 Material without internal cracks,no meterial between stripped,no deaded light

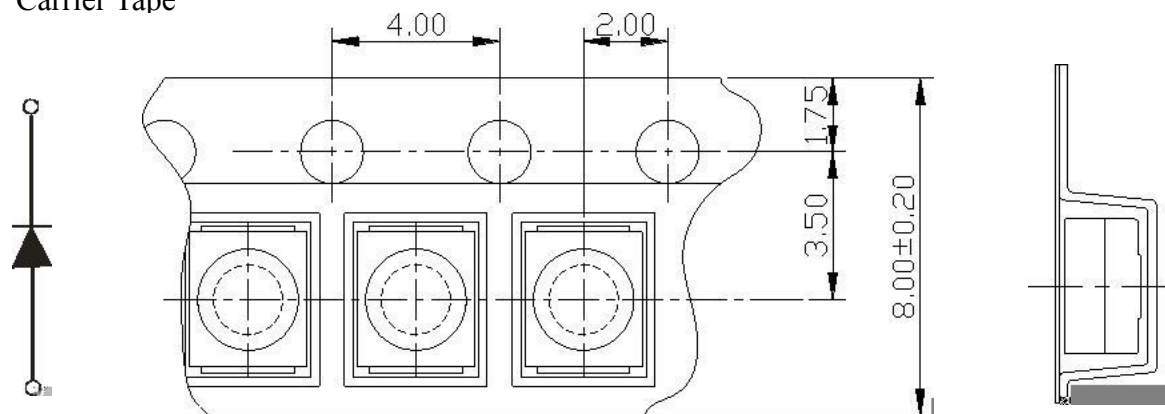
\*注：Tsol-锡液温度 \*Note Tsol-Temperature of tin liquid



产品型号 Part Number: W-P3030B-B9-C2

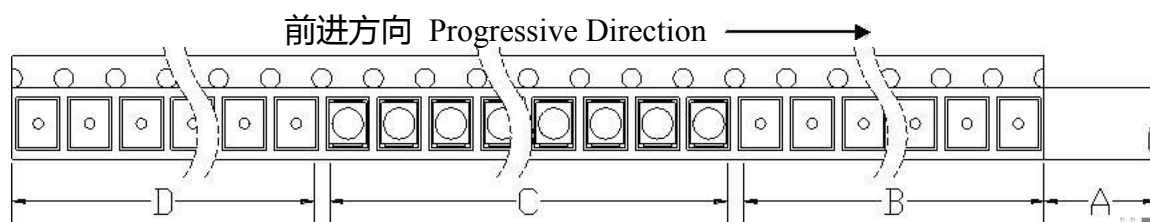
## 包装(1) Packaging(1):

### 载带 Carrier Tape



单位: mm, 未注公差: ±0.1 mm All dimensions in mm, tolerances unless mentioned is

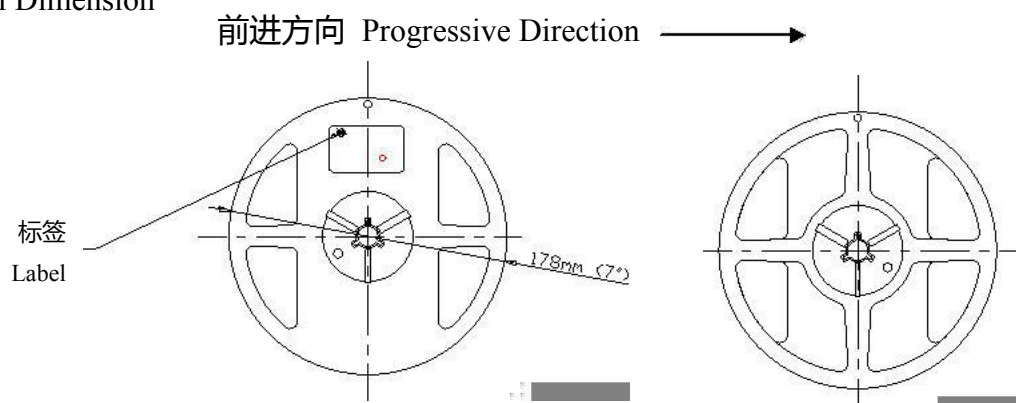
### 编带细节 Details Of Carrier Tape



A: 盖带, 300 mm; B: 引导, 空带, 200mm; C: 编载产品 4000只; D: 尾部, 空带, 200mm

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

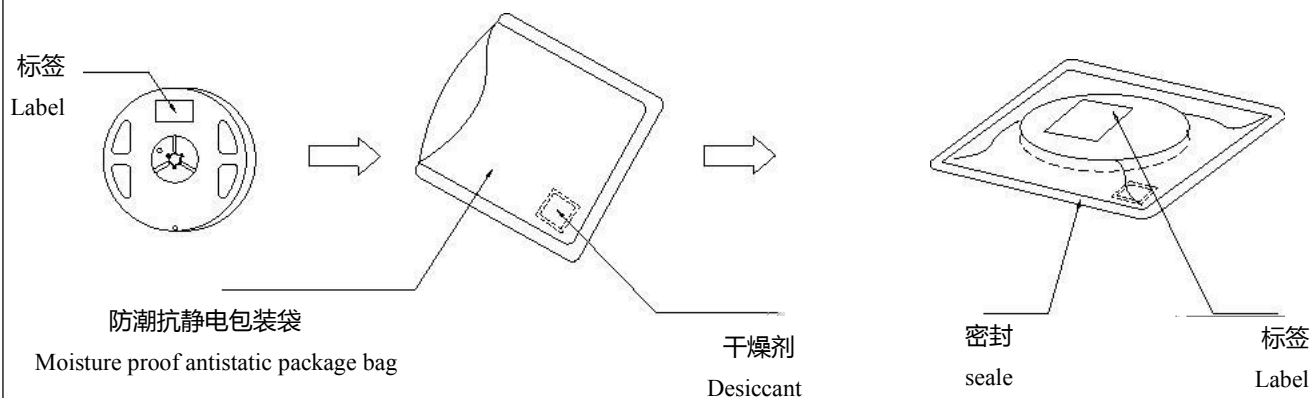
### 带盘 Reel Dimension



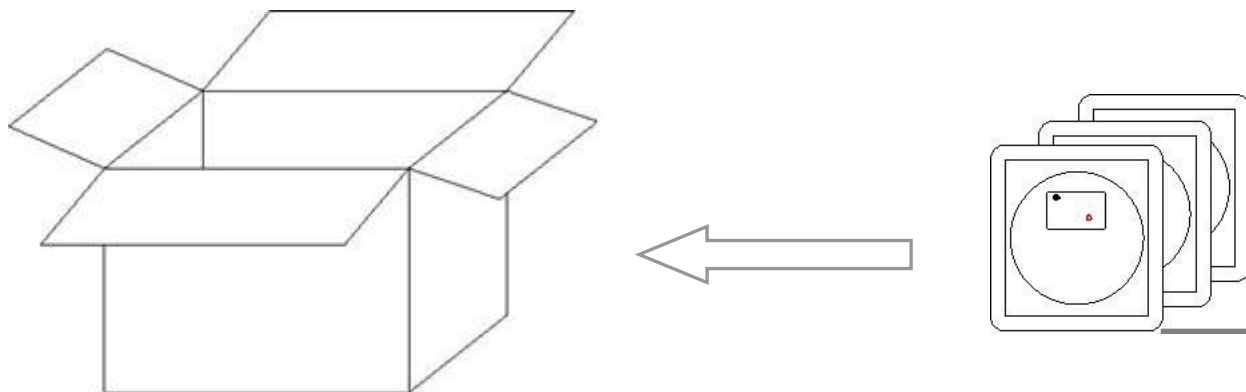
产品型号 Part Number: W-P3030B-B9-C2

## 包装 (2) Packaging (2):

### ✧ 防潮抗静电包装 Moisture Proof and Anti-Electrostatic Foil Bag



### ✧ 外包装箱 Cardboard Box



## 产品型号 Part Number: W-P3030B-B9-C2

### 产品使用说明 (Useful hint) :

#### 1、使用烙铁人手焊接 Hand Soldering

推荐使用功率低于 20W 的烙铁,焊接时烙铁的温度必须保持在 360℃以下,且每个电极只能进行一次焊接,每次焊接的持续时间不得超过 3 秒。

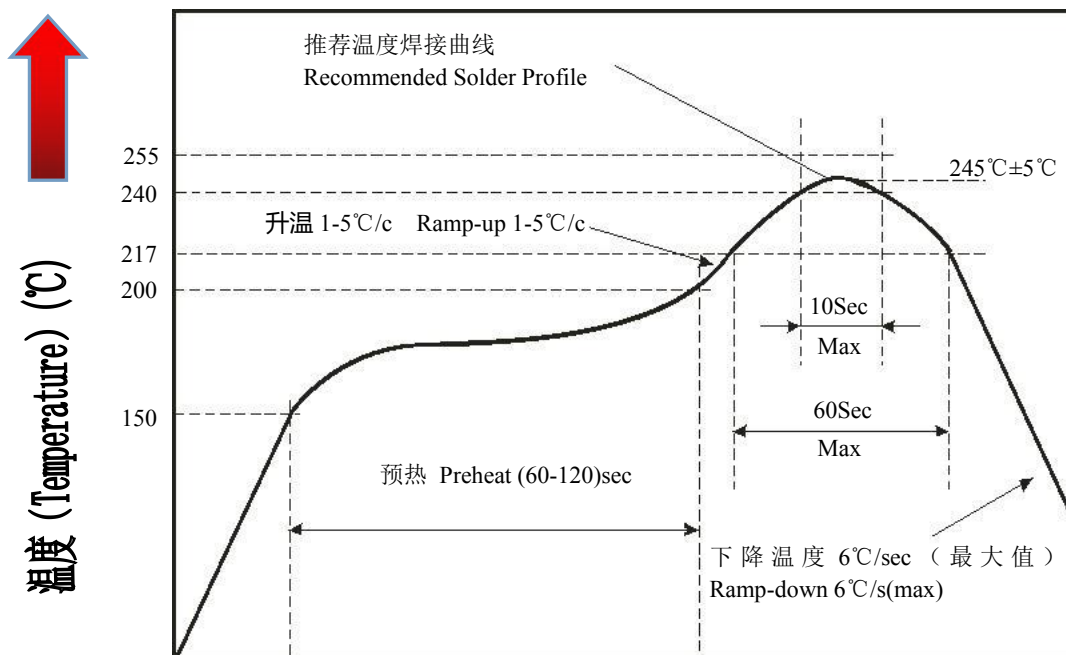
人手焊接过程中不慎操作易引起 LED 产品的损坏,应当小心谨慎。

A soldering iron of less than 20W is recommended to be used in Hand Soldering. Please keep the temperature of the soldering iron under 360℃ 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: 推荐使用以下无铅回流焊接温度图进行。

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



- 回流焊最多只能进行两次。

Reflow soldering should not be done more than two times

- 在回流焊升温过程中, 请不要对 LED 施加任何压力。

Stress on the LEDs should be avoided during heating in soldering process

- 在焊接完成后, 待产品温度下降到室温之后, 再进行其它处理。

After soldering, do not deal with the product before its temperature drop down to room Temperature.

## 产品型号 Part Number:W-P3030B-B9-C2

### 使用注意事项 Precautions(1)

#### 1.烘烤除湿标准 Standard for drying and dehumidification :

a-卷装：除湿方法，去掉静电袋，在使用前请将产品放在 65-70℃烤箱中烘烤≥24 小时。

Package:dehumidification method, remove the electrostatic bag, before use, please put the product in 65-70 °C oven, baking not less than 24 hours.

b-散数：除湿方法，在使用前请将产品放在 150-160℃烤箱中烘烤≥4 小时。

Bulk number: dehumidification method, please put the product in 150-160 °C oven before baking, not less than 4 hours.

c-从烤箱中拿出来后请在 4 小时内立即使用完毕。

Please take it within 4 hours after taking it out of the oven.

#### 2. 贮存： Storage

●本产品使用密封防潮抗静电袋包装，并附有干燥剂，未开封的产品有一年的保存时间。

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

●开封前，产品须存放在温度不高于 30℃，湿度不高于 60%RH 的环境中。

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

●开封后，产品须存放在温度不高于 30℃，湿度不高于 10%RH 的环境中，且应该在 4 小时内使用完。建议工作环境为温度不高于 30℃，湿度不高于 60%RH。

After opening the package, the product should be stored at 30℃ or less and humidity less than 10%RH, and be soldered within 4 hours. It is recommended that the product be operated at the workshop condition of 30℃ or less and humidity less than 60%RH.

●对于尚未焊接的 LED，如果吸湿剂或包装失效，或者产品没有符合以上有效存储条件，烘焙可以起到一定的性能恢复效果。烘焙条件：（65-70）℃，持续 24 小时。

If the moisture absorbent material has faded away or the LEDs have exceeded the storage time, baking treatment should be performed based on the following condition: (65-70)℃ for 24 hours.

## 产品型号 Part Number: W-P3030B-B9-C2

### 3. 静电 Static Electricity:

静电和电涌会导致产品特性发生改变，例如正向电压降低等，如果情况严重甚至会损毁产品。所以在使用时必须采取有效的防静电措施。

所有相关的设备和机器都应该正确接地，同时必须采取其他防止静电和电涌的措施。

使用防静电手环，防静电垫子，防静电工作服、工作鞋、手套，防静电容器，都是有效的防止静电和电涌的措施。

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.

## 使用注意事项 Precautions (2)

### 4. 硫化 Vulcanization:

LED 硫化是由于环境中的硫进入支架内部与+1 价的银发生化学反应生成黑色  $\text{Ag}_2\text{S}$  的过程。该过程会导致支架镀银层的反光能力下降，色温漂移和光衰严重，很大程度上影响了产品性能。因此，在使用时应注意采取相应的防硫措施，如避免使用挥发性强的含硫物质，避免接触含硫较高的物质。

LED curing is due to sulfur being in bracket and the +1 price of silver in the chemical reaction generated  $\text{Ag}_2\text{S}$  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.

### 5. 眼睛保护忠告 Safety Advice For Human Eyes:

LED 发光时，请勿直视发光光源，特别是对于一些光强较高的 LED，强光可能伤害你的眼睛。

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.