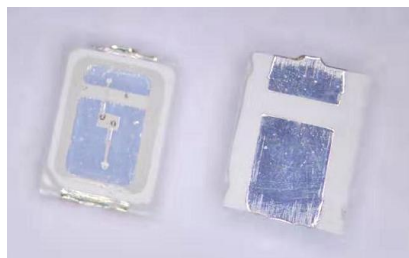




## 产品规格书

### PRODUCT SPECIFICATION



产品型号 (Product Model) : HS-2016-UB-3V

产品描述 (Product Description) : 2016 蓝光 0.5 瓦 3 伏

产品制造商: 深圳市鸿之森电子有限公司 Product manufacturer: Shenzhen hongzhisen Electronic Co., Ltd			
市场部 Market department	核准 approval	编制 authorized strength	时间 time
			2020-6-23

产品应用商: Product application:		
核准 approval	确认 affirm	时间 time



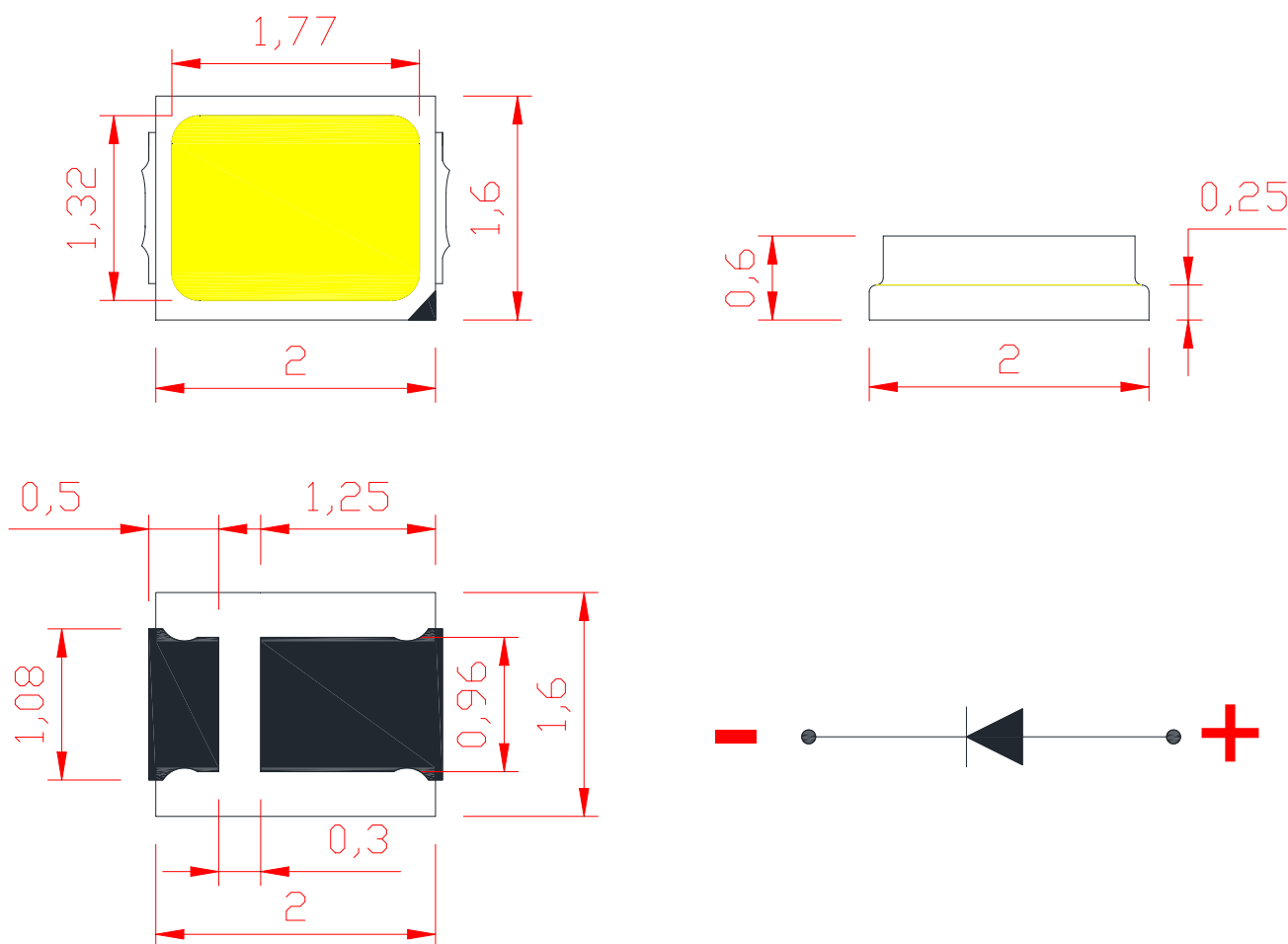
HS-2016-UB-3V

2016 蓝光-0.5 瓦 3 伏

## ■ 产品特性 (Features)

- 长寿命 (Long operating life )
- 低维护成本 (Reduced maintenance costs )
- 高效能 (More energy efficient )
- 低电压直流驱动 (Low voltage DC operated )
- 启动快 (Instant light )
- 符合RoHS标准 (RoHS compliant)

## ■ 外形尺寸 (Outline Dimension)



说明: ①所有标注尺寸单位为毫米 (All dimensions are millimeters) ;

②公差为 0.05 毫米 (Tolerance is 0.05 mm) 。



# 深圳市鸿之森电子有限公司

HS-2016-UB-3V

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## 最大绝对额定值 (Absolute maximum ratings) Ta=25°C

参数 Parameter	符号 Symbol	典型值 Typical	单 Unit
功率耗损 Power dissipation	Pd	480	mW
正向电流 Forward current	If	150	mA
反向电压 Reverse voltage	Vr	5	V
工作温度范围 Operating temperature range	Top	-40 ~+85	°C
贮存温度范围 Storage temperature range	Tstg	-40~+100	°C
最大脉冲电流 Peak pulsing current	I <sub>fp</sub>	225	mA
抗静电能力 Electrostatic Discharge	ESD	2000(HBM)	V
焊接温度 Soldering temperature	Tsol	230~260, ≤10s	°C

备注：脉冲持续时间 ≤ 10msec，占空比 ≤ 1/10  
IFP Conditions: Pulse Width ≤ 10msec. and Duty cycle ≤ 1/10.

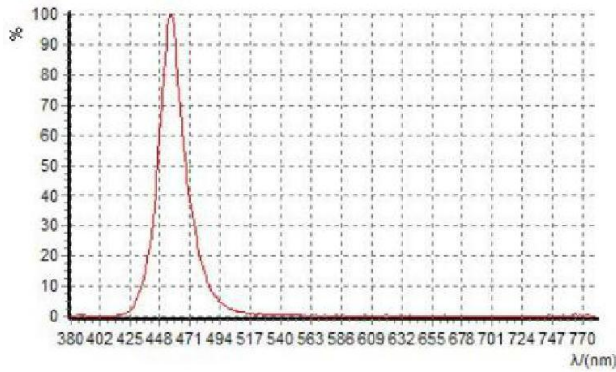
## 电器光学特性 (Electrical & Optical Characteristics) Ta=25°C

项目 Item	测试条件 Test Condition	符号 Symbol	最小值 Min.	典型值 Typ.	最大值 Max.	单位 Unit
正向电压 Forward voltage	If=150mA	Vf	3.0	--	3.2	V
光通量 Luminous intensity	If=150mA	Iv	2500	--	3000	MCD
主波长 Main wavelength	If=150mA	λ <sub>d</sub>	460	--	465	nm
半功率角 Viewing angle at 50% Iv	If=150mA	2 θ 1/2	100	--	120	Deg
反向电流 Reverse current	Vr=5V	I <sub>r</sub>	--	--	5	μA

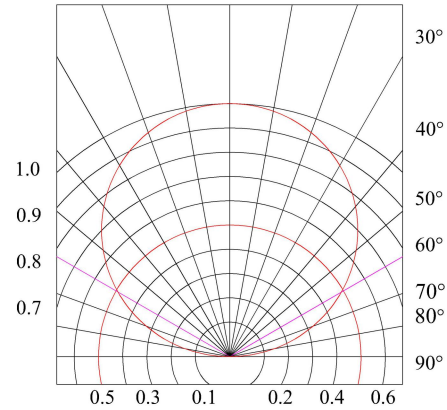


## ■ 典型光电特性曲线 (Typical optical characteristics curves)

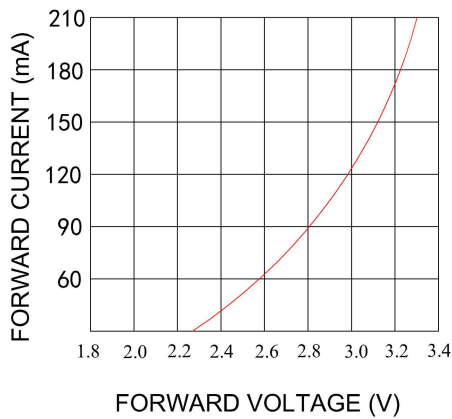
### ◆ 发射光谱 (Emission spectrum)



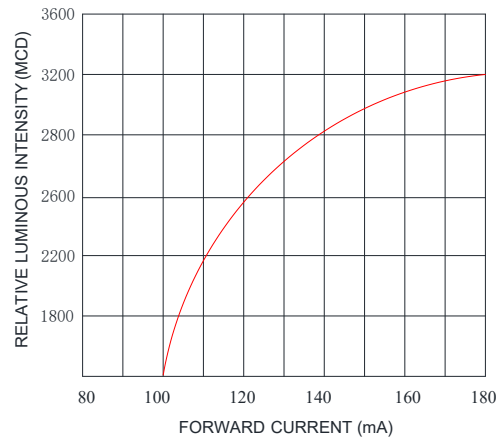
### ◆ 典型辐射分布图 (Typical radiation distribution map)



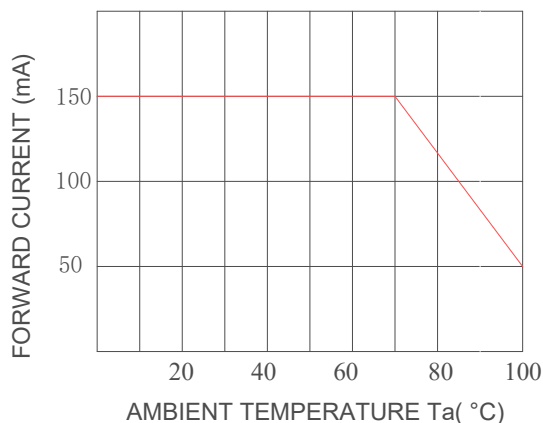
### ◆ 伏安特性 (V-A characteristic)



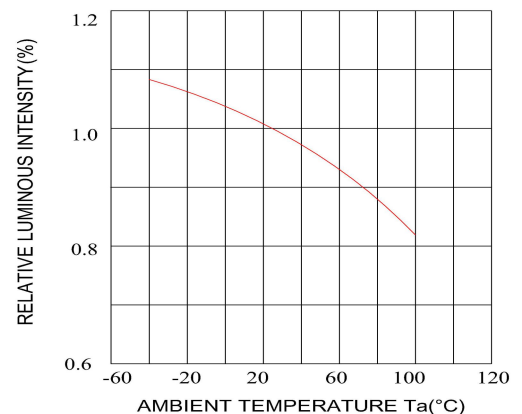
### ◆ 亮度特性 (Luminance characteristic)



### ◆ 温度与电流关系 (Temperature and current characteristic)



### ◆ 温度与亮度关系 (Temperature and brightness characteristic)





## ■ 可靠性试验 (Reliability test)

测试项目 Test project	测试条件 Test conditions	测试周期 Test cycle	样品数量 Sample quantity	允收 Ac/Re
常温老化 Normal temperature aging	Ta=25°C IF=150mA	1000H	22pcs	0/1
高温老化 High temperature aging	Ta=85°C IF=150mA	1000H	22pcs	0/1
高温存储 High temperature storage	Ta=100°C	1000H	22pcs	0/1
低温存储 Cryogenic storage	Ta=-40°C	1000H	22pcs	0/1
冷热冲击 Thermal Shock	-40°C/30min~ 100°C/30min	300 cycles	22pcs	0/1
回流焊 Reflow test	Ta=260°C T=10s	3 times	22pcs	0/1
高温高湿老化 High temperature and high humidity aging	85°C/85%RH IF=150mA	500H	22pcs	0/1
硫化实验 Vulcanization experiment	Ta=85°C	2H	10pcs	0/1
红墨水实验 Red ink experiment	Ta=120°C	2H	22pcs	0/1
静电测试 Antistatic test	2000V HBM	5 times/pcs	10pcs	0/1

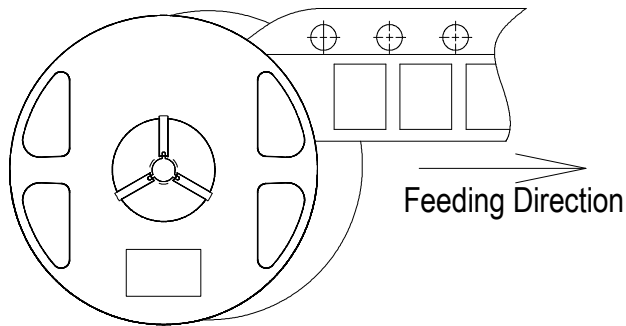


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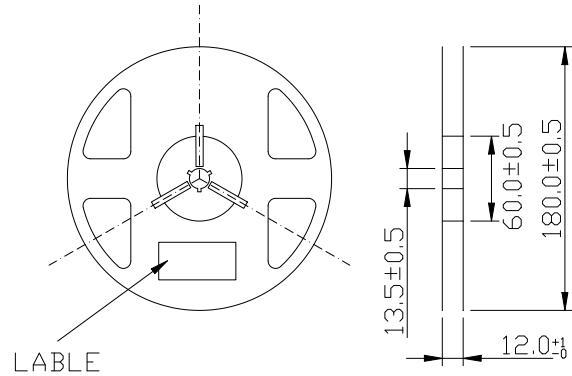
2016 蓝光-0.5 瓦 3 伏

## 卷盘包装规格 (Reel packaging specification)

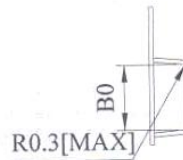
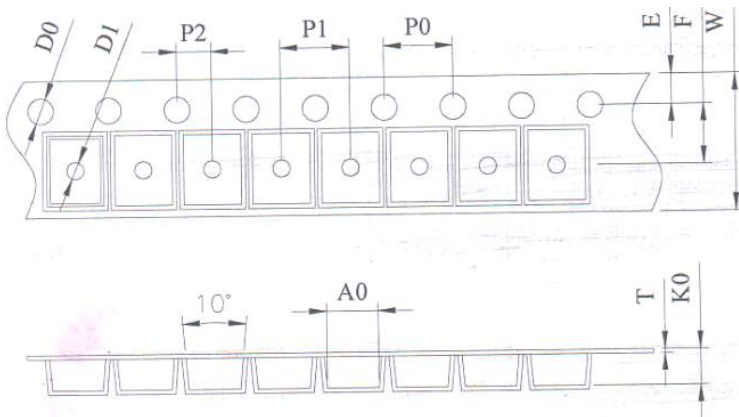
◆ 卷带输送方 (Feeding Direction)



◆ 卷盘尺寸 (Dimensions of Reel)



◆ 卷带尺寸 (Dimensions of Tape)



W	8.00±0.10
T	0.20±0.10
A0	1.80±0.10
B0	2.35±0.10
K0	0.80±0.10
E	1.75±0.10
F	3.50±0.10
P0	4.00±0.10
P1	4.00±0.10
P2	2.00±0.10
D0	1.60±0.10
D1	1.10(MIN)
10P0	40.00±0.2

备注 (NOTES) :

1、无材料部分同样用上封带密封;

No material part is also sealed with sealing tape.

2、材料缺口 (负极) 方向, 与卷带齿孔方向一致;

The direction of material gap (negative pole) is the same as that of the coiling hole.

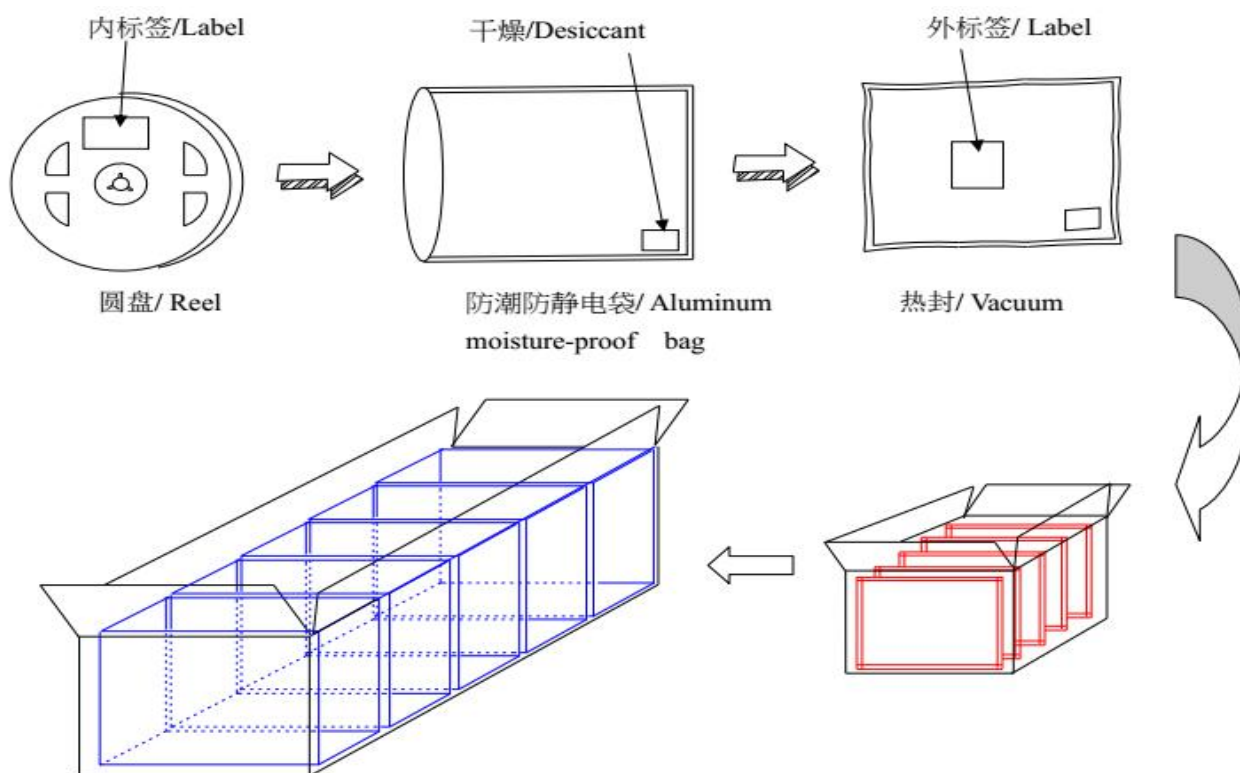
3、4000pcs/卷

4000 pcs/ Reel.



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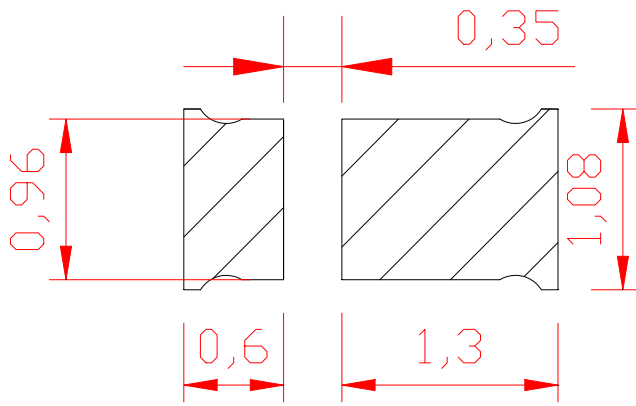
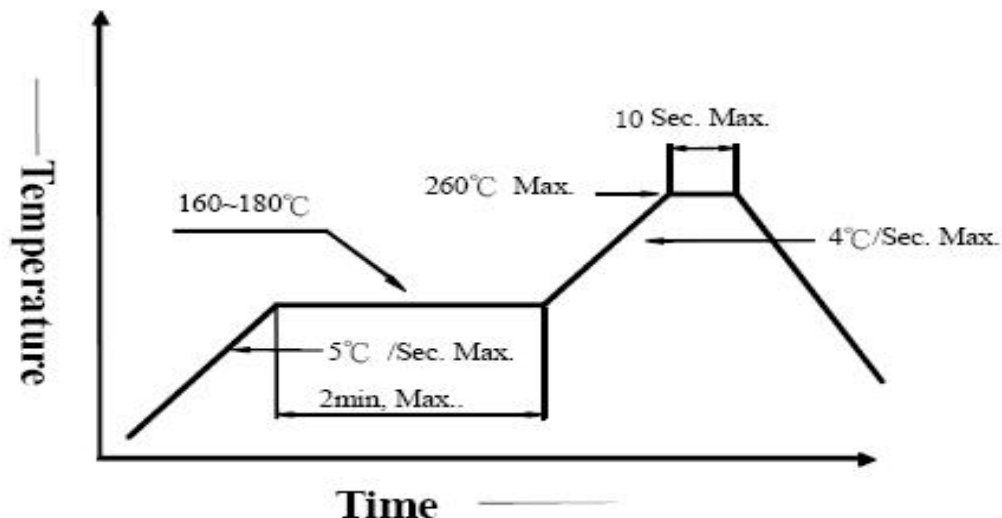
## ■ 纸箱包装规格 (Carton packaging specification)



## ■ 标签 (Label)



## ■ 使用重要事项 (Importation for user)

<p>建议焊盘尺寸 (Recommended pad size)</p>	
<p>无铅回流焊规范 (Specification for lead free reflow soldering)</p>	

### 说明 (Note) :

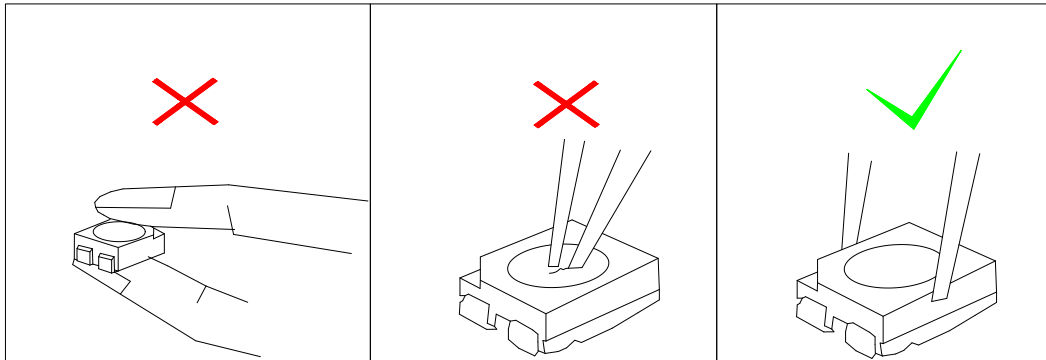
- 1、焊接时请不要重压 LED 灯 (Do not press LED lamp when welding) ;
- 2、焊接后温度未回降到常温时请勿扭曲线路板 (Do not distort the circuit board when the temperature does not return to normal temperature after welding) ;
- 3、手工焊接时, 烙铁温度不高于 300°C, 每个焊脚焊接时间不超过 3 秒  
(The temperature of the iron should be lower than 300°C and soldering within 3sec per solder-pad is to be observed) ;





4、必须注意的是把这些灯放到装置中使用时，不可接触 LED 灯的胶体表面，以避免其受到破坏导致死灯或减少光效率。

(Caution must be used in handing this device to avoid damage to the lens surfaces that will reduce optical efficiency)。



## ■ 存储重要事项 (Important storage items)

1、请在未准备使用 LED 之前不要打开防静电袋子

(Do not open the moisture proof bag before ready to use the LEDs) ;

2、LED 在未开封之前应保存在 30℃ 以下，湿度在 60% 以下的环境中，最长保存期为 1 年

(The LEDs should be kept at 30℃ or less and 60%RH or less before opening the package. The max. storage period before opening the package is 1 year) ;

3、打开包装待后，LED 需保存在 30℃/40% 湿度以下的条件，且必须在 4H 内使用完

(After opening the package, the LEDs should be kept at 30℃/40%RH or less, and it should be used within 4 hours) ;

4、如果 LED 超出了第 3 点要求，则 LED 必须经过烘烤才能使用。

烘烤条件为：60±5℃，12 个小时

(If the LEDs be kept over the condition of 3, baking is required before mounting.

Baking condition as below: 60±5℃ for 12 hours) 。