

SPECIFICATION

产品规格书

NO. (编号): _____

Part No.(型号): 9.HCU35-451

Description(描述): 3535 UVA

Version NO.(版本): A0

Date(日期): 20240115

| Customer Approved (客户审核) | | Approved (确认) | |
|--------------------------------------|--|---|----------------|
| | | | |
| Xuyu Approved (旭宇审核) | | Approved (确认) | Issued (制定) |
| | | | |
| <input type="checkbox"/> Sample (样品) | | <input checked="" type="checkbox"/> Mass Product (量产供货) | |



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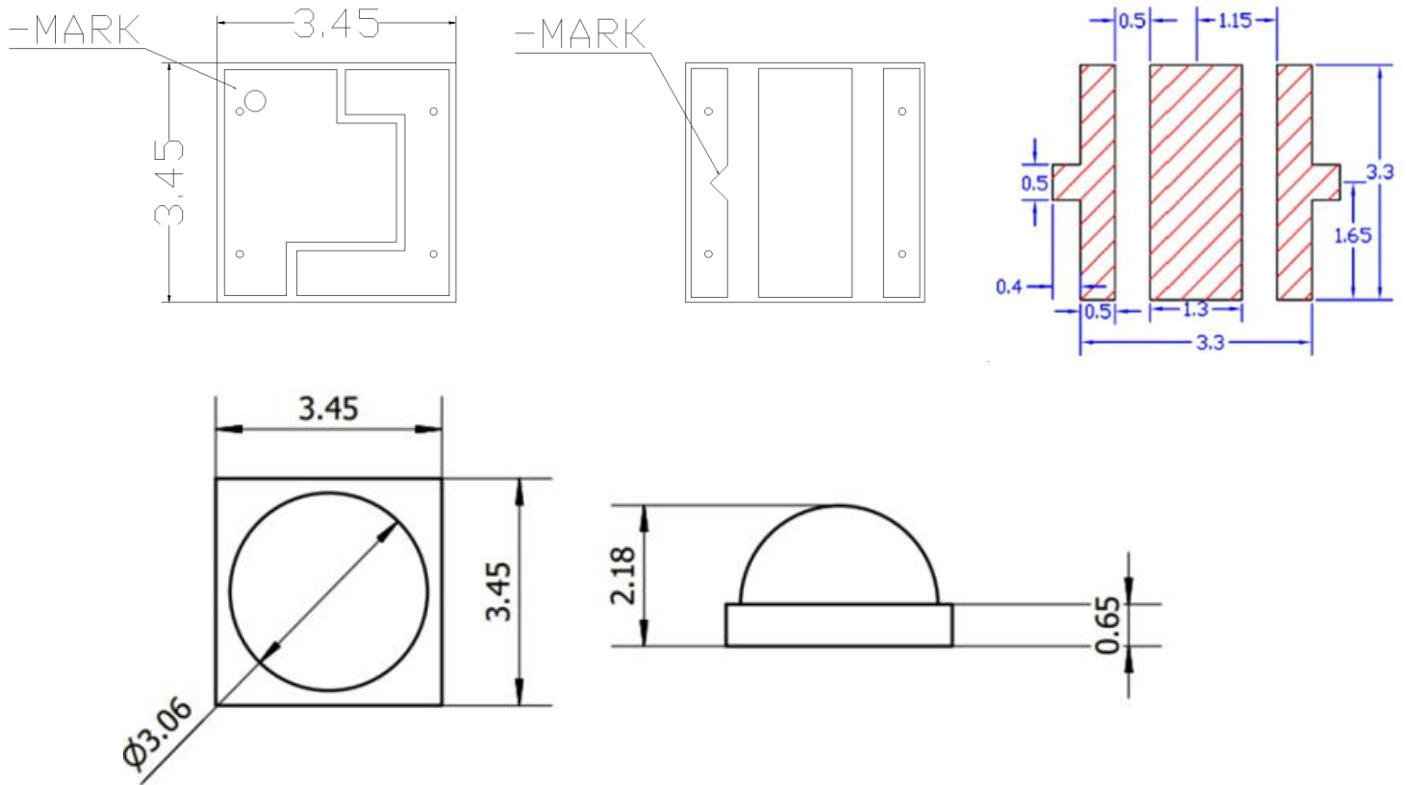
◆ Features 特性:

- *Size(mm): 3.5*3.5*1.5 尺寸 (mm) : 3.5*3.5*1.5
- *Ceramic aluminum nitride package 陶瓷氮化铝封装
- *Viewing Angle: Flat 发光角度: 平面/60/90/120
- * High reliability 高可靠性
- * RoHS compliant 通过 RoHS 认证
- *Suitable for all SMT assembly and solder process 适用所有 SMT 焊接工艺
- *Pb-free reflow soldering application 无铅回流焊

◆ Applications 产品应用:

- *Planting light 植物照明

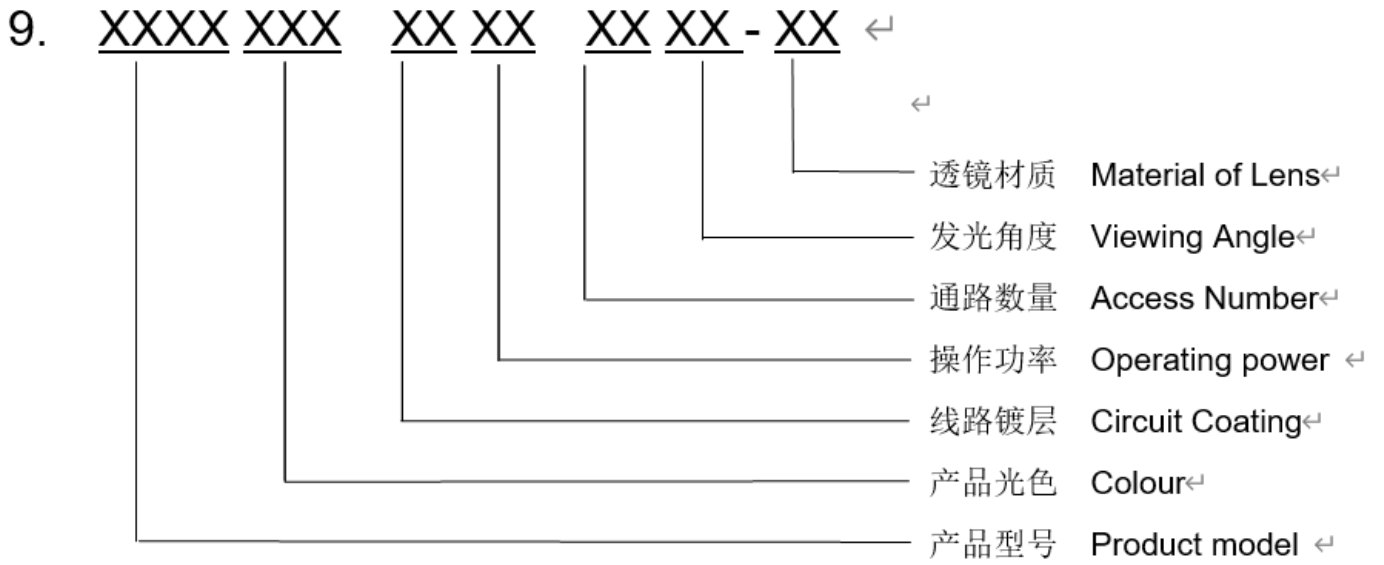
◆ Package Dimensions 产品外观尺寸



Notes:

1. All dimensions are in mm 所有尺寸单位为毫米。
2. Tolerance is ± 0.15 mm unless otherwise noted. 非特殊标注，公差为 ± 0.15 毫米

◆ Product coding rules 产品编码规则



◆ Electro Optical Characteristics (TA=25℃, IF=350mA) 光电特性

| Parameter 参数 | Symbol 符号 | Min 最小值 | Typ 典型值 | Max 最大值 | Unit 单位 |
|-------------------------|-----------------|------------|------------|------------|------------|
| Forward Voltage 正向电压 | V_F | 2.8 | --- | 3.8 | V |
| View Angle 发光角度 | $2\theta_{1/2}$ | --- | 120 | --- | deg. |
| Radiant Flux 辐射通量 | Φ_e | 550 | --- | 650 | mW |
| Peak Wavelength 峰值波长 | λ_p | 390 | 395 | 400 | nm |

◆ Absolute Maximum Ratings (TA=25℃) 最大额定值

| Parameter (参数) | Symbol (符号) | Rating (等级) | Unit (单位) |
|----------------------------------|----------------|------------------|--------------|
| Forward Current 正向电流 | I_F | 700 | mA |
| Reverse voltage 反向电压 | V_R | 5 | V |
| Work pin temperature 工作引脚温度 *2 | T_{opr} | -30 to +60 | °C |
| Storage Temperature Range 储存温度范围 | T_{stg} | -40 to +100 | °C |
| Junction Temperature 结温 | T_j | 115 | °C |
| Thermal resistance 热阻 | R_θ | 15 | °C/W |
| Soldering Temperature 回流温度 | T_{sld} | 230°C for 10 sec | |

Notes:

1. Frequency 10KHz, duty ratio $\leq 10\%$ 频率 10KHz , 占空比 $\leq 10\%$
2. The maximum allowable temperature of the pin depends on the current value applied to LED, and the reference chart of "forward current and pin temperature" is required. 引脚的最大允许温度取决于施加在 LED 的电流值, 需参考 "正向电流与引脚温度" 图表。
3. The forward pulse current is the maximum current used by the chip at 25 °C.
正向脉冲电流为芯片在 25°C 下使用的最大电流。

◆ Mass Production List (IF=60mA;TA=25°C) 生产目录

| Part NO.型号 | Peak Wavelength(nm) 峰值波长 | Φ_e (mW) Min | Φ_e (mW) Max |
|-------------|-----------------------------|----------------------|----------------------|
| 9.HCU35-451 | 390-400 | 550 | 700 |

Note: The test error 测试误差

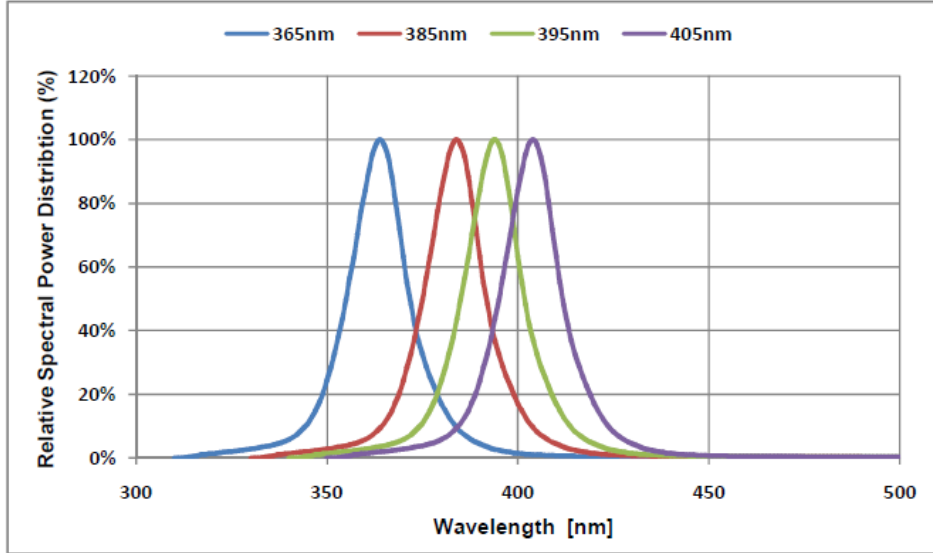
$V_f: \pm 2\%$

$\Phi: \pm 10\%$

$\lambda_p: \pm 3\text{nm}$

◆ Spectral Distribution 光谱分布特性曲线

光谱分布特性曲线
Spectrum Distribution

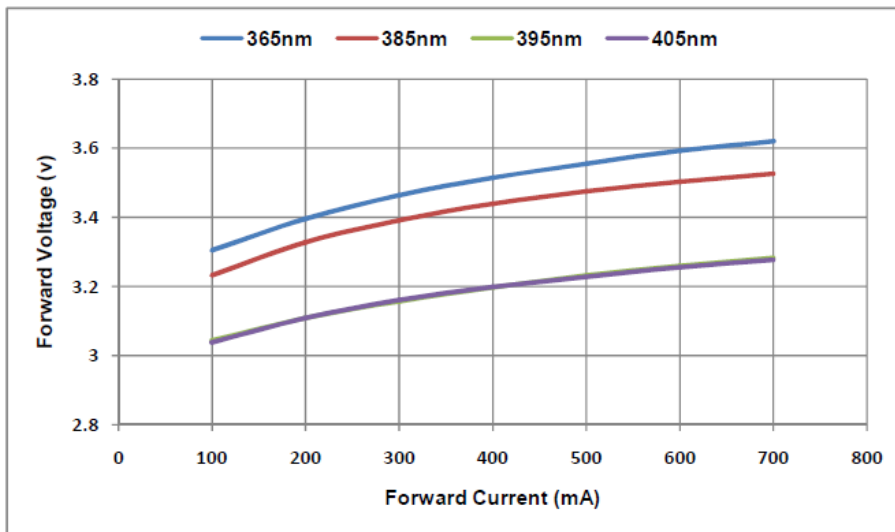


◆ Forward Voltage vs Forward Current 伏安特性曲线

典型特性曲线 Typical Characteristics Curves

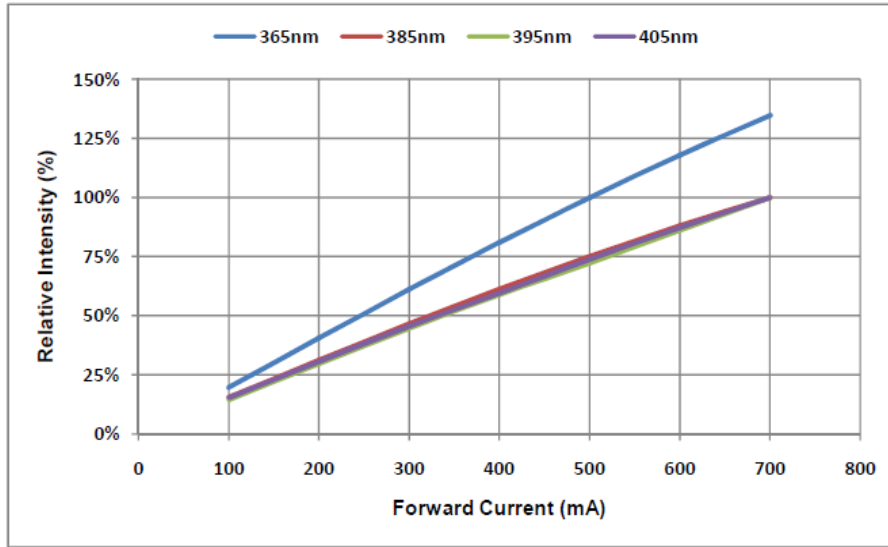
伏安特性曲线

Forward Voltage Vs. Forward Current

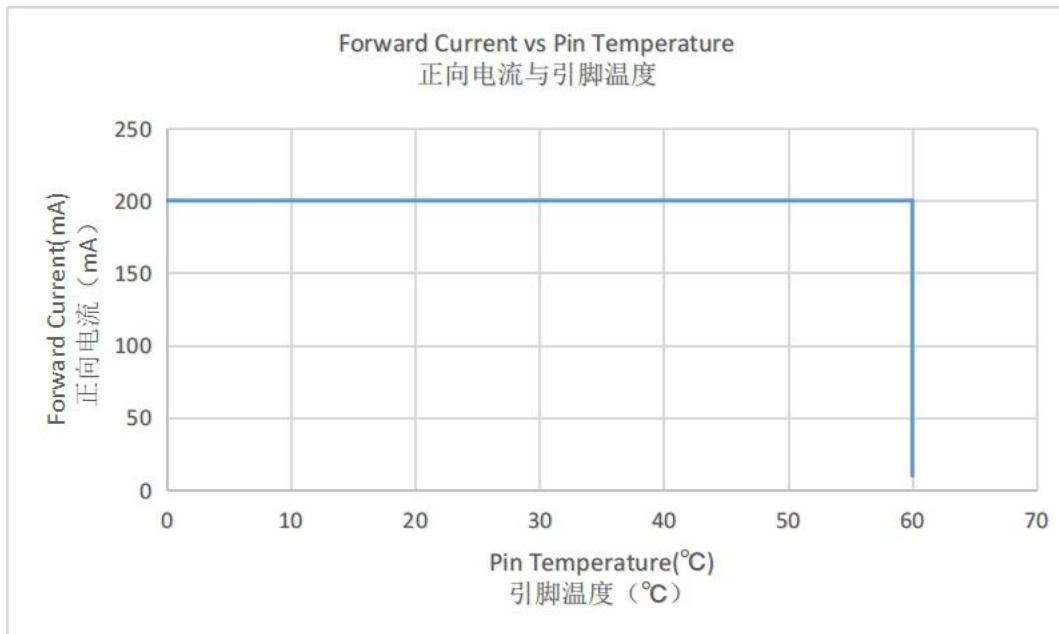


◆ Relative Luminous vs Forward Current 相对光通量与正向电流

正向电流与相对光强特性曲线
Forward Current Vs. Relative Intensity

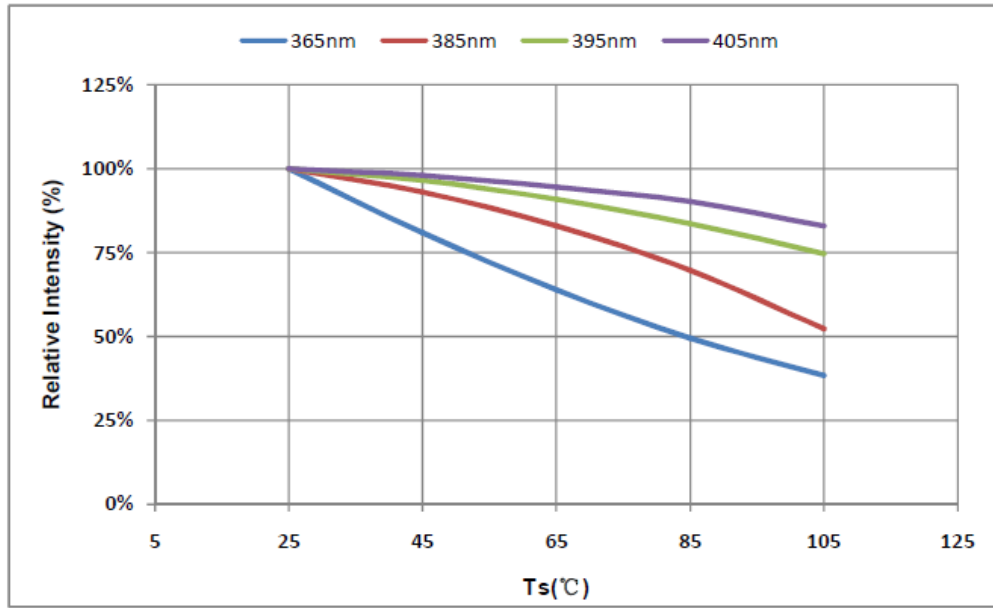


◆ Ambient Temperature vs Forward Current 引脚温度与正向电流



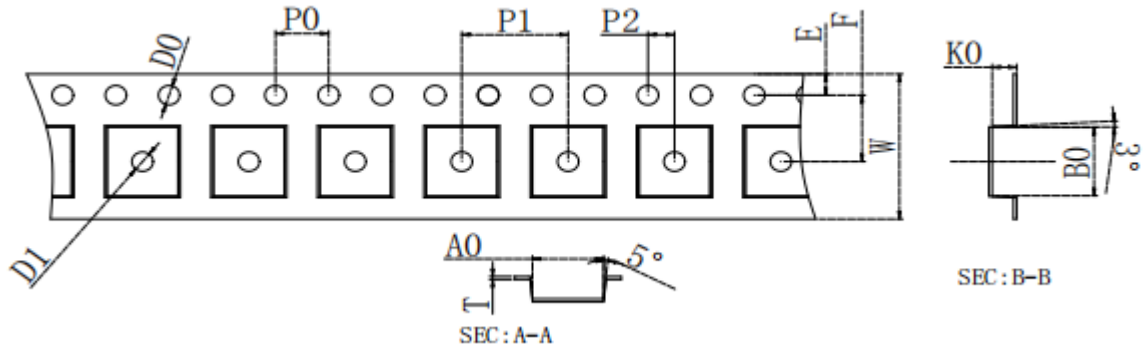
◆ Relative Flux vs Junction Temperature 相对光通量与结温特性曲线

焊盘温度与相对光强特性曲线
Solder Temperature Vs. Relative Intensity

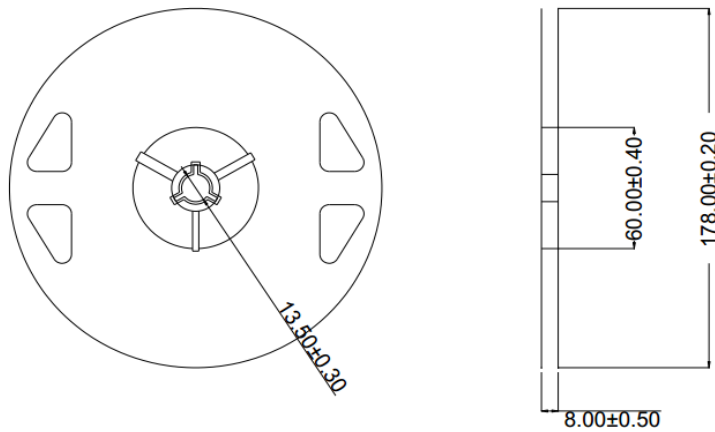


◆ Packaging Specifications 包装规格

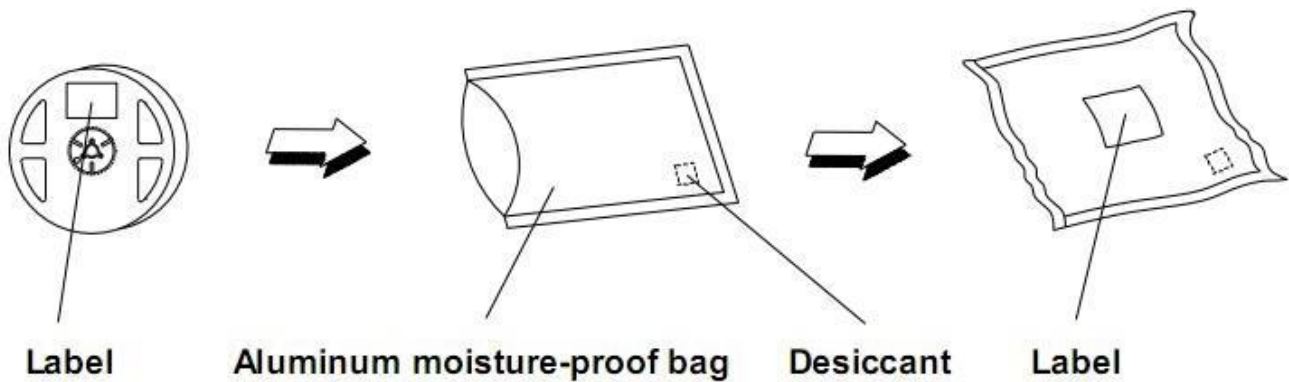
Dimensions of Tape 载带规格



Dimensions of Reel 卷盘规格



Packaging specifications 包装规格



◆Label(标签):



Part NO: Product model 产品型号

LOT NO: Instruction number 指令单号

Spec NO: product 产品规格

Date: Date 日期

Bin No.: Class-Bin No.-Wavelength code 班别-Bin 号-波段代码

Q'ty: Quantity 数量

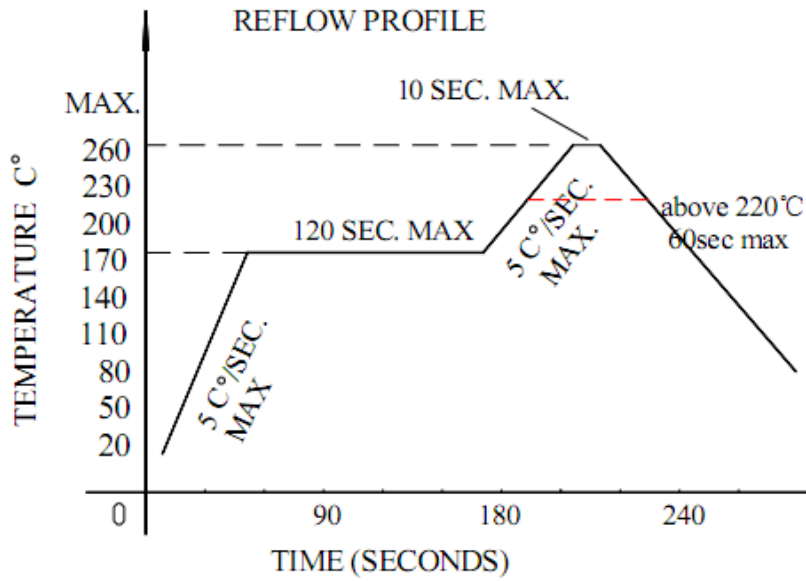
IF (mA) : Forward current 正向电流

VF (V) : Forward voltage 正向电压

Φ (mW) : Radiant flux 辐射通量

λp(nm): Peak Wavelength 峰值波长

◆ SMT Reflow Soldering Instructions SMT 回流焊说明



1. Reflow soldering should not be done more than two times
回流焊不可以做两次以上
2. When soldering, do not put stress on the LEDs during heating
当焊接时，材料受热，不可以用力按压胶体表面

◆ CARTIONS 注意事项

1.The product must be handled with care, it is strictly forbidden to fall, and it is strictly forbidden to touch the product, especially the light-emitting surface of the lamp. 产品须轻拿轻放，严禁跌落、严禁锐器接触产品特别是灯珠出光面。

2.Do not use a power supply that does not meet the requirements for driving. 请勿使用不符合要求的电源进行驱动。

3.The product should not be lit for a long time in a high temperature and closed environment in an environment within the rated temperature range. 产品应用于额定温度范围内的环境中，不得在高温密闭环境中长时间点亮。

4.Do not expose the LED directly to high humidity. It should be waterproof and moisture-proof. 请勿将 LED 直接裸露在高湿环境下，应做好防水防湿隔离处理。

5.The light-transmissive window on the light-emitting side of the product should be made of high-purity quartz glass plate, which can effectively pass 380~400 nm ultraviolet light. 产品出光侧的透光窗口应使用高纯石英玻璃板，可有效透过 380~400 nm 紫外线。

6.Reflow soldering should not be done more than two times. Please refer to the instruction manual for reflow temperature. 回流焊不能超过 2 次，回流焊温度请参考使用说明书。

7.This product produces deep ultraviolet rays when energized. This kind of ultraviolet light can cause damage to human skin and eyes, and should be avoided without direct protection. The human body is directly exposed to deep ultraviolet rays. 本产品在通电后会产生深紫外线。这种紫外线对人的皮肤及眼睛会造成伤害，应避免未加防护措施人体直接暴露在深紫外线中。

8.It is strictly forbidden to look directly at the deep ultraviolet light emitted by this product. 任何时候严禁裸眼直视本产品发射出的深紫外线。

9.The machine operator must bring an electrostatic ring. 所有接触产品人员务必戴静电手环。

10.The machine must be grounded. 务必操作机台接地线