

SPECIFICATION

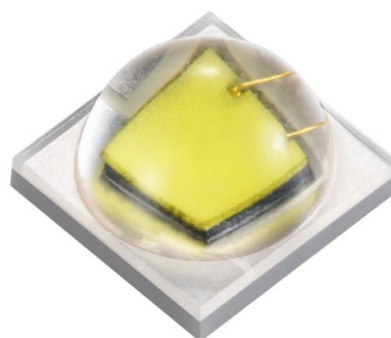
产品规格书

Customer(客户): _____

Part No.(型号): 9.XM2W1V21E SL80

Description(描述): 5050 LED

Date(日期): _____



| 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 type="checkbox"/> Mass Product (量产供货) | |

XUYU OPTOELECTRONICS (SHENZHEN)

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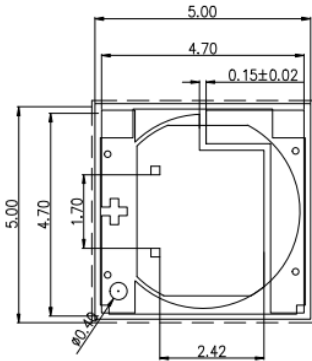
◆ Features 特性:

| | |
|---|---------------------|
| * Size (mm) 5.0*5.0*3.2 | 尺寸 (mm) 5.0*5.0*3.2 |
| *Ceramic and silicone molding package | 陶瓷基板硅胶 molding 封装 |
| *Viewing Angle: 120° | 发光角度: 120° |
| *High reliability | 高可靠性 |
| *RoHS compliant | 符合 RoHS |
| *Suitable for all SMT assembly and solder process | 使用所有 SMT 焊接工艺 |
| *Pb-free reflow soldering application | 无铅回流焊 |

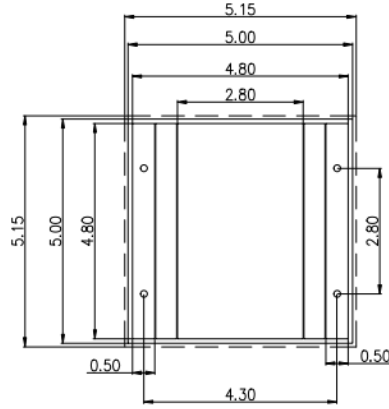
◆ Applications 产品应用:

| | |
|----------------------|------|
| *Security monitor | 安防监控 |
| *Special application | 特种应用 |
| *Torch LED | 手电筒 |
| *Portable | 移动照明 |
| *General Lighting | 常规照明 |

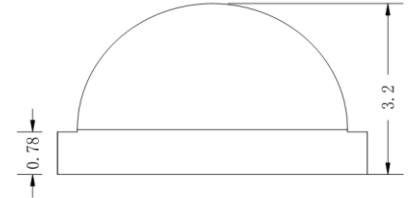
◆ Package Dimensions 产品外观尺寸



Top (5 : 1)



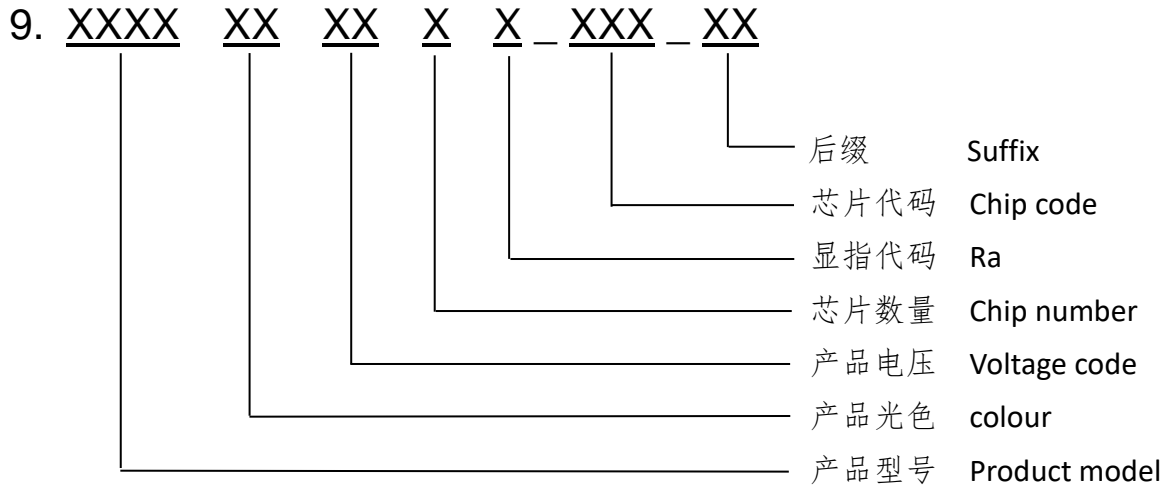
Bottom (5 : 1)



Notes:

1. All dimensions are in mm 所有尺寸单位为毫米。
2. Tolerance is ± 0.2 mm unless otherwise noted. 非特殊标注, 公差为 ± 0.2 毫米。

◆ Product coding rules 产品编码规则



◆ Mass Production List ($I_F=700\text{mA}; T_a=25^\circ\text{C}$) 批量生产目录

| Part NO. 型号 | RA 显指 | Tc(K) Min 最小值 | Tc(K) Typ 典型值 | Tc(K) Max 最大值 | Φ (lm) Min 最小值 | Φ (lm) Max 最大值 |
|-------------------|----------|---------------------|---------------------|---------------------|---------------------------|---------------------------|
| 9.5050W1V21E_SL80 | 70 | | 6000 | | 360 | 400 |
| 9.5050W2V21E_SL80 | 70 | | 4000 | | 360 | 400 |
| 9.5050W3V21E_SL80 | 70 | | 3000 | | 360 | 400 |

Note: The test error 测试误差
 $V_F: \pm 3\%$ $\lambda: \pm 0.05$ $\Phi: \pm 10\%$

◆ Absolute Maximum Ratings (Ta=25°C) 最大额定值

| Parameter 参数 | Symbol 符号 | Rating 等级 | Unit 单位 |
|----------------------------------|--------------------|-----------------|------------|
| MAX Forward Current 最大正向电流 | MAX I _F | 4000 | mA |
| Pulse Forward Current 正向脉冲电流 | I _{FP} | 6000 | mA |
| Power Dissipation 额定功率 | P _O | 12 | W |
| Operation temperature range 工作温度 | T _{opr} | -40 to +100 | °C |
| Storage Temperature Range 储存温度范围 | T _{stg} | -40 to +85 | °C |
| Junction Temperature 结温 | T _j | 150 | °C |
| ESD sensitivity(HBM) 抗静电级别 | --- | 4000 | V |
| Soldering Temperature 回流温度 | T _{sld} | 260°C for 10sec | |

Note1: Frequency 10KHz, duty ratio ≤10% 频率 10KHz , 占空比≤10%

◆ Electrical-Optical Characteristics (Ta=25°C) 光电特性

| Parameter 参数 | Test Condition 测试条件 | Symbol 符号 | Min 最小值 | Typ 典型值 | Max 最大值 | Unit 单位 |
|-------------------------------------|------------------------|------------------|------------|------------|------------|------------|
| Forward Voltage (500-505nm) 正向电压 | I _F =700mA | V _F | 2.8 | --- | 3.0 | v |
| Reverse Current 反向电流 | V _R =-5V | I _R | --- | --- | 5 | μA |
| View Angle 发光角度 | I _F =700mA | 2θ 1/2 | --- | 120 | --- | deg. |
| Thermal resistance 有效热阻 | I _F =700mA | R _{J-A} | --- | 0.85 | --- | °C/W |

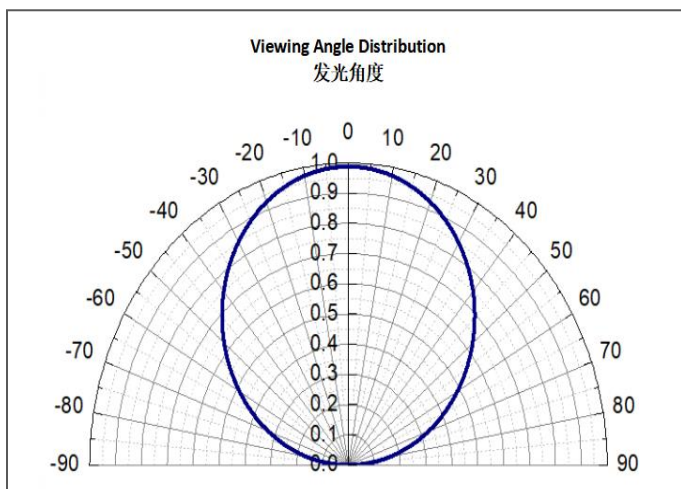
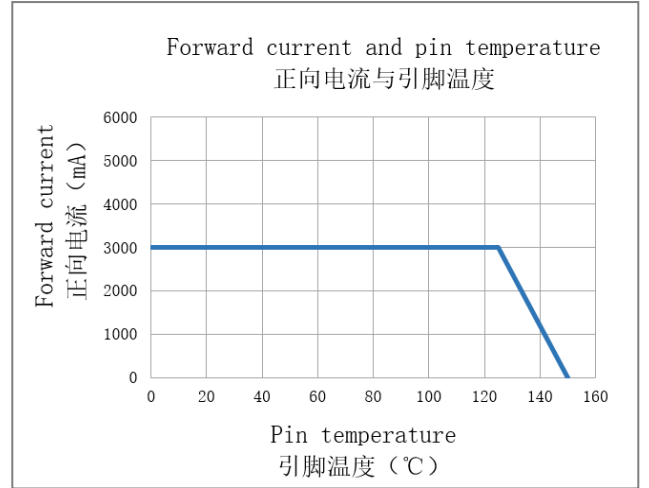
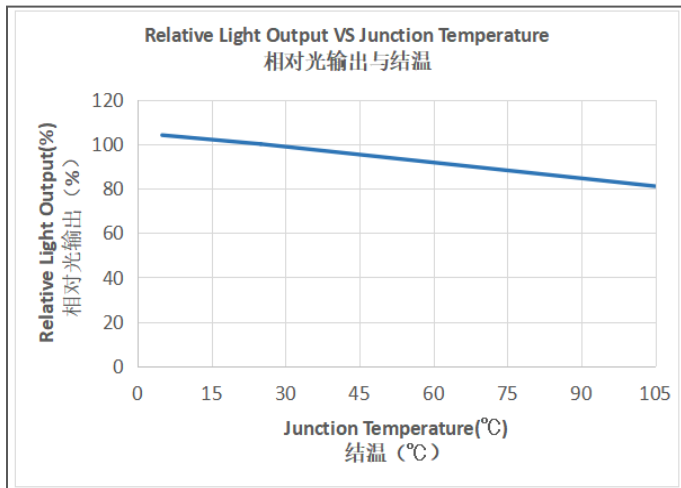
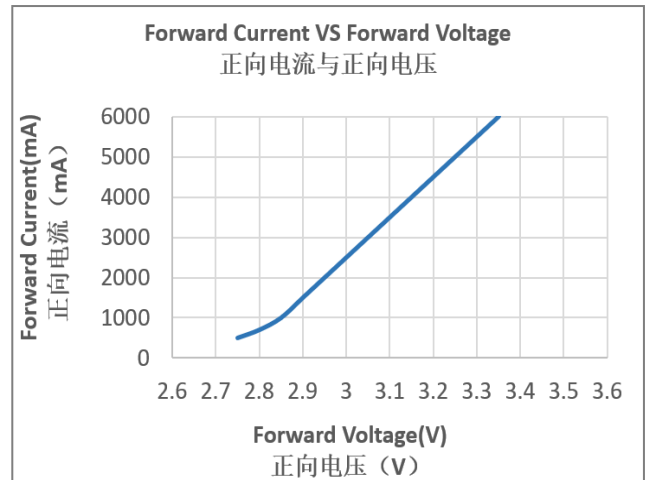
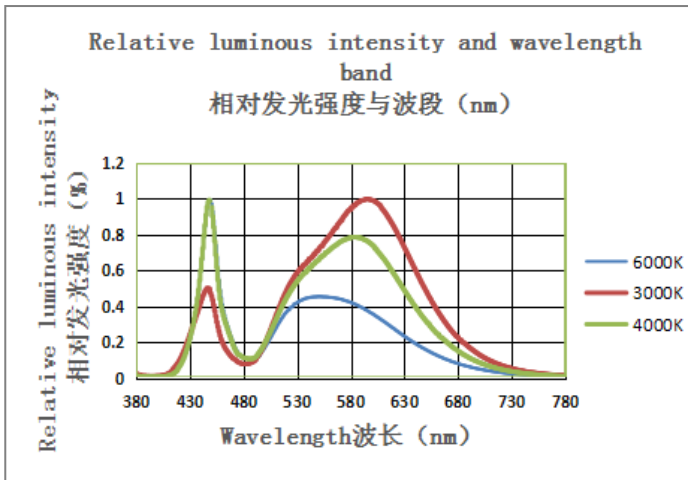
Note: the test tolerance 测试公差

V_F : ±1%

Δλ : ±5%

Φ_e : ±10%

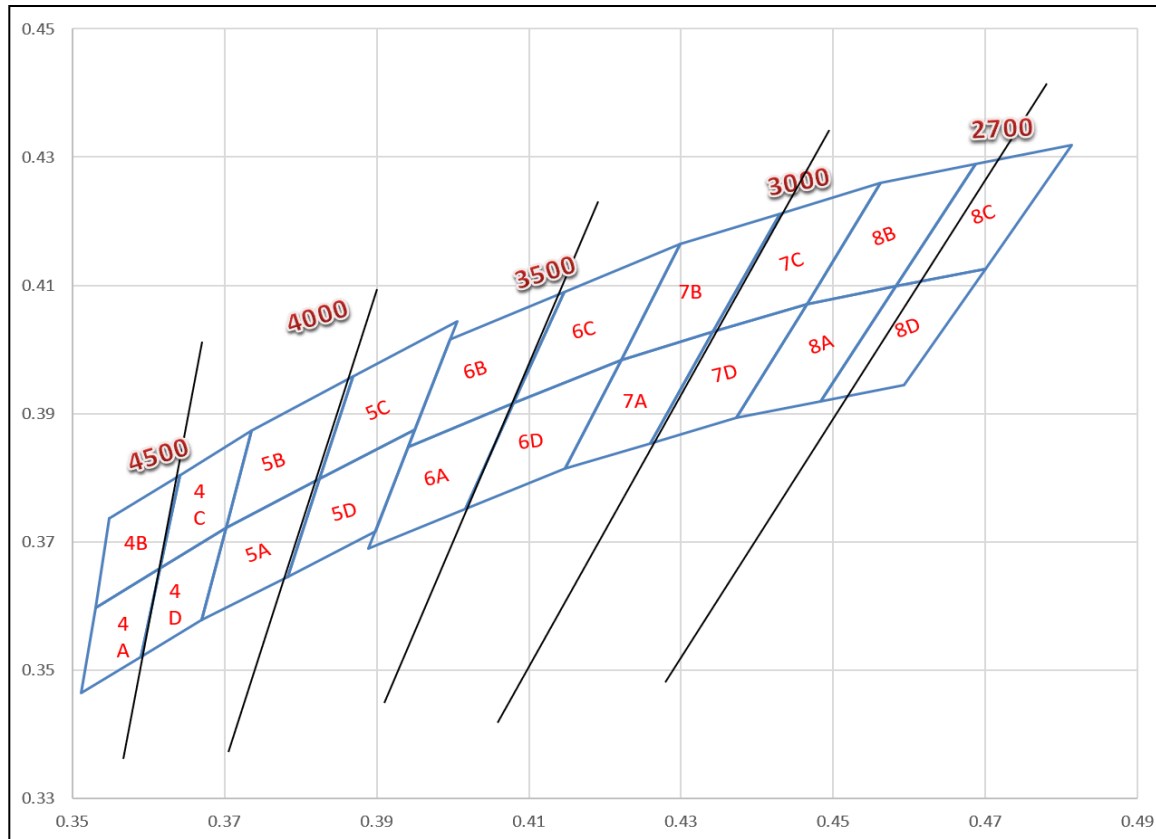
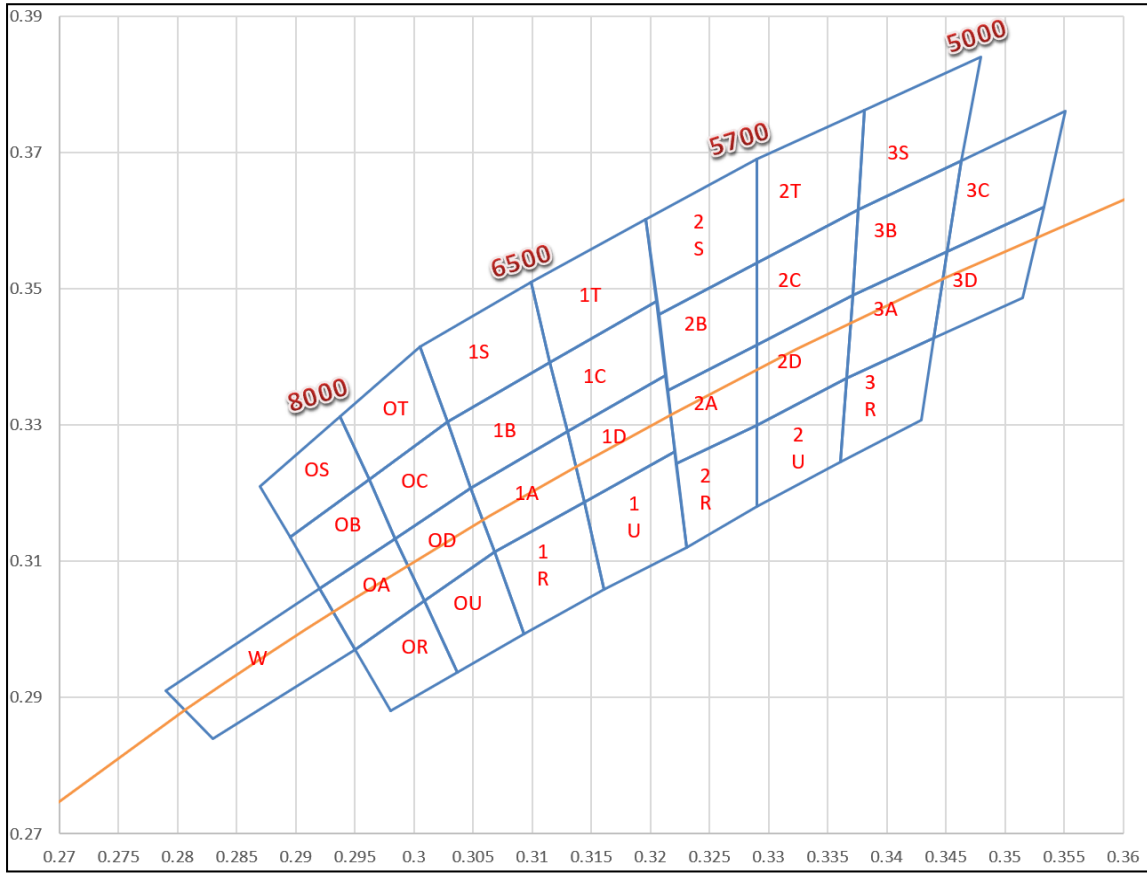
◆ Typical Electrical/Optical Characteristic Curves 典型光电特性曲线



Notes:

1. Related to the temperature test based on the right current. 与温度相关测试基于额定电流。
2. All measurements were made under the standardized environment of XUYU. 所有测试都是基于旭宇光电（深圳）股份有限公司现有的标准测试平台。

CIE Chromaticity Diagram:(IF=350mA;TA=25°C) CIE 色度图



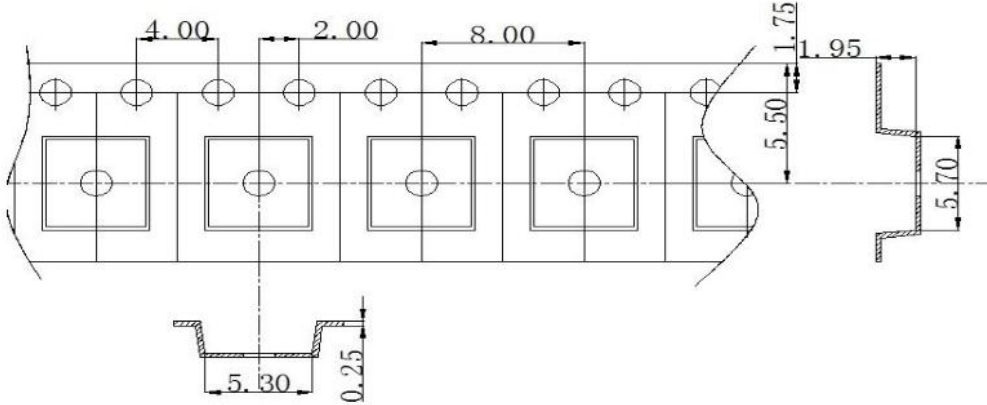
Color Rank :(IF=350mA;TA=25℃) 分 Bin 规格

| Region | X | Y | Region | X | Y | Region | X | Y | Region | X | Y |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0A | 0.295 | 0.297 | 0B | 0.292 | 0.306 | 0C | 0.2984 | 0.3133 | 0D | 0.2984 | 0.3133 |
| | 0.292 | 0.306 | | 0.2895 | 0.3135 | | 0.2962 | 0.322 | | 0.3048 | 0.3207 |
| | 0.2984 | 0.3133 | | 0.2962 | 0.322 | | 0.3028 | 0.3304 | | 0.3068 | 0.3113 |
| | 0.3009 | 0.3042 | | 0.2984 | 0.3133 | | 0.3048 | 0.3207 | | 0.3009 | 0.3042 |
| 0R | 0.298 | 0.288 | 0S | 0.2895 | 0.3135 | 0T | 0.2962 | 0.322 | 0U | 0.3037 | 0.2937 |
| | 0.295 | 0.297 | | 0.287 | 0.321 | | 0.2937 | 0.3312 | | 0.3009 | 0.3042 |
| | 0.3009 | 0.3042 | | 0.2937 | 0.3312 | | 0.3005 | 0.3415 | | 0.3068 | 0.3113 |
| | 0.3037 | 0.2937 | | 0.2962 | 0.322 | | 0.3028 | 0.3304 | | 0.3093 | 0.2993 |
| 1A | 0.3048 | 0.3207 | 1B | 0.3028 | 0.3304 | 1C | 0.3115 | 0.3391 | 1D | 0.313 | 0.329 |
| | 0.313 | 0.329 | | 0.3115 | 0.3391 | | 0.3205 | 0.3481 | | 0.3213 | 0.3373 |
| | 0.3144 | 0.3186 | | 0.313 | 0.329 | | 0.3213 | 0.3373 | | 0.3221 | 0.3261 |
| | 0.3068 | 0.3113 | | 0.3048 | 0.3207 | | 0.313 | 0.329 | | 0.3144 | 0.3186 |
| 1R | 0.3068 | 0.3113 | 1S | 0.3005 | 0.3415 | 1T | 0.3099 | 0.3509 | 1U | 0.3144 | 0.3186 |
| | 0.3144 | 0.3186 | | 0.3099 | 0.3509 | | 0.3196 | 0.3602 | | 0.3221 | 0.3261 |
| | 0.3161 | 0.3059 | | 0.3115 | 0.3391 | | 0.3205 | 0.3481 | | 0.3231 | 0.312 |
| | 0.3093 | 0.2993 | | 0.3028 | 0.3304 | | 0.3115 | 0.3391 | | 0.3161 | 0.3059 |
| 2A | 0.3215 | 0.335 | 2B | 0.3207 | 0.3462 | 2C | 0.329 | 0.3538 | 2D | 0.329 | 0.3417 |
| | 0.329 | 0.3417 | | 0.329 | 0.3538 | | 0.3376 | 0.3616 | | 0.3371 | 0.349 |
| | 0.329 | 0.33 | | 0.329 | 0.3417 | | 0.3371 | 0.349 | | 0.3366 | 0.3369 |
| | 0.3222 | 0.3243 | | 0.3215 | 0.335 | | 0.329 | 0.3417 | | 0.329 | 0.33 |
| 2R | 0.3222 | 0.3243 | 2S | 0.3196 | 0.3602 | 2T | 0.329 | 0.369 | 2U | 0.329 | 0.33 |
| | 0.329 | 0.33 | | 0.329 | 0.369 | | 0.3381 | 0.3762 | | 0.3366 | 0.3369 |
| | 0.329 | 0.318 | | 0.329 | 0.3538 | | 0.3376 | 0.3616 | | 0.3361 | 0.3245 |
| | 0.3231 | 0.312 | | 0.3207 | 0.3462 | | 0.329 | 0.3538 | | 0.329 | 0.318 |
| 3A | 0.3371 | 0.349 | 3B | 0.3376 | 0.3616 | 3C | 0.3463 | 0.3687 | 3D | 0.3451 | 0.3554 |
| | 0.3451 | 0.3554 | | 0.3463 | 0.3687 | | 0.3551 | 0.376 | | 0.3533 | 0.362 |
| | 0.344 | 0.3427 | | 0.3451 | 0.3554 | | 0.3533 | 0.362 | | 0.3515 | 0.3487 |
| | 0.3366 | 0.3369 | | 0.3371 | 0.349 | | 0.3451 | 0.3554 | | 0.344 | 0.3427 |
| 3R | 0.3366 | 0.3369 | 3S | 0.3381 | 0.3762 | | | | | | |
| | 0.344 | 0.3428 | | 0.348 | 0.384 | | | | | | |
| | 0.3429 | 0.3307 | | 0.3463 | 0.3687 | | | | | | |
| | 0.3361 | 0.3245 | | 0.3376 | 0.3616 | | | | | | |

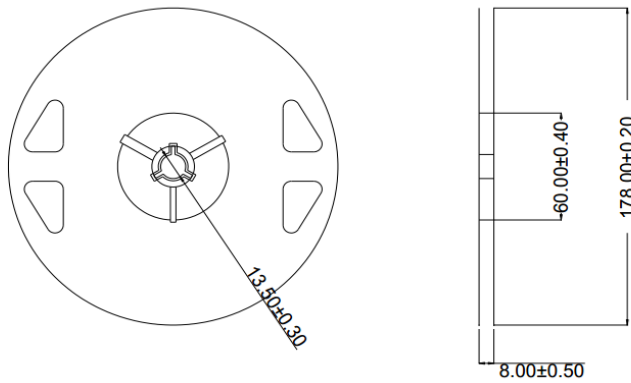
| Region | X | Y | Region | X | Y | Region | X | Y | Region | X | Y |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 4A | 0.353 | 0.3597 | 4B | 0.3548 | 0.3736 | 4C | 0.3641 | 0.3804 | 4D | 0.3615 | 0.3659 |
| | 0.3615 | 0.3659 | | 0.3641 | 0.3804 | | 0.3736 | 0.3874 | | 0.3702 | 0.3722 |
| | 0.359 | 0.3521 | | 0.3615 | 0.3659 | | 0.3702 | 0.3722 | | 0.367 | 0.3578 |
| | 0.3512 | 0.3465 | | 0.353 | 0.3597 | | 0.3615 | 0.3659 | | 0.359 | 0.3521 |
| 5A | 0.367 | 0.3578 | 5B | 0.3702 | 0.3722 | 5C | 0.3825 | 0.3798 | 5D | 0.3783 | 0.3646 |
| | 0.3702 | 0.3722 | | 0.3736 | 0.3874 | | 0.3869 | 0.3958 | | 0.3825 | 0.3798 |
| | 0.3825 | 0.3798 | | 0.3869 | 0.3958 | | 0.4006 | 0.4044 | | 0.395 | 0.3875 |
| | 0.3783 | 0.3646 | | 0.3825 | 0.3798 | | 0.395 | 0.3875 | | 0.3898 | 3716 |
| 6A | 0.3889 | 0.369 | 6B | 0.3941 | 0.3848 | 6C | 0.408 | 0.3916 | 6D | 0.4017 | 0.3751 |
| | 0.3941 | 0.3848 | | 0.3996 | 0.4015 | | 0.4146 | 0.4089 | | 0.408 | 0.3916 |
| | 0.408 | 0.3916 | | 0.4146 | 0.4089 | | 0.4299 | 0.4165 | | 0.4221 | 0.3984 |
| | 0.4017 | 0.3751 | | 0.408 | 0.3916 | | 0.4221 | 0.3984 | | 0.4147 | 0.3814 |
| 7A | 0.4147 | 0.3814 | 7B | 0.4221 | 0.3984 | 7C | 0.4342 | 0.4028 | 7D | 0.4259 | 0.3853 |
| | 0.4221 | 0.3984 | | 0.4299 | 0.4165 | | 0.443 | 0.4212 | | 0.4342 | 0.4028 |
| | 0.4342 | 0.4028 | | 0.443 | 0.4212 | | 0.4562 | 0.426 | | 0.4465 | 0.4071 |
| | 0.4259 | 0.3853 | | 0.4342 | 0.4028 | | 0.4465 | 4071 | | 0.4373 | 0.3893 |
| 8A | 0.4373 | 0.3893 | 8B | 0.4465 | 0.4071 | 8C | 0.4582 | 0.4099 | 8D | 0.4483 | 0.3919 |
| | 0.4465 | 0.4071 | | 0.4562 | 0.426 | | 0.4687 | 0.4289 | | 0.4582 | 0.4099 |
| | 0.4582 | 0.4099 | | 0.4687 | 0.4289 | | 0.4813 | 0.4319 | | 0.47 | 0.4126 |
| | 0.4483 | 0.3919 | | 0.4582 | 0.4099 | | 0.47 | 0.4126 | | 0.4593 | 0.3944 |

◆ Packaging Specifications 包装规格

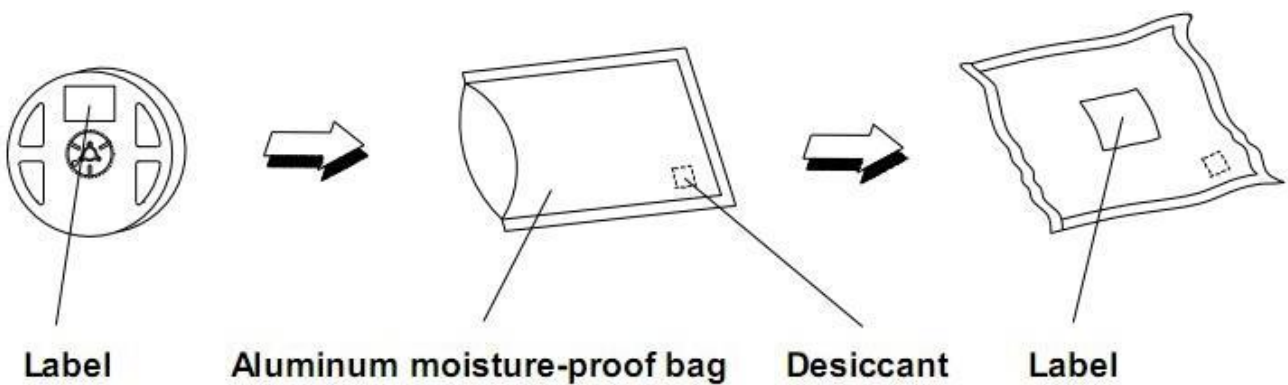
Dimensions of Tape 载带规格



Dimensions of Reel 卷盘规格 (一卷盘 1K One reel 1K)



Packaging specifications 包装规格



Label(标签):

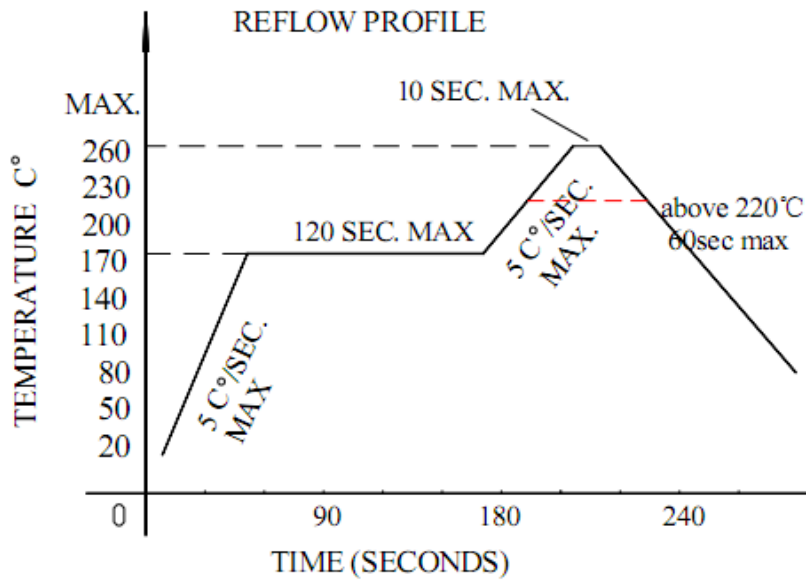
Part NO: Product model 产品型号
LOT NO: Instruction number 指令单号
Spec NO: product 产品规格
Date: Date 日期
Bin No.:Class-Bin No.-Wavelength code 班别-Bin 号-波段代码
Q' ty: Quantity 数量
IF (mA) : Forward current 正向电流
VF (V) : Forward voltage 正向电压
 Φ (lm) : Luminous flux 光通量
 λ d(nm): Dominant wavelength 主波长

 旭宇光电（深圳）股份有限公司
XUYU OPTOELECTRONICS(SHENZHEN)CO.,LTD.

Part NO: XX-XXXXXXXX
LOT NO: XXXXXXXX-XX-XXXXXXXX
IV/Po: XX-XXlm/XW
VF/IF : X.XX-X.XXV/XmA
CCT/XY: XXXXK/XXX
Ra/SD/R9: XX/X/X
Q'ty: XXXXPCS
Date: XXXX.XX.XX
Code : X.XXXXXXXXXXX_XXX




◆ 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 encapsulated material of the LEDs is silicone. Therefore the LEDs have a soft surface on the top of package. The pressure to the top surface will be influence to the reliability of the LEDs. Precautions should be taken to avoid the strong pressure on the encapsulated part. So when use the picking up nozzle, the pressure on the silicone resin should be proper.

2、LED 封装为硅胶，故 LED 胶体表面较软，用力按压胶体表面会影响 LED 可靠性。应避免使用较大压力按压胶体表面，在使用吸嘴时，作用于胶体表面的力应适宜。

3.Handle the component along the side surface by using forceps or appropriate tools; do not directly touch or Handle the silicone lens surface, it may damage the internal circuitry.

3、采用合适的工具从侧面夹取材料，不要用手或尖锐金属按压胶体表面，否则可能导致内部电路损坏。

4.Packaging and storage.

4.1 Before opening packaging, avoid moisture entry into LED. SMD series LED is suggested to be stored in a drying cabinet with built-in desiccant. The storage environment is 5-30 centigrade, no more than 50% humidity. If storage time is over 3 months, LED needs to be re dehumidifying (65 degrees centigrade for more than /24 hours).

4.2 Open the precautions after packing. LED is a surface mount. When the LED is welded, the internal separation of LED may occur. The luminescence efficiency is affected and the luminance decreases or the color variation. The following are the matters to be paid attention to:

A. After opening the package, welding should be completed as soon as possible (within 12 hours).

B. The remaining materials are sealed or placed in an environment of 5~40 C and no more than 30% humidity.

C. If the open package is more than 24 hours (< 168 hours) or the humidity card is changed from blue to pink, LED needs to be dehumidifying again (65 degrees centigrade for more than /24 hours). If the package is opened for more than 168 hours, it is necessary to dismantle the tape and remove the moisture at 150°C /2h.

4.3 LED electrode and bracket are made of silver plated copper alloy. The silver layer on the surface is easy to be affected by corrosive gases. Please avoid contacting with corrosive environment to cause LED discoloration, so as to avoid the poor weldability of LED and influence the photoelectric performance. Avoid sudden changes in temperature and humidity of the environment, especially under high humidity environment, easy to produce water vapor condensation.

4、包装储存。

4.1 开包装前避免湿气进入 LED 内部，建议 SMD 系列 LED 存放在内置干燥剂的干燥柜中，储存环境为温度 5-30℃，湿度不超过 50%，若存储时间超过 3 个月，LED 需要重新除潮（65℃/24 小时以上）。

4.2 打开包装后的预防措施。LED 是表面贴装件，当 LED 进行焊接时，可能会发生 LED 内部分离，其发光效率受到影响而导致亮度下降或发光颜色变异。以下是需注意的事项：

A、打开包装后应尽快完成焊接（12 小时内）。

B、余料请密封或放置在 5~40°C、湿度不超过 30%的环境中。

C、如果开包装超过 24 小时（<168 小时）或湿度卡由蓝色变为粉红色，LED 需要重新除潮（65°C/24 小时以上），如果开包装超过 168 小时，需要拆开卷带，除潮 150°C/2h。

4.3 LED 电极和支架是由镀银的铜合金组成，外表银层易受到腐蚀性气体影响，请避免接触腐蚀的环境造成 LED 变色，以免产生 LED 的焊接性变差或者影响光电性能。请避免环境温湿度的骤变，尤其是高湿环境下易产生水汽凝结。

5. Electrostatic protection. LED is a chip sensitive electronic component. Various measures should be taken to avoid static electricity, such as wearing an electrostatic bracelet or anti-static gloves during use. All devices, equipment and instruments should be well grounded.

5、静电防护。LED 是晶片敏感电子元器件，应采取各种措施避免静电，诸如在使用过程中戴静电手环或防静电手套。所有的装置、设备仪器应良好接地。