

SPECIFICATION  
(产品规格书)

CLIENT :  
客 户

PART NO : 2835 蓝光  
产品型号

SPEC NO : ZK-RD-03003A  
规格书编号

DATE : 2025-03-11  
日 期

|                                                                                       |                |                 |                |                     |
|---------------------------------------------------------------------------------------|----------------|-----------------|----------------|---------------------|
| CLIENT APPROVAL<br>客户审核                                                               |                |                 |                |                     |
| APPROVAL<br>核 准                                                                       | CHECKED<br>审 核 | APPROVAL<br>核 准 | CHECKED<br>审 核 | CONFIRMATION<br>制 定 |
|                                                                                       |                |                 |                |                     |
| <input type="checkbox"/> QUALIFIED    接受<br><input type="checkbox"/> DISQUALIFIED 不接受 |                | DATE:<br>日期:    |                |                     |

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(产品型号)

**SPEC NO: Z-RD-03003A**  
(编号)

**REV NO: A**  
(版次)

## Feature

(特性)

- ◆ Industry standard footprint  
(采用行业标准尺寸)
- ◆ For automatic placement equipments  
(使用自动焊接装置)
- ◆ For infrared and vapor phase reflow  
Solder processes  
(可以采用红外线和回流焊接)
- ◆ Long life solid state reliability  
(使用寿命长, 可靠性强)
- ◆ Extremely wide viewing angle  
(宽的发光角度)
- ◆ Available on tape and reel  
(适用于载带及卷轴)

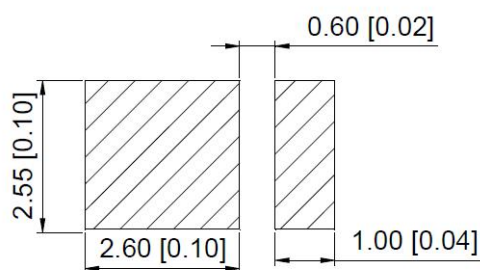
## Applications

(用途)

- ◆ Backlighting for LCDs  
(LCD 背光源)
- ◆ Push-button/Keypad backlighting  
(触摸屏及开光背光源)
- ◆ Indicators  
(指示灯)
- ◆ Automobile front panel indicating  
and backlighting  
(自动机台控制板指示及背光源)
- ◆ Indoor and outdoor lighting  
(室内、室外照明)
- ◆ General use  
(一般应用)

## Recommended Soldering Pattern

(建议焊盘尺寸图)

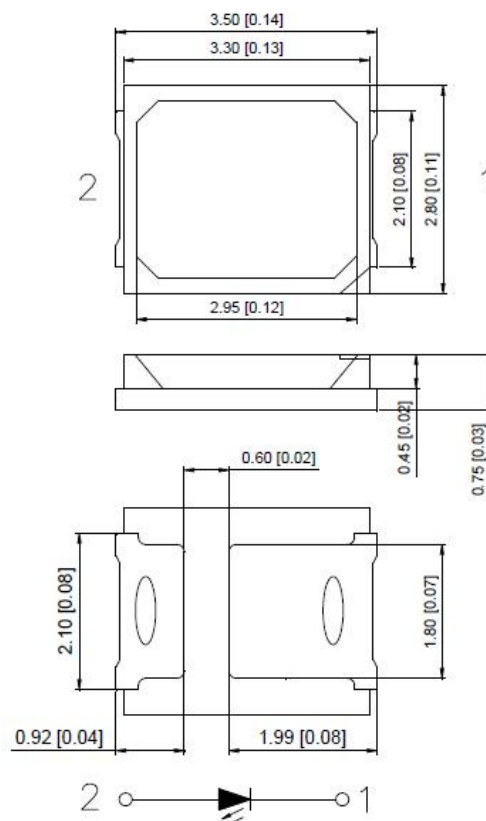


## Notes:

1. All dimensions are in millimeters.  
(所有尺寸以毫米为单位)
2. All dimension tolerance is  $\pm 0.15\text{mm}$   
unless otherwise noted.  
(除特别标注外, 所有尺寸允许公差 $\pm 0.15\text{mm}$ )

## Package Dimensions

(外观尺寸)



|                                   |                                      |                           |
|-----------------------------------|--------------------------------------|---------------------------|
| <b>PART NO:</b> 2835 蓝光<br>(产品型号) | <b>SPEC NO:</b> Z-RD-03003A<br>(编 号) | <b>REV NO:</b> A<br>(版 次) |
|-----------------------------------|--------------------------------------|---------------------------|

### Electrical/Optical Characteristics(At T<sub>A</sub> =25℃)

(光 电 参 数)

| Parameter<br>(参 数)          | Symbol<br>(符 号) | Conditions<br>(测试条件) | Min<br>(最小值) | Typ<br>(典型值) | Max<br>(最大值) | Units<br>(单 位) |
|-----------------------------|-----------------|----------------------|--------------|--------------|--------------|----------------|
| Luminous Flux<br>(光通量)      | Φ               | IF=60mA              | 2            | --           | 7            | Lm             |
| Wavelength coverage<br>(波长) | WLD             | IF=60mA              | 455          | 460          | 465          | NM             |
| Foverse Current<br>(顺向电压)   | V <sub>F</sub>  | IF=60mA              | 3.0          | 3.3          | 3.6          | V              |
| Reverse Current<br>(反向漏电流)  | I <sub>R</sub>  | V <sub>R</sub> =5v   | --           | --           | 5            | μ A            |
| Viewing Angle<br>(发光角度)     | 2○1/2           | IF=60mA              | --           | 120°         | --           | Deg            |
| Rendering Index<br>(显色指数)   | CRI             | IF=60mA              | --           | --           | --           | --             |

### Absolute Maximum Ratings (At T<sub>A</sub>=25℃)

(极 限 参 数)

| Parameter<br>(参 数)                     | Symbol<br>(符 号)       | Ratings<br>(数 值) | Units<br>(单 位) |
|----------------------------------------|-----------------------|------------------|----------------|
| Continuous orward Current<br>(顺 向 电 流) | I <sub>F</sub>        | 60               | mA             |
| Peak Forward Current[1]<br>(顺向脉冲电流)    | I <sub>F</sub> (Peak) | 60               | mA             |
| Reverse Voltage<br>(反向电压)              | V <sub>R</sub>        | 5                | V              |
| Operating Temperature Range<br>(工作温度)  | T <sub>OPR</sub>      | -30℃To+80℃       |                |
| Storage Temperature Range<br>(贮存温度)    | T <sub>STG</sub>      | -40℃To+85℃       |                |

#### Notes:

[1].1/10 Duty Cycle 0.1ms Pulse Width.

(脉宽 0.1ms, 点空比 1/10.)

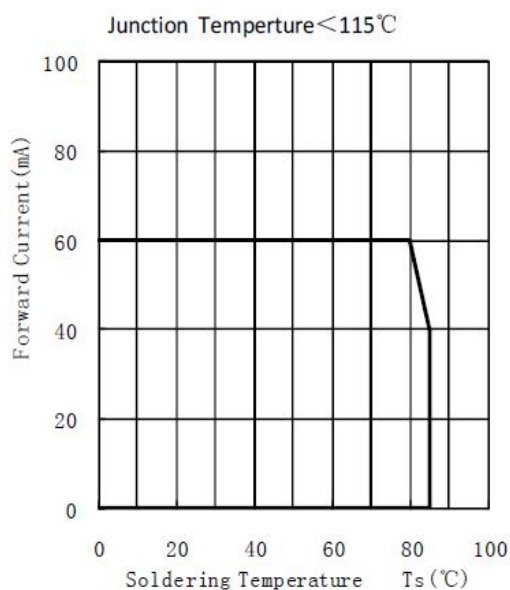
**PART NO:** 2835 蓝光  
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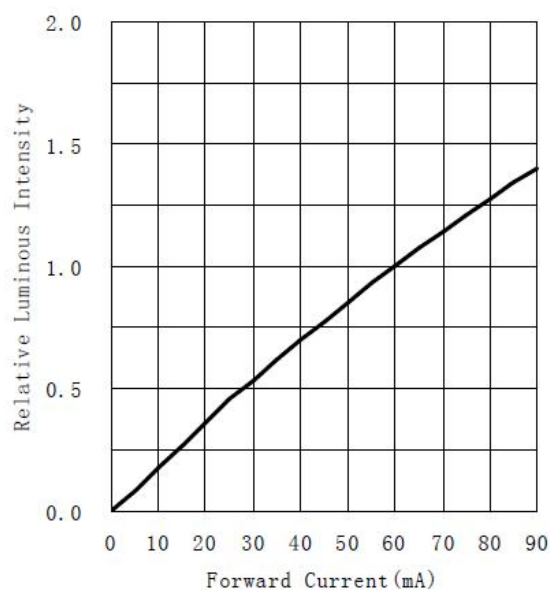
**REV NO:** A  
(版次)

## ■ Typical Electro-Optical Characteristics Curves 光电曲线

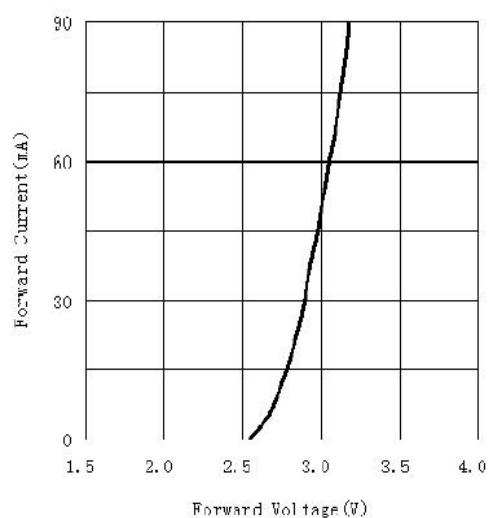
**Soldering Temperature vs. Forward Current**  
焊盘温度与正向电流特性曲线



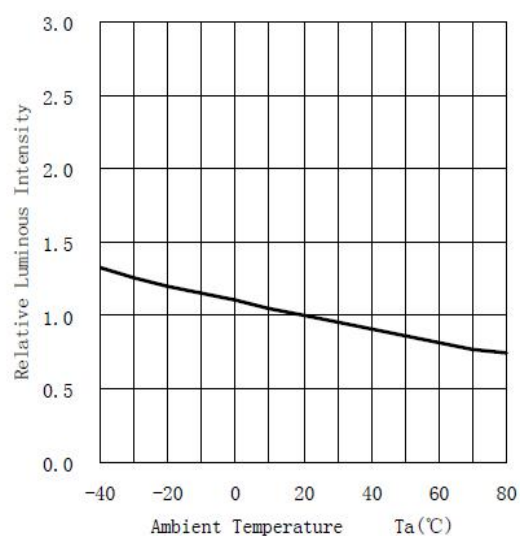
**Forward Current VS. Relative Intensity**  
正向电流与相对光强特性曲线



**Forward Voltage VS. Forward Current**  
正向电压与正向电流特性曲线



**Ambient Temperature VS. Relative Intensity**  
环境温度与相对光强特性曲线

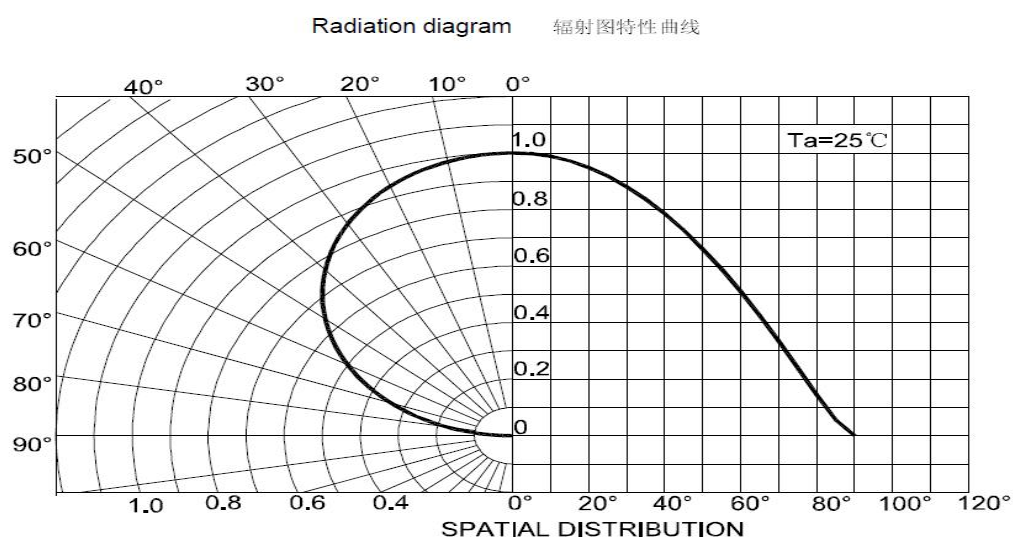
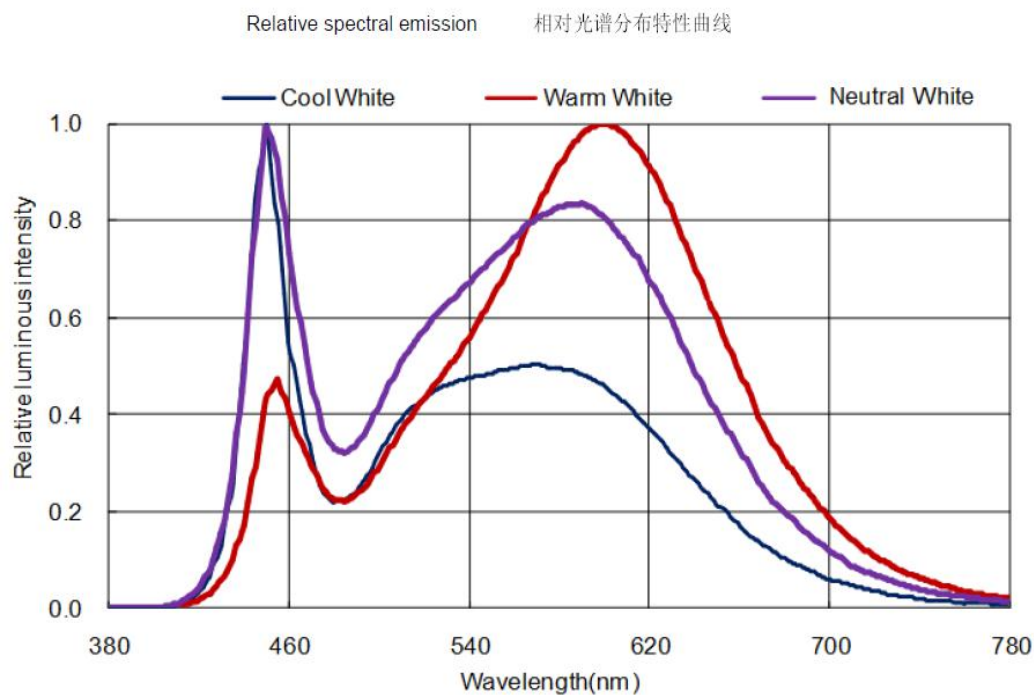


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**Typical optical characteristics curves 典型光学特性曲线**



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## ■ Bin Standard

### 分光规格

Wavelength coverage(WLD at 60mA)

主波长范围

| Φ Rank | 1       | 2       | 3 | 4 |
|--------|---------|---------|---|---|
| WLD    | 455-460 | 460-465 | / | / |

Notes:Tolerance for each Wavelength coverage

Bin is  $\pm 10\%$ .主波长公差为 $\pm 10\%$

Luminous Flux Combination (Flux at 60mA)

光通量范围

| Φ Rank                            | 1   | 2   | 3   | 4   |
|-----------------------------------|-----|-----|-----|-----|
| Luminous flux<br>Of referring(lm) | 2-3 | 3-4 | 4-5 | 5-7 |

Notes:Tolerance for each Luminous Intensity

Bin is  $\pm 10\%$ .每 BIN 光通量公差为 $\pm 10\%$

Forward Voltage Combination(VF at 60mA)

电压范围

| VF Rank | 1   | 2   | 3   |
|---------|-----|-----|-----|
| MIN     | 2.8 | 3.0 | 3.2 |
| MAX     | 3.0 | 3.2 | 3.4 |

Notes:Tolerance for each forward voltage bin is  $\pm 0.05V$ .

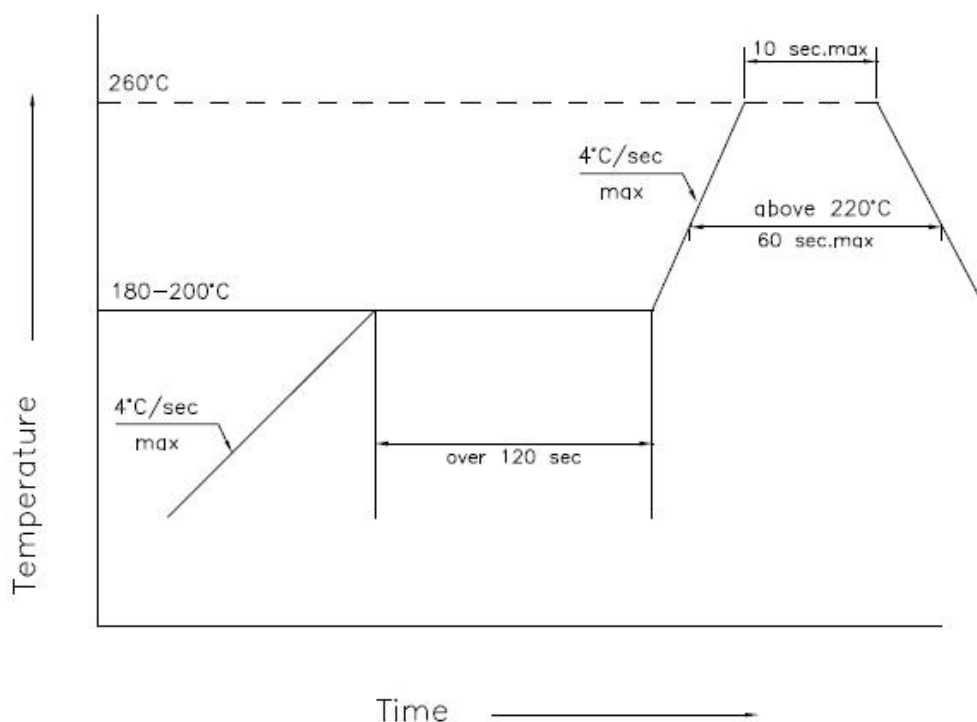
每 Bin 顺向电压公差为 $\pm 0.05V$ 。

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### ■ 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，不要在材料受热时用力压胶体表面

### ■ Soldering iron 烙铁焊接

- 1.When hand soldering, keep the temperature of iron below less 300°C less than 3 seconds;  
当手工焊接时，烙铁的温度必须小于300℃，时间不可超过3秒
- 2.The hand solder should be done only one times.  
手工焊接只可焊接一次

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                      |                           |
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| <b>PART NO: 2835 蓝光</b><br>(产品型号)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>SPEC NO: Z-RD-03003A</b><br>(编 号) | <b>REV NO: A</b><br>(版 次) |
| <b>Caution/注意事项</b><br><p>After open the package,the LED should be kept at 25℃,65% RH environment or less.<br/>         打开包装后请在温度 25±3℃湿度 65±5%的环境下使用。</p> <p>1、 The LED should be soldered within 6 hours after opening the package.<br/>         打开包装后请在 6 小时内作焊接。</p> <p>2、 The LAMP LED is an ESD sensitive device. All the equipment and machine must be properly grounded.<br/>         LED 是静电敏感器件, 使用时所有设备、机构都需有适当的接地导电措施。</p> <p>4、 When make use of it,please use static-free container,operator should ware antistatic clothes and rope-satic-ring also should make effective ground.<br/>         请使用防静电的盛装容器, 作业人员应穿著防静电服装及佩戴有绳之静电环并作有效接地。</p> <p>5、 Damaged device will appear some symptoms, lower forward voltage,higher leak current or even short curcuin.<br/>         受静电与突波破坏之 LED 的电性特性上, 会有明显的漏电流, 或驱动电压明显变低, 甚至是短路现象。</p> <p>6、 Ferrochromium soldering:power keep no more than 30W,tip temperature should not pass 280℃,soldering time within 3 second.<br/>         铬铁焊接时铬铁功率不要超过 30W, 尖端温度不要超过 280℃, 焊接时间不要超过 3 秒。</p> <p>7、 Weve-soldering:temperature should not pass 240℃,soldering time within 5 second.<br/>         波峰焊接时温度不要超过 240℃, 焊接时间不要超过 5 秒。</p> <p>8、 After soldering tha LED should keep out off any shake or outer force before it come to normal temperature.<br/>         在焊接温度回到正常以前, 必须避免使 LED 受到任何震动或外力。</p> <p>9、 LED is one-way continuity,please check electrode before mount,if amount wrong,the LED ship will damage or fail when LED applied voltage<br/>         单项导通性, 安装前确认极性, 若装反, 在施加电压时容易造成 LED 晶片损伤或失效。</p> <p>10、 Please design the PCB board to keep a distance between LED and other emit heat component.<br/>         线路设计时, 请不要将 LED 与发热元件靠得过近。</p> <p>11、 Strongly recommend design the board according setting current other than setting voltage.if you are really need setting voltage type please consider there may cause influence arise by difference voltage of difference LED.<br/>         电路设计上, 建议以定电流设计, 若为定电压设计, 请考虑 LED 之间不同正向电压所可能造成之影响。</p> <p>12、 The outer voltage change will bring the current index change.unsuitable design and current control,easy cause LED fail.for example excess current will cause LED life short or even burn down, too little electricity will cause lacking light.<br/>         LED 之外加电压变化, 会造成电流指数级变化, 不当之设计与电流控制, 易造成 LED 失效, 如电流过大引起寿命问题甚至烧毁, 电流过小引起亮度不足。</p> <p>13、 If you need make difference BIN LED in the one module.please confirm whether it can meet the electric and optics characteristic require such as the current balance,emitting and brightness consistency.<br/>         不同 BIN 号之 LED 需安装在同一个组件时, 请先确认是否可满足相关电气及光学之特性要求, 如电流是否均衡, 光色、亮度的一致性。</p> |                                      |                           |