



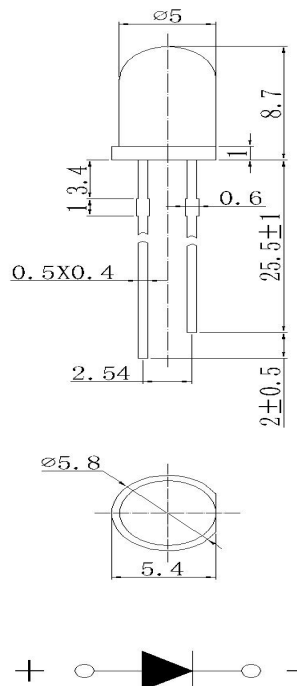
深圳匡通电子有限公司

Shenzhen Kento Electronic Co., Ltd

发光二极管产品规格书 Specification for LED Product

Model: 5AR3UD12

■ Package Dimensions (mm)



注解:

Notes:

- 所有尺寸单位是mm
All dimension units are millimeters.
- 所有未标注尺寸公差为 $\pm 0.2\text{mm}$
All dimension tolerance is $\pm 0.2\text{mm}$ unless otherwise noted.
- 所有胶体底部与引脚处多胶部分大约为1.5mm
An epoxy meniscus may extend about 1.5mm down the leads.
- 胶体底部毛边小于等于0.5mm
Burr around bottom of epoxy may be 0.5mm max.

简介:	5mm 圆形	红色散射胶体
Synopsis:	5mm Round Type	Red Diffused Lens
	红色发光二极管	
	Red LED Lamp	



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产品型号: 5AR3UD12

■ 主要光电特性 (室温 = 25℃) Typical Electrical & Optical Characteristics (Ta = 25℃)

项目 ITEMS	符号 SYMBOL	条件 CONDITION	最小值 MIN.	典型值 TYP.	最大值 MAX.	单位 UNIT
正向电压 Forward Voltage	VF	IF = 20mA	1.4	1.8	2.5	V
反向电流 Reverse Current	IR	VR = 5V	---	---	1.1	μA
主波长 Dominant Wavelength	λ D	IF = 20mA	620	---	630	nm
发光强度 Luminous Intensity	IV	IF = 20mA	477	563	624	mcd
50%能量发光视角 50% Power Viewing Angle	2θ½	IF = 20mA	---	19	---	deg

■ 最大绝对额定值(室温 = 25℃) Absolute Maximum Ratings at (Ta = 25℃)

项目 ITEMS	符号 SYMBOL	最大绝对额定值 ABSOLUTE MAXIMUM RATING	单位 UNIT
正向电流 Forward Current	IF	50	mA
峰值正向电流 Peak Forward Current	IFP	220	mA
连续工作电流 Continuous Forward Current	IL	20	mA
反向电压 Reverse Voltage	VR	5	V
功耗 Power Dissipation	PD	90	mW
工作温度 Operation Temperature	Topr	-40 ~ +80	℃
贮存温度 Storage Temperature	Tstg	-40 ~ +80	℃
引脚镀锡温度 Lead Soldering Temperature	Tsol	最大温度260℃,最长时间5 秒 Max.260℃ for 5 sec Max.	

IFP 条件: 脉冲宽度小于等于10 分钟

IFP Conditions: Pulse Width≤10msec duty≤1/10

Tsol 条件: 离胶体底部4mm 处为基础

Tsol Conditions: 4mm from the base of the epoxy bulb



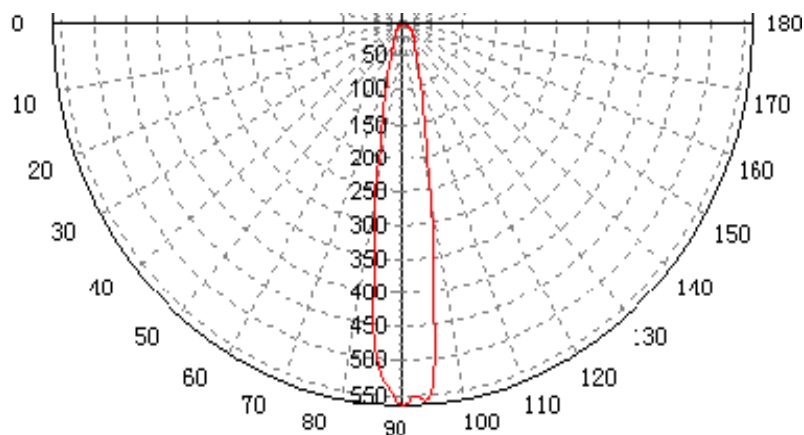
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产品型号: 5AR3UD12

■ 半功视角

Spatial Distribution



■ 可靠性试验

Reliability Performance

测试分类 Test Classification	测试项目 Test Item	测试条件 Test Conditions	测试持续时间 Test Duration	抽样大小 Sample Size	判定 Standard
寿命测试 Life Test	寿命测试 Life Test	Ta=25°C±5°C, IF=20mA	1000小时(hrs)	10PCS	
环境测试 Environment Test	热冲击测试 Thermal Shock Test	10°C±5°C ↔ +100°C±5°C 5min. 10sec. 5min.	100循环(cycles)	10PCS	
	冷热循环测试 Temperature Cycle Test	55°C±5°C ↔ +85°C±5°C 30min. 5min. 30min.	100循环(cycles)	10PCS	
	高温高湿测试 High Temperature & High Humidity Test	Ta=85°C±5°C RH =85%±0.5 %RH	240小时(hrs)	10PCS	
	高温贮存测试 High Temperature Storage	Ta=100°C±5°C	1000小时(hrs)	10PCS	
	低温贮存测试 Low Temperature Storage	Ta=-55°C±5°C	1000小时(hrs)	10PCS	
机械测试 Mechanical Test	抗焊接热度 Resistance to Soldering Heat	Ta=260°C±5°C	5 秒(sec.)	10PCS	
	引脚折弯 Lead Integrity	负荷2.5 牛顿(0.25 千克) 0° ~ 90° ~ 0°	3 回合(times)	10PCS	



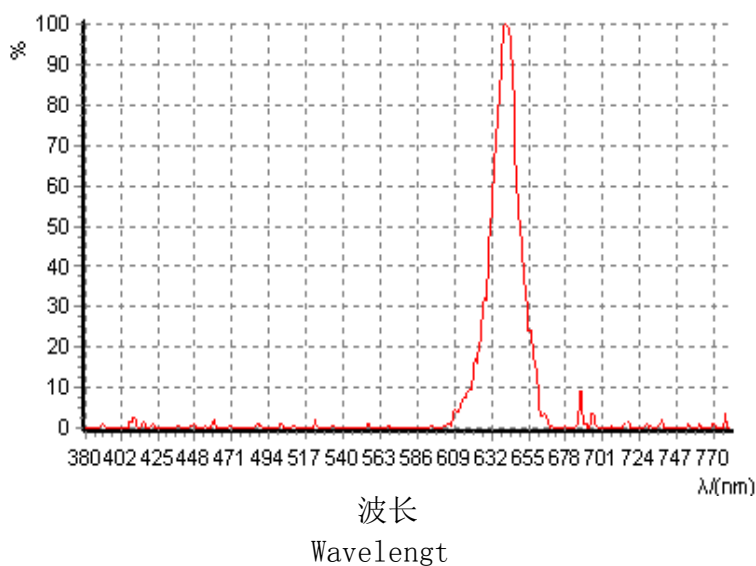
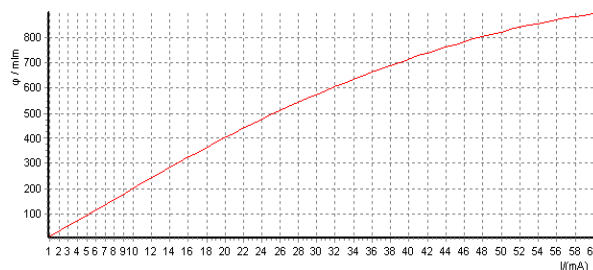
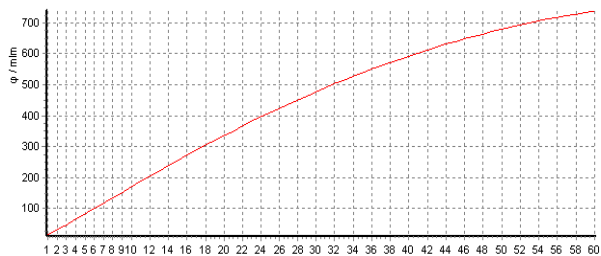
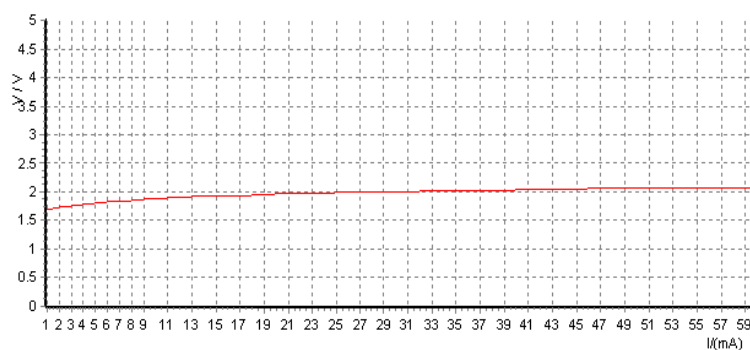
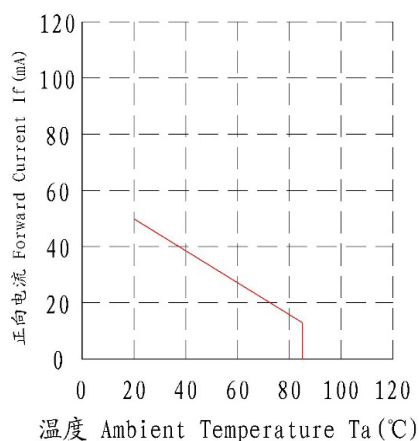
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Shenzhen Kento Electronic Co., Ltd

产品型号: 5AR3UD12

■典型的光电特性曲线 (Ta=25℃ 除非不同地方)

Typical Optical/Electrical Characteristics Curves (Ta=25℃ Unless Otherwise Noted)





Model: 5AR3UD12

1. Application

- A. Office equipment & Communications equipment & Home decoration
- B. Traffic control & Medical equipment & Air transport

2. 贮存

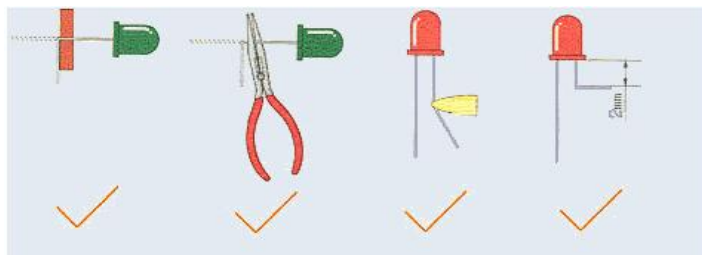
- A. Temperature $\leq 30^{\circ}\text{C}$
- B. Relative Humidity: $\leq 70\%$
- C. Usage Time in Packing Container ≤ 3 months
- D. Long-Time Storage Condition: Drying Cabinet (with desiccant or Nitrogen)

3. Wash

- A. Use alcohol to wipe LED Lampes, Washing Time ≤ 3 minutes (at normal temperature)
- B. Notice: Be careful about washing colloid by chemical goods. Such as: trichloroethylene, acetone etc.

4. Pins Fitting

- (1) Must be 2 mm from the colloid to bend the stent.
- (2) Stent forming must be done by a fixture or by a professional.
- (3) Support must be completed before welding
- (4) Support is required to ensure that the pin and spacing are consistent with the circuit board
- (5) Welding must be carried out at normal temperature, and when the LED is normally welded to the PCB board, the mechanical pressure should be applied to the LED pin as far as possible.



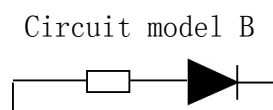
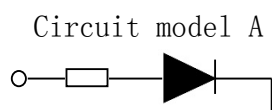
5. Soldering

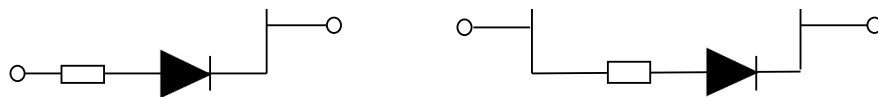
- A. Soldering under 2mm
- B. Avoid dipping and shaking colloid

Recommended soldering conditions			
Soldering iron		Wave soldering	
Welding temperature	260℃ Max	Preheating temperature	100℃ Max
Welding time	5 Sec. Max	Warm-up time	60sec. Max
	(one time only)	Welding temperature	260℃ Max
		Welding time	10sec. Max

Excessive welding temperature and long welding time will lead to led change and deformation

6. Driving way





7. Electrostatic Protection

- A. Use anti-static device. Such as: shield and gloves
- B. HBM<1000V Machine Discharge Model<100V