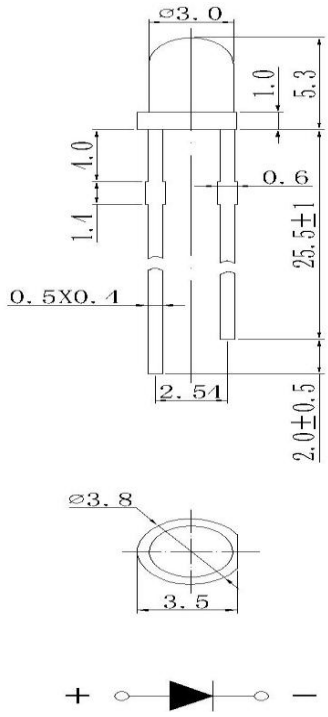
Hubei Kento Electronic Co., Ltd

Specification for LED Product

Model: 3AR4UD09

■ Package Dimensions(mm)



Notes:

1. All dimension units are millimeters.
2. All dimension tolerance is ±0.2mm unless otherwise noted.
3. An epoxy meniscus may extend about 1.5mm down the leads.
4. Burr around bottom of epoxy may be 0.5mm max.

Synopsis: 3mm Round Type Red Diffused Lens Red LED Lamp

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■ Typical Electrical & Optical Characteristics (Ta = 25℃)

	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT
Forward Voltage	VF	IF = 20mA	1.4	1.8	2.5	V
Reverse Current	IR	VR = 5V	---	---	1.1	μA
Dominant Wavelength	λD	IF = 20mA	620	---	630	nm
Luminous Intensity	IV	IF = 20mA	367	421	480	mcd
50% Power						

Viewing Angle	2θ½	IF = 20mA	---	52	---	deg

■ Absolute Maximum Ratings at (Ta = 25℃)

ITEMS	SYMBOL	ABSOLUTE MAXIMUM RATING	UNIT
Forward Current	IF	50	mA
Peak Forward Current	IFP	220	mA
Continuous Forward Current	IL	20	mA
Reverse Voltage	VR	5	V
Power Dissipation	PD	90	mW
Operation Temperature	Topr	-40 ~ +80	℃
Storage Temperature	Tstg	-40 ~ +80	℃
Lead Soldering Temperature	Tsol	Max.260°C for 5 sec Max.	

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

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

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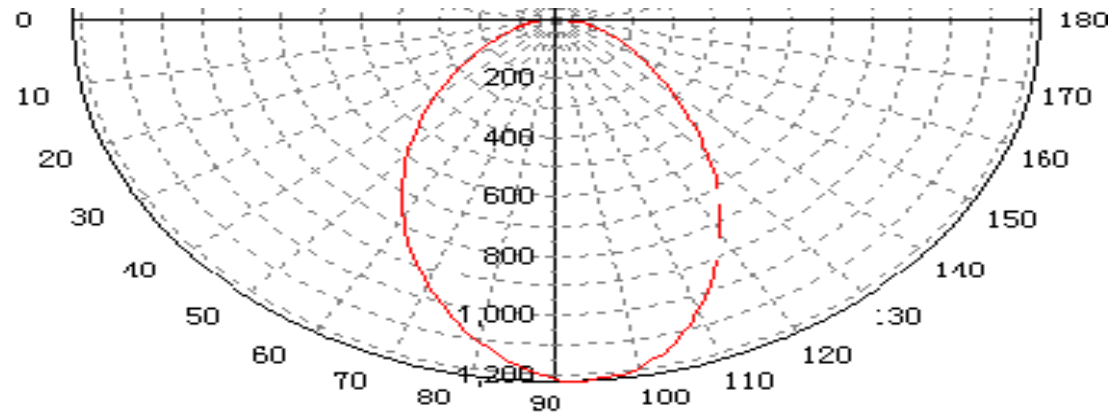
■ **Spatial Distribution**



■ **Reliability Performance**

Test Classification	Test Item	Test Conditions	Test Duration	Sample Size	Standard
Life Test	Life Test	Ta=25℃ ±5℃, IF=20mA	1000(hrs)	10PCS	
	Thermal Shock Tes	10℃ ±5℃ ← → +100℃ ±5℃ 5min. 10sec. 5min.	100(cycles)	10PCS	
	Temperature Cycle Test	55℃ ±5℃ ← → +85℃ ±5℃ 30min. 5min. 30min.	100(cycles)	10PCS	
	High Temperature & High Humidity	Ta=85℃ ±5℃	240(hrs)	10PCS	

Environment Test	Test	RH =85% ±0.5 % RH			
	High Temperature Storage	Ta=100℃ ±5℃	1000(hrs)	10PCS	
	Low Temperature Storage	Ta=-55℃ ±5℃	1000(hrs)	10PCS	
Mechanical Test	Resistance to Soldering Heat	Ta=260℃ ±5℃	5 (sec.)	10PCS	
	Lead Integrity	负荷 2.5 牛顿 (0.25 千克) 0°~90°~0°	3 (times)	10PCS	

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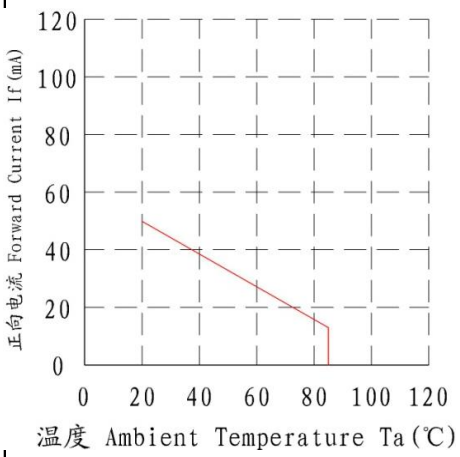
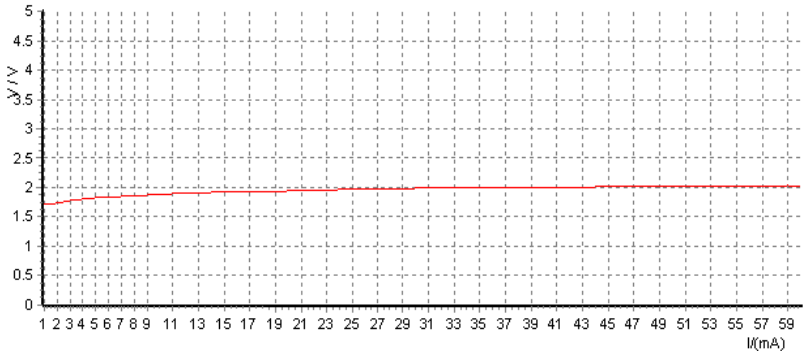
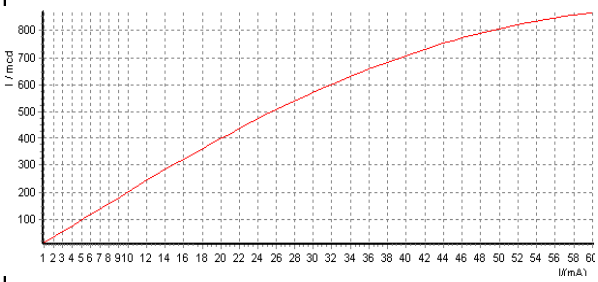
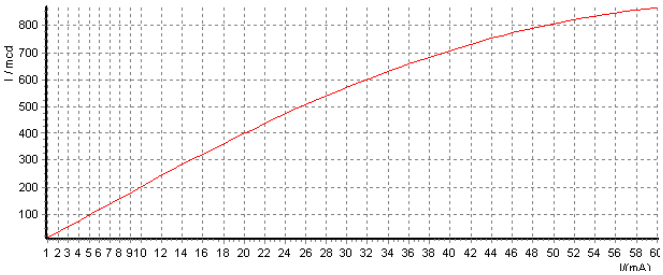
■ **Typical Optical/Electrical Characteristics Curves (Ta=25℃ Unless Otherwise Noted)**





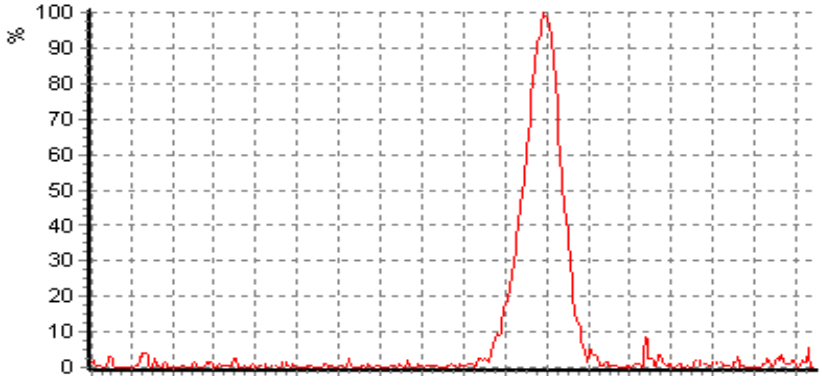
urrent-Voltage Curv

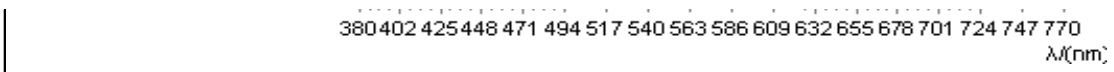




Current-Luminous intensity Curve

Current-Luminous flux Curve





Wavelength

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1.Application

A.Office equipment& Communications equipment& Home decoration

B.Traffic control& Medical equipment& Air transport

2.Storage

A.Temperature≤ 30℃

B.Relative Humidity:≤ 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

4.Pins Fitting

(1) Must be 2mm 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.。

Bend stent≥ 2mm(between pins & colloid)

5.Soldering

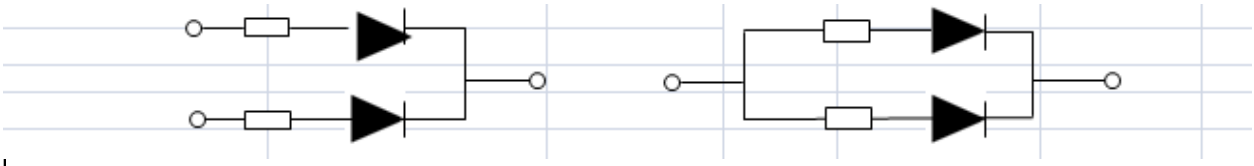
A.Soldering under 2mm

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

Circuit model A(many led lamps in parallel) Circuit model B



7.Electrostatic Protection

A.Use anti-static device.Such as:shield and gloves

B.HBM <1000V Machine Discharge Model<100V