

Part No. **AL-50-30UOC-004**

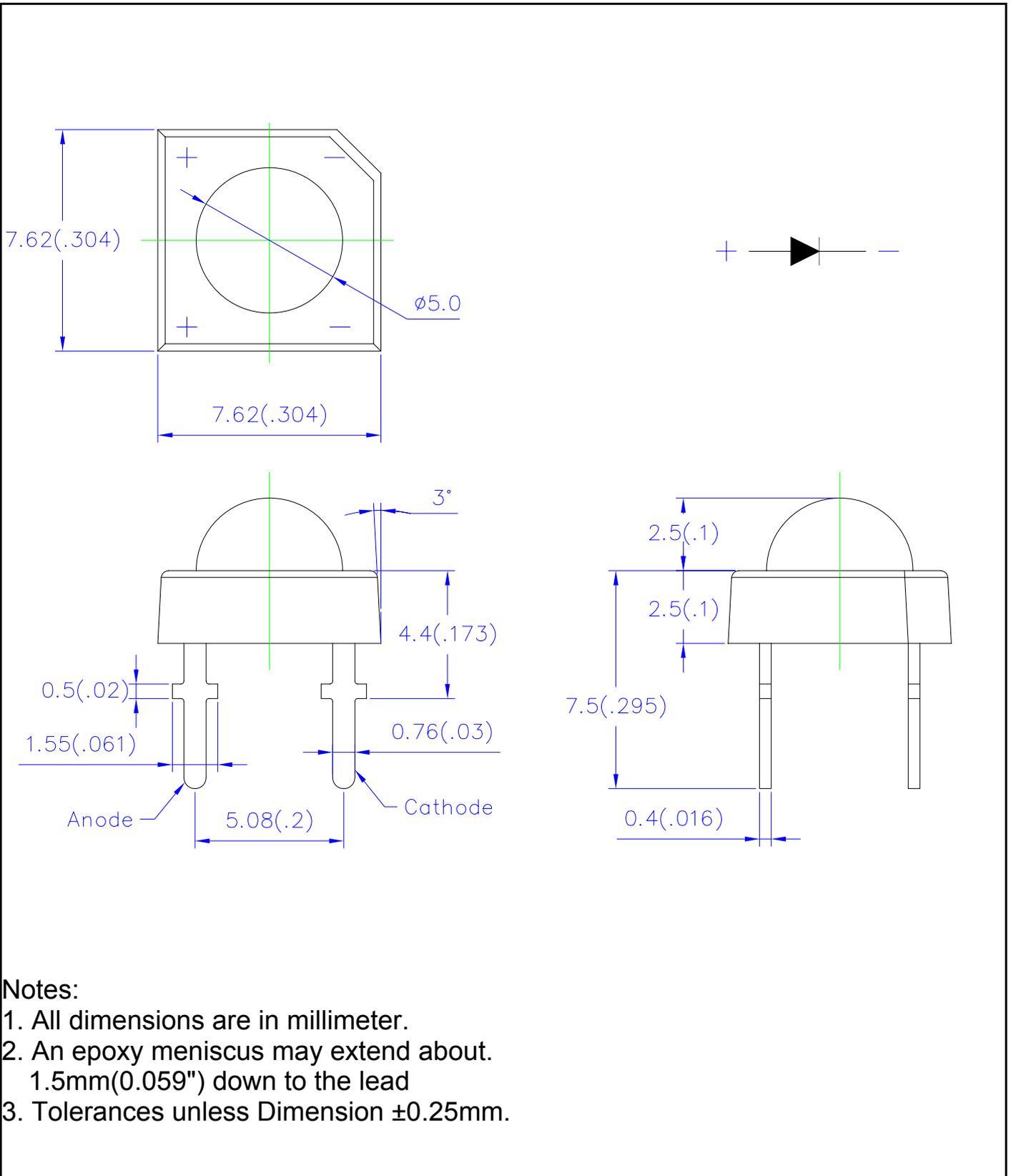
Diff No.004

5 mm

High Power

Type : LED Lamps

■ Package Dimension:



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LED Parts P/N.	Chip		Lens Color
	Material	Emitted Color	
AL-50-30UOC-004	AlGaInP	Amber	Water Clear

■ Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Rating	Unit
Continuous Forward Current	I _F	60	mA
Operating Temperature	T _{opr}	-30 to +80	°C
Storage Temperature	T _{stg}	-40 to +100	°C
Soldering Temperature	T _{sol}	260 ± 5	°C
Electrostatic Discharge	ESD	1000	V
Power Dissipation	P _D	160	mW
Peak Forward Current (Duty 1/10@1KHz)	I _F (Peak)	100	mA
Reverse Voltage	V _R	5	V

■ Electronic Optical Characteristics :

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	I _v	740	1550	/	mcd	I _F =50mA
Viewing Angle	2θ 1/2	/	65	/	deg	I _F =50mA
Peak Wavelength	λ _p	/	610	/	nm	I _F =50mA
Dominant Wavelength	λ _d	/	605	/	nm	I _F =50mA
Spectrum Radiation Bandwidth	Δλ	/	20	/	nm	I _F =50mA
Forward Voltage	V _F	/	1.9	2.4	V	I _F =50mA
Reverse Current	I _R	/	/	50	μA	V _R =5V

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■ Reliability test items and conditions :

The reliability of products shall be satisfied with items listed below.

Confidence level: 90%

LTPD: 10%

NO	ITEM	Test Conditions	Test hours/cycle	Sample Q'ty	Ac/Re
1	Solder Heat	Temp : 260°C±5°C	5 sec	80 pcs	0/1
2	Temperature Cycle	H : +85°C 30min λ 5min L : -40°C 30min	100 cycles	80 pcs	0/1
3	Thermal Shock	H : +100°C 5min λ 10sec L : -10°C 5min	100 cycles	80 pcs	0/1
4	High Temperature Storage	Ta=100°C	1000 hrs	80 pcs	0/1
5	Low Temperature Storage	Ta=-40°C	1000 hrs	80 pcs	0/1
6	DC Operating Life	Temp : 25°C I _F =20mA	1000 hrs	80 pcs	0/1
7	High Temperature / High Humidity	85°C / 85%RH	1000 hrs	80 pcs	0/1

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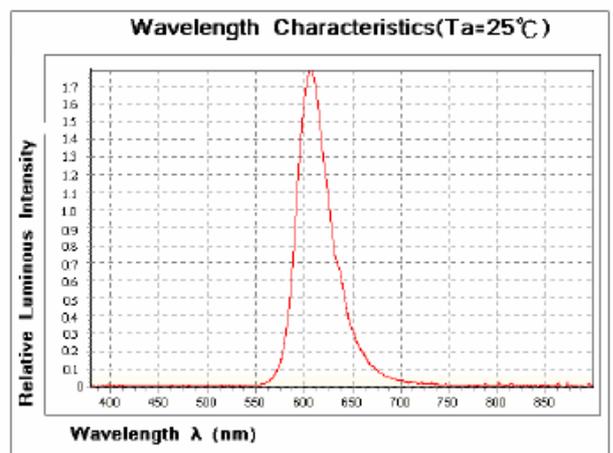
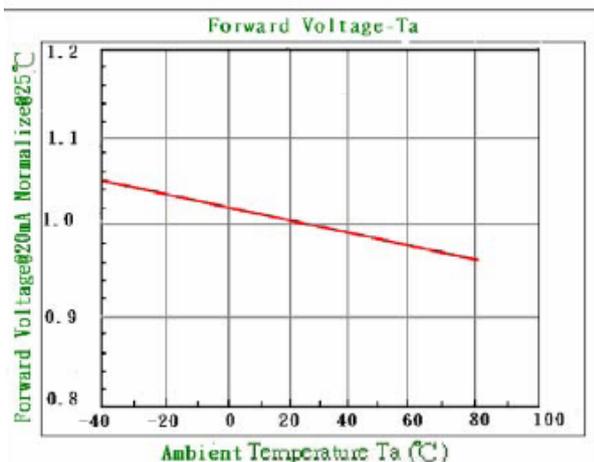
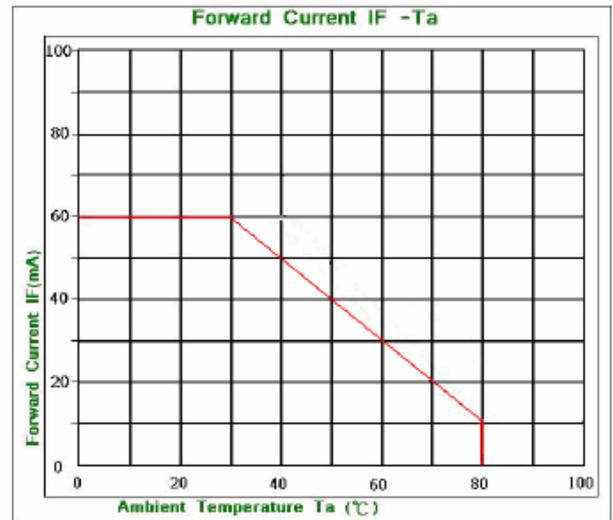
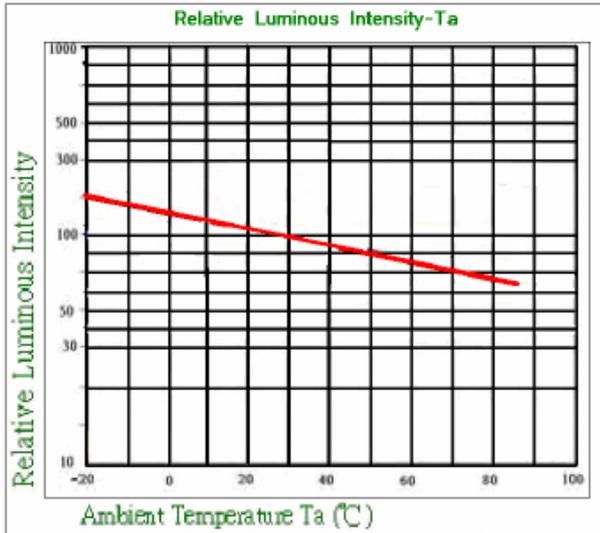
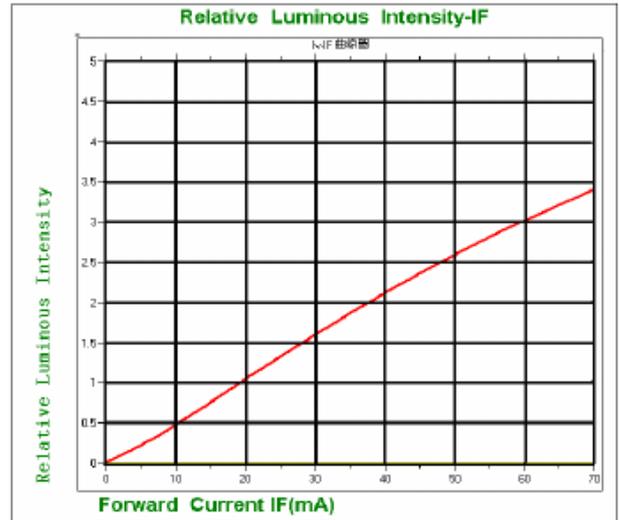
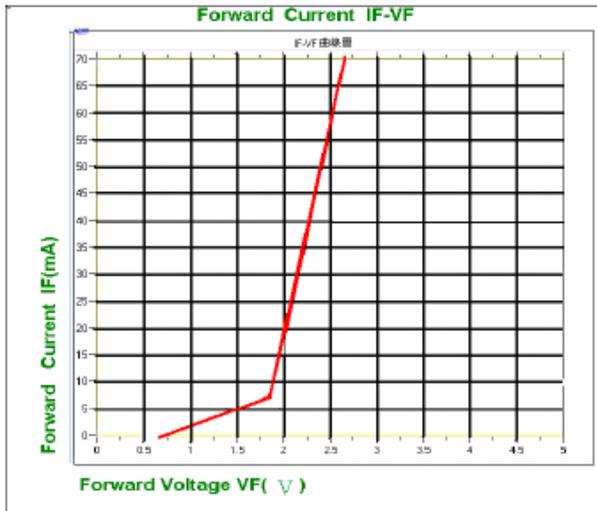
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■ **Typical electro-optical characteristics curves :**

The data typical, and the value is not guaranteed.



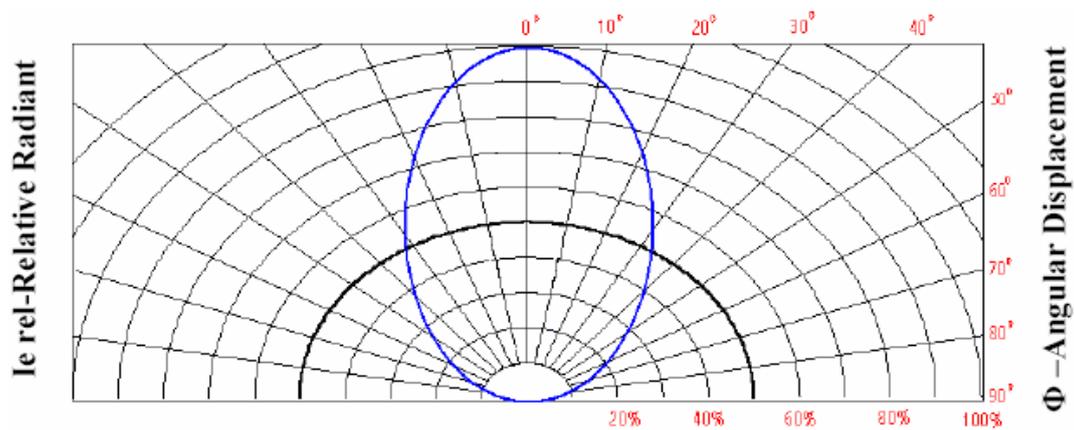
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Relative Radiant Intensity vs .Angular

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Precautions For Use

1. Over-current proof

Customer must apply resistors for protection, otherwise slight voltage shift will cause big current change (Burn out will happen).

2. Storage

Do not open moisture proof bag before the products are ready to use.

Before opening the package, the LEDs should be kept at 30°C or less and 90%RH or less. The LEDs should be used within a year.

After opening the package, the LEDs should be kept at 30°C or less and 70%RH or less.

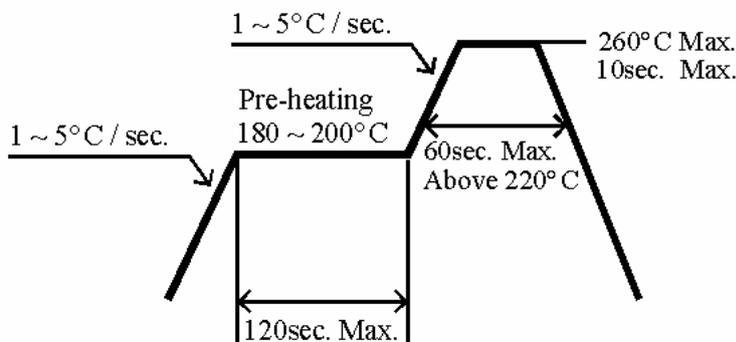
The LEDs should be used within 168 hours (7 days) after opening the package.

If the moisture absorbent material (silica gel) has faded away or the LEDs have exceeded the storage time, baking treatment should be performed using the following conditions.

Baking treatment : 60±5°C for 24 hours.

3. Soldering Condition

Pb-free solder temperature profile



Reflow soldering should not be done more than two times.

When soldering, do not put stress on the LEDs during heating.

After soldering, do not warp the circuit board.

4. Soldering Iron

Each terminal is to go to the tip of soldering iron temperature less than 280°C for 3 seconds within once in less than soldering iron capacity 25W. Leave two seconds and more intervals, and do soldering of each terminal. Be careful because the damage of the product is often started at the time of the hand solder.