



High Brightness LED Emitter

AL-R 100 Watt Series Specifications

LED Product features:

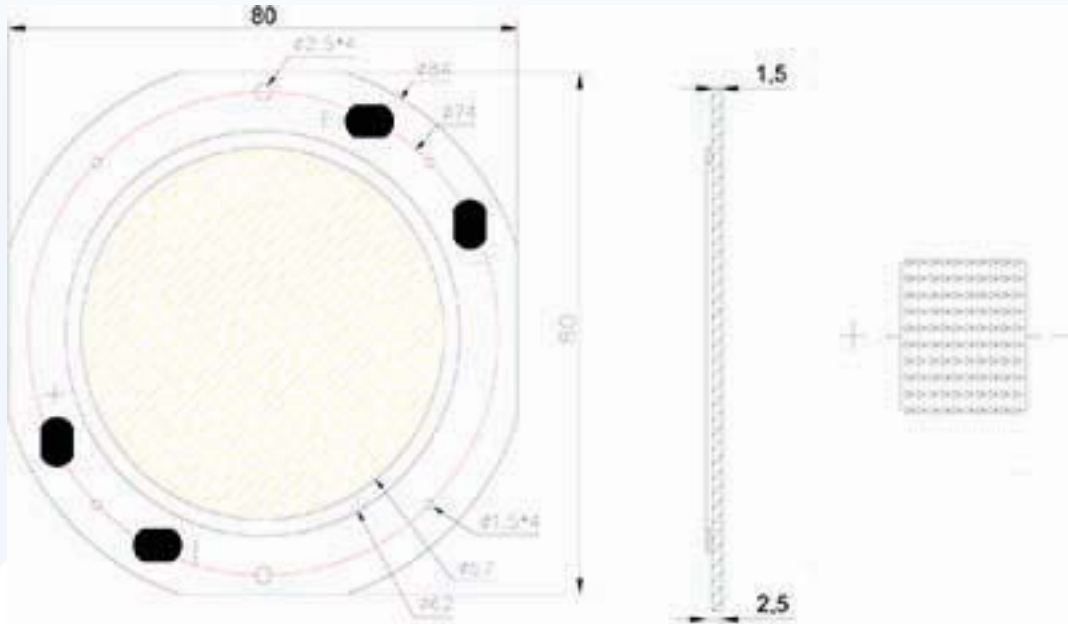
High Efficiency and Reliability
Low Power Consumption
Over 100,000 hour life span



ALTA LED

AL-R Series Specifications

Chip Dimensions



All dimensions are in millimeters (mm).

ALTA LED



AL-R Series Specifications

Maximum Ratings at Ta = 25° C

Parameter	Symbol	Rating	Unit
DC Forward Current	If	3.5	A
Operating Temperature	Topr	-20 to +60	°C
Storage Temperature	Tstg	-30 to +80	°C
Junction Temperature	Tj	120	°C
Peak Forward Current	Ifp (Peak) *	8000	mA
Reverse Voltage	Vr	45	V

* Ifp Conditions – Pulse Width \leq 1msec / Duty \leq 1/10.

Forward Voltage and Luminance Ranking

Part Number	Color	Condition If (A)	CCT Range (K)			Luminous Flux		Forward Voltage (V)		
			Min.	Typ.	Max.	Min.	Max.	Min.	Typ.	Max.
AL-S-100W-50	Cool White	3.50	5000	-	6500	8900	10500	29.60	30.00	32.00
AL-S-100W-30	Warm White	3.50	2900	-	3500	7000	7550	29.60	30.00	32.00

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Characteristic Curves, $T_a = 25^\circ\text{C}$

Fig1. Relative Intensity vs. Wavelength

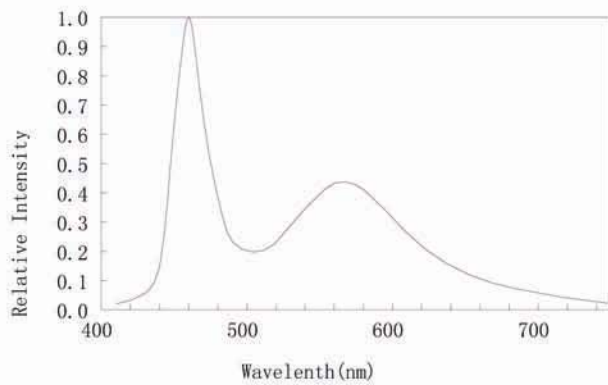


Fig2. Forward Current vs. Forward Voltage

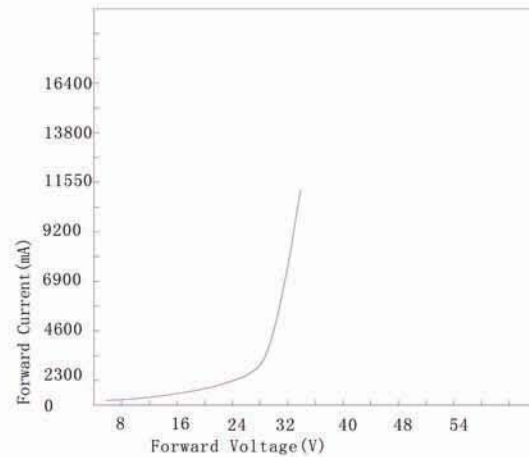


Fig3. Forward Current vs. Relative Intensity

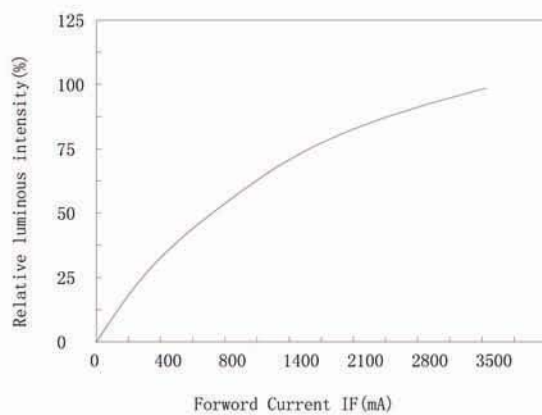
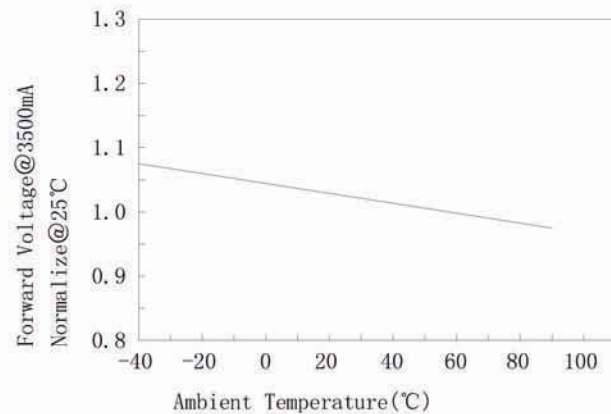


Fig4. Forward Voltage vs. Temperature





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Precautions for use

Manual Soldering

The top temperature of soldering iron should not exceed 300°C. The soldering time should not exceed 3 seconds. The soldering position must be 3mm outside of LED colloid.

ESD countermeasure

Static electricity and high voltage can damage the LED. The production whose Die material is InGaN must strictly be required to prevent ESD. It is required that you put on static glove and a static fillet. The soldering tool and the cover of the device must connect to the ground. Soldering conditions must follow the related information in the specification manual.

Constant current drive

Please add constant current drive to circuit in order to avoid damaging LED due to large current and voltage fluctuation.

Storage time

A) LED can be stored for a year under the following conditions: temperature of 5°C ~35°C and humidity of RH60%. The production must be re-inspected and tested before use if the storage time exceeds a year.

B) If LED is exposed to air for a week under the following conditions: temperature of 5°C ~35°C, humidity of RH60%, place the ambience temperature at 65°C ±5°C for 24 hours and use it within 15 days for best results.

Cleaning

Be careful of some chemicals because the LED colloid fades and can become damaged. You can use ethanol to wash or soak LED, but the time should not exceed 3 minutes.