

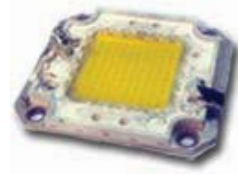


# High Brightness LED Emitter

## AL-S 100 Watt Series Specifications

### LED Product features:

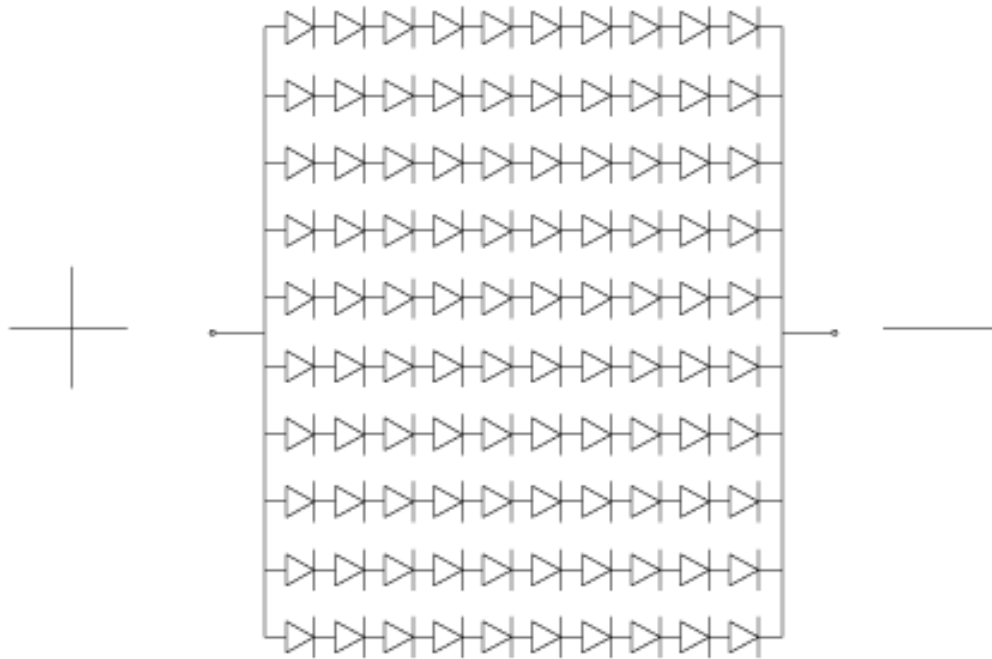
High Efficiency and Reliability  
Low Power Consumption  
Over 100,000 hour life span



# ALTA LED

## AL-S Series Specifications

### Chip Dimensions



**All dimensions are in millimeters (mm).**

*ALTA LED*



## AL-S 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.

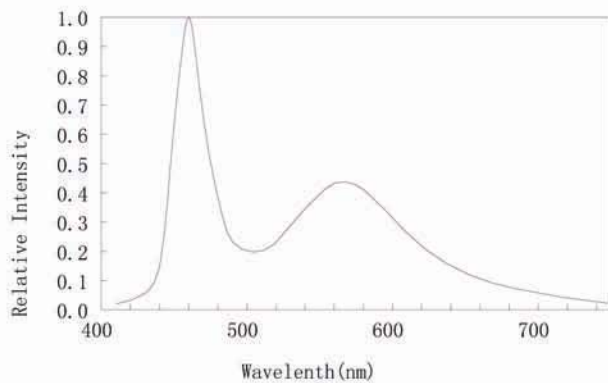
## Forward Voltage and Luminance Ranking

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

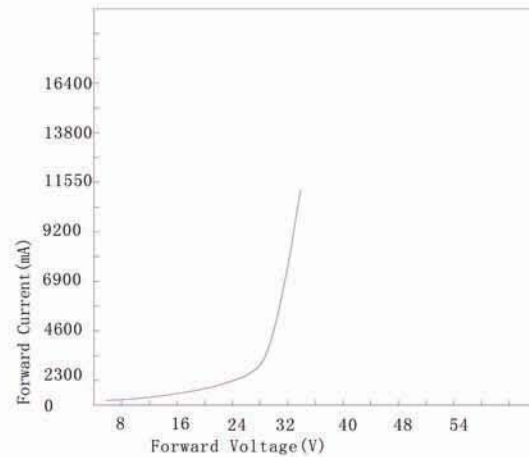
# AL-S Series Specifications

## Characteristic Curves, Ta = 25° C

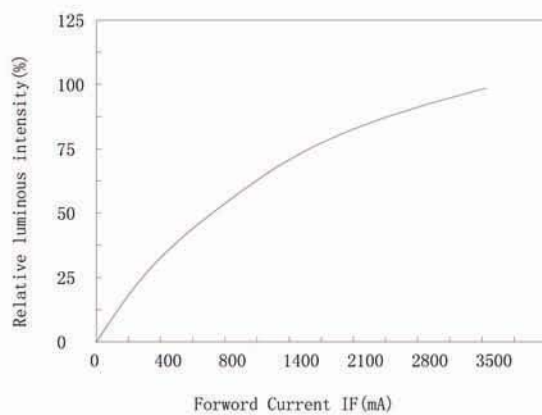
**Fig1. Relative Intensity vs. Wavelength**



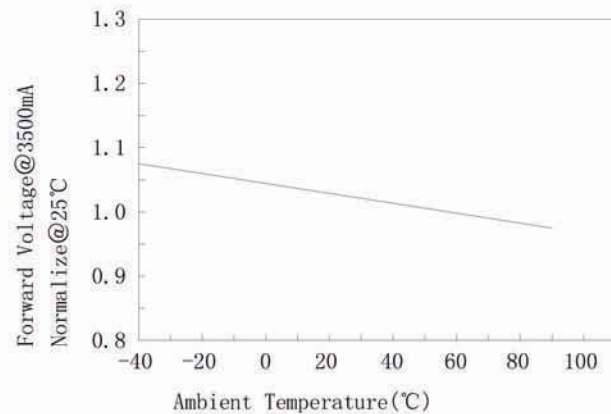
**Fig2. Forward Current vs. Forward Voltage**



**Fig3. Forward Current vs. Relative Intensity**



**Fig4. Forward Voltage vs. Temperature**





## AL-S Series Specifications

### Precautions for use

#### Manual Soldering

The tip temperature of soldering iron should not exceed 300°C; soldering time should not exceed 3 seconds. Soldering position must be 3mm out of led colloid.

#### ESD countermeasure

Static electricity and high volt can damage LED, The production whose Die material is InGaN must strictly required to prevent ESD, Must put on static glove and static fillet, Soldering tool and the cover of device must connect the ground, soldering condition follows the related stating of production specification manual.

#### Constant current drive

Need to add constant current drive in circuit in order to avoid damaging led due to big current and voltage fluctuation.

#### Storage time

A) LED can be stored for a year under the condition: the temperature of 5°C ~35°C and humidity of RH60% ,These production must be re-inspected and tested before use if their storage time exceed a year.

B) If LED is exposed in air for a week under the condition: the temperatures of 5°C ~35°C, humidity of RH60%, must place the ambience of 65°C ±5°C for 24 hours and use it in 15 days for best.

#### Cleaning

Be careful of some chemical results in the LED colloid fades and damage when using chemical clean the LED, such as chloroethylene, acetone etc. Can use ethanol to wash or soak LED but the time don't exceed 3 minutes.