



## LED660N-66-16100

- Infrared High Power LED Array
- 660 nm, 4.3 W
- Chip: 1x1 mm, 16 pcs., AlGaInP
- TO-66 package, Silicone and/or Epoxy resin
- Viewing Angle: 124°



### Description

**LED660N-66-16100** is a wide viewing and extremely high output power illuminator consists of 16 pcs. 1x1 mm high current driven AlGaInP chip dies, mounted on a metal stem TO-66 package and covered with clear silicone and/or epoxy resin.

It is designed for wide viewing and extremely high output power illuminator.

On forward bias, it emits a power radiation of typical **4.8 W** at a peak wavelength at **660 nm**.

### Maximum Ratings $(T_{CASE}=25^{\circ}C)$

Parameter	Symbol	Values		Unit
		Min.	Max.	
Power Dissipation	$P_D$		24	W
Forward Current	$I_F$		2.0	A
Reverse Voltage	$V_F$		20	V
Thermal Resistance	$T_{thja}$		2	K/W
Junction Temperature	$T_J$		120	°C
Operating Temperature	$T_{CASE}$	- 40	+ 85	°C
Storage Temperature	$T_{STG}$	- 40	+ 100	°C
Lead Solder Temperature *	$T_{SLD}$		+ 265	°C

\* must be completed within 3 seconds

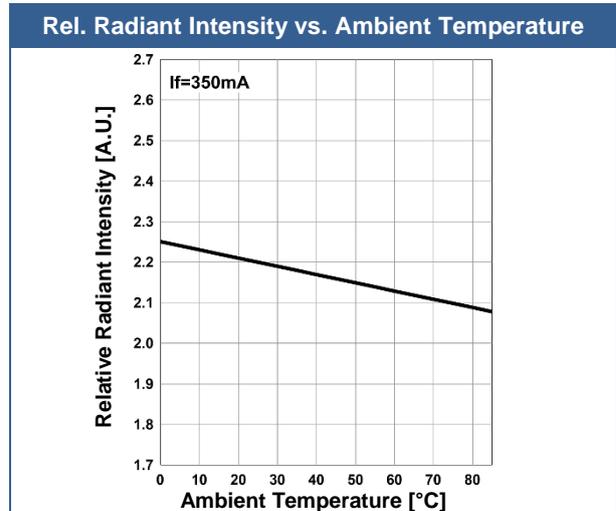
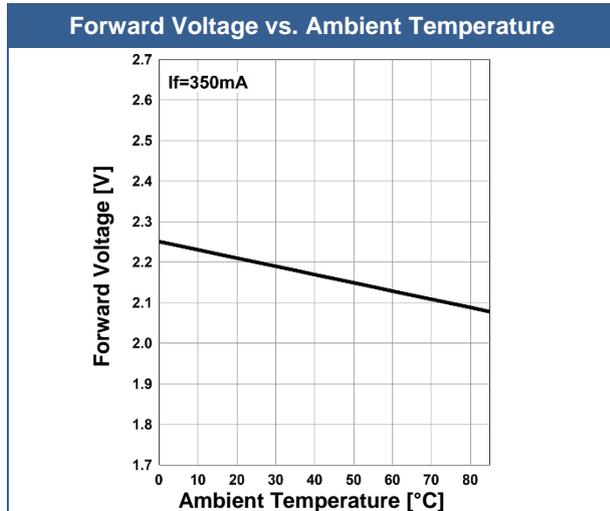
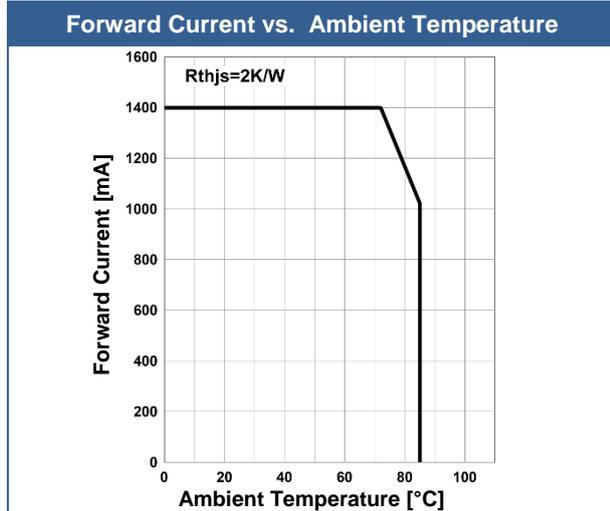
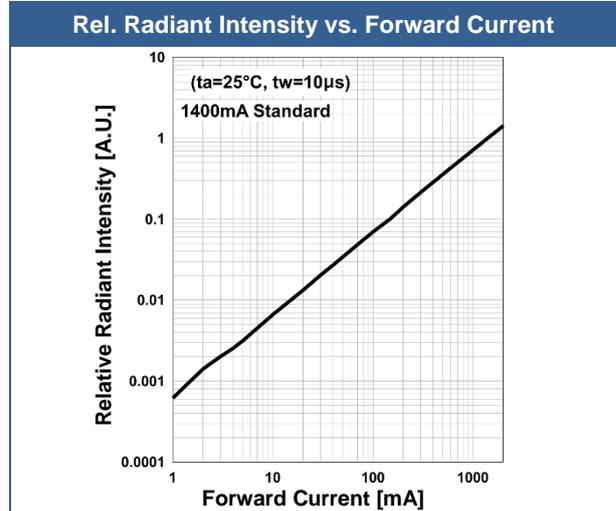
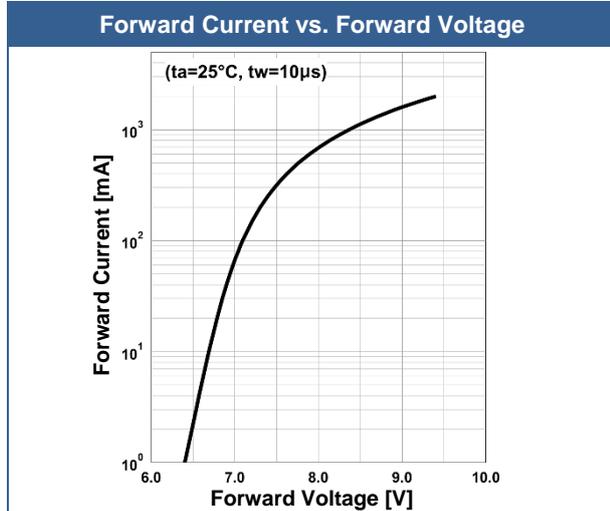
### Electro-Optical Characteristics $(T_{CASE}=25^{\circ}C)$

Parameter	Symbol	Conditions	Values			Unit
			Min.	Typ.	Max.	
Peak Wavelength	$\lambda_P$	$I_F=1.4A$	650		670	nm
Half Width	$\Delta\lambda$	$I_F=1.4A$		642		nm
Half Width	$\Delta\lambda$	$I_F=1.4A$		17		nm
Forward Voltage	$V_F$	$I_F=1.4A$		8.8	12	V
Reverse Current	$I_R$	$V_R=20V$			10	$\mu A$
Radiated Power *	$P_O$	$I_F=1.4A$		4.8		W
Luminous Flux	$\Phi_V$	$I_F=1.4A$		400		lm
Viewing Angle	$\varphi$	$I_F=100mA$		124		deg.
Rise Time	$t_r$	$I_F=1.4A$		70		ns
Fall Time	$t_f$	$I_F=1.4A$		50		ns

\* measured by S3584-08

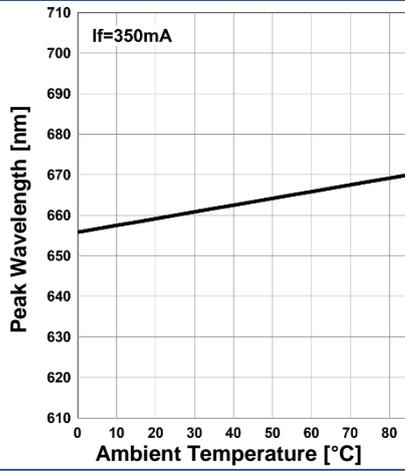


## Typical Performance Curves

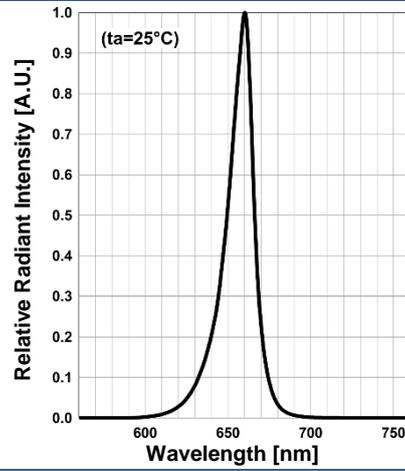




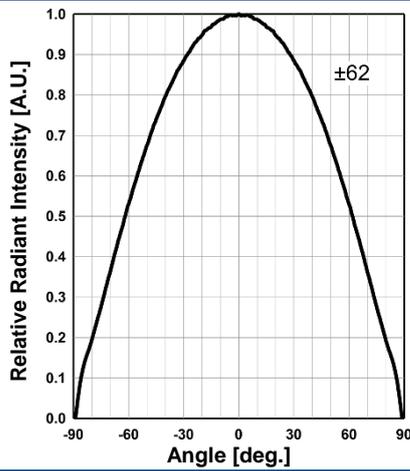
### Peak Wavelength vs. Ambient Temperature



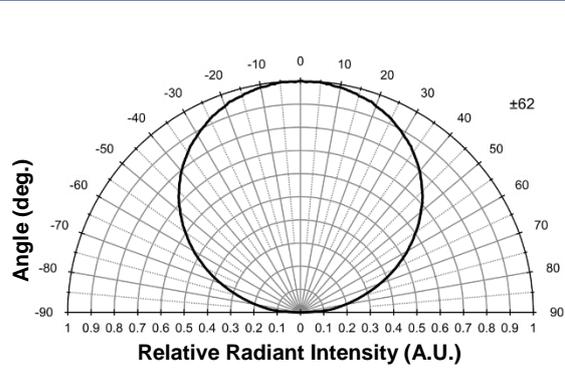
### Relative Spectral Emission



### Radiation Characteristics

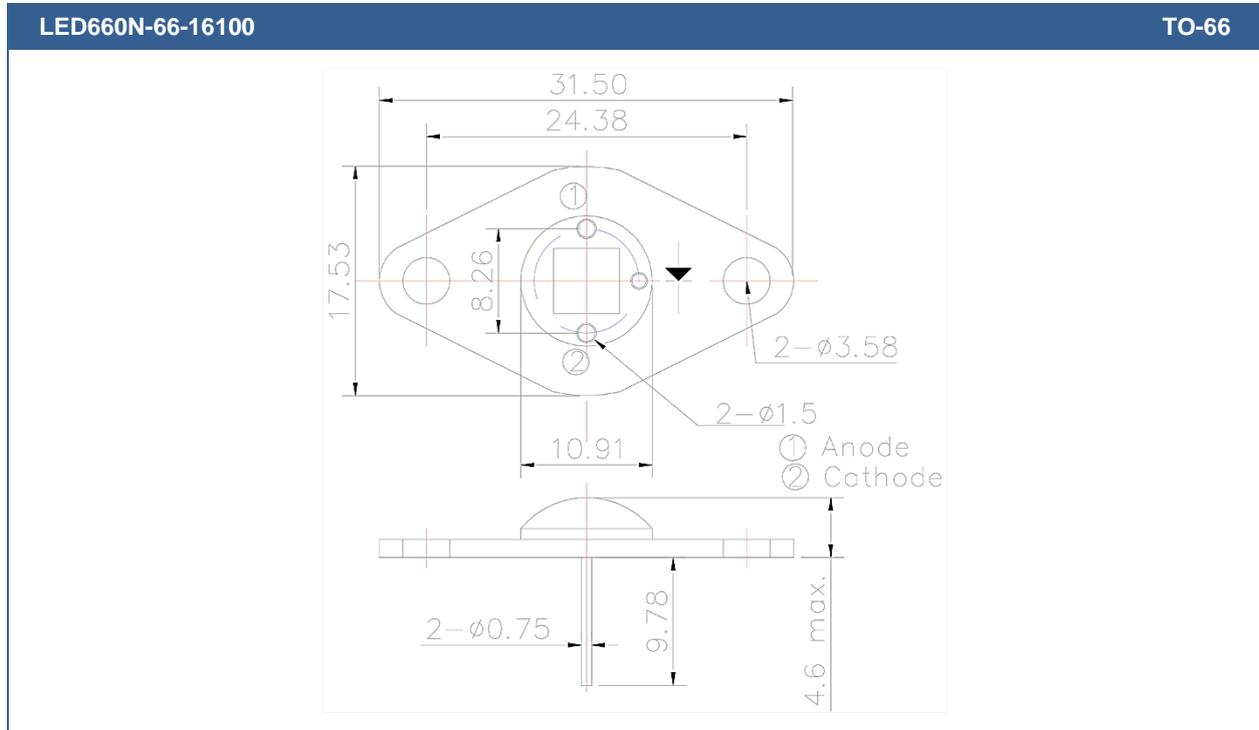


### Radiation Characteristics





## Outline Dimensions



All Dimensions in mm



## Precautions

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### Cautions:

- This high power LED must be cooled!
- NOT look directly into the emitting area of the LED during operation!

### Soldering:

- Do avoid overheating of the LED
- Do avoid electrostatic discharge (ESD)
- Do avoid mechanical stress, shock, and vibration
- Do only use non-corrosive flux
- Do not apply current to the LED until it has cooled down to room temperature after soldering

### Cleaning:

**Cleaning with isopropyl alcohol, propanol, or ethyl alcohol is recommended**

DO NOT USE acetone, chloroform, trichloroethylene, or MKS

DO NOT USE ultrasonic cleaners

### Static Electricity:

**LEDs are sensitive to electrostatic discharge (ESD).** Precautions against ESD must be taken when handling or operating these LEDs. Surge voltage or electrostatic discharge can result in complete failure of the device.

### Radiation:

During operation these LEDs do emit **high intensity light**, which is hazardous to skin and eyes, and may cause cancer. Do avoid exposure to the emitted light. **Protective glasses are recommended.** It is further advised to attach a warning label on products/systems.

### Operation:

**Do only operate LEDs with a current source.**

Running these LEDs from a voltage source will result in complete failure of the device.

Current of a LED is an exponential function of the voltage across it. Usage of current regulated drive circuits is mandatory.