



LED395-66-60

- UV High Power LED Array
- 395 nm, 670 mW
- Chip: 350x350 μm , 60 pcs., InGaN
- TO-66 package, Silicone and/or Epoxy resin
- Viewing Angle: 124°



Description

LED395-66-60 is a wide viewing and extremely high output power illuminator consists of 60 pcs. of InGaN chip dies, mounted on a metal stem TO-66 package with AlN ceramics and covered with clear silicone and/or epoxy resin.

On forward bias, it emits a power radiation of typical **670 mW** at a peak wavelength of **395 nm**.

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

Parameter	Symbol	Values		Unit
		Min.	Max.	
Power Dissipation	P_D		14	W
Forward Current	I_F		600	mA
Reverse Voltage	V_R		25	V
Thermal Resistance	R_{THJA}		2	K/W
Junction Temperature	T_J		120	$^{\circ}\text{C}$
Operating Temperature	T_{CASE}	- 40	+ 85	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	- 40	+ 100	$^{\circ}\text{C}$
Lead Solder Temperature *	T_{SLD}		+ 265	$^{\circ}\text{C}$

* must be completed within 3 seconds

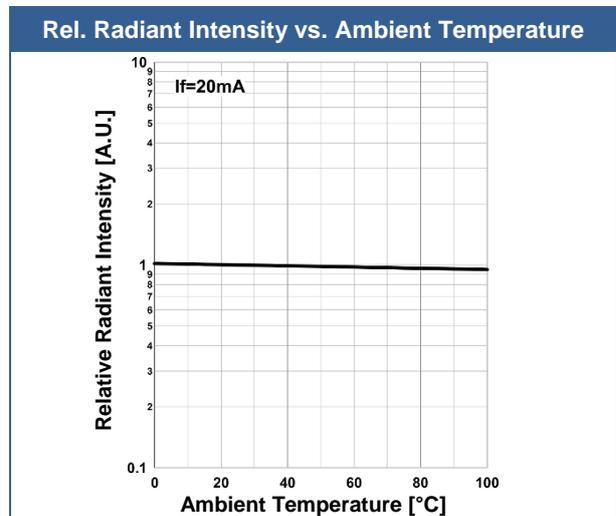
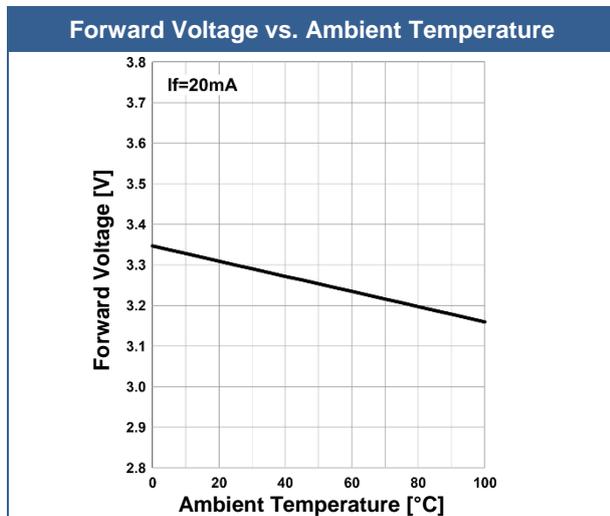
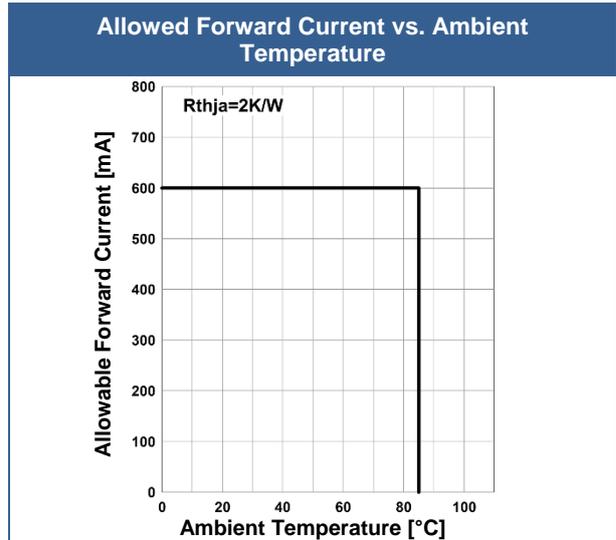
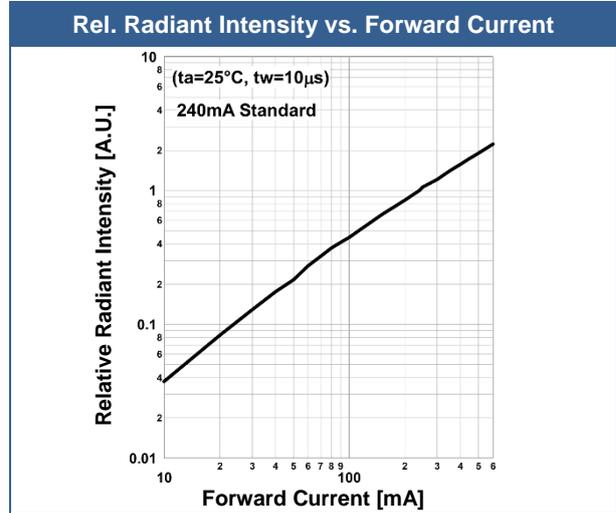
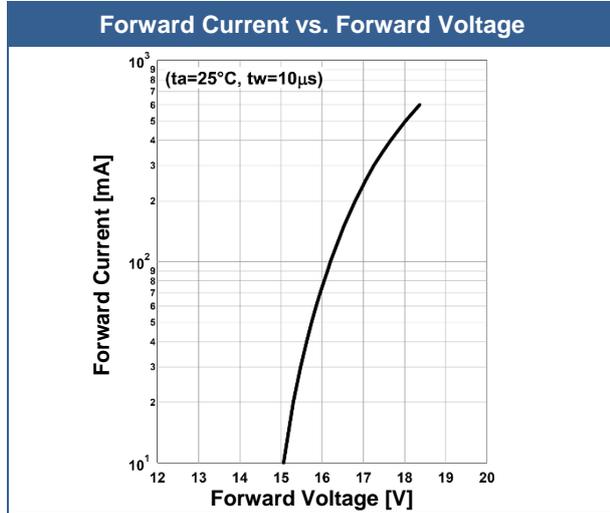
Electro-Optical Characteristics ($T_{CASE}=25^{\circ}\text{C}$)

Parameter	Symbol	Conditions	Values			Unit
			Min.	Typ.	Max.	
Peak Wavelength	λ_P	$I_F=240\text{mA}$	390		400	nm
Half Width	$\Delta\lambda$	$I_F=240\text{mA}$		17		nm
Forward Voltage	V_F	$I_F=240\text{mA}$		17	22	V
Radiated Power *	P_O	$I_F=240\text{mA}$		670		mW
Viewing Angle	$2\theta_{1/2}$	$I_F=100\text{mA}$		124		deg.
Rise Time	t_R	$I_F=240\text{mA}$		10		ns
Fall Time	t_F	$I_F=240\text{mA}$		15		ns

* measured by S3584-08

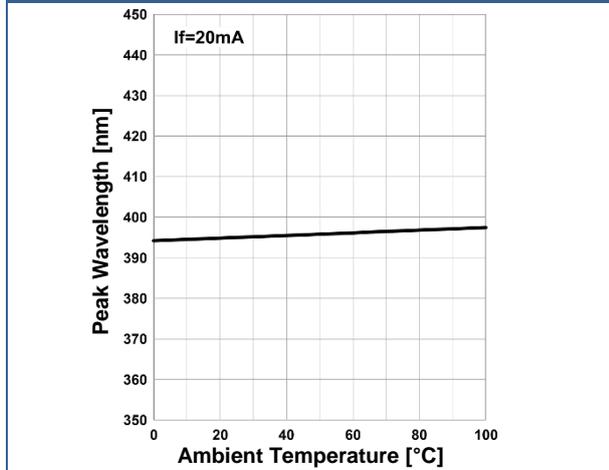


Typical Performance Curves

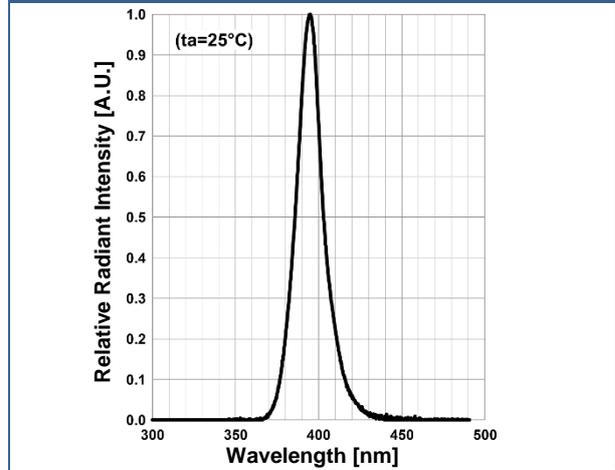




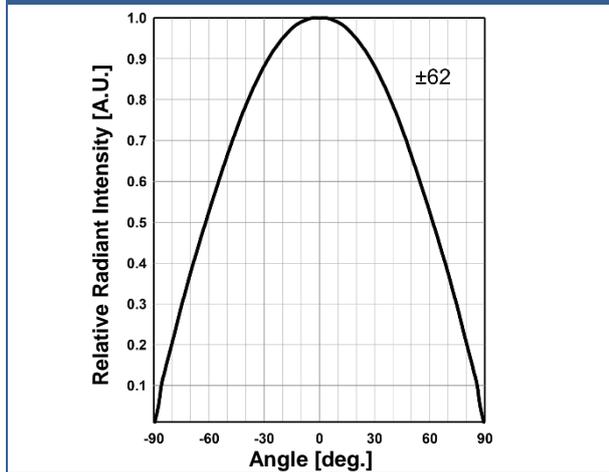
Peak Wavelength vs. Ambient Temperature



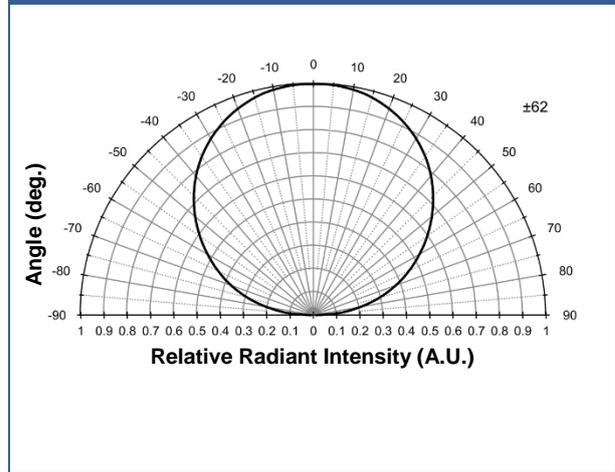
Relative Spectral Emission



Radiation Characteristics



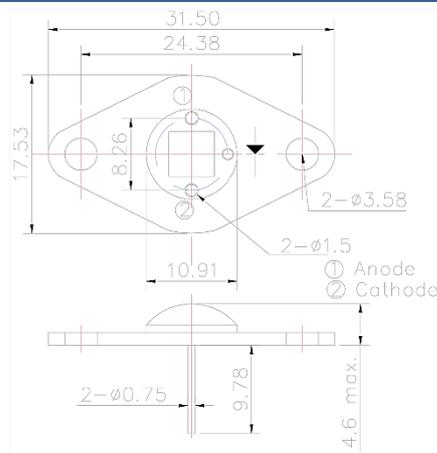
Radiation Characteristics



Outline Dimensions

LED395-66-60

TO-66



Lead	Description
Pin 1	LED Anode
Pin 2	LED Cathode

All Dimensions in mm



Precautions

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.



Revisions History

Rev.	Rel. Date	Chapter	Modification	Page
B1	2020-07-07	Layout	Added Revisions History	5
		Electro-Optical Characteristics	$2\theta_{1/2}$: 124° (previously 104°)	1
A2	2018-05-18	Maximum Ratings	P_D : 14 W (previously 4.5 W) I_F : 600 mA (previously 360 mA) Included: Thermal Resistance, Junction Temperature T_{CASE} : -40..+85 °C (previously 30..80 °C) T_{STG} : -40..+100 °C (previously -30..+100 °C) T_{SLD} : +265 °C (previously +240 °C)	1
		Electro-Optical Characteristics	$\Delta\lambda$: 17 nm (previously 20 nm) V_F : typ. 17V / max. 22 V (previously typ. 18 V) $2\theta_{1/2}$: 104° (previously 120°) P_O : 670 mW (previously 250 mW) Included: Rise Time, Fall Time	1
		Typical Performance Curves	Included	2-3
A1	2010-01-28	-	Initial release	-

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The above specifications are for reference purpose only and subjected to change without prior notice