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PRELIMINARY

UV230-T39L

- DEEP UV Light Emitting Device
- 230 nm, 400 μ W
- TO39 Metal Can Package
- Hemispherical Glass Lens
- Beam Angle $\pm 8^\circ$



Description



UV230-T39L is a deep ultraviolet LED, typically emitting at **230 nm** with an optical output power of **400 μ W @ 20 mA**, and narrow bandwidth. It comes in a hermetically sealed TO39 metal can package with hemispherical glass lens, and is typically used for biological/chemical analysis and fluorescence spectroscopy applications.

Maximum Ratings*

Parameter	Symbol	Values		Unit
		Min.	Max.	
Power Dissipation	P_D		180	mW
Forward Current	I_F		25	mA
Pulse Forward Current**	I_{FP}		100	mA
Operating Temperature	T_{OPR}	- 30	+ 60	$^\circ\text{C}$
Storage Temperature	T_{STG}	- 40	+ 100	$^\circ\text{C}$
Soldering Temperature (t_{max} 3s)	T_{SLD}		260	$^\circ\text{C}$

* Operating close to or exceeding these parameters may damage the device

** duty cycle = 1 %, pulse width = 10 μ s

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

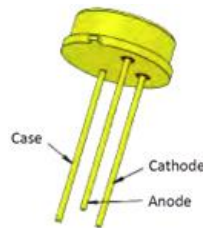
Parameter	Symbol	Conditions	Values			Unit
			Min.	Typ.	Max.	
Peak Wavelength	λ_P	$I_F = 20$ mA	225	230	235	nm
Half Width	λ_Δ	$I_F = 20$ mA		11		nm
Forward Voltage	U_F	$I_F = 20$ mA		7.0		V
Total Radiated Power	P_O	$I_F = 20$ mA	200	400		μ W
Beam Angle	$2\theta_{1/2}$	$I_F = 20$ mA		16		deg.
Thermal Resistance	R_{THJA}	$I_F = 20$ mA		5		K/W



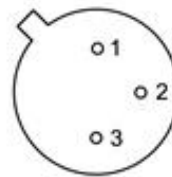


Electrical Connection

Pin #	Function
Pin 1	Anode
Pin 2	Cathode
Pin 3	Case

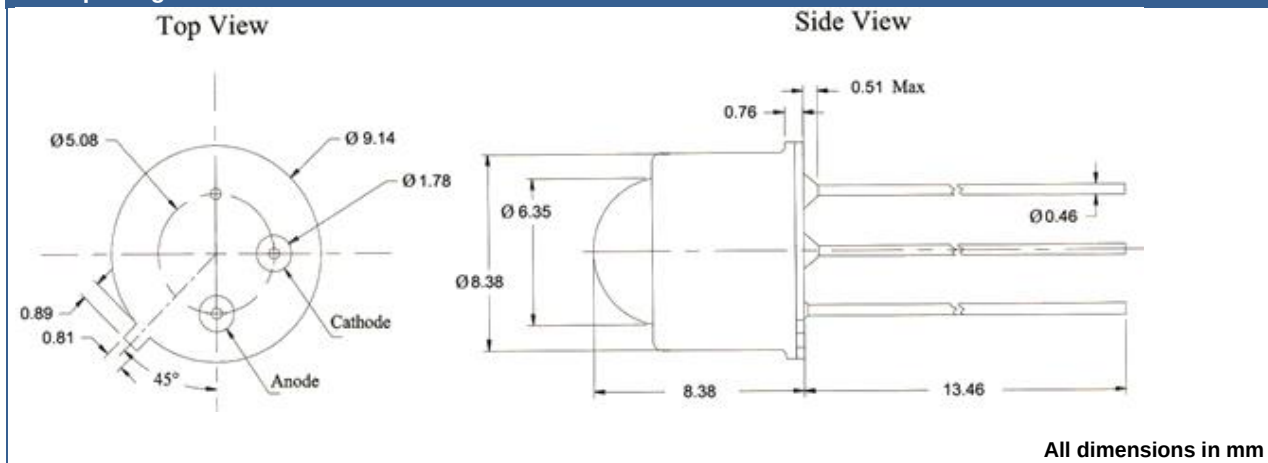


Bottom View:



Outline Dimensions

TO39 package



Precautions for Use

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.

UV-Radiation:

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

Operation:

- **Do only operate these LEDs with a current source.**
Current of a LED is an exponential function of the voltage across it. Usage of current regulated drive circuits is mandatory.
- Compliance to the maximum electrical specifications is paramount.

Storage:

- **Recommended storage temperature:** $\leq 30^\circ\text{C}$
- **Recommended storage relative humidity:** $\leq 70\%$