



XSL-355-TB

- UV Through Hole LED
- 355 nm, 0.7 mW
- TO-46 Metal Can Package
- Beam Angle: $\pm 5^\circ$
- ESD Protection Device



Description

XSL-355-TB is an ultraviolet LED, emitting at a peak wavelength of typically 355 nm and optical output power of 0.7 mW @ 20 mA. It comes in a **TO-46 metal can package** with **glass ball lens** and a beam angle of 10° , and features an **integrated Z-diode** against Electrostatic Discharge (ESD)

Maximum Ratings*

Parameter	Symbol	Values		Unit
		Min.	Max.	
Power Dissipation	P_D		100	mW
Forward Current	I_F		25	mA
Pulse Forward Current **	I_{FP}		100	mA
Reverse Current	I_R		85	mA
Operating Temperature	T_{CASE}	- 30	+ 80	$^\circ\text{C}$
Storage Temperature	T_{STG}	- 30	+ 100	$^\circ\text{C}$
Lead Solder Temperature ($t_{max. 3s}$)	T_{SLD}		+ 260	$^\circ\text{C}$

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

** duty cycle = 10 %, pulse width = 100 μs

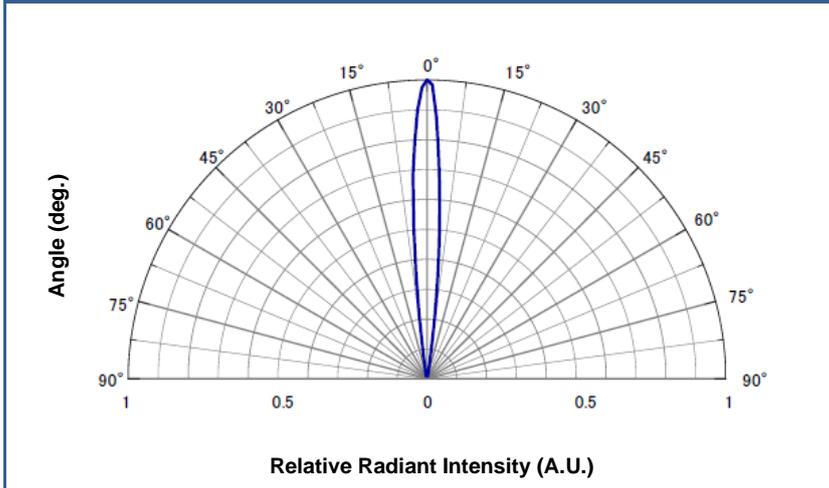
Electro-Optical Characteristics ($T_{CASE} = 25^\circ\text{C}$)

Parameter	Symbol	Conditions	Values			Unit
			Min.	Typ.	Max.	
Peak Wavelength	λ_P	$I_F = 20 \text{ mA}$	353	355	360	nm
Half Width	λ_Δ	$I_F = 20 \text{ mA}$		15		nm
Forward Voltage	U_F	$I_F = 20 \text{ mA}$	3.2	3.6	4.2	V
Total Radiated Power	P_O	$I_F = 20 \text{ mA}$	0.6		0.8	mW
Beam Angle	$2\theta_{1/2}$	$I_F = 20 \text{ mA}$		10		deg.



Typical Performance Curves

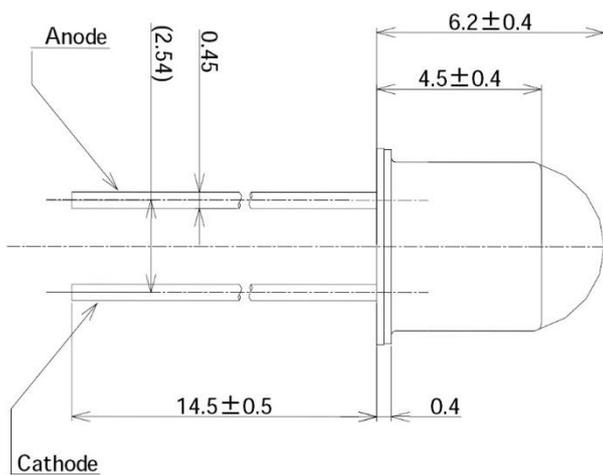
Radiation Characteristics



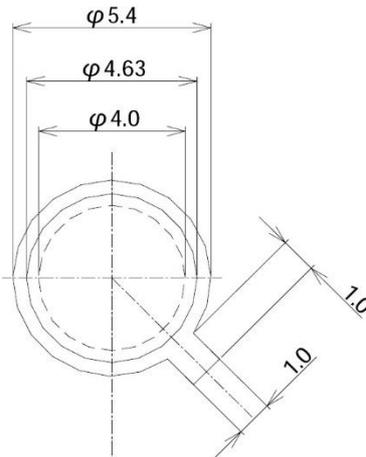
Outline Dimensions

TO-46

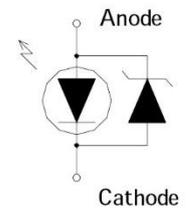
Side View



Top View



Internal circuit



all dimensions in mm



General Notes

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 LED.

Radiation

- During operation these LEDs do emit light, which **could be hazardous to skin and eyes**, and **may cause cancer**.
- Do avoid exposure to the emitted light. Protective glasses if needed
- 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.

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