



XSL-365-TB4

- UV Through Hole LED
- 365 nm, 1.0 mW
- TO-46 Metal Can Package
- Beam Angle: $\pm 5^\circ$
- ESD Protection Device



Description

XSL-365-TB4 is an ultraviolet LED, emitting at a peak wavelength of typically 365 nm and optical output power of 1.0 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

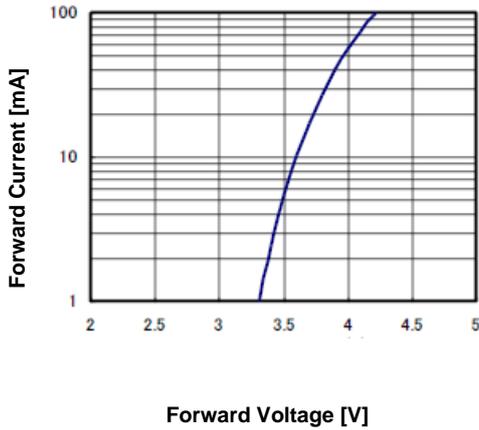
Electro-Optical Characteristics ($T_{CASE} = 25^\circ\text{C}$)

Parameter	Symbol	Conditions	Values			Unit
			Min.	Typ.	Max.	
Peak Wavelength	λ_P	$I_F = 20 \text{ mA}$	363		370	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	$I_F = 20 \text{ mA}$	0.8		1.2	mW
Beam Angle	$2\theta_{1/2}$	$I_F = 20 \text{ mA}$		10		deg.

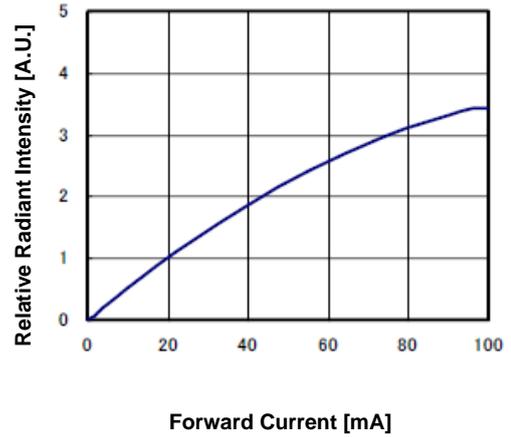


Typical Performance Curves

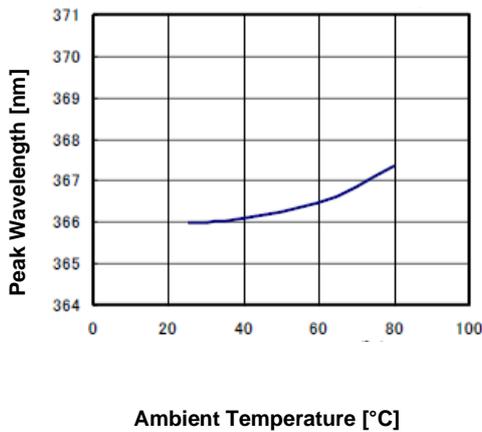
Forward Current vs. Forward Voltage



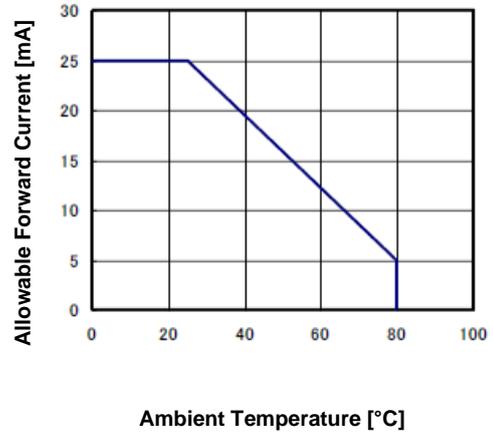
Relative Radiant Intensity vs. Forward Current



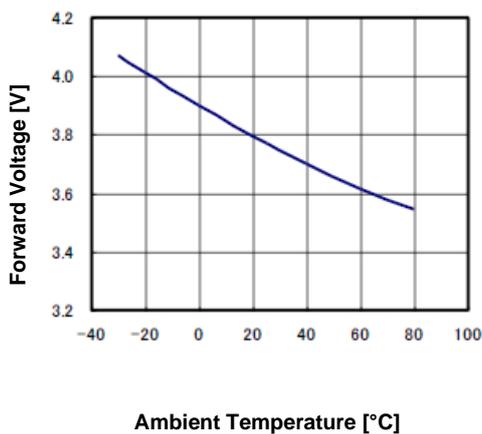
Peak Wavelength vs. Ambient Temperature



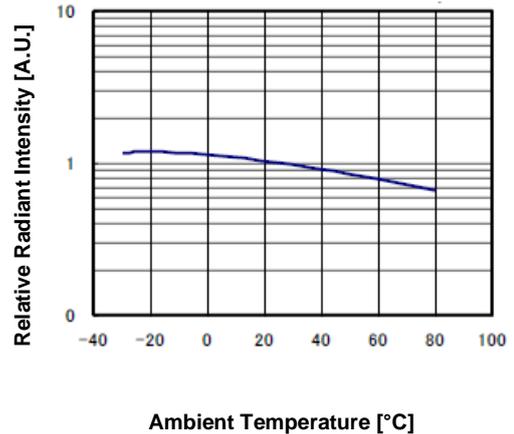
Allowed Forward Current vs. Amb. Temperature



Forward Voltage vs. Ambient Temperature



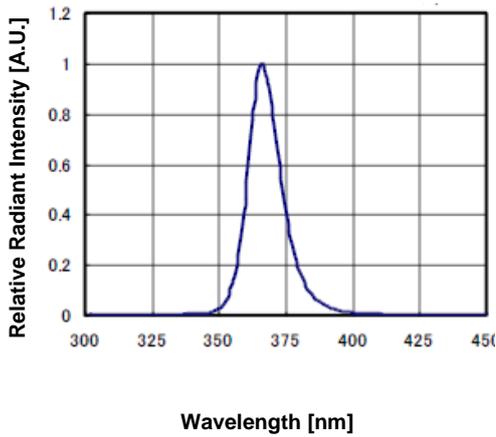
Rel. Radiant Intensity vs. Ambient Temperature



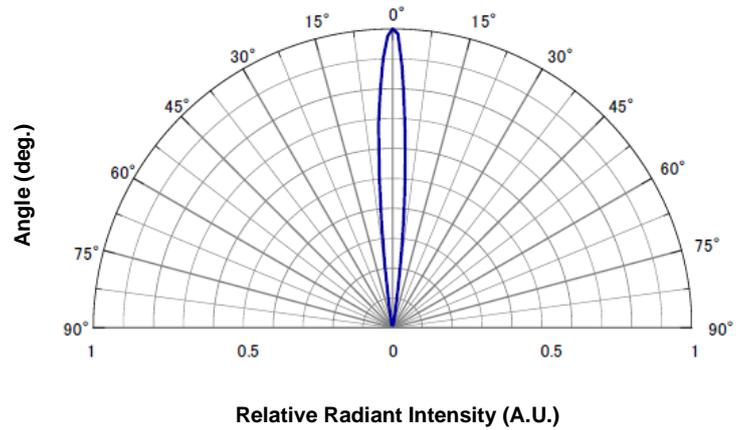


Typical Performance Curves

Radiation Characteristics



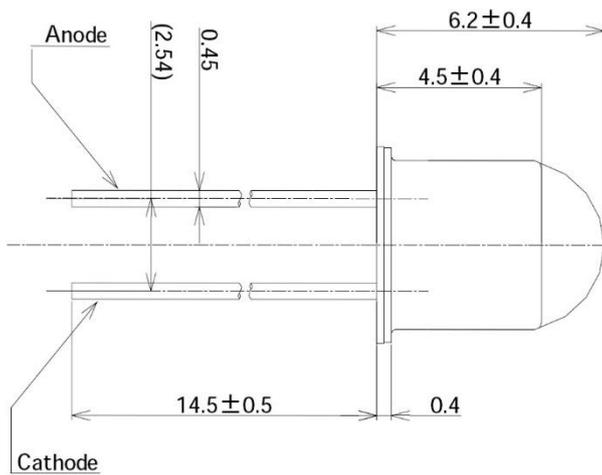
Radiation Characteristics



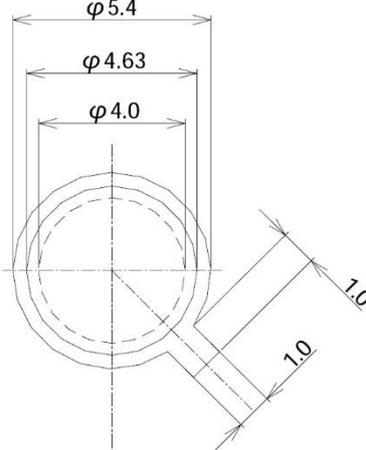
Outline Dimensions

TO-46

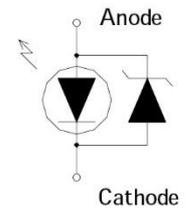
Side View



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.

© All Rights Reserved

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