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RLT400-1000MGE

- UV Laser Diode
- 400 nm, 1 W
- Multi Transverse Mode
- 5.6 mm TO Package



Description

RLT400-1000MGE is a ultraviolet **multi transverse mode** laser diode, based on AlInGaN structure, typically emitting at 400 nm, with an output power of 1 W, and max. allowed operating temperature of 50°C. **RLT400-1000MGE** comes in 5.6 mm TO-Can package.

Maximum Ratings*

Parameter	Symbol	Values		Unit
		Min.	Max.	
Operating Temperature*	T_{OPR}	- 10	+ 50	°C
Storage Temperature*	T_{STG}	- 40	+ 80	°C
LD Reverse Voltage	U_R		2	V
Soldering Temperature ($t_{max} = 3$ s)	T_{SOL}		+ 260	°C

* Operating close to or outside these conditions may damage the device

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

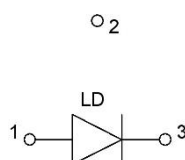
Parameter	Symbol	Values			Unit
		Min.	Typ.	Max.	
Peak Wavelength	λ_P	395	400	405	nm
Optical Output Power (CW)	P_O		1000		mW
Spectral Width (FWHM)	λ_d		2		nm
Operating Voltage	U_F		4.5	5.5	V
Threshold Current	I_{th}		120	200	mA
Operating Current	I_F		600	700	mA
Beam Divergence (FWHM)	parallel	$\Theta_{ }$	10		deg.
	perpendicular	Θ_{\perp}	39		deg.



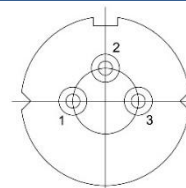
Electrical Connection

Pin Configuration

Pin #	Function
Pin 1	LD anode
Pin 2 [case]	not connected
Pin 3	LD cathode



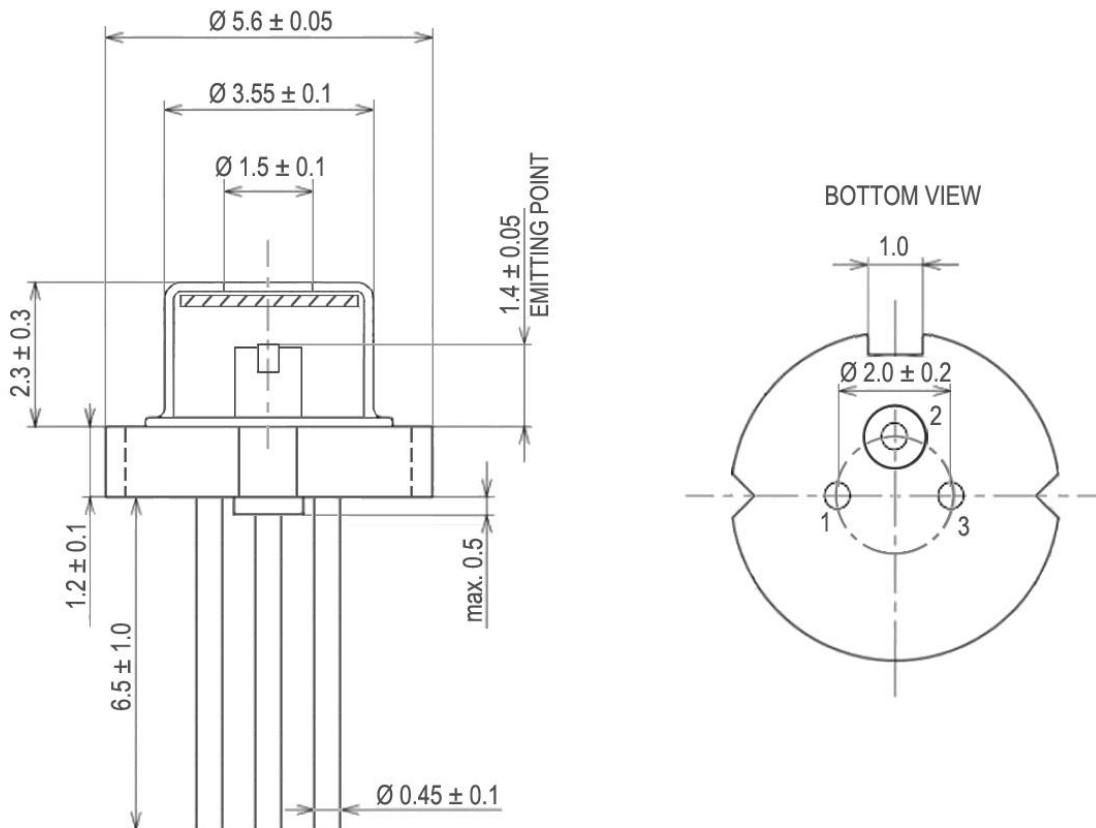
Bottom View





Outline Dimensions

5.6 mm TO-Can



All dimensions in mm

Precautions

Safety

Caution: Laser light emitted from any laser diode may be **harmful to the human eye**. Avoid looking directly into the laser diode's aperture when the diode is in operation.

Note: The use of optical lenses with this laser diode will increase eye hazard

ESD caution

Always do handle laser diodes with extreme care to **prevent electrostatic discharge**, the primary cause of unexpected diode failure. To prevent ESD related failures, we do advise to always **wearing wrist straps**, and **grounding all applicable work surfaces**, when handling laser diodes.

Operating considerations

We do advise to operate this laser diode with a current source only. The current of a laser diode is an exponential function of the voltage across it. **Usage of current regulated drive circuits is mandatory**. Laser diodes may be damaged by excessive drive currents or switching transients.

Proper heat sinking will greatly enhance stability and lifetime of the laser diode