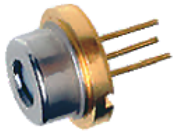
ROITHNER LASERTECHNIK GmbH
WIEDNER HAUPTSTRASSE 76 1040 VIENNA AUSTRIA
TEL. +43 1 586 52 43 -0, FAX. -44 OFFICE@ROITHNER-LASER.COM

RLT635-2W-GOP

- **Red High Power Laser Diode**
- **638 nm, 2.0 W**
- **Multi transverse mode**
- **TO5 package (9mm), Flat Window**



Description

RLT635-2W-GOP is a red high power laser diode, typically emitting at 638 nm. It features multi transverse mode emission and wide operating temperature of up to 50°C. It is an efficient radiation source for many applications like laser projection, holography, metrology, or use in the biomedical field. **RLT635-2W-GOP** comes in 9 mm TO-Can package **without PD.**

Maximum Rating*

Parameter	Symbol	Values Min.	Values Max.	Unit
Reverse Voltage	V_R		2	V
Operating Temperature*	T_{OPR}	- 0	+ 50	°C
Storage Temperature*	T_{STG}	- 40	+ 85	°C
Soldering Temperature (max. 3s)	T_{SOL}		+ 260	°C

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

Electro-Optical Characteristics (T_{CASE} = 25°C)

Parameter		Symbol	Values Min.	Values Typ.	Values Max.	Unit
Peak Wavelength		**λ_P**	**630**	**638**	**645**	**nm**
Spectral Width		λ_Δ		2.0		**nm**
Optical Output Power		P_O		2.0		W
Operating Voltage		V_F		2.5		V
Threshold Current		I_{th}		0.5		A
Operating Current		I_F		2.5		A
Slope Efficiency		η		1.2		W/A
Spatial Mode			Multi transverse mode			
Beam Divergence (FWHM)	parallel	$\Theta_{\parallel}$		10		deg.
	perpendicular	$\Theta_{\perp}$		65		deg.

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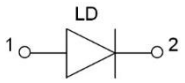
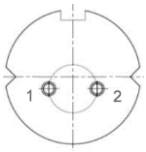
Electrical Connection

Pin Configuration (subject to change without notice)

Pin #	Function
Pin 1	LD Anode
Pin 2	LD Cathode

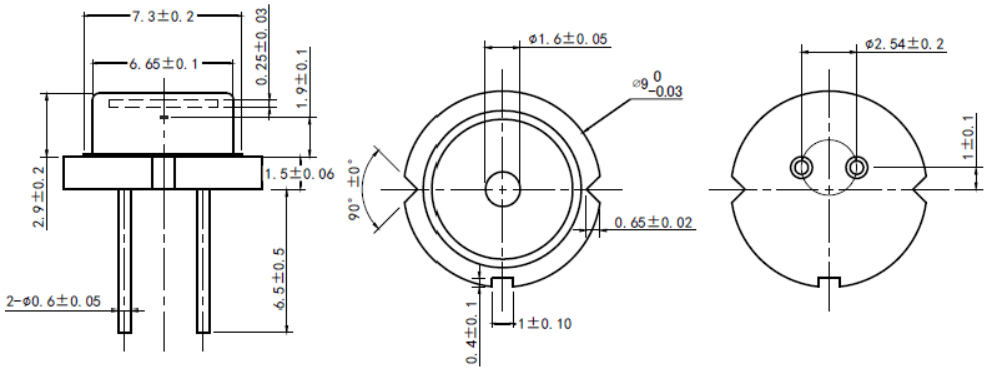


Bottom View



Outline Dimensions

TO5



All dimensions in mm

Precautions

Safety

Caution: This laser diode emits highly concentrated light which can be **hazardous to the human eye and skin**. This diode is classified as **CLASS 4 laser product** according to **IEC 60825-1** and **21 CFR Part 1040.10 Safety Standards**.

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, it is strongly advised to always **wearing wrist straps**, and **grounding all applicable work surfaces**, when handling laser diodes

Operating considerations

It is strongly advised to only operate this laser diode with a current source. 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