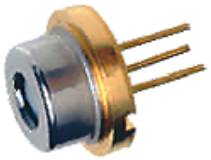
ROITHNER LASERTECHNIK GmbH
WIEDNER HAUPTSTRASSE 76 1040 VIENNA AUSTRIA
TEL. +43 1 586 52 43 -0, FAX. -44 OFFICE@ROITHNER-LASER.COM

RLT808-100G



- **Infrared Laser Diode**
- **808 nm, 100 mW**
- **Single Mode**
- **9 mm TO-Can, Flat Window**

Description

RLT808-100G is an IR laser diode, typically emitting at 808 nm. It features a 3 x 1 µm emitter with **single transverse mode** emission and wide operating temperature range.

RLT808-100G comes in 9 mm TO-Can package with **integrated PD**.

Additional options like closer peak wavelength selection are available on request.

Maximum Rating (T_{CASE} = 25°C)

Parameter	Symbol	Values Min.	Values Max.	Unit
Reverse Voltage	V_R		2.0	V
PD Reverse Voltage	V_{PDR}		30	V
Operating Temperature	T_{OPR}	- 10	+ 50	°C
Storage Temperature	T_{STG}	- 40	+ 80	°C
Soldering Temperature (max. 3s)	T_{SOL}		+ 260	°C

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

Parameter		Symbol	Values Min.	Values Typ.	Values Max.	Unit
Peak Wavelength *		λ_P	798	808	818	nm
Spectral Width (FWHM)		$\Delta\lambda$		2		nm
Output Power		P_O		100		mW
Emitter Size		A		3 x 1		µm
Threshold Current		I_{th}		35	60	mA
Operating Current		I_F		140	160	mA
Operating Voltage		V_F		2.3	2.8	V
PD Current		I_{PD}		0.1		mA
Slope Efficiency		η		1.0		mW/mA
Beam Divergence (FWHM)	parallel	$\Theta\perp$		28		deg
	perpendicular	$\Theta\parallel$		10		deg

** optional: down to ±5 nm*

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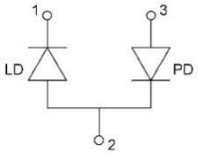
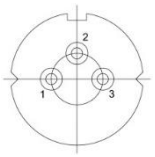
Electrical Connection

Pin Configuration*	
PIN #	**Function**
1	LD Cathode
2	LD Anode, PD Cathode, Case
3	PD Anode

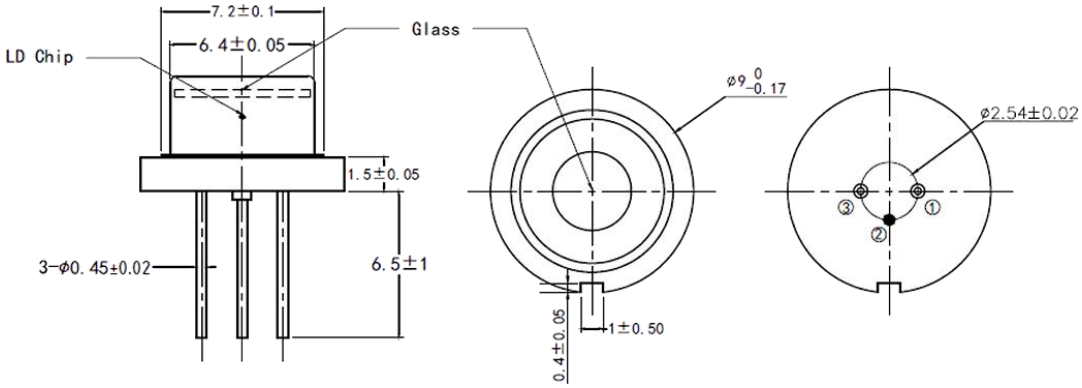


Bottom View



* subject to change

Outline Dimension



All dimensions in mm

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

Operating Considerations

We strongly advise 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

It is advised, to operate the laser diode at the lowest temperature possible, and to never exceed maximum specifications as outlined in the datasheet. Device degradation will accelerate with increased temperature. **Proper heat sinking will greatly enhance stability and life-time of the laser diode.**