



RLT1550-40GS

- Infrared Laser Diode
- 1550 ±20 nm, 40 mW
- Single transverse mode
- 9 mm TO-Can



Description

RLT1550-40GS is an infrared Fabry Perot laser diode, typical emitting at 1550 nm. It features single transverse mode emission and CW or pulse operation. **RLT1550-40GS** comes in 9 mm TO-Can package with **integrated PD**.

Absolute Maximum Ratings

Parameter	Symbol	Values	Unit
Output Power	P_O	45	mW
Operating Temperature	T_{CASE}	-50 ..+50	°C
Storage Temperature	T_{STG}	-50 ..+80	°C
Soldering Temperature *	T_{SLD}	260	°C

* must be completed within 5 seconds

Electro-Optical Characteristics

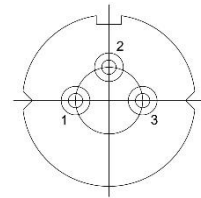
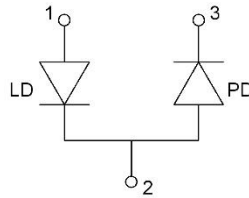
$T_{CASE} = 25^{\circ}C$

Parameter	Symbol	Min.	Typ.	Max.	Unit
Peak Wavelength	λ_P	1535	1550	1565	nm
Spectral Width (FWHM)	$\Delta\lambda$		3	6	nm
Optical Output Power	P_O	30	40	45	mW
Emitter Size			5x1		μm
Operating Voltage	V_{OP}		1.25	1.5	V
Threshold Current	I_{TH}	40	60	80	mA
Operating Current	I_{OP}		240	280	mA
Monitor Current	I_M	0.07			mA
Slope Efficiency	η		0.5		mW/mA
Temperature Coefficient			0.5		nm/°C
Beam Divergence, Parallel (FWHM)	$\theta_{ }$	8	10	12	deg.
Beam Divergence, Perpendicular (FWHM)	θ_{\perp}	25	30	35	deg.



Pin Configuration

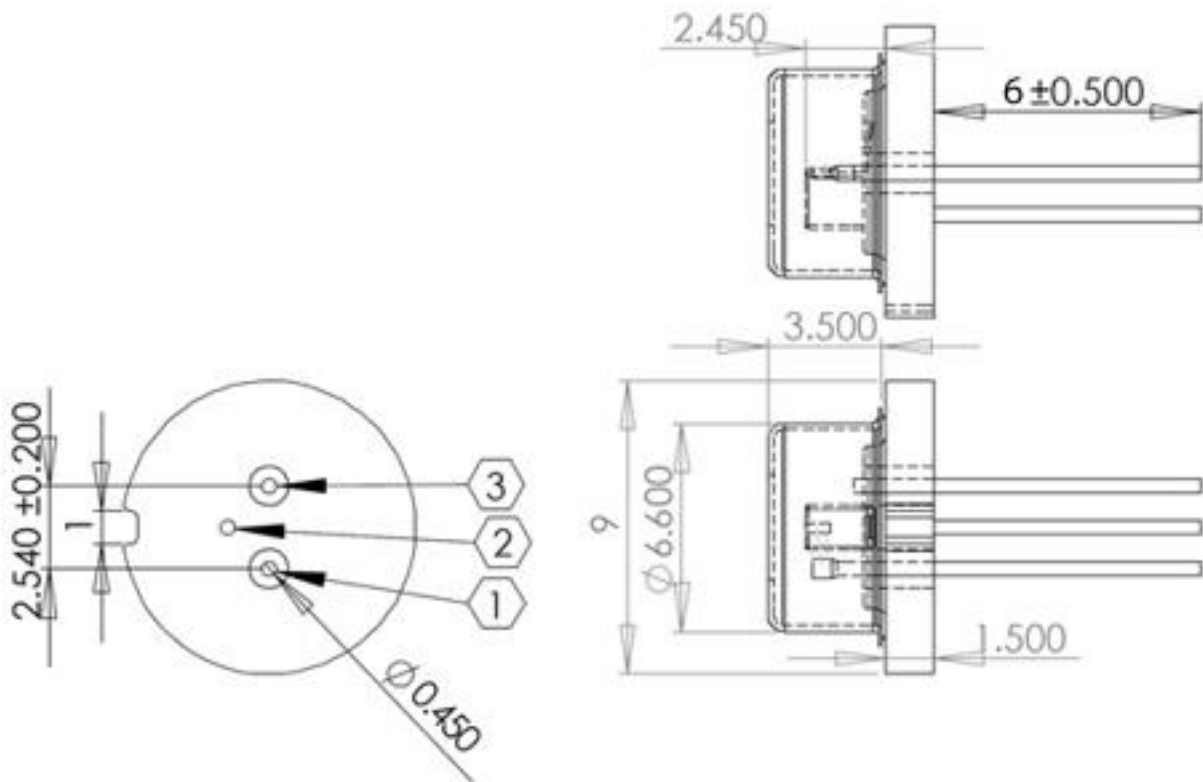
Pin	Description
1	LD Anode
2	LD Cathode, PD Anode
3	PD Cathode



bottom view

Outline Dimensions

9 mm TO-can



Dimensions: mm



Precautions

Safety

Warning: This LD is emitting invisible laser radiation!

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, 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.

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.

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