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RLT1064-50MGS

- **IR Laser Diode**
- **1064 nm, 50 mW**
- **Single Transverse Mode**
- **5.6 mm TO Package, Flat Window**

Description

RLT1064-50MGS is an infrared laser diode, typically emitting at 1064 nm. It features single mode emission and operating temperature range of up to 40°C. **RLT1064-50MGS** comes in 5.6 mm TO-Can package with **integrated monitor PD.**

Maximum Rating*

Parameter	Symbol	Values Min.	Values Max.	Unit
Reverse Voltage	V_R		2	V
Operating Temperature*	T_{OPR}	- 10	+ 40	°C
Storage Temperature*	T_{STG}	- 40	+ 85	°C
Soldering Temperature ($t_{max.}$=3 s)	T_{SOL}		+ 260	°C

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

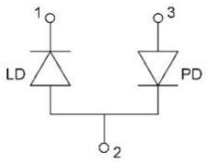
Electro-Optical Characteristics (T_{CASE} = 25°C)

Parameter		Symbol	Values Min.	Values Typ.	Values Max.	Unit
Peak Wavelength		**λ_P**	**1049**	**1064**	**1079**	**nm**
Spectral Width		λ_Δ		2.0		nm
Emitter Size				3*1.5		µm
Optical Output Power		P_O		50		mW
Operating Voltage		V_F		2.0	2.5	V
Threshold Current		I_{th}		20	45	mA
Operating Current		I_F		100	120	mA
Slope Efficiency		η		0.6		W/A
Monitor Current		I_M		0.1		mA
Beam Divergence (FWHM)	parallel	$\Theta_{\parallel}$		10		deg.
	perpendicular	$\Theta_{\perp}$		20		deg.

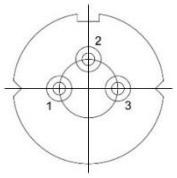
Electrical Connection

Pin Configuration

Pin #	Function
Pin 1	LD Cathode
Pin 2	LD Anode, PD Cathode
Pin 3	PD Anode



Bottom View



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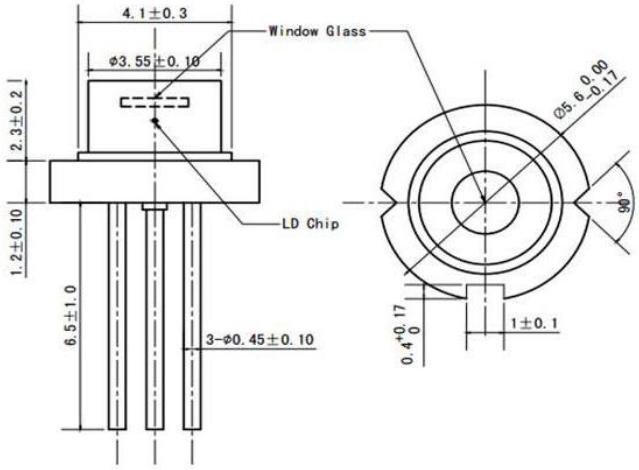
Outline Dimensions

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