ROITHNER LASERTECHNIK GmbH
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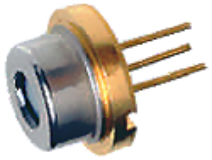
RLT915-1000G



- **Laser Diode**
- **915 nm, 1 W**
- **Multi Transverse Mode**
- **9 mm TO-Can with flat glass window**

RoHS COMPLIANT Pb Pb-Free

Description

RLT915-1000G is an AlN based infrared laser diode, typically emitting at 915 nm. It features a 1x100 µm emitter with multi transverse mode emission and wide operating temperature range of up to 50°C.

RLT915-1000G comes in hermetically sealed 9 mm TO-Can package with AlN carrier and AuSn bonding, AR coated window glass, and an **integrated monitor photodiode**.

Maximum Rating* (T_{CASE} = 25°C)

Parameter	Symbol	Values		Unit
		Min.	Max.	
Operating Temperature*	T_{OPR}	- 20	+ 50	°C
Storage Temperature*	T_{STG}	- 40	+ 85	°C
Soldering Temperature (max. 3s)	T_{SOL}		+250	°C

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

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

Parameter		Symbol	Values			Unit
			Min.	Typ.	Max.	
Peak Wavelength		λ_P		915		nm
Optical Output Power		P_O		1		W
Emitter Size		$W \times H$		1 x 100		µm
Operating Voltage		V_F		1.7	2.2	V
Threshold Current		I_{th}		250	550	mA
Operating Current		I_F		1.3	1.8	A
Slope Efficiency		η		1		W/A
Beam Divergence (FWHM)	Parallel	Θ_{II}		9		deg.
	Perpendicular	$\Theta_{\perp}$		30		deg.

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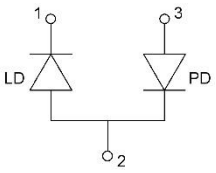
Electrical Connection

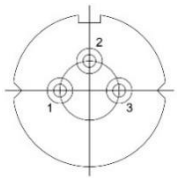
ATTENTION
STATIC SENSITIVE DEVICES
HANDLE ONLY AT
STATIC WORK STATIONS

Pin Configuration

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



Bottom View

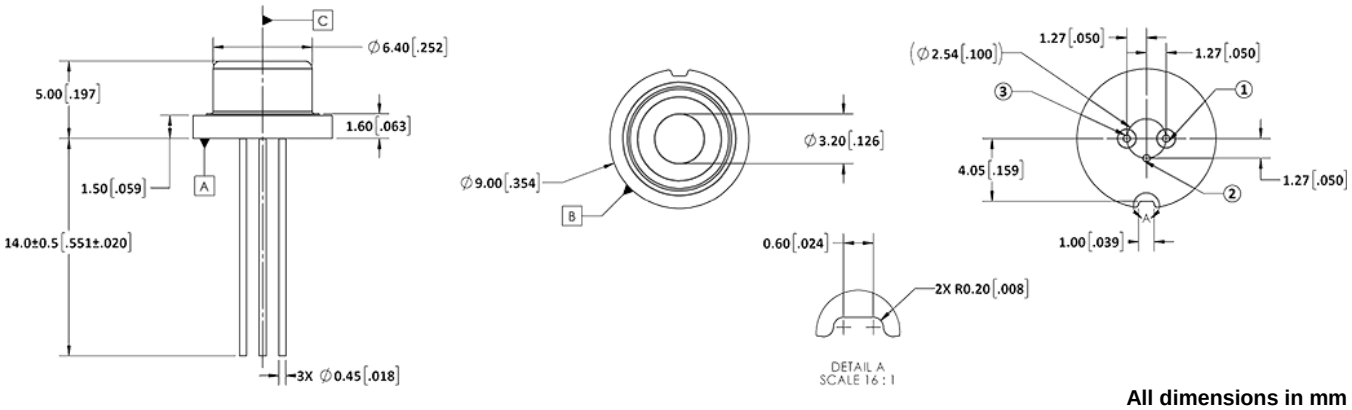


* subject to change

Optional

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

Outline Dimension



All dimensions in mm

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Precautions

Safety

Warning: Invisible laser radiation is emitted from this device !!!
CLASS IV Laser Product

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 lifetime of the laser diode**