



## RLT820-100MGS

- IR Laser Diode
- 820 nm, 100 mW
- Single Transverse Mode
- 5.6 mm TO Package, Flat Window



### Description



**RLT820-100MGS** is an infrared laser diode, typically emitting at 820 nm. It features single mode emission and operating temperature range of up to 50°C. **RLT820-100MGS** comes in 5.6 mm TO-Can package with **integrated monitor PD**.

### Maximum Rating\*

Parameter	Symbol	Values		Unit
		Min.	Max.	
Reverse Voltage	$V_R$		2	V
PD Reverse Voltage	$V_{RPD}$		25	V
Operating Temperature*	$T_{OPR}$	- 20	+ 50	°C
Storage Temperature*	$T_{STG}$	- 40	+ 85	°C
Soldering Temperature (3 s)	$T_{SOL}$		+ 260	°C

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

### Electro-Optical Characteristics ( $T_{CASE} = 25^\circ\text{C}$ )

Parameter	Symbol	Values			Unit
		Min.	Typ.	Max.	
<b>Peak Wavelength</b>	$\lambda_P$	<b>810</b>	<b>820</b>	<b>830</b>	<b>nm</b>
Spectral Width	$\lambda_\Delta$		3.0		<b>nm</b>
Optical Output Power	$P_O$		100		mW
Operating Voltage	$V_F$		2.2	2.7	V
Threshold Current	$I_{th}$		30	60	mA
Operating Current	$I_F$		160	180	mA
Slope Efficiency	$\eta$		0.85		W/A
Monitor Current	$I_M$		0.5		mA
Beam Divergence (FWHM)	parallel	$\theta_{  }$	8		deg.
	perpendicular	$\theta_{\perp}$	30		deg.

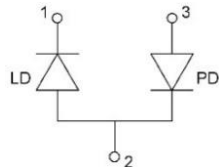




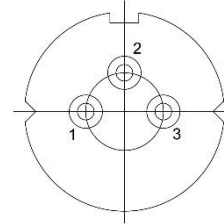
## Electrical Connection

### Pin Configuration

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

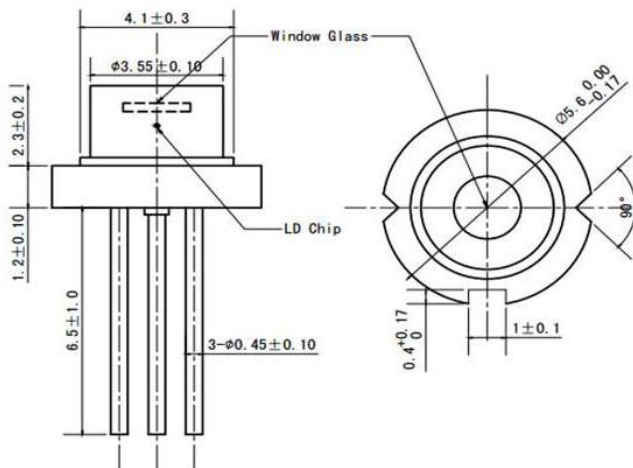


### Bottom View



## Outline Dimensions

### 5.6 mm TO-Can



All dimensions in mm

## Precautions

### Safety

Laser light emitted from any laser diode may be harmful to the human eye. **Avoid looking directly into the laser diode's aperture.** The use of optical lenses will increase eye hazard



### ESD Caution

Always do handle laser diodes with care to **prevent electrostatic discharge.** We advise to **wearing wrist straps, and grounding all applicable work surfaces,** when handling laser diodes

### Operating Considerations

**Usage of current regulated drive circuits is mandatory** We advise to operate this laser diode with a current source and heat sink, and to never exceed the maximum specifications as outlined in this datasheet.



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