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## RLT1590-10MGS

- Infrared DFB Laser Diode
- 1590 nm, 10 mW
- Single transverse mode
- 5.6mm TO-Can with flat glass window



### Description

**RLT1590-10MGS** is an infrared **distributed feedback (DFB)** laser diode, with **single transverse mode** emission at typically 1590 nm and low operating current. **RLT1590-10MGS** comes in a 5.6 mm TO-Can with flat glass window and **integrated PD**. Variants with non-spherical glass lens and reduced peak wavelength tolerance of  $\pm 5$  nm and  $\pm 3$  nm are available on request.

### Maximum Rating\*

Parameter	Symbol	Values		Unit
		Min.	Max.	
Reverse Voltage	$V_R$		2	V
Reverse PD Voltage	$V_{RP}$		15	V
Operating Temperature*	$T_{OPR}$	- 20	+ 50	°C
Storage Temperature*	$T_{STG}$	- 40	+ 85	°C
Soldering Temperature (max. 3s)	$T_{SOL}$		+ 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.	
Peak Wavelength	$\lambda_P$	1580	1590	1600	nm
Optical Output Power	$P_O$		10		mW
Spectral Width (FWHM)	$\lambda$		0.3	1	nm
Operating Voltage	$V_F$		1.4	1.7	V
Threshold Current	$I_{th}$		5	15	mA
Operating Current	$I_F$		80	90	mA
Beam Divergence (FWHM)	parallel	$\Theta_{  }$	25		deg.
	perpendicular	$\Theta_{\perp}$	35		deg.

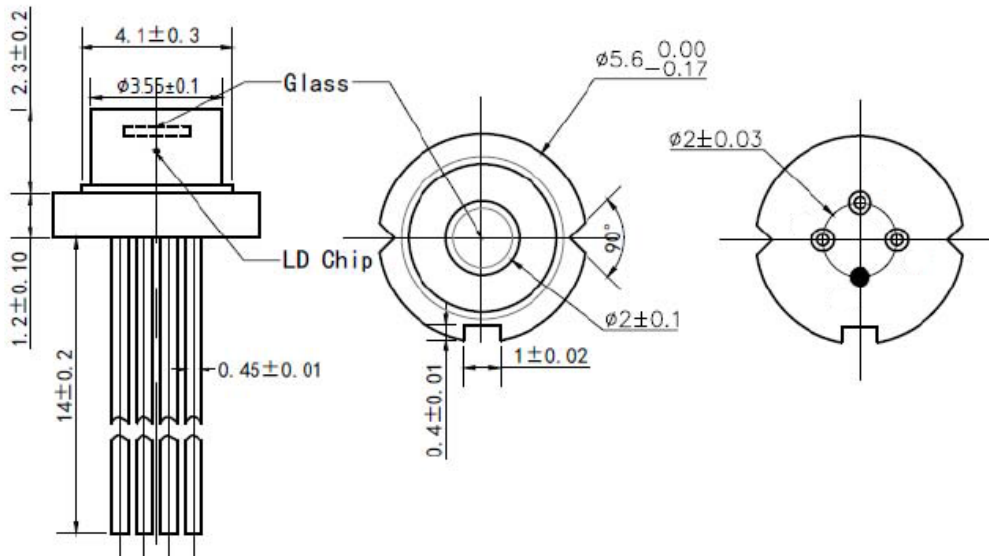


### Electrical Connection

Pin Configuration		Bottom View	
Pin #	Function		
Pin 1	PD anode		
Pin 2	LD anode (case)		
Pin 3	LD cathode		
Pin 4	PD cathode		



## Outline Dimensions



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.