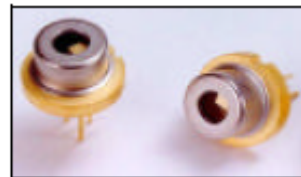




RLT7890MG

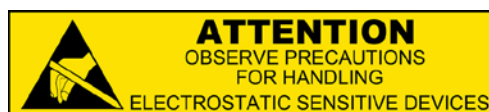


TECHNICAL DATA

High Power Infrared Laser Diode

Features

- Lasing Mode Structure: single transverse mode
- Peak Wavelength : typ. 785 nm
- Optical Output Power: 90 mW
- Package: 5.6 mm



Electrical Connection

Pin Configuration		Bottom View
	n-type	
	PIN	
	1	
	2	
	3	
	Function	
	LD Anode	
	LD Cathode	

Absolute Maximum Ratings ($T_C=25^\circ\text{C}$)

Item	Symbol	Value	Unit
CW Output Power	P_O	90	mW
Pulsed Output Power*	$P_{O\text{ pulse}}$	200	mW
Reverse Voltage	U_R	2	T_C
Operating Case Temperature	T_C	-10 ... +75	$^\circ\text{C}$
Storage Temperature	T_{stg}	-40 ... +100	$^\circ\text{C}$

* duty < 50%, pulse width < 0.1 μs

Specifications ($T_C=25^\circ\text{C}$)

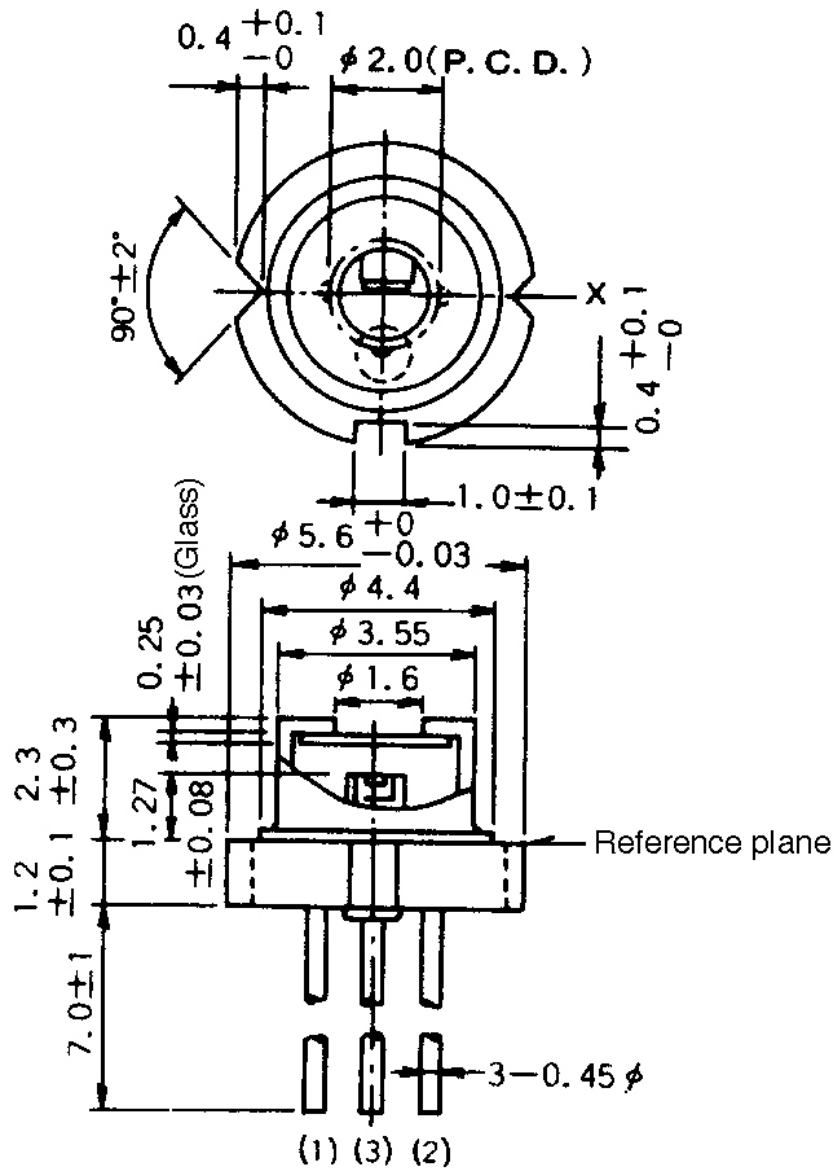
Item	Test Conditions	Symbol	Min.	Typ.	Max.	Unit
Optical Specification						
CW Output Power	CW, $P_O = 90\text{mW}$	P_O	-	-	90	mW
Peak Wavelength	CW, $P_O = 90\text{mW}$	λ_P	780	784	790	nm
FWHM Beam Divergence	CW, $P_O = 90\text{mW}$	θ_{\parallel}	8	8.8	10	deg
		θ_{\perp}	15	17	19	deg
Threshold Current	CW	I_{th}	-	35	55	mA
Operating Current	CW, $P_O = 90\text{mW}$	I_{op}	-	115	160	mA
Slope Efficiency	CW, $P_O = 90\text{mW}$	η	-	1.05	1.3	mW/mA
Operating Voltage	CW, $P_O = 90\text{mW}$	U_{op}	-	1.85	2.2	V

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



Package Dimenasons

9 mm Package (Unit:mm)





Safety of Laser light

- Laser Light can damage the human eyes and skin. Do not expose the eye or skin directly to any laser light and/or through optical lens. When handling the LDs, wear appropriate safety glasses to prevent laser light, even any reflections from entering to the eye. Focused laser beam through optical instruments will increase the chance of eye hazard.
- These LDs are emitting invisible light.



Cautions

1. Operating methode

- This LD shall change its forward voltage requirement and optical output power according to temperature change. Also, the LD will require more operation current to maintain same output power as it degrades. In order to maintain output power, use of APC (Automatic Power Control) is recommended. Which use monitor feedback to adjust the operation current.
- Confirm that electrical spike current generated by switching on and off does not exceed the maximum operating current level specified herein above as absolute maximum rating. Also, employ appropriate countermeasures to reduce chattering and/or overshooting in the circuit.

2. Static Electricity

- Static electricity or electrical surges will reduce and degrade the reliability of the LDs. It is recommended to use a wrist strap or anti-electrostatic glove when handling the product.

3. Absolute Maximum Rating

- Active layer of LDs shall have high current density and generate high electric field during its operation. In order to prevent excessive damage, the LD must be operated strictly below absolute maximum rating.



NOTE
LASERDIODE
MUST BE COOLED