



## RLT981000G

### TECHNICAL DATA



## High Power Infrared Laser Diode

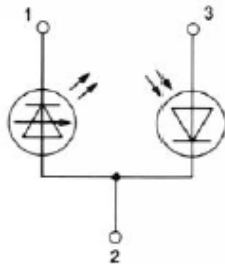
#### Features

- CW Output Power: 1 W
- Typical 975 nm Emission Wavelength
- High-efficiency Quantum Well Structure
- TO5 Package

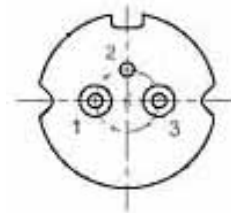
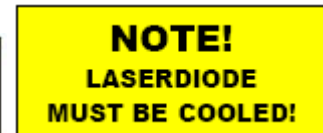
#### Applications

- Solid-state Laser Pumping
- Medical Usage
- Infrared Night Vision Light Sources
- Information to identify

#### PIN CONNECTION



1. Laserdiode cathode
2. Laserdiode anode and photodiode cathode
3. Photodiode anode



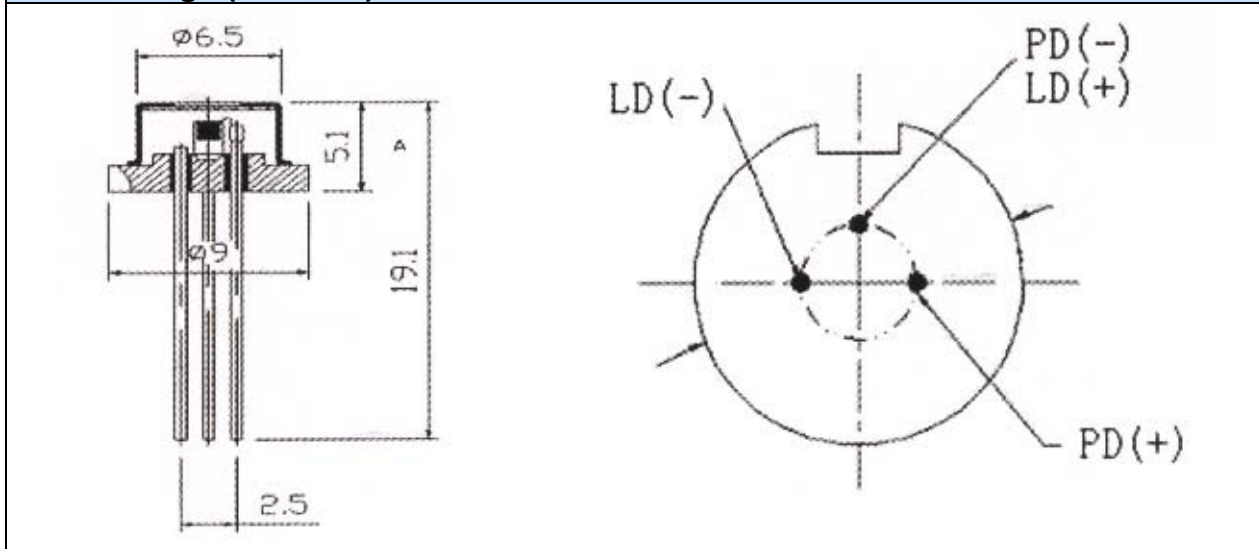
#### Specifications (25°C)

Type	RLT981000G	Unit
<b>Optical Specification</b>		
CW Output Power $P_O$	1	W
Peak Wavelength $\Delta$	975±15	nm
Spectral Width $\Delta\lambda$	≤ 3.5	nm
Emitting Area	100x1	µm
Wavelength Temperature Coefficient	0.3	nm/°C
Beam Divergence $\theta_{\perp} \times \theta_{\parallel}$	48x10	Deg
Polarization	TE	
<b>Electrical Specification</b>		
Slope Efficiency $E_S$	≥ 0.7	W/A
Threshold Current $I_{th}$	≤ 0.35	A
Operation Current $I_O$	≤ 1.8	A
Operation Voltage $V_f$	≤ 2	V
Series Resistance $R_d$	≤ 0.5	Ω
Package Style	TO5	
<b>Absolute Maximum Ratings</b>		
Reverse Voltage $V_r$	2.0	V
Operating Temperature $T_O$	10 ... 40	°C
Storage Temperature $T_{stg}$	-40 ... 85	°C



## Package Dimensions

### TO5 Package (Unit:mm)



## Operating Notes

1. Be sure that the operating current is not exceed the specified operating current, or else which will accelerate aging, shorten lifetime or even damage devices.
2. Increase the current gradually to the specified operating value. For shutting down the laser diode, please decrease the current to zero gradually, and then turn off the power. Pleaser sure that the power supply have no current overshoot at any time. The current overshoot can damage the laser diodes.
3. The high power laser diode is sensitive to the work temperature. The work temperature should be no more than 30°C. It is better if the temperature of the heat sink can be keep at 20°C.
4. Be careful to keep the facet cleaning. Contamination of facet will result in rapid degradation of devices.
5. The high power laser diode is very sensitive to static. Please caution about static during operating with the laser diode.
6. Caution! Don't look at the laser light directly, because it's harmful to eyes.
7. A clean, dry and ventilated environment should be available when storing and operation. Dew can damage the laser diodes.
8. The storage temperature is between -10 and 70°C.