



RLT981000G

TECHNICAL DATA



High Power Infrared Laser Diode

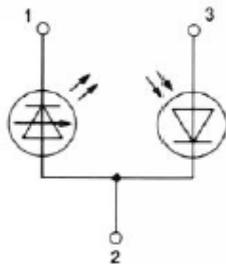
Features

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

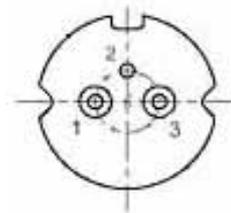
Applications

- 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



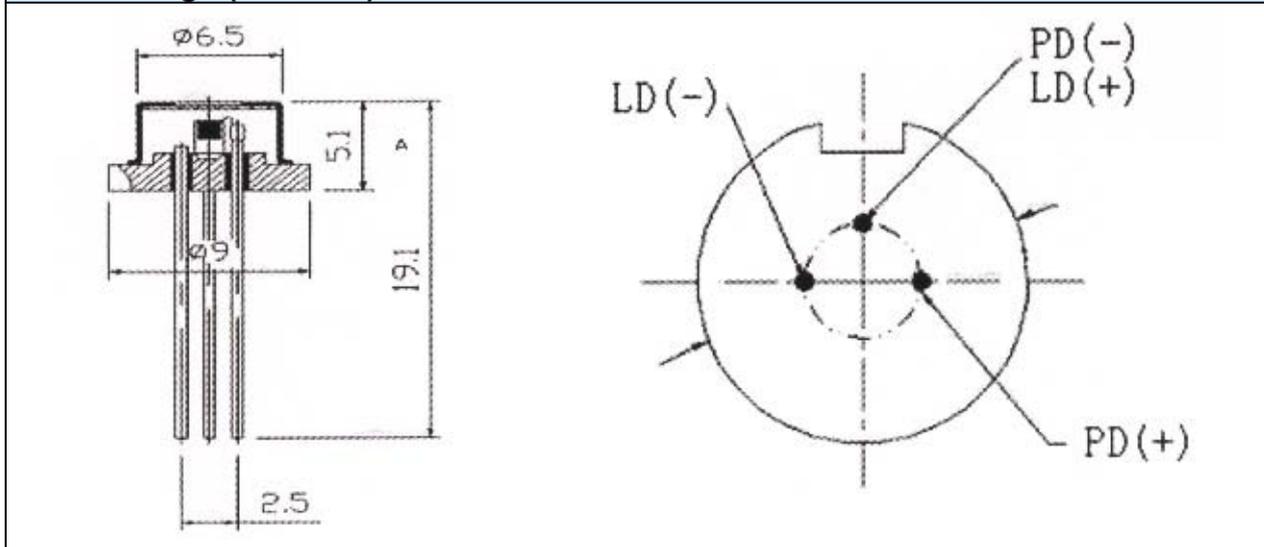
Specifications (25°C)

| Type | RLT981000G | Unit |
|--|------------|-------|
| Optical Specification | | |
| CW Output Power P_O | 1 | W |
| Peak Wavelength Δ | 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 | |
| Electrical Specification | | |
| 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 | |
| Absolute Maximum Ratings | | |
| 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.