

ROITHNER LASERTECHNIK

A-1040 WIEN, FLEISCHMANNGASSE 9
 TEL: +43 -1- 586 52 43 FAX: +43 -1- 586 41 43
 e-mail: office@roithner-laser.com http://www.roithner-laser.com

RLT808500GLI TECHNICAL DATA



High Power Infrared Laserdiode

Structure: **High Efficiency MOVCD Quantum Well Design**

Lasing wavelength: **808 nm typ.**

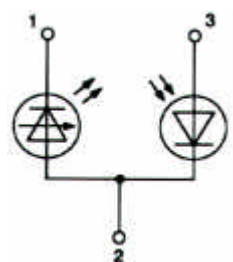
Output power: **500 mW, cw**

Package: **9 mm**

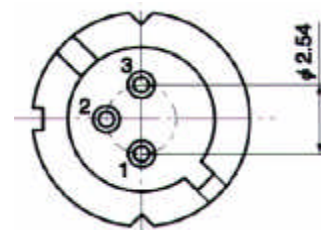


NOTE!
 LASERDIODE
 MUST BE COOLED!

PIN CONNECTION:



- 1) Laser diode cathode
- 2) Laser diode anode and photodiode cathode
- 3) Photodiode anode



Absolute Maximum Ratings (Tc=25°C)

| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|-----------------------|-------------|------------|------|
| Optical Output Power | P_o | 550 | mW |
| LD Reverse Voltage | $V_{R(LD)}$ | 2 | V |
| PD Reverse Voltage | $V_{R(PD)}$ | 30 | V |
| Operating Temperature | T_C | -10 .. +40 | °C |
| Storage Temperature | T_{STG} | -40 .. +80 | °C |

Optical-Electrical Characteristics (Tc = 25°C)

| CHARACTERISTIC | SYMBOL | TEST CONDITION | MIN | TYP | MAX | UNIT |
|-----------------------------------|------------------|------------------------|-----|------|-----|-----------------|
| Threshold Current | I_{th} | cw | 130 | 150 | 170 | mA |
| Operation Current | I_{op} | $P_o = 500 \text{ mW}$ | 500 | 600 | 700 | mA |
| Operation Voltage | V_{op} | $P_o = 500 \text{ mW}$ | | 1.8 | 2.0 | V |
| Slope Efficiency | η | cw | 1.0 | 1.2 | 1.3 | W/A |
| Lasing Wavelength | λ | $P_o = 500 \text{ mW}$ | 805 | 808 | 811 | nm |
| Beam Divergence | $\theta_{//}$ | $P_o = 500 \text{ mW}$ | 5 | 10 | 12 | ° |
| Beam Divergence | θ_{\perp} | $P_o = 500 \text{ mW}$ | 30 | 40 | 45 | ° |
| Lasing Aperture | A | $P_o = 500 \text{ mW}$ | | 50x1 | | μm^2 |
| Recommended Operating Temperature | T_{op} | cw | | 25 | 40 | °C |
| Monitor Current | I_m | $P_o = 500 \text{ mW}$ | | 0.6 | 1.5 | mA |