

# ROITHNER LASERTECHNIK

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## RLT7830MG TECHNICAL DATA

### High Power Infrared Laserdiode

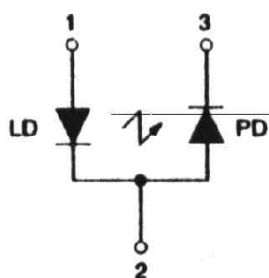
Structure: **AlGaAs**, index guided, single transverse mode

Lasing wavelength: **785 nm typ.**

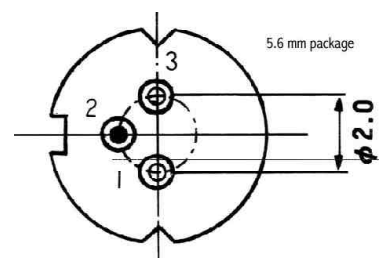
Max. optical power: **30 mW cw**

Package: **5.6 mm MG**

#### PIN CONNECTION:



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



#### Maximum Ratings (Tc=25°C)

| CHARACTERISTIC             | SYMBOL      | RATING      | UNIT |
|----------------------------|-------------|-------------|------|
| Optical Output Power cw    | $P_o$       | 35          | mW   |
| LD Reverse Voltage         | $V_{R(LD)}$ | 2           | V    |
| PD Reverse Voltage         | $V_{R(PD)}$ | 30          | V    |
| Operation Case Temperature | $T_c$       | -10 .. +60  | °C   |
| Storage Temperature        | $T_{STG}$   | -10 .. +100 | °C   |

#### Optical-Electrical Characteristics (Tc = 25°C)

| CHARACTERISTIC       | SYMBOL           | TEST CONDITION                       | MIN  | TYP  | MAX   | UNIT  |
|----------------------|------------------|--------------------------------------|------|------|-------|-------|
| Optical Output Power | $P_o$            | kink free                            |      | 30   | 45 *) | mW    |
| Threshold Current    | $I_{th}$         | cw                                   |      | 35   | 55    | mA    |
| Operation Current    | $I_{op}$         | $P_o = 30\text{mW}$                  |      | 90   | 110   | mA    |
| Operating Voltage    | $V_{op}$         | $P_o = 30\text{mW}$                  |      | 2.0  | 2.5   | V     |
| Lasing Wavelength    | $\lambda_p$      | $P_o = 30\text{mW}$                  | 770  | 785  | 800   | nm    |
| Beam Divergence      | $\theta_{//}$    | $P_o = 30\text{mW}$                  | 8    | 10   | 13    | °     |
| Beam Divergence      | $\theta_{\perp}$ | $P_o = 30\text{mW}$                  | 22   | 25   | 28    | °     |
| Slope efficiency     | $\eta$           | $P_o = 30\text{mW}$                  | 0.40 | 0.55 | 0.75  | mW/mA |
| Monitor Current      | $I_m$            | $P_o = 30\text{mW}, V_i = 5\text{V}$ |      | 0.4  |       | mA    |

\*) Note: Duty cycle less than 50%, pulse width less than 1µs