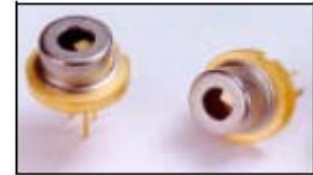




## LDM-0808-500m-92

### TECHNICAL DATA



### High Power Infrared Laser Diode

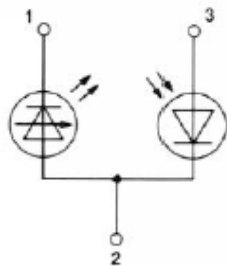
#### Features

- CW Output Power: 500 mW
- Typical 808 nm Emission Wavelength
- High-efficiency Quantum Well Structure
- TO5 Package

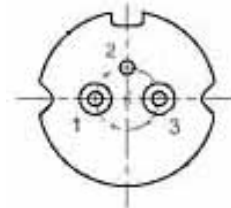
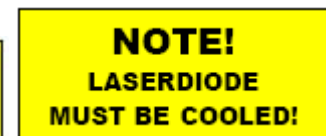
#### Applications

- Solid-state Laser Pumping
- Medical Usage
- Target Designator
- Free-space Optical Communication

#### PIN CONNECTION



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



#### Specifications (25°C)

| Type                                                       | LDM-0808-500m-92 | Unit  |
|------------------------------------------------------------|------------------|-------|
| <b>Optical Specification</b>                               |                  |       |
| CW Output Power $P_O$                                      | 500              | mW    |
| Peak Wavelength $\Delta$                                   | 808±10           | nm    |
| Spectral Width $\Delta\lambda$                             | ≤ 3.0            | nm    |
| Emitting Area                                              | 50x1             | μm    |
| Wavelength Temperature Coefficient                         | 0.3              | nm/°C |
| Beam Divergence $\theta_{\perp} \times \theta_{\parallel}$ | 40x10            | Deg   |
| Polarization                                               | TE               |       |
| <b>Electrical Specification</b>                            |                  |       |
| Slope Efficiency $E_S$                                     | ≥ 1.0            | W/A   |
| Threshold Current $I_{th}$                                 | ≤ 0.13           | A     |
| Operation Current $I_O$                                    | ≤ 0.6            | A     |
| Operation Voltage $V_f$                                    | ≤ 2              | V     |
| Series Resistance $R_d$                                    | ≤ 0.6            | Ω     |
| Package Style                                              | TO5              |       |
| <b>Absolute Maximum Ratings</b>                            |                  |       |
| Reverse Voltage $V_r$                                      | 2.0              | V     |
| Operating Temperature $T_O$                                | 10 ... 30        | °C    |
| Storage Temperature $T_{stg}$                              | -40 ... 85       | °C    |



# ROITHNER LASERTECHNIK

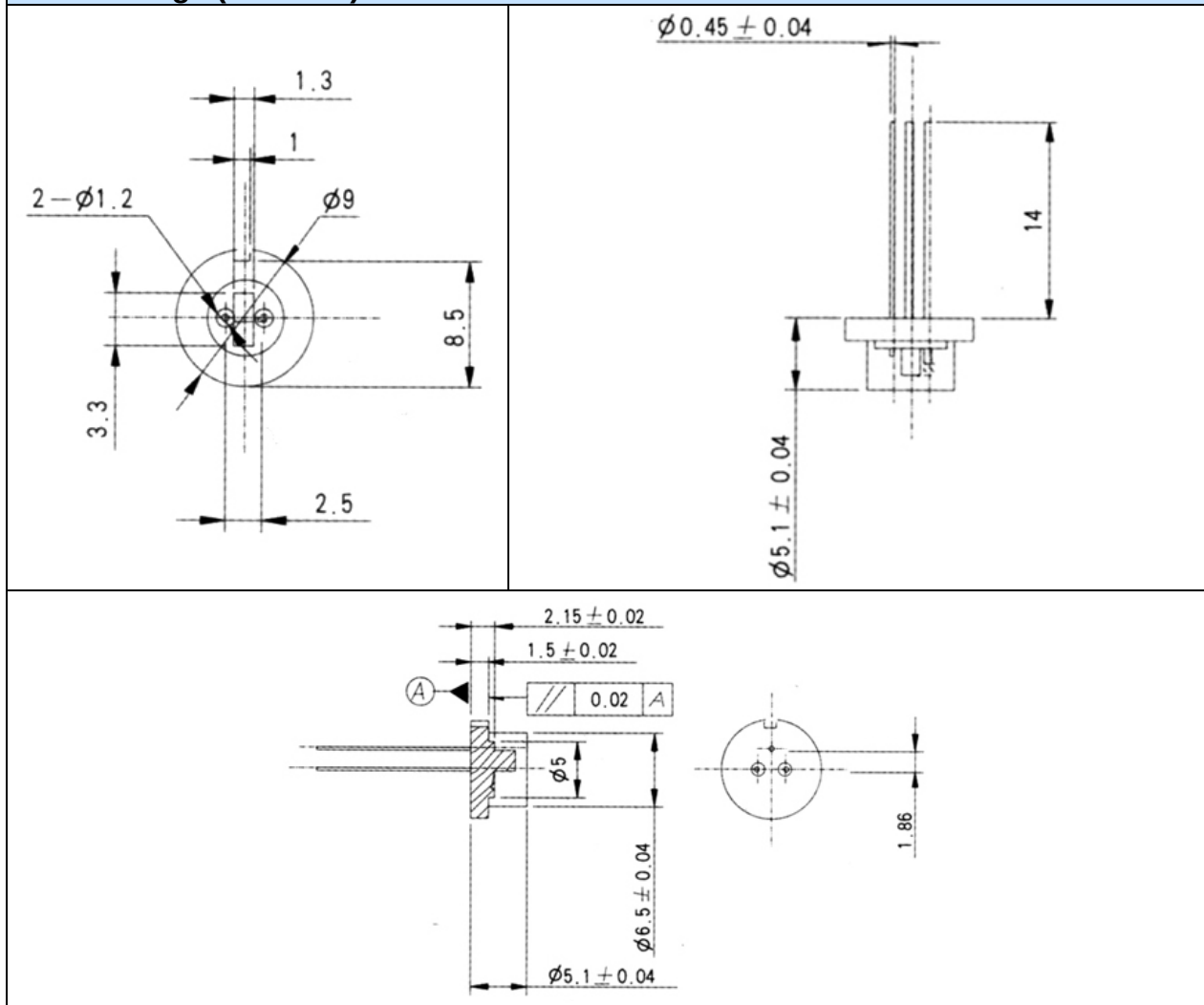
Wiedner Hauptstraße 76, A-1040 Vienna, Austria

Tel.: ++43 1 586 52 43-0, Fax -44, office@roithner-laser.com



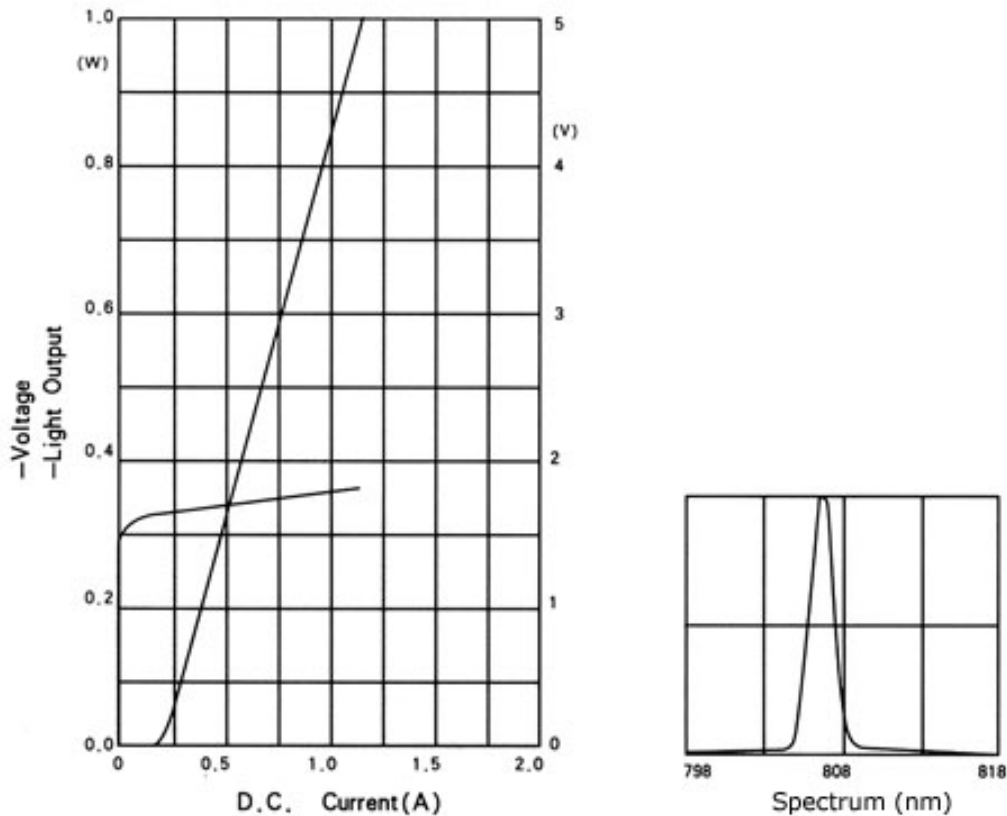
## Package Dimensons

### TO5 Package (Unit:mm)





## Typical Performance Curves



## Notes

1. High power laser diodes are high energy laser devices. It is harmful to human body and health. Never look directly into the laser output port.
2. High power laser diodes could operate in forward voltage. The reverse current and voltage should not be higher than 25 $\mu$ A and 3V, respectively.
3. Heavy humidity can get dew on the LD then damage the LD.
4. The generated heat must be removed in time when the LD working.
5. The high temperature will effect the performance of the products. The lifetime can also be shortened by high temperature.
6. The operating current and optical power of laser must not be higher than the given rate current and power. The excessive current would accelerate aging and shorten lifetime, even damage the LD.
7. The semiconductor laser diode is a sensitive electronic device. Please observe precaution for handling electrostatitic sensitive devices.