



Laser Diode ZBD-LD-638-1000M-F91

ZBD-LD-638-1000M-F91 is a multimode laser diode with 1W CW output power at 638nm. Its beam pattern is linear with $9^\circ \times 1^\circ$ ($\theta_{//} \cdot \theta_{\perp}$). It is supplied in a 9mm floating mounted TO-CAN package. The laser diode is suitable for opto-electronic applications.

■ Absolute Maximum Ratings

| Parameter | Symbol | Conditions | Value | Unit |
|----------------------------|---------------------|------------|---------|------|
| Output Optical Power | P_o | CW | 1.1 | W |
| Pulse optical output power | $P_o(\text{Pulse})$ | - | 1.3 | W |
| LD Reverse Voltage | $V_R(\text{LD})$ | - | 2 | V |
| Operating temperature | T_{opr} | - | -10~+45 | °C |
| Storage temperature | T_{stg} | - | -40~+85 | °C |

■ Initial Electrical/Optical Characteristics ($T_c=25^\circ\text{C}$)

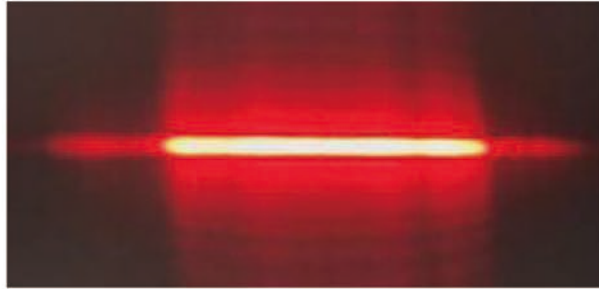
| Parameter | Symbol | Condition | Min | Typ. | Max | Unit | |
|-------------------|---------------|------------------|----------|------|-----|------|---|
| Threshold Current | I_{th} | CW | - | 200 | 250 | mA | |
| Operating Current | I_{op} | $P_o=1W$ | - | 1.0 | 1.3 | A | |
| Operating Voltage | V_{op} | $P_o=1W$ | - | 2.4 | 2.8 | V | |
| Centre Wavelength | λ_p | $P_o=1W$ | 632 | 638 | 644 | nm | |
| Beam Divergence* | Parallel | $\theta_{//}$ | $P_o=1W$ | 1 | 9 | 20 | ° |
| | Perpendicular | θ_{\perp} | $P_o=1W$ | 0.8 | 1 | 1.2 | ° |

() are reference figures.

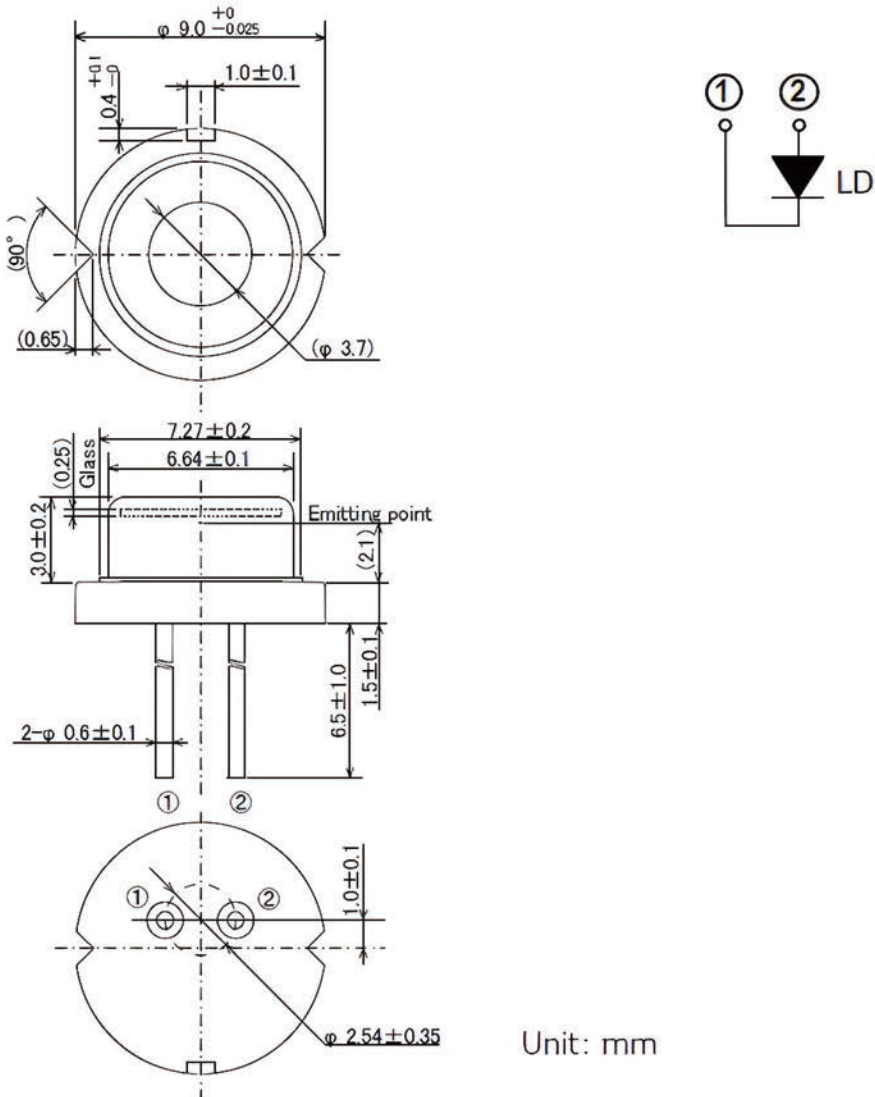
* Full angle at $1/e^2$ from peak intensity



■ Beam Pattern



■ Outline Dimension (Unit: mm)



Unit: mm