



Model No. LD635D700D13
635nm 700mW 25°C Laser Diode in TO-5 Φ 9.0mm Package

FEATURES

- 635nm 700mW Red Laser Diode
- High power
- High brightness
- Long lifetime
- Package: TO-5 (dia. 9mm)

APPLICATIONS

- Laser display
- PDT
- Biochemistry
- Military
- Medical / Life and Health sciences
- Illumination

ABSOLUTE MAXIMUM RATINGS

| PARAMETER | SYMBOL | CONDITION | RATING | UNIT |
|----------------------|----------|-----------|------------|------|
| LIGHT OUTPUT POWER | P_O | CW | 800 | mW |
| REVERSE VOLTAGE (LD) | V_{RL} | - | 2 | V |
| CASE TEMPERATURE | T_C | - | -10 to +30 | °C |
| STORAGE TEMPERATURE | T_S | - | -40 to +85 | °C |

ELECTRICAL AND OPTICAL CHARACTERISTICS ($T_C = 25^\circ\text{C}$)

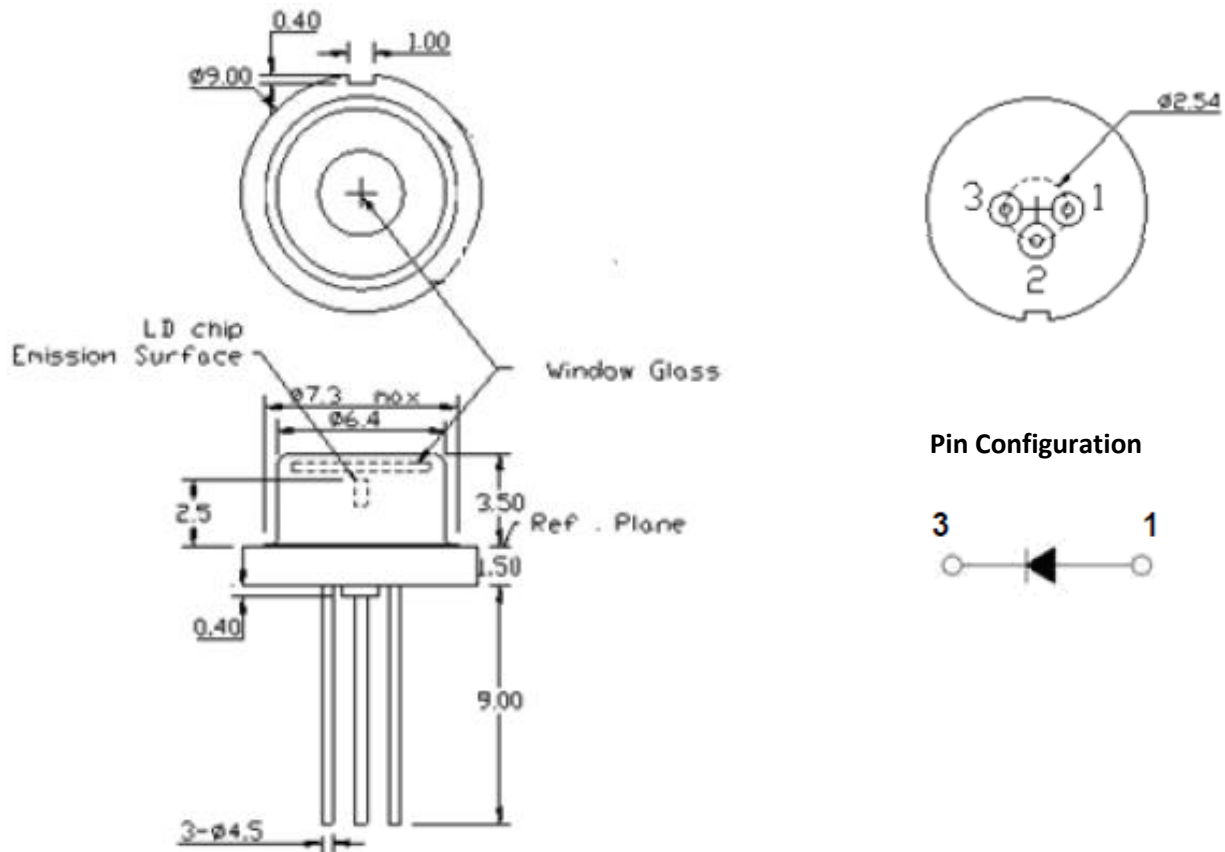
| PARAMETER | SYMBOL | MIN. | TYP. | MAX. | UNIT | CONDITIONS |
|--------------------------------|------------------|------|------|------|-------|--------------------------------|
| PEAK WAVELENGTH | λ | 634 | 638 | 644 | nm | $P_O = 700\text{mW}$ |
| EMITTER SIZE | | - | 50 | - | um | |
| POLARIZATION | | | TM | | | |
| THRESHOLD CURRENT | I_{th} | - | 500 | 600 | mA | |
| OPERATING CURRENT | I_{op} | - | 1400 | 1600 | mA | $P_O = 700\text{mW}$ |
| OPERATING VOLTAGE | V_{op} | - | 2.5 | 3.0 | V | $P_O = 700\text{mW}$ |
| DIFFERENTIAL EFFICIENCY | η | - | 0.85 | - | mW/mA | $P_O = 20\text{-}200\text{mW}$ |
| PERPENDICULAR DIVERGENCE ANGLE | Θ_{\perp} | - | 22 | - | deg | |

Note: The above specifications are subject to change without notice.





MECHANICAL OUTLINE (unit: mm)



PRECAUTIONS

- Do not operate the device above maximum ratings. Doing so may cause unexpected and permanent damage to the device.
- Take precautions to avoid electrostatic discharge and/or momentary power spikes. A change in the characteristics of the laser or premature failure may result.
- Proper heat sinking of the device assures stability and lifetime. Always ensure that maximum operating temperatures are not exceeded.
- Observing visible or invisible laser beams with human eye directly, or indirectly, can cause permanent damage. Use a camera to observe the laser.
- No laser device should be used in any application or situation where life or property is at risk in the event of device failure.
- Specifications are subject to change without notice. Ensure that you have the latest specification by contacting us prior to purchase or use of the product.

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