

★ 650nm 7mW 85°C High Temperature, Reliable Operation

● Features

1. High temperature operation (85°C)

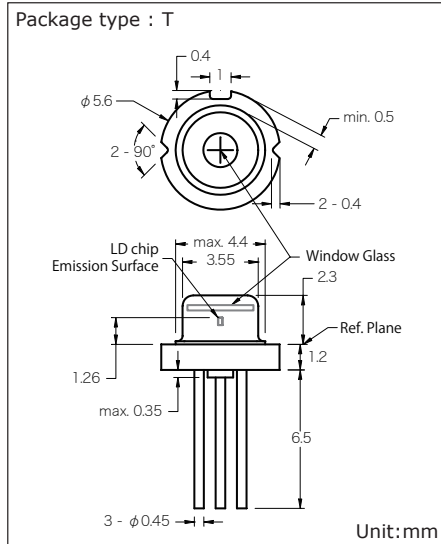


Fig.1:Outside view

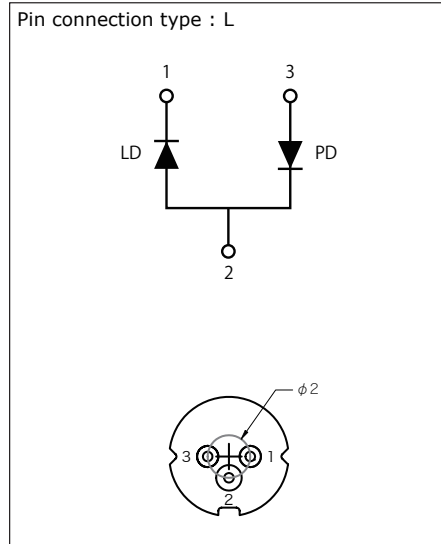


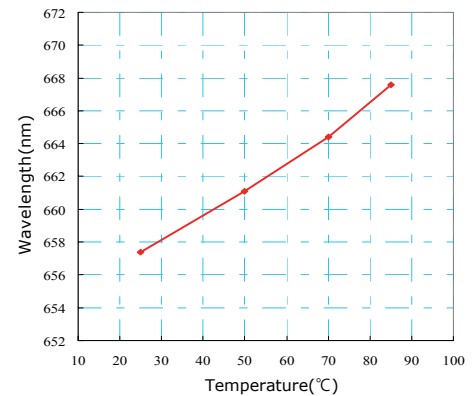
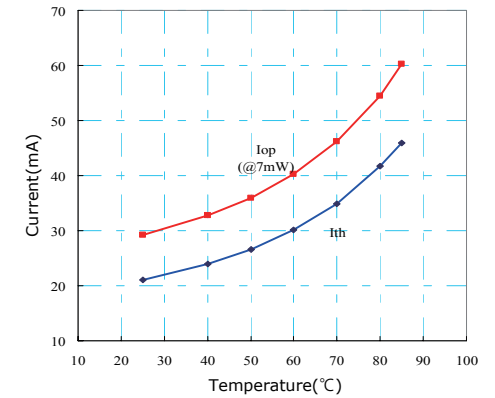
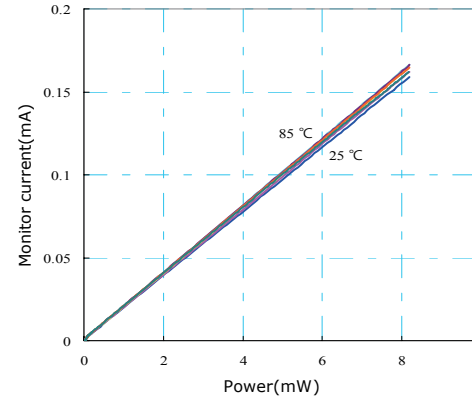
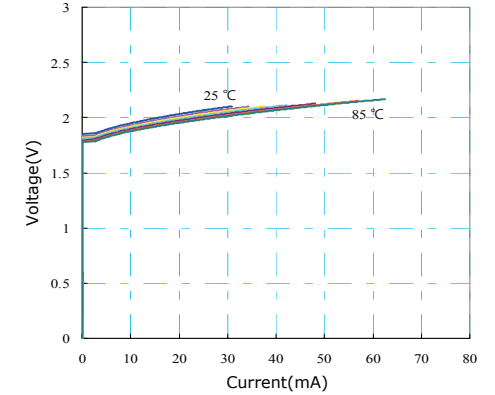
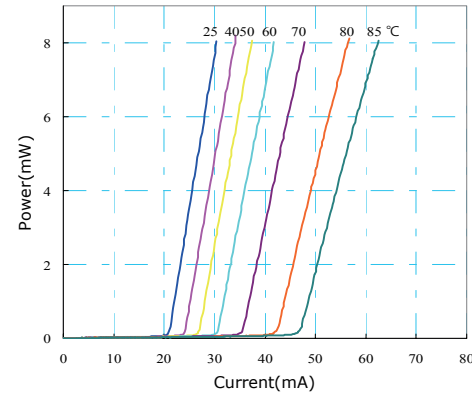
Fig.2:Pin connection

● Absolute maximum ratings

| Parameter | Symbol | Condition | Rating | Unit |
|----------------------|----------|-----------|---------|------|
| Light output power | P_o | CW | 10 | mW |
| Reverse voltage (LD) | V_{RL} | - | 2 | V |
| Reverse voltage (PD) | V_{RD} | - | 30 | V |
| Forward current (PD) | I_{FD} | - | 10 | mA |
| Case temperature | T_c | - | -10~+85 | °C |
| Storage temperature | T_s | - | -40~+85 | °C |

● Electrical and optical characteristics ($T_c=25^\circ\text{C}$)

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Conditions |
|-----------------------------------|----------------------------|------|------|------|---------------|------------------------------------|
| Peak wavelength | λ | 645 | 655 | 660 | nm | $P_o=7\text{mW}$ |
| Threshold current | I_{th} | - | 20 | 28 | mA | |
| Operating current | I_{op} | - | 28 | 35 | mA | $P_o=7\text{mW}$ |
| Operating voltage | V_{op} | - | 2.2 | 2.5 | V | $P_o=7\text{mW}$ |
| Differential efficiency | η | 0.7 | 0.85 | 1.10 | mW/mA | $P_o=3\text{-}5\text{mW}$ |
| Monitor current | I_m | 0.1 | 0.2 | 0.3 | mA | $P_o=7\text{mW}, V_{RD}=5\text{V}$ |
| Parallel divergence angle | $\theta_{//}$ | 6 | 9 | 12 | deg | $P_o=7\text{mW}$ |
| Perpendicular divergence angle | θ_{\perp} | 25 | 28 | 32 | deg | |
| Parallel FFP deviation angle | $\Delta\theta_{//}$ | -2 | 0 | +2 | deg | |
| Perpendicular FFP deviation angle | $\Delta\theta_{\perp}$ | -2 | 0 | +2 | deg | |
| Emission point accuracy | $\Delta x\Delta y\Delta z$ | -80 | 0 | +80 | μm | |



● 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 the 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 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.