

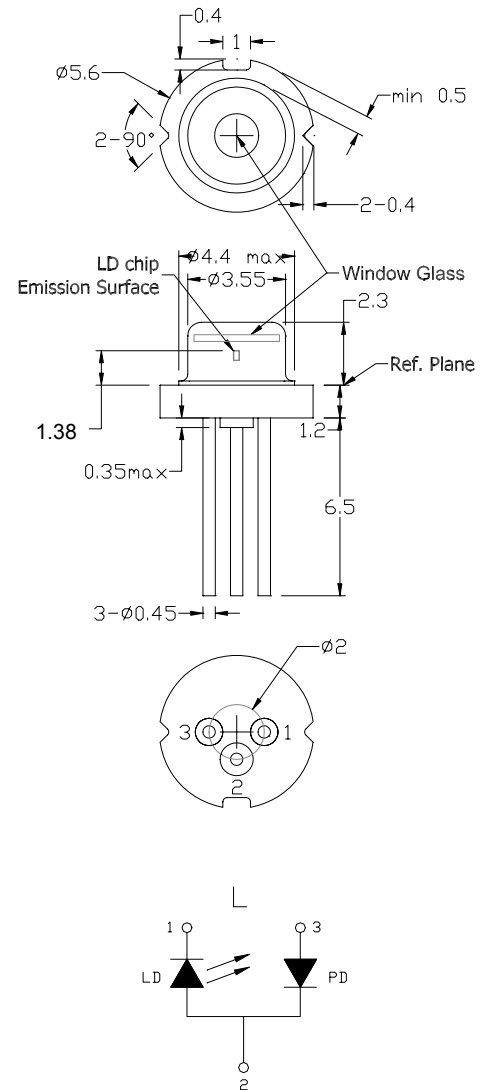
## ★635nm 10mW 50°C Reliable Operation

### •Features

1. High visibility (10mW)
2. High temperature operation
3. High reliability
4. Z:1380um

### •Applications

1. Industrial laser markers
2. Measuring instruments
3. High visibility LD display



### •Absolute maximum ratings

| Parameter            | Symbol   | Condition | Rating  | Unit |
|----------------------|----------|-----------|---------|------|
| Light output power   | $P_O$    | CW        | 12      | 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~+50 | °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                   | $\lambda$                    | 630  | 637  | 640  | nm    | $P_o=10\text{mW}$                      |
| Threshold current                 | $I_{th}$                     | -    | 35   | 40   | mA    |                                        |
| Operating current                 | $I_{op}$                     | -    | 55   | 65   | mA    | $P_o=10\text{mW}$                      |
| Operating voltage                 | $V_{op}$                     | 2    | 2.2  | 2.5  | V     | $P_o=10\text{mW}$                      |
| Differential efficiency           | $\eta$                       | 0.25 | 0.6  | 0.85 | mW/mA | $P_o=5\sim10\text{mW}$                 |
| Monitor current                   | $I_m$                        | 0.05 | 0.12 | 0.5  | mA    | $P_o=10\text{mW}$ , $V_{RD}=5\text{V}$ |
| Parallel divergence angle         | $\theta_{  }$                | 6    | 7.5  | 11   | deg   | $P_o=10\text{mW}$                      |
| Perpendicular divergence angle    | $\theta_{\perp}$             | 30   | 33   | 40   | 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  | um    |                                        |

### •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.

