

Red Laser Diode

Part No: LD-650-05-50-N-2



Features

- ※ Wavelength: $\lambda = 650\text{nm}$ (Type)
- ※ Threshold current: $I_{th} = 21\text{mA}$ (Type)
- ※ Output optical power: 5mW
- ※ Package: T0-18 ($\Phi 5.6\text{mm}$)

Applications

- ※ Industrial Use

Absolute Maximum Rating at $T_c = 25^\circ\text{C}$

| Items | Symbols | Values | Unit |
|-----------------------------|------------|----------------|------------------|
| Optical Output Power | P_o (CW) | 6 | mW |
| | V_r (LD) | 2 | V |
| Laser Diode Reverse Voltage | V_r (PD) | 30 | V |
| Operating Temperature | T_{opr} | $-10 \sim +50$ | $^\circ\text{C}$ |
| Storage Temperature | T_{stg} | $-40 \sim +85$ | $^\circ\text{C}$ |

Electrical and Optical Characteristics at $T_c = 25^\circ\text{C}$

| Items | Symbols | Min | Type | Max. | Unit | Condition |
|-------------------------|------------------------------|-----|------|---------|---------------|--------------------|
| Optical Output Power | P_o | - | 5 | - | mW | CW |
| Threshold Current | I_{th} | - | 21 | 30 | mA | CW |
| Operating Current | I_{op} | - | 28 | 35 | mA | $P_o = 5\text{mW}$ |
| Slope Efficiency | η | - | 0.2 | 0.3 | mW/mA | $P_o = 5\text{mW}$ |
| Operating Voltage | V_{op} | - | 2.2 | 2.6 | V | $P_o = 5\text{mW}$ |
| Monitor Current | I_m | 0.1 | 0.2 | 0.5 | mA | $P_o = 5\text{mW}$ |
| Lasing Wavelength | λ | 650 | 655 | 660 | nm | $P_o = 5\text{mW}$ |
| Beam Divergence | // | 6 | 8 | 12 | $^\circ$ | $P_o = 5\text{mW}$ |
| | \perp | 22 | 32 | 38 | $^\circ$ | $P_o = 5\text{mW}$ |
| Beam Angle | $\Delta //$ | - | - | ± 3 | $^\circ$ | $P_o = 5\text{mW}$ |
| | $\Delta \perp$ | - | - | ± 3 | $^\circ$ | $P_o = 5\text{mW}$ |
| Emission Point Accuracy | $\Delta X \Delta Y \Delta Z$ | -60 | - | 60 | μm | $P_o = 5\text{mW}$ |

- 1) Measurement condition: CW
- 2) Full angle at half maximum.
- 3) All the above values are measured by OPELUS method.

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Package and Electrical connection

