

Infrared Laser Diode

Part No: LD-830-05-50-N-2



Features

- ※ Wavelength: $\lambda = 830\text{nm}$ (Type)
- ※ Low threshold current: $I_{th} = 20\text{mA}$ (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) | 5 | 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} | $-40 \sim +80$ | $^\circ\text{C}$ |

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

| Items | Symbols | Min | Type | Max. | Unit | Condition |
|-------------------------|------------------------------|-----|------|---------|---------------|--------------------|
| Optical Output Power | P_o | - | 5 | 7 | mW | CW |
| Threshold Current | I_{th} | - | 20 | 25 | mA | CW |
| Operating Current | I_{op} | - | 30 | 40 | mA | $P_o = 5\text{mW}$ |
| Slope Efficiency | η | 0.3 | 0.5 | 0.8 | mW/mA | $P_o = 5\text{mW}$ |
| Operating Voltage | V_{op} | - | 2 | 2.3 | V | $P_o = 5\text{mW}$ |
| Monitor Current | I_m | - | 0.2 | - | mA | $P_o = 5\text{mW}$ |
| Lasing Wavelength | λ | 820 | 830 | 840 | nm | $P_o = 5\text{mW}$ |
| Beam Divergence | // | - | 10 | - | $^\circ$ | $P_o = 5\text{mW}$ |
| | \perp | - | 37 | - | $^\circ$ | $P_o = 5\text{mW}$ |
| Beam Angle | $\Delta //$ | - | - | ± 2 | $^\circ$ | $P_o = 5\text{mW}$ |
| | $\Delta \perp$ | - | - | ± 2 | $^\circ$ | $P_o = 5\text{mW}$ |
| Emission Point Accuracy | $\Delta X \Delta Y \Delta Z$ | -60 | - | 60 | μm | - |

1) Measurement condition: CW

2) Full angle at half maximum.

3) All the above values are measured by OPELUS method.

Infrared Diode

Package and Electrical connection

