

# Infrared Laser Diode

Part No: LD-980-100-40-N-2



## Features

- ※ Wavelength:  $\lambda = 980\text{nm}$  (Type)
- ※ Output optical power: 100mW
- ※ 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) | 100            | mW               |
|                             | $V_r$ (LD) | 2              | V                |
| Laser Diode Reverse Voltage | $V_r$ (PD) | 30             | V                |
| Operating Temperature       | $T_{opr}$  | $-10 \sim +40$ | $^\circ\text{C}$ |
| 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    | $P_o$                        | -   | 100  | -       | mW            | CW                 |
| Threshold Current       | $I_{th}$                     | -   | 35   | 55      | mA            | CW                 |
| Operating Current       | $I_{op}$                     | -   | 160  | 180     | mA            | $P_o=100\text{mW}$ |
| Slope Efficiency        | $\eta$                       | 0.5 | 0.8  | -       | mW/mA         | $P_o=100\text{mW}$ |
| Operating Voltage       | $V_{op}$                     | -   | 1.6  | 2.1     | V             | $P_o=100\text{mW}$ |
| Monitor Current         | $I_m$                        | -   | 0.2  | 0.8     | mA            | $P_o=100\text{mW}$ |
| Lasing Wavelength       | $\lambda$                    | 965 | 980  | 995     | nm            | $P_o=100\text{mW}$ |
| Beam Divergence         | //                           | 8   | 12   | 14      | $^\circ$      | $P_o=100\text{mW}$ |
|                         | $\perp$                      | 30  | 35   | 40      | $^\circ$      | $P_o=100\text{mW}$ |
| Beam Angle              | $\Delta //$                  | -   | -    | $\pm 3$ | $^\circ$      | $P_o=100\text{mW}$ |
|                         | $\Delta \perp$               | -   | -    | $\pm 3$ | $^\circ$      | $P_o=100\text{mW}$ |
| Emission Point Accuracy | $\Delta X \Delta Y \Delta Z$ | -80 | -    | 80      | $\mu\text{m}$ | -                  |

- 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

