

# 980 nm LASER DIODE

## DL-LS6002

# Tentative

# SANYO

Ver.1 July. 2002

### Features

- Wavelength : 980 nm (Typ.)
- Light output : 100 mW CW
- Low threshold current :  $I_{th} = 15$  mA (Typ.)
- Small aspect ratio : 2.5 (Typ.)

### Applications

- Erbium-doped fiber amplifiers
- Free space optical communications

### Absolute Maximum Ratings

( $T_c=25^\circ\text{C}$ )

| Parameter             |       | Symbol    | Ratings    | Unit             |
|-----------------------|-------|-----------|------------|------------------|
| Light Output          | CW    | $P_o$     | 120        | mW               |
| Reverse Voltage       | Laser | VR        | 2          | V                |
|                       | PD    |           | 30         |                  |
| Operating Temperature |       | $T_{opr}$ | -10 to +70 | $^\circ\text{C}$ |
| Storage Temperature   |       | $T_{stg}$ | -40 to +85 | $^\circ\text{C}$ |

### Electrical and Optical Characteristics

1) 2)

( $T_c=25^\circ\text{C}$ )

| Parameter                     |               | Symbol         | Condition          | Min. | Typ. | Max.    | Unit     |
|-------------------------------|---------------|----------------|--------------------|------|------|---------|----------|
| Threshold Current             |               | $I_{th}$       | CW                 | -    | 15   | 25      | mA       |
| Operating Current             |               | $I_{op}$       | $P_o=100\text{mW}$ | -    | 130  | 160     | mA       |
| Operating Voltage             |               | $V_{op}$       | $P_o=100\text{mW}$ | -    | 1.8  | 2.2     | V        |
| Lasing Wavelength             |               | $L_p$          | $P_o=100\text{mW}$ | 970  | 980  | 990     | nm       |
| Beam <sup>3)</sup> Divergence | Perpendicular | Qv             | $P_o=100\text{mW}$ | 18   | 23   | 28      | $^\circ$ |
|                               | Parallel      | Qh             | $P_o=100\text{mW}$ | 7    | 9    | 11      | $^\circ$ |
| Off Axis Angle                | Perpendicular | dQv            | -                  | -    | -    | $\pm 3$ | $^\circ$ |
|                               | Parallel      | dQh            | -                  | -    | -    | $\pm 3$ | $^\circ$ |
| Differential Efficiency       |               | $dP_o/dI_{op}$ | -                  | -    | 0.9  | -       | mW/mA    |
| Monitoring Output Current     |               | $I_m$          | $P_o=100\text{mW}$ | -    | -    | -       | mA       |

1) Initial values 2) All the above values are evaluated with Tottori Sanyo's measuring apparatus

3) Full angle at half maximum

Note : The above product specification are subject to change without notice.

