

RED LASER DIODE

DL-3147-260

SANYO

Ver.1 Nov. 2003

Features

- Wavelength : 650 nm (Typ.)
- Low threshold current : $I_{th} = 20\text{mA}$ (Typ.)
- High operating temperature : 5 mW at 70°C
- TE mode

Applications

DVD-ROM/PLAYER
Laser module
industrial instrument

Absolute Maximum Ratings

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

| Parameter | | Symbol | Ratings | Unit |
|-----------------------|-------|-----------|------------|------|
| Light Output | CW | P_o | 7 | mW |
| Reverse Voltage | Laser | VR | 2 | V |
| | PD | | 30 | |
| Operating Temperature | | T_{opr} | -10 to +70 | °C |
| Storage Temperature | | T_{stg} | -40 to +85 | °C |

Electrical and Optical Characteristics ^{1) 2)}

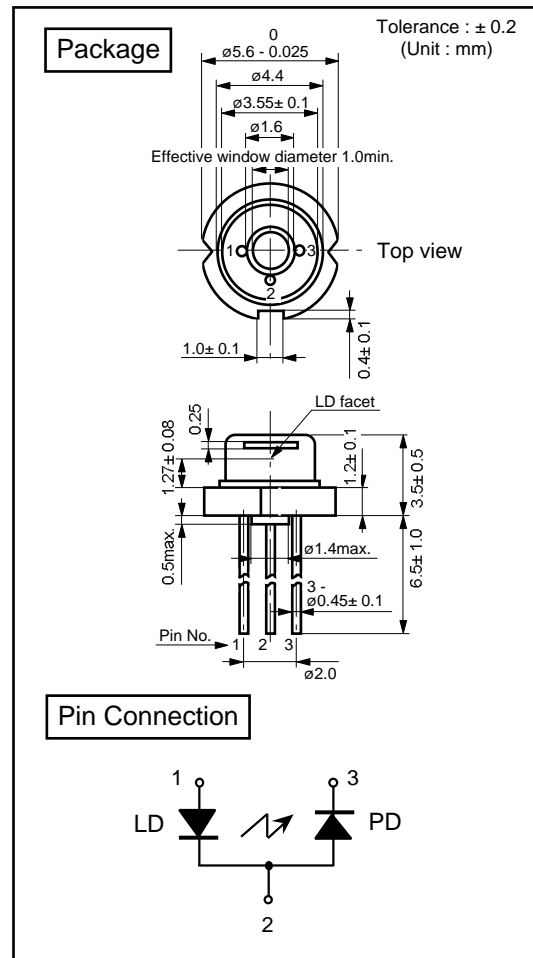
($T_c=25^\circ\text{C}$)

| Parameter | | Symbol | Condition | Min. | Typ. | Max. | Unit |
|----------------------------------|---------------|----------------|------------------|------|------|---------|---------------|
| Threshold Current | | I_{th} | CW | - | 20 | 35 | mA |
| Operating Current | | I_{op} | $P_o=5\text{mW}$ | - | 30 | 45 | mA |
| Operating Voltage | | V_{op} | $P_o=5\text{mW}$ | - | 2.3 | 2.6 | V |
| Lasing Wavelength | | L_p | $P_o=5\text{mW}$ | 645 | 650 | 660 | nm |
| Beam ³⁾ Divergence | Perpendicular | Q_v | $P_o=5\text{mW}$ | 25 | 30 | 35 | ° |
| | Parallel | Q_h | $P_o=5\text{mW}$ | 7.0 | 8.0 | 10 | ° |
| Off Axis Angle | Perpendicular | dQ_v | - | - | - | ± 3 | ° |
| | Parallel | dQ_h | - | - | - | ± 2 | ° |
| Differential Efficiency | | dP_o/dI_{op} | - | 0.3 | 0.5 | 0.8 | mW/mA |
| Monitoring Output Current | | I_m | $P_o=5\text{mW}$ | 0.08 | 0.15 | 0.4 | mA |
| Astigmatism | | A_s | $P_o=5\text{mW}$ | - | 8 | - | μm |

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

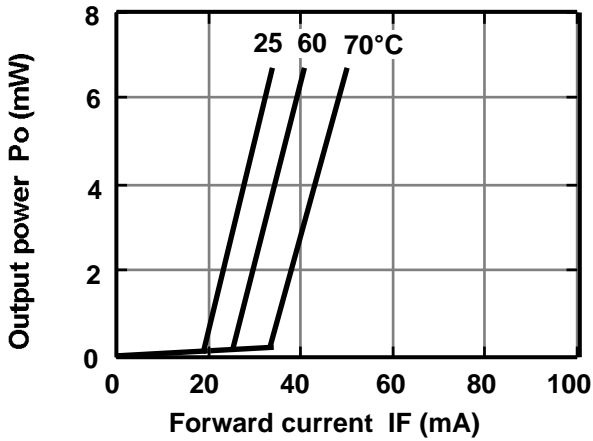
3) Full angle at half maximum

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

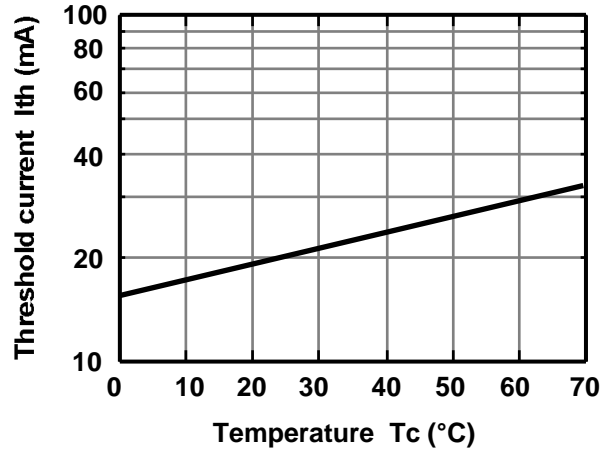


Characteristics

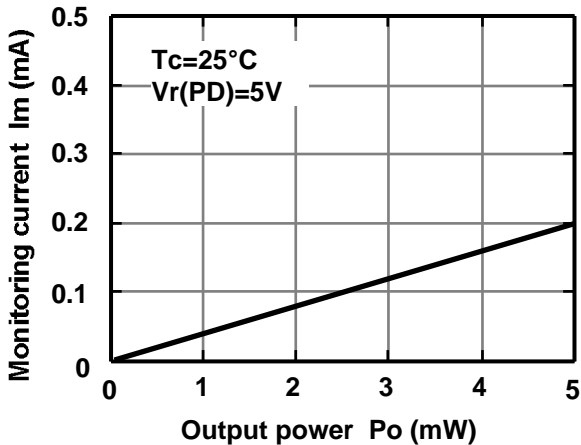
Output power vs. Forward current



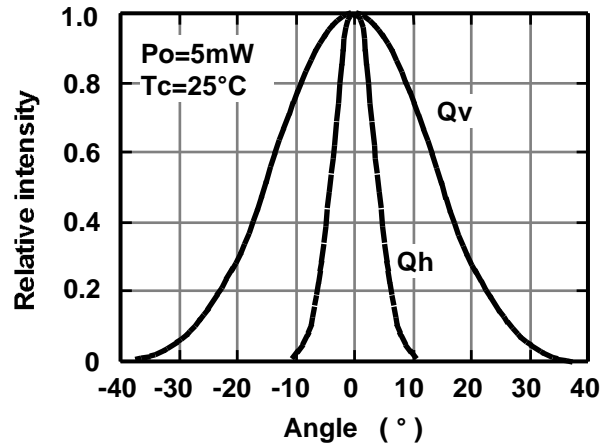
Threshold current vs. Temperature



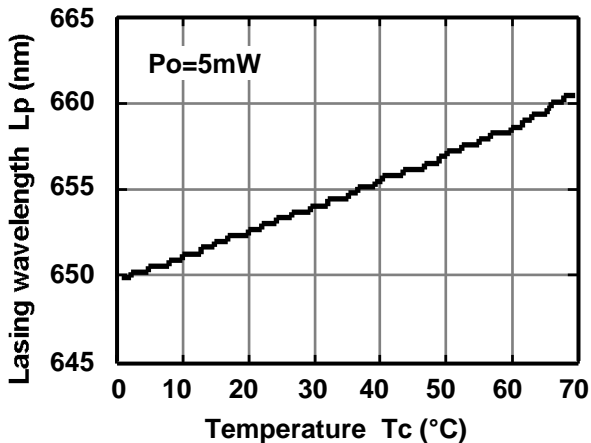
Monitoring current vs. Output power



Beam divergence



Lasing wavelength vs. Temperature



Lasing wavelength vs. Output power

