

RED LASER DIODE

DL-3147-285

SANYO

Ver.1 Jan. 2000

Features

- Short wavelength : 650 nm (Typ.)
- Low threshold current : $I_{th} = 25\text{mA}$ (Typ.)
- High operating temperature : 5 mW at 80°C
- TE mode

Applications

DVD-ROM/PLAYER

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 +80 | °C |
| Storage Temperature | | T_{stg} | -40 to +85 | °C |

Electrical and Optical Characteristics ^{1) 2)}

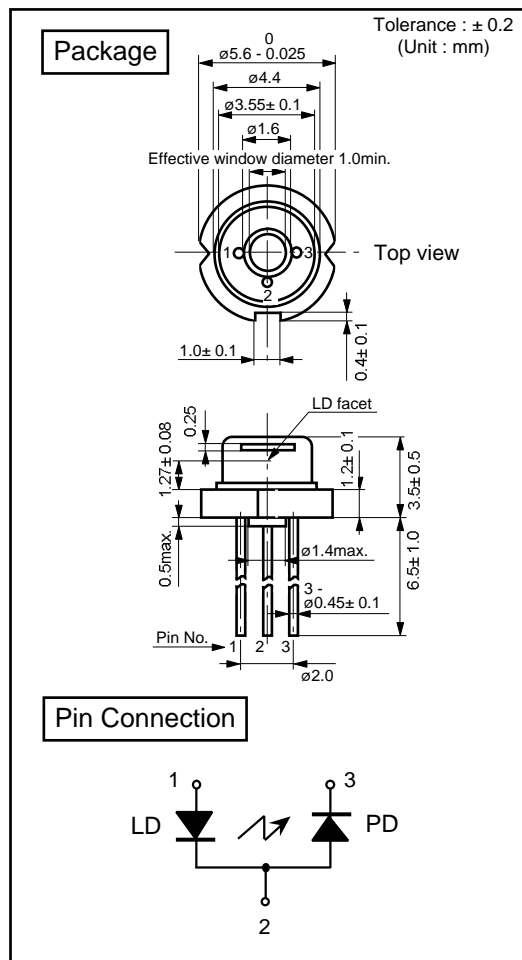
($T_c=25^\circ\text{C}$)

| Parameter | | Symbol | Condition | Min. | Typ. | Max. | Unit |
|-------------------------------|---------------|----------------|------------------|------|------|---------|---------------|
| Threshold Current | | I_{th} | CW | - | 25 | 40 | mA |
| Operating Current | | I_{op} | $P_o=5\text{mW}$ | - | 35 | 50 | 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.



Tottori SANYO Electric Co., Ltd. Electronic Device Business Headquarters

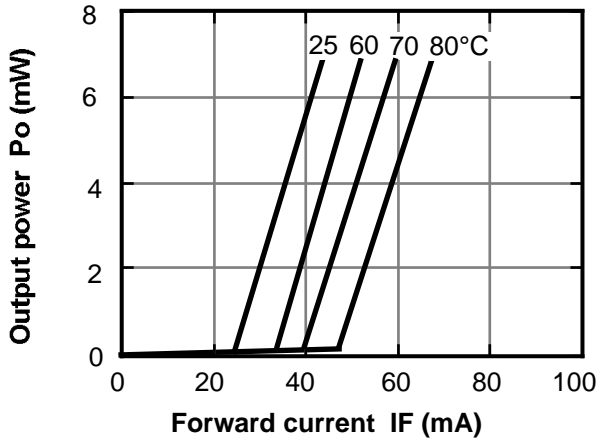
LED Division

5-318, Tachikawa, Tottori 680-8634 Japan

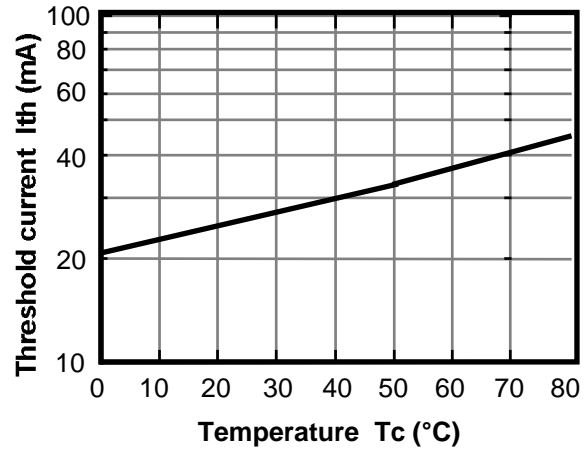
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Characteristics

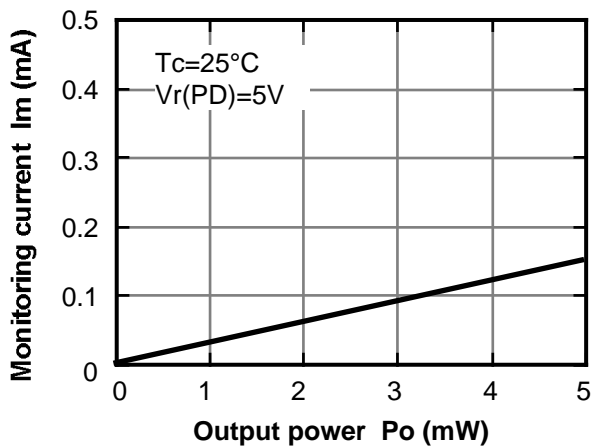
Output power vs. Forward current



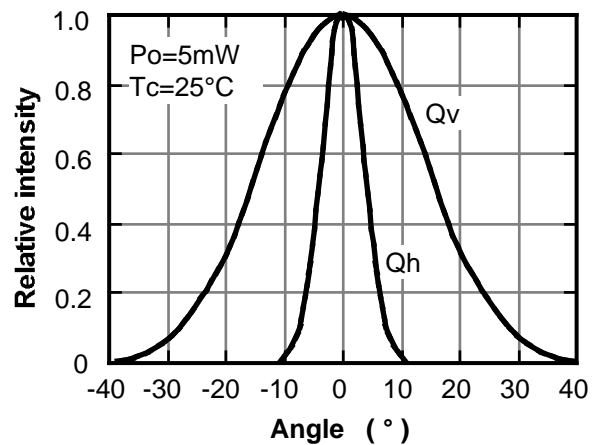
Threshold current vs. Temperature



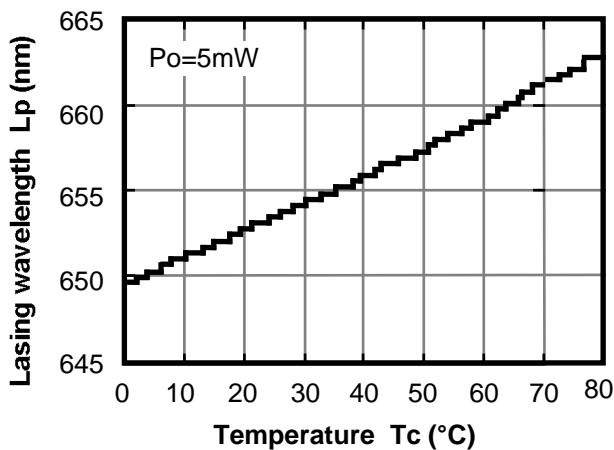
Monitoring current vs. Output power



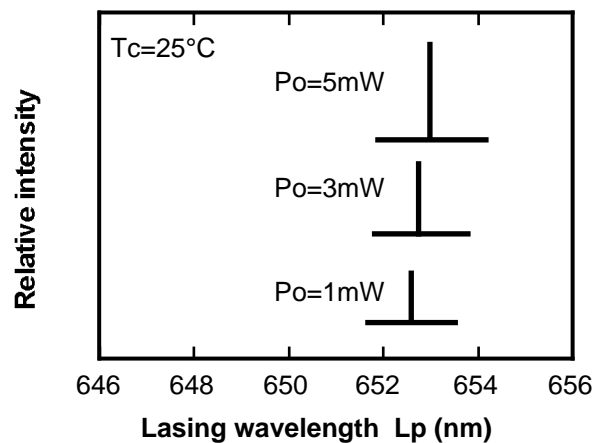
Beam divergence



Lasing wavelength vs. Temperature



Lasing wavelength vs. Output power



This is typical data and it may not represent all products.