

RED LASER DIODE

DL-LS1037

Tentative

SANYO

Ver.1 Jun. 2002

Features

- Short wavelength : 635 nm (Typ.)
- High output power : 40 mW (CW)
- Low threshold current : $I_{th} = 50$ mA (Typ.)
- Low operating voltage : $V_{op} = 2.5V$ (Typ.)
- TE mode

Applications

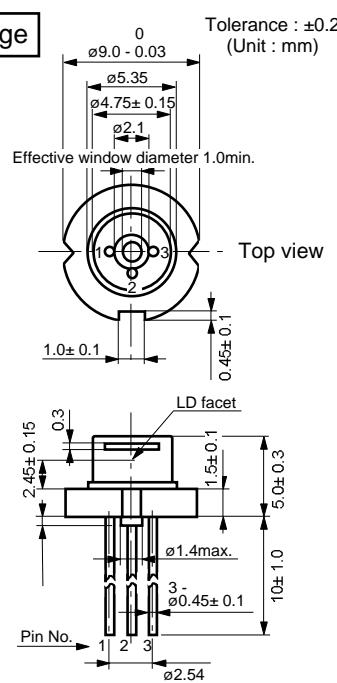
Bar-code scanner
Line marker , Leveler

Absolute Maximum Ratings

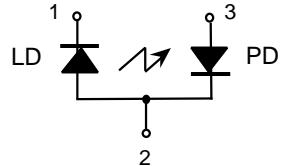
($T_c=25^\circ C$)

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

Package



Pin Connection



Electrical and Optical Characteristics ^{2) 3)}

($T_c=25^\circ C$)

| Parameter | Symbol | Condition | Min. | Typ. | Max. | Unit |
|-------------------------------|---------------------|------------|------------|------|---------|-------|
| Threshold Current | I_{th} | CW | - | 50 | 70 | mA |
| Operating Current | I_{op} | $P_o=40mW$ | - | 100 | 120 | mA |
| Operating Voltage | V_{op} | $P_o=40mW$ | - | 2.5 | 2.8 | V |
| Lasing Wavelength | λ_p | $P_o=40mW$ | - | 635 | 645 | nm |
| Beam Divergence ⁴⁾ | Perpendicular | Q_v | $P_o=40mW$ | 25 | 30 | ° |
| | Parallel | Q_h | $P_o=40mW$ | 6 | 7 | ° |
| Off Axis Angle | Perpendicular | dQ_v | - | - | ± 3 | ° |
| | Parallel | dQ_h | - | - | ± 3 | ° |
| Differential Efficiency | dP_o/dI_{op} | - | - | 0.8 | - | mW/mA |
| Monitoring Output Current | I_m ⁵⁾ | $P_o=40mW$ | 0.2 | 0.4 | 0.7 | mA |
| Astigmatism | A_s | $P_o=40mW$ | - | 10 | - | μm |

2) Initial values 3) All the above values are evaluated with Tottori Sanyo's measuring apparatus

4) Full angle at half maximum

5) We recommend Front monitor APC Note : The above product specification are subject to change without notice.

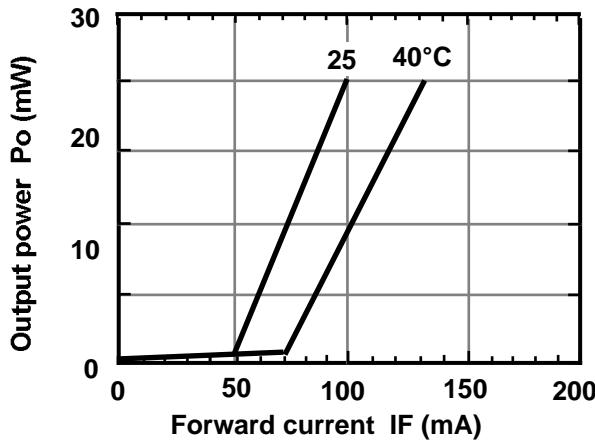
Tottori SANYO Electric Co., Ltd. Electronic Device Business Headquarters

LED Division

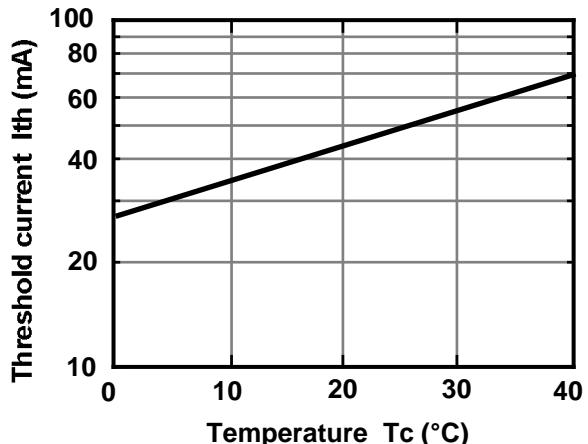
5-318, Tachikawa, Tottori 680-8634 Japan TEL : +81-857-21-2137 FAX : +81-857-21-2161

Characteristics

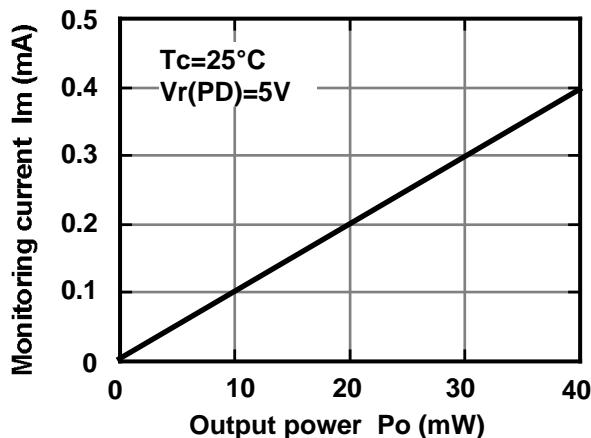
Output power vs. Forward current



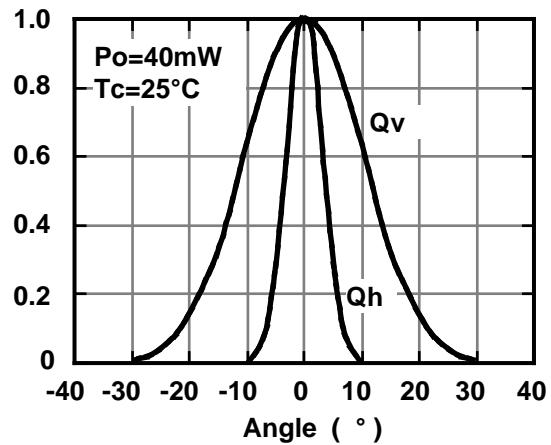
Threshold current vs. Temperature



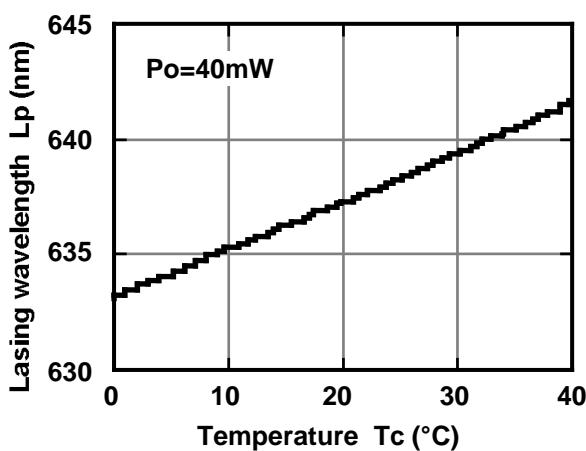
Monitoring current vs. Output power



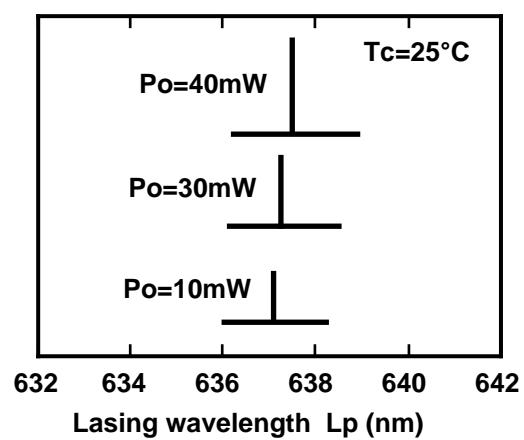
Beam divergence



Lasing wavelength vs. Temperature



Lasing wavelength vs. Output power



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