

QSI LASER DIODE SPECIFICATIONS FOR APPROVAL

Customer :

Model : QL80T4HD-Y

Signature of Approval

Approved by _____

Checked by _____

Issued by _____

Approval by Customer



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QL80T4HD-Y

Laser Diode

Quantum Semiconductor International Co., Ltd.

Ver.2 July. 2009

◆ OVERVIEW

QL80T4HD-Y is a MOCVD grown 808nm band laser diode with quantum well structure. It's an attractive light source, with a typical light output power of 1W for optoelectronic devices such as solid state laser pumping and medical use.

◆ APPLICATION

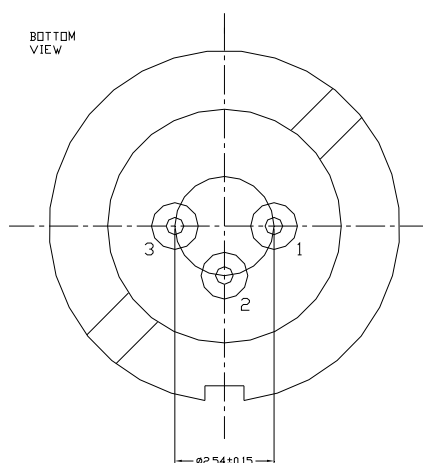
- Solid state laser excitation
- Medical use
- Material processes
- Measurement

◆ FEATURES

- Optical Output Power : 1W CW
- Package Type : TO-5 (ϕ 9mm)
- Polarization : TM (Electric Field Perpendicular to the Junction Plane)

◆ ELECTRICAL CONNECTION

Bottom View



Pin Configuration

| | | |
|---|----------------------------|-----------|
| D | LD cathode, No PD (Fig. 4) | QL80T4H-D |
|---|----------------------------|-----------|

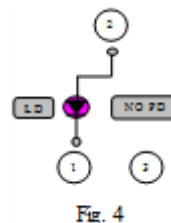


Fig. 4

◆ ABSOLUTE MAXIMUM RATING at Tc=25°C

| Items | Symbols | Values | Unit |
|-----------------------------|---------|-----------|------|
| Optical Output Power | P | 1 | W |
| Laser Diode Reverse Voltage | V | 2 | V |
| Photo Diode Reverse Voltage | V | 30 | V |
| Operating Temperature | Topr | -10 ~ +40 | °C |
| Storage Temperature | Tstg | -40 ~ +85 | °C |

◆ ELECTRICAL and OPTICAL CHARACTERISTICS at Tc=25°C ¹⁾²⁾

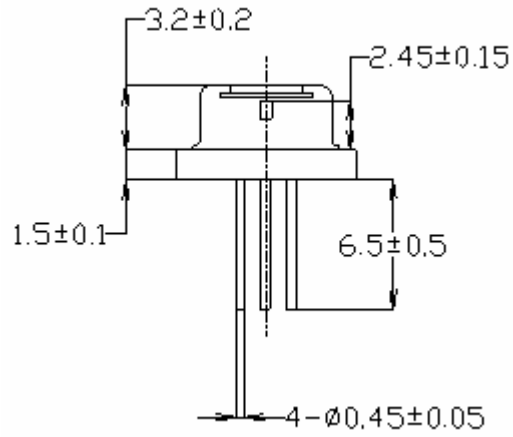
| Items | Symbols | Min. | Typ. | Max. | Unit | Condition |
|-------------------------------|--------------------------------|------|------|------|------|-----------|
| Optical Output Power | Po | - | 1 | - | W | - |
| Threshold Current | Ith | - | 0.25 | 0.30 | A | - |
| Slope Efficiency | SE | | 1 | 2 | W/A | |
| Operating Current | Iop | - | 1.1 | 1.5 | A | Po=1W |
| Operating Voltage | Vop | - | 2.0 | 2.5 | V | Po=1W |
| Lasing Wavelength | λ_p | 785 | 808 | 830 | nm | Po=1W |
| Beam Divergence ³⁾ | $\theta_{ }$ | | 7 | 12 | deg | Po=1W |
| | θ_{\perp} | | 30 | 40 | deg | Po=1W |
| Beam Angle | $\Delta\theta_{ }$ | - | - | ±3 | deg | Po=1W |
| | $\Delta\theta_{\perp}$ | - | - | ±3 | deg | Po=1W |
| Monitor Current | I _m | - | - | - | mA | |
| Polarization | TM mode | | | | | |
| Optical Distance | $\Delta X, \Delta Y, \Delta Z$ | - | - | ±80 | μm | - |

1) Initial Values 2) All above values are evaluated with QSI's measuring apparatus

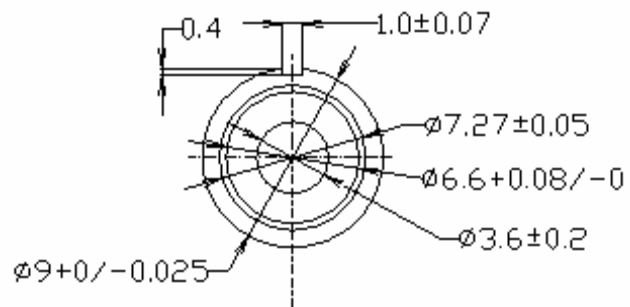
3) Full Width at Half Maximum

The above product specifications are subject to change without notice.

◆ PACKAGE DIMENSION



TOP VIEW



BOTTOM VIEW

