

# 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

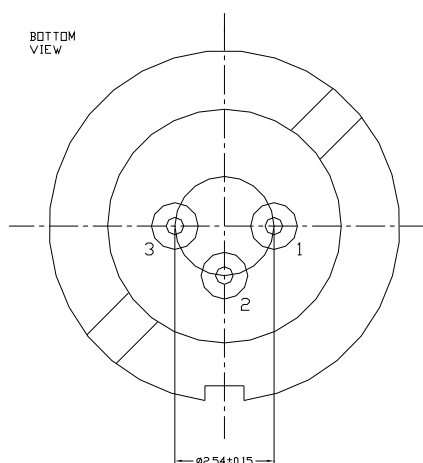
- Solid state laser excitation
- Medical use
- Material processes
- Measurement

### ◆ FEATURES

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

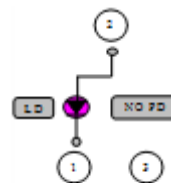
### ◆ ELECTRICAL CONNECTION

Bottom View



Pin Configuration

D	LD cathode, No PD (Fig. 4)	QL80T4H-D
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◆ 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 <sup>1)2)</sup>

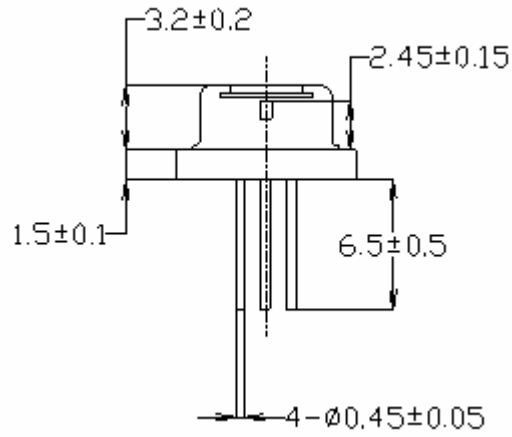
Items	Symbols	Min.	Typ.	Max.	Unit	Condition
Optical Output Power	Po	-	1	-	W	-
Threshold Current	Ith	-	0.25	0.30	A	-
Slope Efficiency	SE		1	2	W/A	
Operating Current	Iop	-	1.1	1.5	A	Po=1W
Operating Voltage	Vop	-	2.0	2.5	V	Po=1W
Lasing Wavelength	$\lambda_p$	785	808	830	nm	Po=1W
Beam Divergence <sup>3)</sup>	$\theta_{  }$		7	12	deg	Po=1W
	$\theta_{\perp}$		30	40	deg	Po=1W
Beam Angle	$\Delta\theta_{  }$	-	-	±3	deg	Po=1W
	$\Delta\theta_{\perp}$	-	-	±3	deg	Po=1W
Monitor Current	I <sub>m</sub>	-	-	-	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

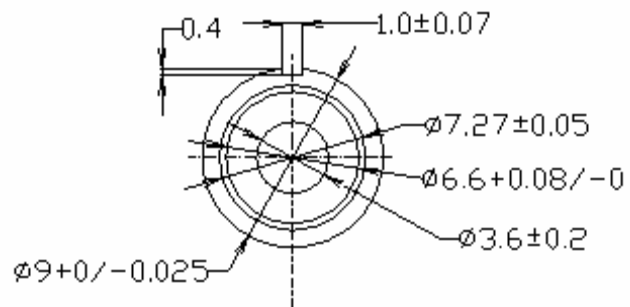
3) Full Width at Half Maximum

The above product specifications are subject to change without notice.

## ◆ PACKAGE DIMENSION



TOP VIEW



BOTTOM VIEW

