

# QSI LASER DIODE SPECIFICATIONS FOR APPROVAL

Customer :

Model : QL80S4H-A/B/C/D/E-Y

*Tentative*

**Signature of Approval**

Approved by \_\_\_\_\_

Checked by \_\_\_\_\_

Issued by \_\_\_\_\_

**Approval by Customer**

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# QL80S4H-A/B/C/D/E-Y

*Tentative*

## Laser Diode

Quantum Semiconductor International Co., Ltd.

Ver.4 Nov. 2006

### ◆ OVERVIEW

QL80S4H-A/B/C/D/E-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 500mW for optoelectronic devices such as solid state laser pumping and medical use.

### ◆ APPLICATION

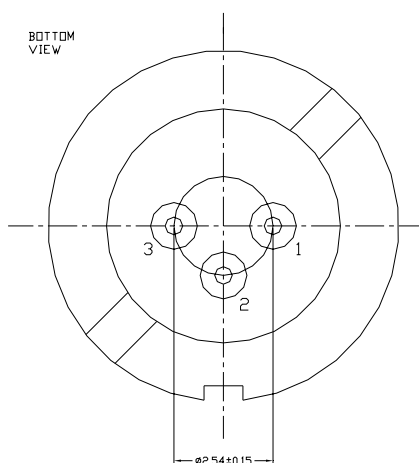
- Solid state laser excitation
- Medical use
- Material processes
- Measurement

### ◆ FEATURES

- Optical Output Power : 500mW CW
- Package Type : TO-5 ( $\phi$  9mm)
- Polarization : TM ( Electric Field Perpendicular to the Junction Plane )

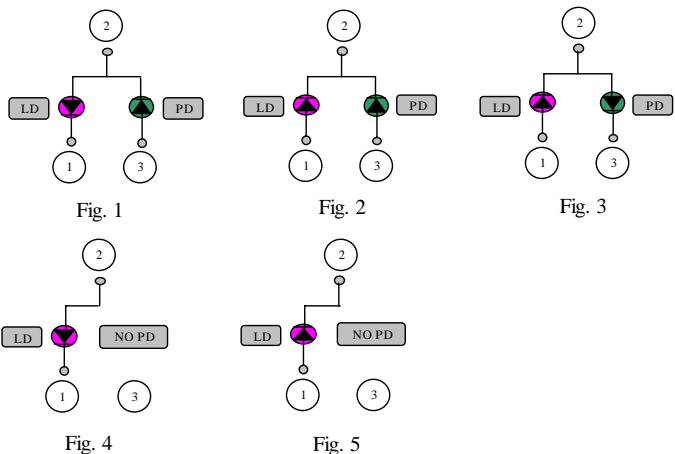
### ◆ ELECTRICAL CONNECTION

#### Bottom View



#### Pin Configuration

A	LD cathode, PD anode (Fig. 1)	QL80S4H-A
B	LD, PD anode (Fig. 2)	QL80S4H-B
C	LD anode, PD cathode (Fig. 3)	QL80S4H-C
D	LD cathode, No PD (Fig. 4)	QL80S4H-D
E	LD anode, No PD (Fig. 5)	QL80S4H-E



**Tentative**

◆ **ABSOLUTE MAXIMUM RATING at Tc=25°C**

Items	Symbols	Values	Unit
Optical Output Power	P	500	mW
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	-	500	-	mW	-
Threshold Current	Ith	-	100	200	mA	-
Operating Current	Iop	-	550	700	mA	Po=500mW
Operating Voltage	Vop	-	2.2	3	V	Po=500mW
Lasing Wavelength	$\lambda_p$	803	808	813	nm	Po=500mW
Beam Divergence <sup>3)</sup>	$\theta_{  }$	4	8	17	deg	Po=500mW
	$\theta_{\perp}$	20	30	40	deg	Po=500mW
Beam Angle	$\Delta\theta_{  }$	-	-	$\pm 3$	deg	Po=500mW
	$\Delta\theta_{\perp}$	-	-	$\pm 3$	deg	Po=500mW
Monitor Current	Im	-	-	-	mA	
Polarization	TM mode					
Optical Distance	$\Delta X, \Delta Y, \Delta Z$	-	-	$\pm 80$	$\mu\text{m}$	-

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

3) Full Width at Half Maximum

**NOTICE : QL80S4H-A/B/C/D/E-Y to be operated on APC circuit.**

**The above product specifications are subject to change without notice.**

# ◆ PACKAGE DIMENSION

