

QSI LASER DIODE SPECIFICATIONS FOR APPROVAL

Customer :

Model : QL80T4H-A/B/C/D/E-Y

Tentative

Signature of Approval

Approved by _____

Checked by _____

Issued by _____

Approval by Customer



QSI Co., Ltd.

315-9, Chunheung-ri, Sungger-eup,
Cheonan-city, Chungnam, Korea 330-836

WWW.QSILaser.com

QL80T4H-A/B/C/D/E-Y

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Laser Diode

Quantum Semiconductor International Co., Ltd.

Ver.1 Dec. 2006

◆ OVERVIEW

QL80T4H-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 1W for optoelectronic devices such as solid state laser pumping and medical use.

◆ APPLICATION

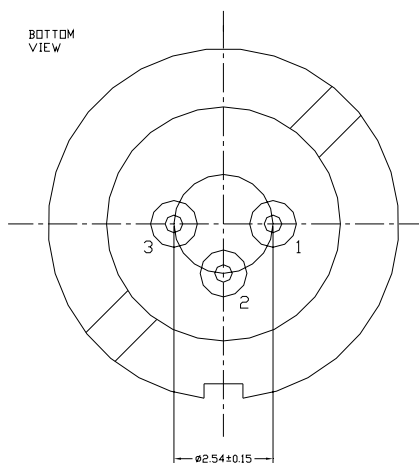
- Solid state laser excitation
- Medical use
- Material processes
- Measurement

◆ FEATURES

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

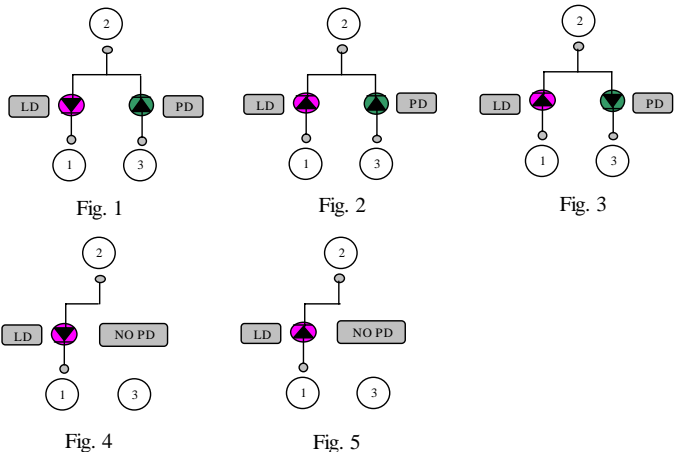
◆ ELECTRICAL CONNECTION

Bottom View



Pin Configuration

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



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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 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	803	808	813	nm	Po=1W
Beam Divergence ³⁾	$\theta_{ }$		9	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

NOTICE : QL80T4H-A/B/C/D/E-Y to be operated on APC circuit.

The above product specifications are subject to change without notice.

◆ PACKAGE DIMENSION

