

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

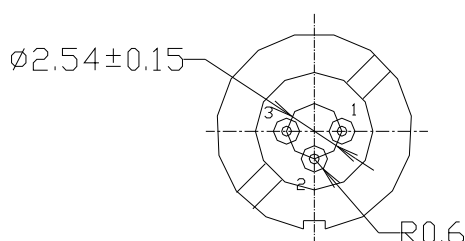
- Solid state laser excitation
- Medical use
- Material processes
- Measurement

◆ FEATURES

- Optical Output Power : 500mW CW
- Package Type : TO-5 (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

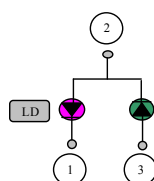


Fig. 1

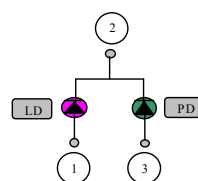


Fig. 2

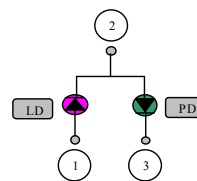


Fig. 3

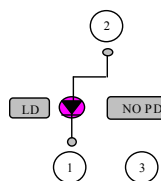


Fig. 4

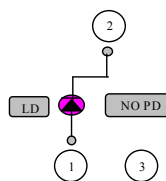


Fig. 5

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 ¹⁾²⁾**

Items	Symbols	Min.	Typ.	Max.	Unit	Condition
Optical Output Power	P _o	-	500	-	mW	-
Threshold Current	I _{th}	-	100	200	mA	-
Operating Current	I _{op}	-	550	700	mA	P _o =500mW
Operating Voltage	V _{op}	-	2.2	3	V	P _o =500mW
Lasing Wavelength	λ _p	803	808	813	nm	P _o =500mW
Beam Divergence ³⁾	θ	4	8	17	deg	P _o =500mW
	θ ⊥	20	30	40	deg	P _o =500mW
Beam Angle	Δθ	-	-	±3	deg	P _o =500mW
	Δθ ⊥	-	-	±3	deg	P _o =500mW
Monitor Current	I _m	-	-	-	mA	
Polarization	TM mode					
Optical Distance	ΔX, ΔY, ΔZ	-	-	±80	μm	-

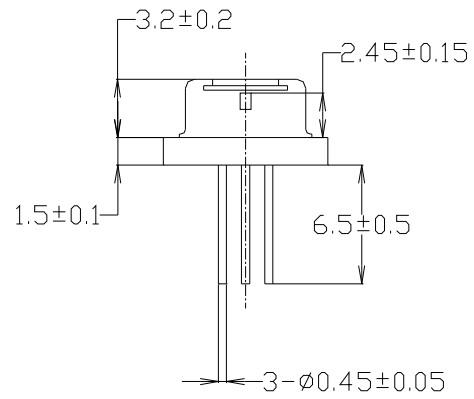
1) Initial Values 2) All above values are evaluated with QSI's measuring apparatus

3) Full Width at Half Maximum

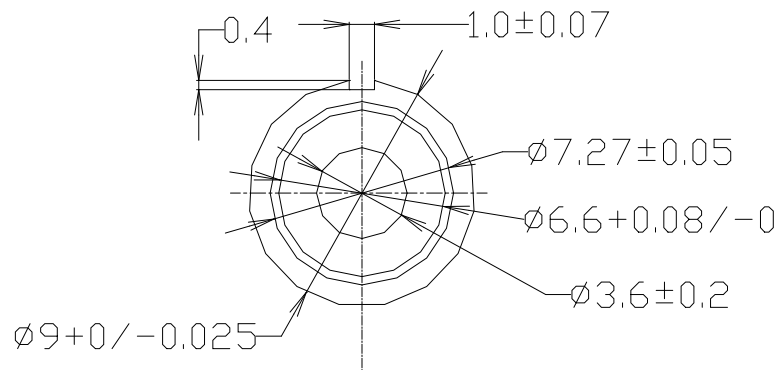
NOTICE : QL80S4H-A/B/C/D/E-Y to be operated on APC circuit.

The above product specifications are subject to change without notice.

◆ PACKAGE DIMENSION



TOP VIEW



BOTTOM VIEW

