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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Tentative

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

Laser Diode

Quantum Semiconductor International Co., Ltd.

Ver.4 July. 2005

♦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

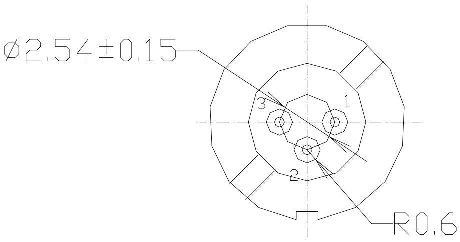
- Solid state laser excitation
- Medical use
- Material processes
- Measurement

♦FEATURES

- Optical Power Output : 500mW CW
- Package Type : TO-5 (9mmϕ)
- Polarization Mode : TM Mode (Type Y)
- Built-in Photo Diode for Monitoring Laser Diode (Option)

♦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

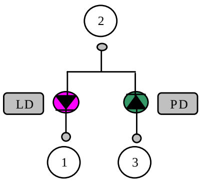


Fig. 1

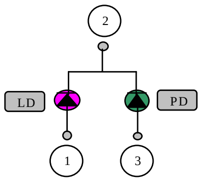


Fig. 2

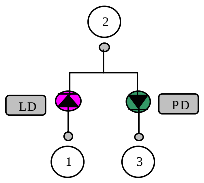


Fig. 3

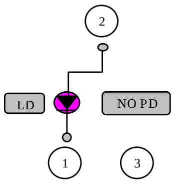


Fig. 4

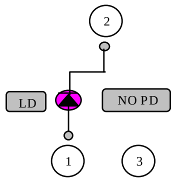


Fig. 5

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	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	λp	803	808	813	nm	Po=500mW
Beam Divergence3)	$\theta \parallel$	4	8	17	deg	Po=500mW
	$\theta \perp$	20	30	40	deg	Po=500mW
Beam Angle	$\Delta\theta \parallel$	-	-	±3	deg	Po=500mW
	$\Delta\theta \perp$	-	-	±3	deg	Po=500mW
Monitor Current	Im	-	-	-	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 angle 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.

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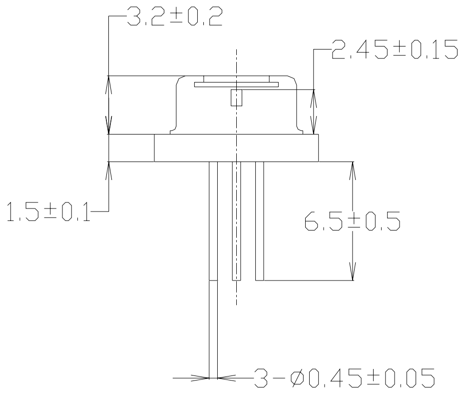
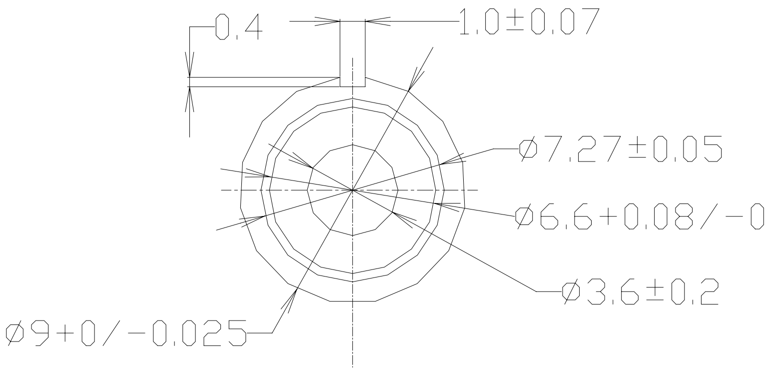
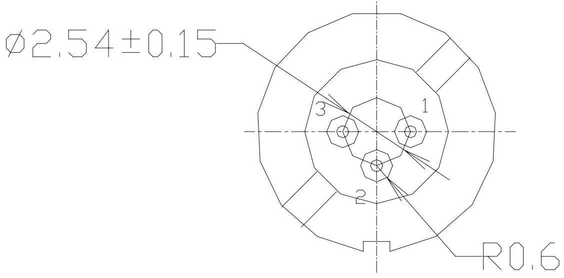
◆ PACKAGE DIMENSION



TOP VIEW



BOTTOM VIEW



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