

# QSI LASER DIODE SPECIFICATIONS FOR APPROVAL

Customer :

Model : QL80R4S-A/B/C/D/E-Z4

*Tentative*

**Signature of Approval**

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

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

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

**Approval by Customer**

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# QL80R4S-A/B/C/D/E-Z4 Laser Diode

*Tentative*

Quantum Semiconductor International Co., Ltd.

Ver.0 Aug. 2007

## ◆ OVERVIEW

QL80R4S-A/B/C/D/E-Z4 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 200mW for optoelectronic devices such as solid state laser pumping and medical use.

## ◆ APPLICATION

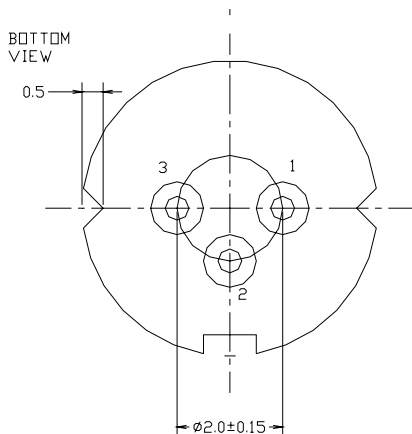
- Solid State Laser Pumping
- Medical Use
- Industrial Use

## ◆ FEATURES

- Wavelength :  $\lambda_p = 808 \text{ nm}$
- Optical Output Power : 200mW (CW)
- Package Type : TO-18 ( $\phi 5.6\text{mm}$ )
- Polarization : TE (Electric Field Parallel to the Junction Plane)
- Cap : removable

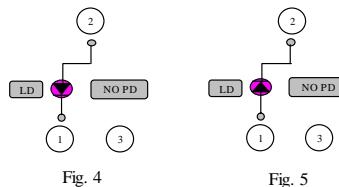
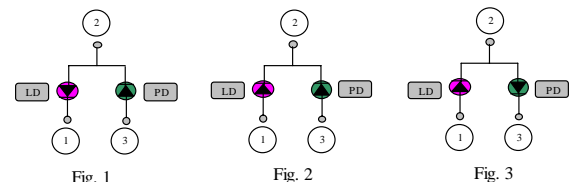
## ◆ ELECTRICAL CONNECTION

### Bottom View



### Pin Configuration

A	LD cathode, PD anode (Fig. 1)	QL80R4S-A
B	LD, PD anode (Fig. 2)	QL80R4S-B
C	LD anode, PD cathode (Fig. 3)	QL80R4S-C
D	LD cathode, No PD (Fig. 4)	QL80R4S-D
E	LD anode, No PD (Fig. 5)	QL80R4S-E



**Tentative**

◆ ABSOLUTE MAXIMUM RATING at Tc=25°C

Items	Symbols	Values	Unit
Optical Output Power	P	200	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	-	200	-	mW	-
Threshold Current	Ith	-	60	80	mA	-
Operating Current	Iop	-	250	280	mA	Po=200mW
Operating Voltage	Vop	-	1.9	2.5	V	Po=200mW
Lasing Wavelength	$\lambda_p$	803	808	813	nm	Po=200mW
Beam Divergence <sup>3)</sup>	$\theta \parallel$	-	7	12	deg	Po=200mW
	$\theta \perp$	-	35	45	deg	Po=200mW
Beam Angle	$\Delta\theta \parallel$	-	-	±3	deg	Po=200mW
	$\Delta\theta \perp$	-	-	±3	deg	Po=200mW
Monitor Current	Im	-	0.5	2.0	mA	Po=200mW
Polarization	TE mode					
Optical Distance	$\Delta X, \Delta Y, \Delta Z$	-	-	±60	μm	-

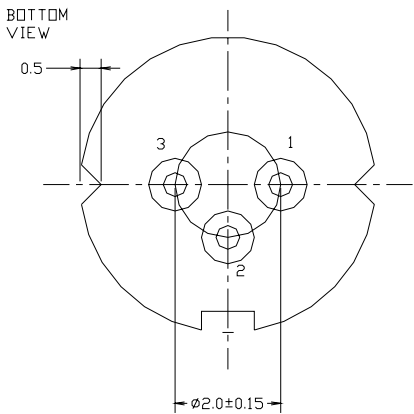
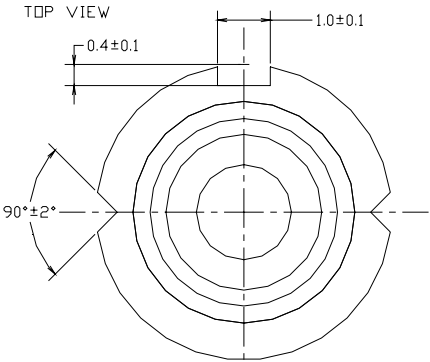
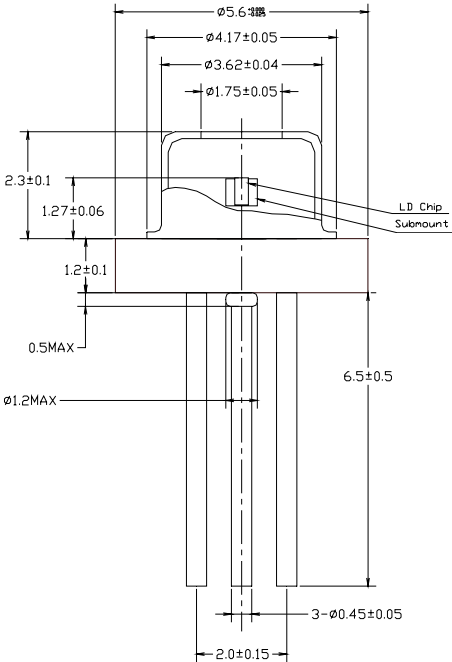
1) Initial Values      2) All above values are evaluated with QSI's measuring apparatus

3) Full Width at Half Maximum

**NOTICE : QL80R4S-A/B/C/D/E-Z4 to be operated on APC circuit.**

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

# PACKAGE DIMENSION



# PACKING

