

QSI LASER DIODE SPECIFICATIONS FOR APPROVAL

Customer :

Model : QL80D6S-A/B/C/D/E-Z

Tentative

Signature of Approval

Approved by _____

Checked by _____

Issued by _____

Approval by Customer



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QL80D6S-A/B/C/D/E-Z

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Laser Diode

Quantum Semiconductor International Co., Ltd.

Ver.1 Feb. 2007

◆ OVERVIEW

QL80D6S-A/B/C/D/E-Z 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 5mW for optoelectronic devices such as medical use.

◆ APPLICATION

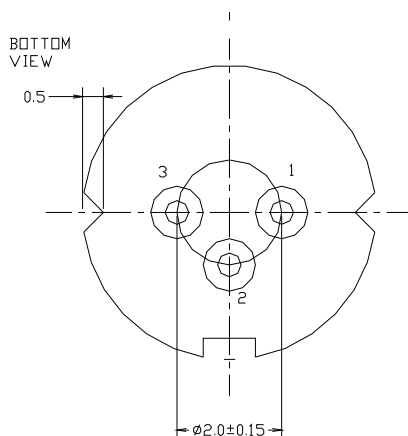
- Medical Use
- Industrial Use

◆ FEATURES

- Wavelength : $\lambda_p = 808 \text{ nm}$
- Optical Output Power : 5mW (CW)
- Package Type : TO-18 ($\phi 5.6\text{mm}$)
- Polarization : TE (Electric Field Parallel to the Junction Plane)

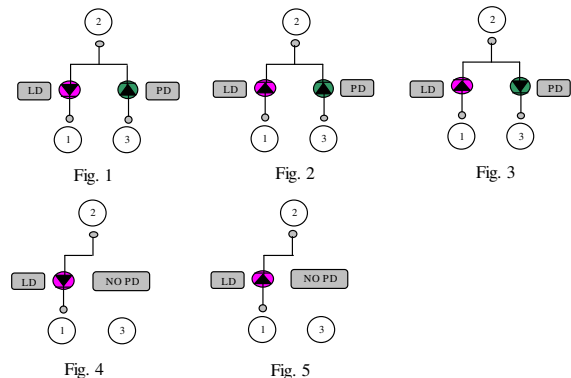
◆ ELECTRICAL CONNECTION

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



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

Items	Symbols	Values	Unit
Optical Output Power	P	8	mW
Laser Diode Reverse Voltage	V	2	V
Photo Diode Reverse Voltage	V	30	V
Operating Temperature	Topr	-10 ~ +60	°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	-	5	-	mW	-
Threshold Current	Ith	-	21	30	mA	-
Operating Current	Iop	-	27	35	mA	Po=5mW
Operating Voltage	Vop	-	1.9	2.3	V	Po=5mW
Lasing Wavelength	λ_p	798	808	818	nm	Po=5mW
Beam Divergence ³⁾	$\theta_{ }$	6	8	12	deg	Po=5mW
	θ_{\perp}	20	30	40	deg	Po=5mW
Beam Angle	$\Delta\theta_{ }$	-	-	± 3	deg	Po=5mW
	$\Delta\theta_{\perp}$	-	-	± 3	deg	Po=5mW
Monitor Current	I _m	0.1	0.3	0.7	mA	Po=5mW
Polarization	TE mode					
Optical Distance	$\Delta X, \Delta Y, \Delta Z$	-	-	± 60	μm	-

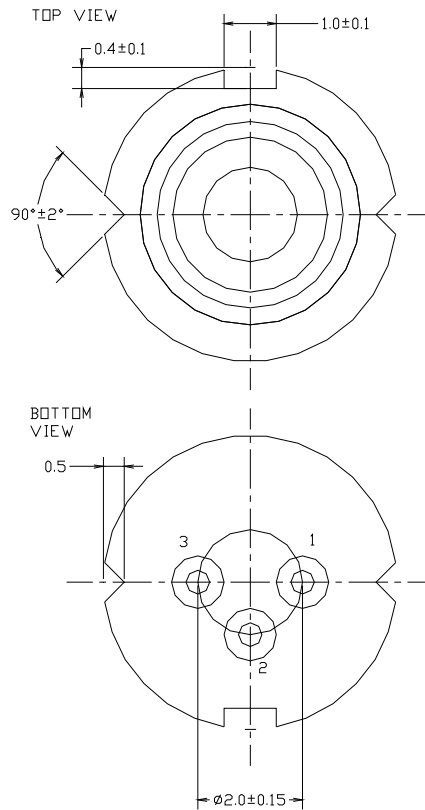
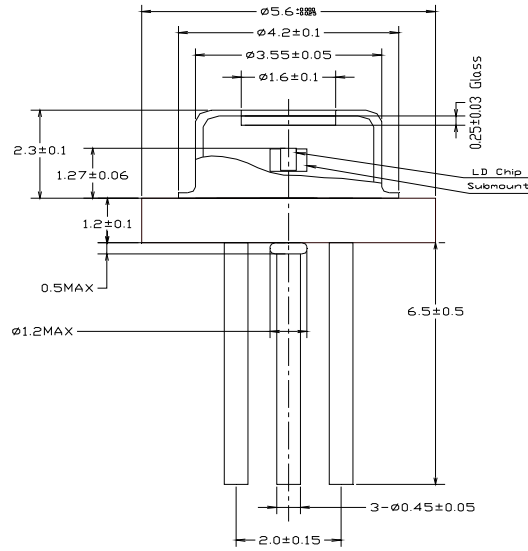
1) Initial Values 2) All above values are evaluated with QSI's measuring apparatus

3) Full Width at Half Maximum

NOTICE : QL80D6S-A/B/C/D/E-Z to be operated on APC circuit.

The above product specifications are subject to change without notice.

◆ PACKAGE DIMENSION



◆ PACKING

