

**QSI LASER DIODE
SPECIFICATIONS FOR APPROVAL**

Tentative

Customer :

Model : QL63H5SA/B/C-R1

Signature of Approval

Approved by _____

Checked by _____

Issued by _____

Approval by Customer



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QL63H5SA/B/C-R1

InGaAlP Laser Diode

Quantum Semiconductor International Co., Ltd.

Ver.1, Jun. 2014

◆ OVERVIEW

QL63H5SA/B/C-R1 is a MOCVD grown 635nm band InGaAlP laser diode with quantum well structure. It's an attractive light source, with a typical light output power of 20mW for optoelectronic devices such as Optical Leveler and Modules.

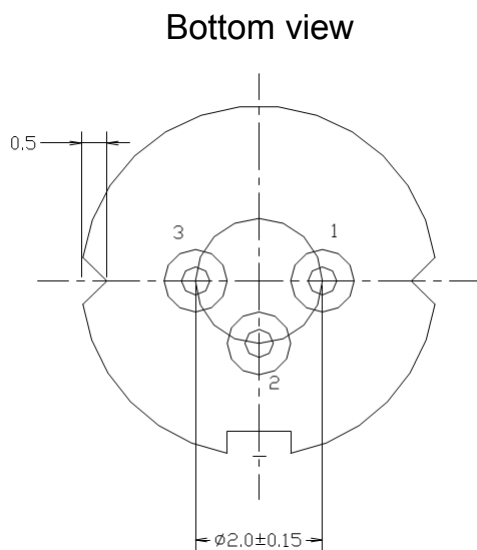
◆ APPLICATION

- Optical Leveler
- Laser Module

◆ FEATURES

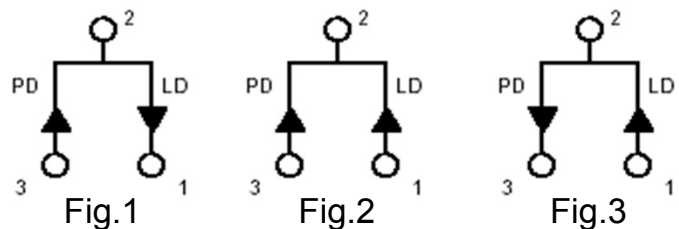
- Visible Light Output : $\lambda_p = 639 \text{ nm}$
- Optical Power Output : 20mW CW
- Package Type : TO-18($\phi 5.6\text{mm}$)
- Built-in Photo Diode for Monitoring Laser Diode
- TM mode oscillation, Single mode

◆ ELECTRICAL CONNECTION



Pin Configuration

A	LD cathode, PD anode (Fig. 1)
B	LD , PD anode (Fig. 2)
C	LD anode, PD cathode (Fig. 3)



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

Items	Symbols	Values	Unit
Optical Output Power	P	22	mW
Laser Diode Reverse Voltage	V	10	V
Photo Diode Reverse Voltage	V	30	V
Operating Temperature	T _{opr}	-10 ~ +50	°C
Storage Temperature	T _{stg}	-40 ~ +85	°C

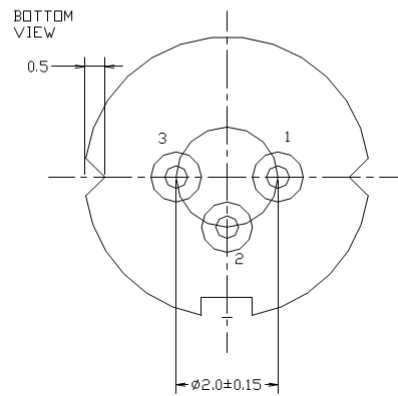
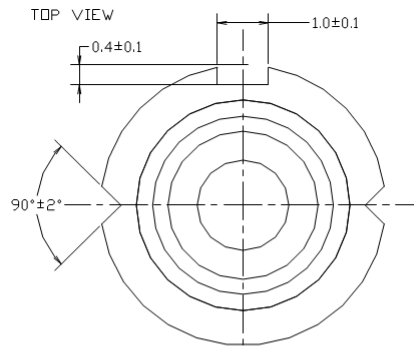
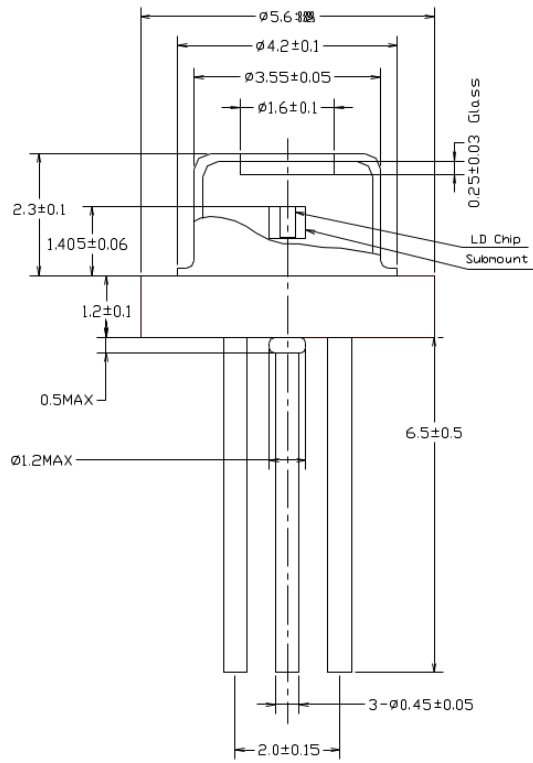
◆ **ELECTRICAL and OPTICAL CHARACTERISTICS at Tc=25 °C**

Items	Symbols	Min.	Typ.	Max.	Unit	Condition
Optical Output Power	P _o	-	20	-	mW	-
Threshold Current	I _{th}	-	50	60	mA	-
Operating Current	I _{op}	-	75	85	mA	Po=20mW
Operating Voltage	V _{op}	-	2.3	2.6	V	Po=20mW
Slope Efficiency	η _s	0.4	0.7	1.0	mW/mA	Po=20mW
Lasing Wavelength	λ _p	634	639	644	nm	Po=20mW
Beam Divergence	θ	6	9	12	deg	Po=20mW
	θ _⊥	25	30	35	deg	Po=20mW
Beam Angle	Δθ	-3	-	3	deg	Po=20mW
	Δθ _⊥	-3	-	3	deg	Po=20mW
Monitor Current	I _m	0.1	0.2	0.4	mA	Po=20mW
Optical Distance	ΔX, ΔY, ΔZ	-	-	± 60	um	-

NOTICE : QL63H5SA/B/C-R1 to be operated on APC

The above product specifications are subject to change without notice.

◆ PACKAGE DIMENSION



◆ PACKING

