

# QSI LASER DIODE SPECIFICATIONS FOR APPROVAL

**Tentative**

Customer :

Model : QL63G5S-A/B/C

**Signature of Approval**

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

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

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

**Approval by Customer**

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# QL63G5S-A/B/C

## InGaAlP Laser Diode

Quantum Semiconductor International Co., Ltd.

Ver. 02 2008

### ◆ OVERVIEW

QL63G5S-A/B/C 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 15mW for optoelectronic devices such as Optical Leveler and Modules.

### ◆ APPLICATION

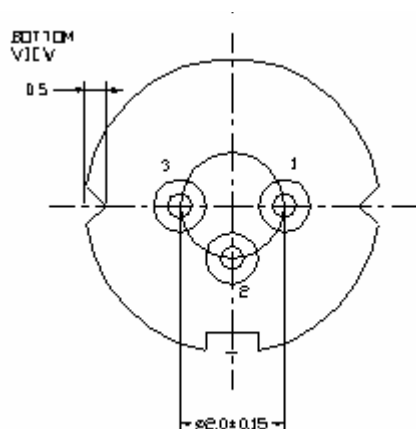
- Laser Pointer
- Bar Code Scanner
- Laser Module

### ◆ FEATURES

- Visible Light Output :  $\lambda_p = 635 \text{ nm}$
- Optical Power Output : 15mW CW
- Package Type : TO-18 (5.6mm $\phi$ )
- Built-in Photo Diode for Monitoring Laser Diode

### ◆ ELECTRICAL CONNECTION

#### Bottom View



#### Pin Configuration

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

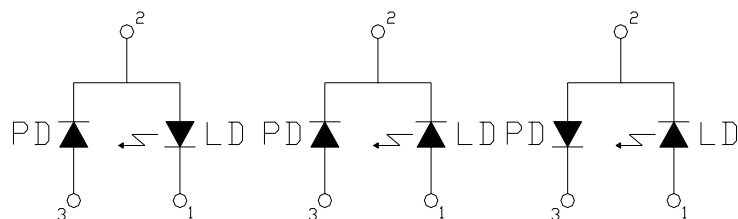


Fig. 1

QL63G5SA

Fig. 2

QL63G5SB

Fig. 3

QL63G5SC

◆ ABSOLUTE MAXIMUM RATING at Tc=25°C

Items	Symbols	Values	Unit
Optical Output Power	P	17	mW
Laser Diode Reverse Voltage	V	2	V
Photo Diode Reverse Voltage	V	30	V
Operating Temperature	Topr	-10 ~ +50	°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	-	15	-	mW	-
Threshold Current	Ith	-	40	50	mA	-
Operating Current	Iop	-	64	80	mA	Po=15mW
Operating Voltage	Vop	-	2.2	2.5	V	Po=15mW
Slope Efficiency	SE	0.4	0.6	0.8	W/A	10~15mW
Lasing Wavelength	$\lambda_p$	-	637	645	nm	Po=15mW
Beam Divergence <sup>3)</sup>	$\theta_{  }$	6	8	11	deg	Po=15mW
	$\theta_{\perp}$	25	30	35	deg	Po=15mW
Beam Angle	$\Delta\theta_{  }$	-	-	±2.0	deg	Po=15mW
	$\Delta\theta_{\perp}$	-	-	±3.0	deg	Po=15mW
Monitor Current	I <sub>m</sub>	0.05	0.1	0.3	mA	Po=15mW
Optical Distance	$\Delta X, \Delta Y, \Delta Z$	-	-	±60	μm	-

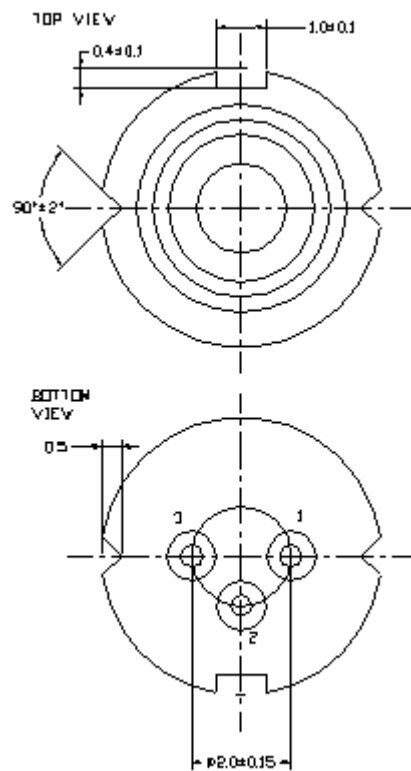
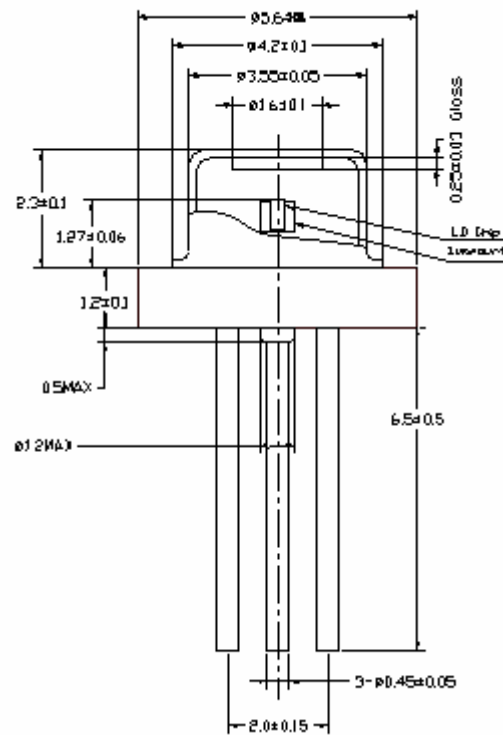
1) Initial values      2) All above values are evaluated with QSI's measuring apparatus

3) Full angle at half maximum

**NOTICE : QL63G5S-A/B/C to be operated on APC**

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

## ◆ PACKAGE DIMENSION



◆PACKING

