

# QSI LASER DIODE SPECIFICATIONS FOR APPROVAL

**Customer :**

**Model : QL65I7S-A/B/C-H**

**Signature of Approval**

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

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

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

**Approval by Customer**

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# QL65I7S-A/B/C-H

## InGaAlP Laser Diode

Quantum Semiconductor International Co., Ltd.

Ver. 2 Mar.2012

### ◆ OVERVIEW

QL65I7S-A/B/C-H is a MOCVD grown 650nm band *InGaAlP* laser diode with quantum well structure. It's an attractive light source, with a typical light output power of 35mW for optoelectronic devices such as DVD-RAM and Industrial Sensor.

### ◆ APPLICATION

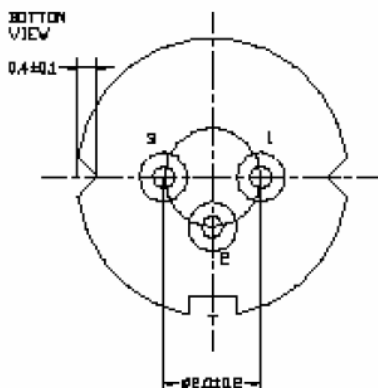
- Industrial Sensor
- DVD-RAM

### ◆ FEATURES

- Visible Light Output :  $\lambda_p = 658 \text{ nm(Typ.)}$
- Optical Power Output : 35mW 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)

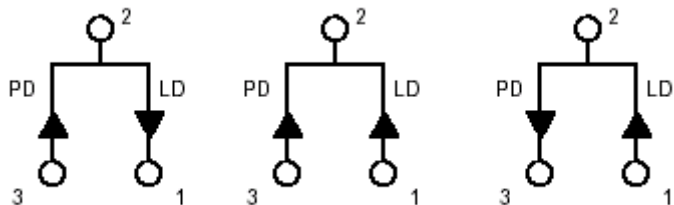


Fig. 1

QL65I7SA-H

Fig. 2

QL65I7SB-H

Fig. 3

QL65I7SC-H

◆ ABSOLUTE MAXIMUM RATING at Tc=25°C

Items	Symbols	Values	Unit
Optical Output Power	P <sub>o</sub> (CW)	40	mW
Laser Diode Reverse Voltage	V <sub>R</sub>	2	V
Photo Diode Reverse Voltage	V <sub>R</sub>	30	V
Operating Temperature	T <sub>opr</sub>	-10 ~ +70	°C
Storage Temperature	T <sub>stg</sub>	-40 ~ +85	°C

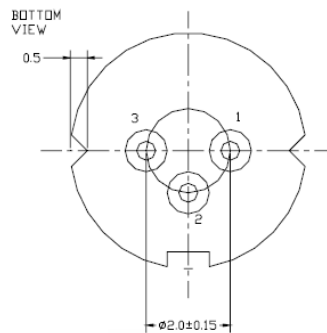
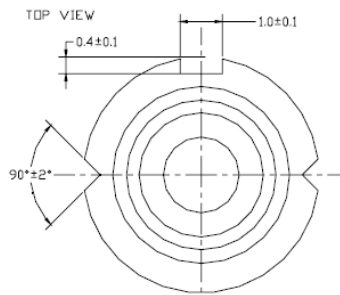
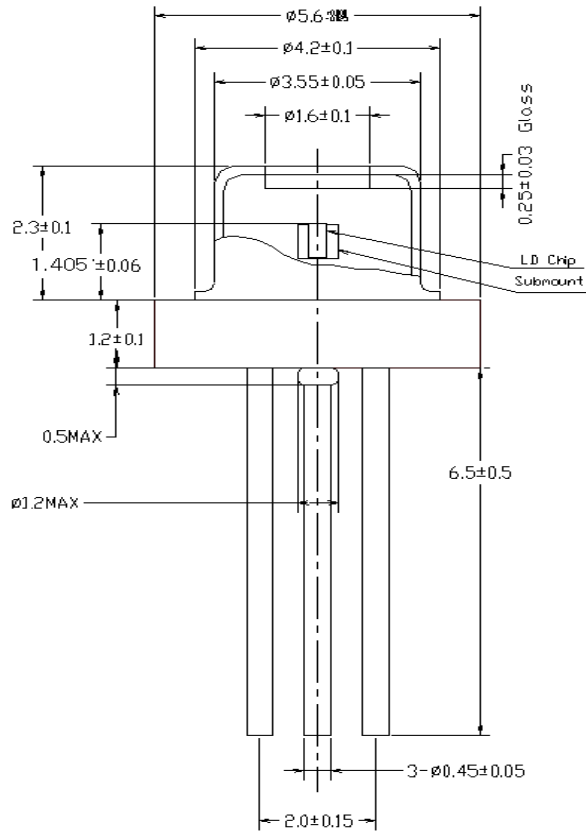
◆ ELECTRICAL and OPTICAL CHARACTERISTICS at Tc=25°C

Items	Symbols	Min.	Typ.	Max.	Unit	Condition
Optical Output Power	P <sub>o</sub>	-	35	-	mW	-
Threshold Current	I <sub>th</sub>	20	35	50	mA	-
Operating Current	I <sub>op</sub>	40	75	110	mA	P <sub>o</sub> =35mW
Slope Efficiency	SE	0.6	0.85	1.1	mW/mA	25~35mW
Operating Voltage	V <sub>op</sub>	1.8	2.2	2.6	V	P <sub>o</sub> =35mW
Lasing Wavelength	λ <sub>p</sub>	645	658	665	nm	P <sub>o</sub> =35mW
Beam Divergence	θ <sub>  </sub>	7	10	14	deg	P <sub>o</sub> =35mW
	θ <sub>⊥</sub>	16	20	27	deg	P <sub>o</sub> =35mW
Beam Angle	Δθ <sub>  </sub>	-	-	±3.0	deg	P <sub>o</sub> =35mW
	Δθ <sub>⊥</sub>	-	-	±3.0	deg	P <sub>o</sub> =35mW
Monitor Current	I <sub>m</sub>	0.05	0.30	1.50	mA	P <sub>o</sub> =35mW
Optical Distance	ΔX, ΔY, ΔZ	-	-	±60	μm	

**NOTICE: QL65I7S-A/B/C-H to be operated on APC**

The above product specifications are subject to change without notice.

# ◆ PACKAGE DIMENSION



◆PACKING

