

# QSI LASER DIODE SPECIFICATIONS FOR APPROVAL

**Customer :**

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

**Signature of Approval**

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

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

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

**Approval by Customer**

---



**QSI Co., Ltd.**

**315-9, Cheonheung-ri, Sungger-eup,  
Cheonan-city, Chungnam, Korea 330-836**

***WWW.QSILaser.com***

# QL65I7S-A/B/C

## InGaAIP Laser Diode

Quantum Semiconductor International Co., Ltd.

Ver. 23 Jul. 2012

### ◆ OVERVIEW

QL65I7S-A/B/C is a MOCVD grown 650nm band *InGaAIP* laser diode with quantum well structure. It's an attractive light source, with a typical light output power of 30mW for optoelectronic devices such as DVD-R/+R, DVD-Recorder, High Speed DVD-player and Industrial Bar Code Scanner.

### ◆ APPLICATION

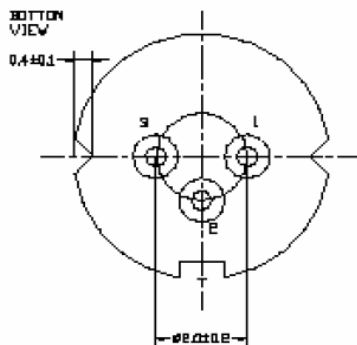
- Standard speed DVD-R/+R
- DVD-RW/+RW
- DVD-RAM

### ◆ FEATURES

- Visible Light Output :  $\lambda_p = 658 \text{ nm(Typ.)}$
- Optical Power Output : 30mW CW, 50mW PULSE( $T_p = 0.5\mu\text{s}$ , Duty = 50%)
- 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)

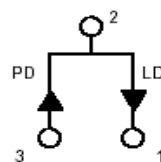


Fig. 1

QL65I7SA

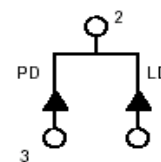


Fig. 2

QL65I7SB

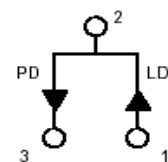


Fig. 3

QL65I7SC

◆ ABSOLUTE MAXIMUM RATING at Tc=25°C

Items	Symbols	Values	Unit
Optical Output Power	Po(CW)	35	mW
	Po(pulse)	50	
Laser Diode Reverse Voltage	V <sub>R</sub>	2	V
Photo Diode Reverse Voltage	V <sub>R</sub>	30	V
Operating Temperature	Topr	-10 ~ +70	°C
Storage Temperature	Tstg	-40 ~ +85	°C

◆ ELECTRICAL and OPTICAL CHARACTERISTICS at Tc=25°C

Items	Symbols	Min.	Typ.	Max.	Unit	Condition
Optical Output Power	Po	-	30	-	mW	-
Threshold Current	I <sub>th</sub>	-	35	50	mA	-
Operating Current	I <sub>op</sub>	-	65	100	mA	Po=30mW
Slope Efficiency	SE	0.7	1.0	1.3	mW/mA	20~30mW
Operating Voltage	V <sub>op</sub>	2.0	2.4	2.7	V	Po=30mW
Lasing Wavelength	λ <sub>p</sub>	-	658	665	nm	Po=30mW
Beam Divergence	θ <sub>  </sub>	7	9.5	14	deg	Po=30mW
	θ <sub>⊥</sub>	18	22	27	deg	Po=30mW
Beam Angle	Δθ <sub>  </sub>	-	-	±3.0	deg	Po=30mW
	Δθ <sub>⊥</sub>	-	-	±3.0	deg	Po=30mW
Monitor Current	I <sub>m</sub>	0.05	0.30	1.50	mA	Po=30mW
Optical Distance	ΔX, ΔY, ΔZ	-	-	±60	μm	

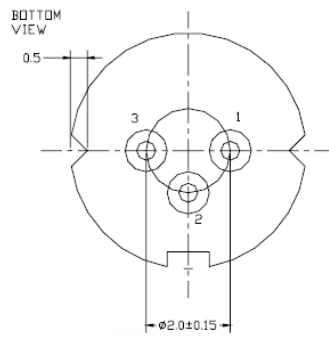
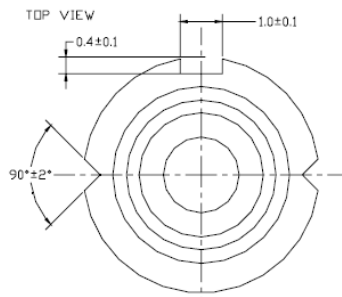
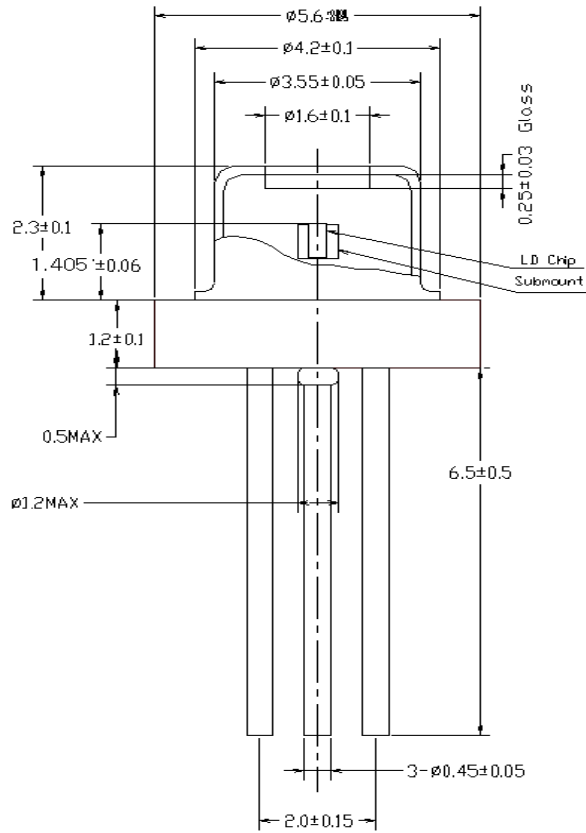
**NOTICE: QL65I7S-A/B/C to be operated on APC**

The above product specifications are subject to change without notice.



QSI Co., Ltd.

# ◆ PACKAGE DIMENSION



◆PACKING

