

# QSI LASER DIODE SPECIFICATIONS FOR APPROVAL

Customer :.

Model : QL65E7S-A/B/C-L

**Signature of Approval**

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

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

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

**Approval by Customer**

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# QL65E7S-A/B/C-L

## InGaAIP Laser Diode

Quantum Semiconductor International Co., Ltd.

Ver. 0 Oct. 2004

### ◆ OVERVIEW

QL65E7S-A/B/C-L 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 7mW and low operation current for optoelectronic devices such as Optical storage & Bar Code Reader.

### ◆ APPLICATION

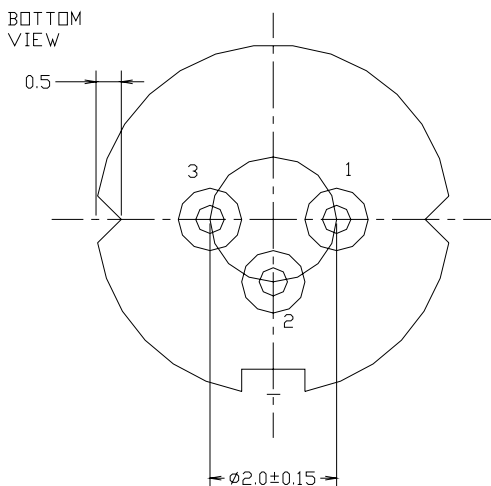
- Laser Module
- Optical Pick-up(Combo type : DVD+CDRW)
- DVD-ROM Drives, DVD-video players
- Bar Code Reader

### ◆ FEATURES

- Visible Light Output :  $\lambda_p = 650 \text{ nm}$
- Optical Power Output : 7mW 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)

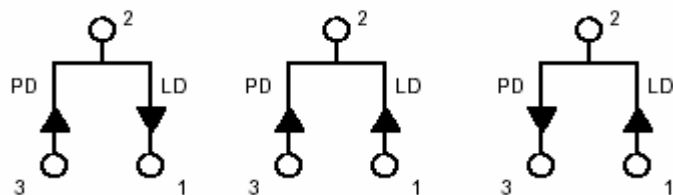


Fig. 1

QL65E7SA-L

Fig. 2

QL65E7SB-L

Fig. 3

QL65E7SC-L

◆ ABSOLUTE MAXIMUM RATING at Tc=25°C

Items	Symbols	Values	Unit
Optical Output Power	P	9	mW
Laser Diode Reverse Voltage	V	2	V
Photo Diode Reverse Voltage	V	30	V
Operating Temperature	Topr	-10 ~ +70	°C
Storage Temperature	Tstg	-40 ~ +85	°C

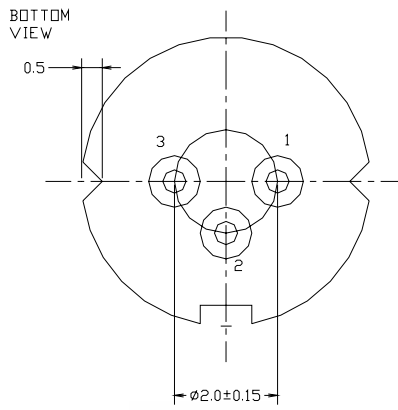
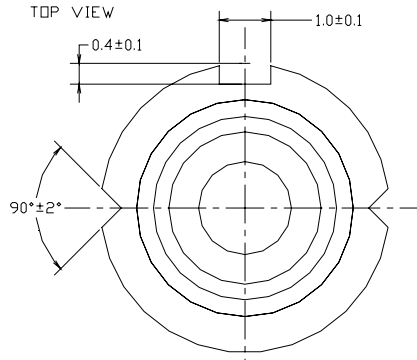
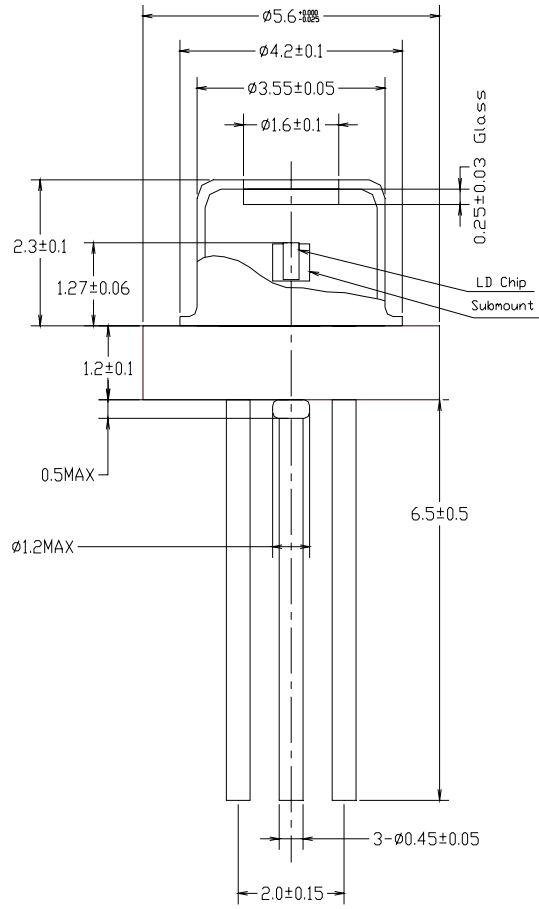
◆ ELECTRICAL and OPTICAL CHARACTERISTICS at Tc=25°C

Items	Symbols	Min.	Typ.	Max.	Unit	Condition
Optical Output Power	Po	-	7	-	mW	-
Threshold Current	Ith	-	25	35	mA	-
Operating Current	Iop	-	35	50	mA	Po=7mW
Slope Efficiency	SE	0.4	0.6	0.9	mW/mA	4~7mW
Operating Voltage	Vop	-	2.2	2.6	V	Po=7mW
Lasing Wavelength	$\lambda_p$	645	655	660	nm	Po=7mW
Beam Divergence	$\theta_{  }$	7	8	10	deg	Po=7mW
	$\theta_{\perp}$	24	27	32	deg	Po=7mW
Beam Angle	$\Delta\theta_{  }$	-	-	$\pm 1.5$	deg	Po=7mW
	$\Delta\theta_{\perp}$	-	-	$\pm 2.5$	deg	Po=7mW
Monitor Current	Im	0.1	0.3	0.5	mA	Po=7mW
Optical Distance	$\Delta X, \Delta Y, \Delta Z$	-	-	$\pm 60$	$\mu\text{m}$	-
Astigmatism	As	-	-	10	$\mu\text{m}$	-

**NOTICE : QL65E7S-A/B/C-L to be operated on APC**

The above product specifications are subject to change without notice.

# ◆ PACKAGE DIMENSION



◆PACKING

