

# QSI LASER DIODE SPECIFICATIONS FOR APPROVAL

**Customer :**

**Model : QL65D7S-A/B/C-L**

**Signature of Approval**

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

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

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

**Approval by Customer**

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# QL65D7S-A/B/C-L

## InGaAlP Laser Diode

Quantum Semiconductor International Co., Ltd.

Ver. 4 Feb. 2006

### ◆ OVERVIEW

QL65D7S-A/B/C-L 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 5mW for optoelectronic devices such as Bar Code Reader.

### ◆ APPLICATION

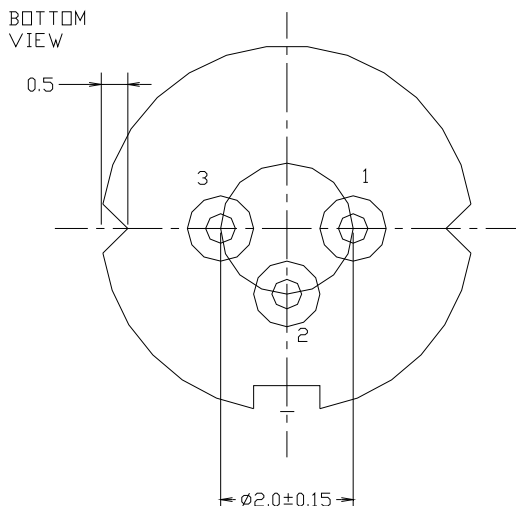
- Laser Pointer
- Optical Leveler
- Bar Code Reader
- DVD Player & DVD ROM

### ◆ FEATURES

- Visible Light Output :  $\lambda_p = 650 \text{ nm}$
- Optical Power Output : 5mW 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)

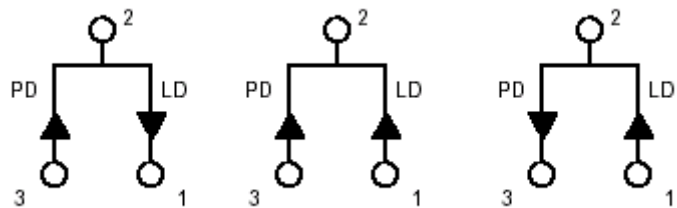


Fig. 1

QL65D7SA-L

Fig. 2

QL65D7SB-L

Fig. 3

QL65D7SC-L

◆ ABSOLUTE MAXIMUM RATING at Tc=25°C

Items	Symbols	Values	Unit
Optical Output Power	P	7	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

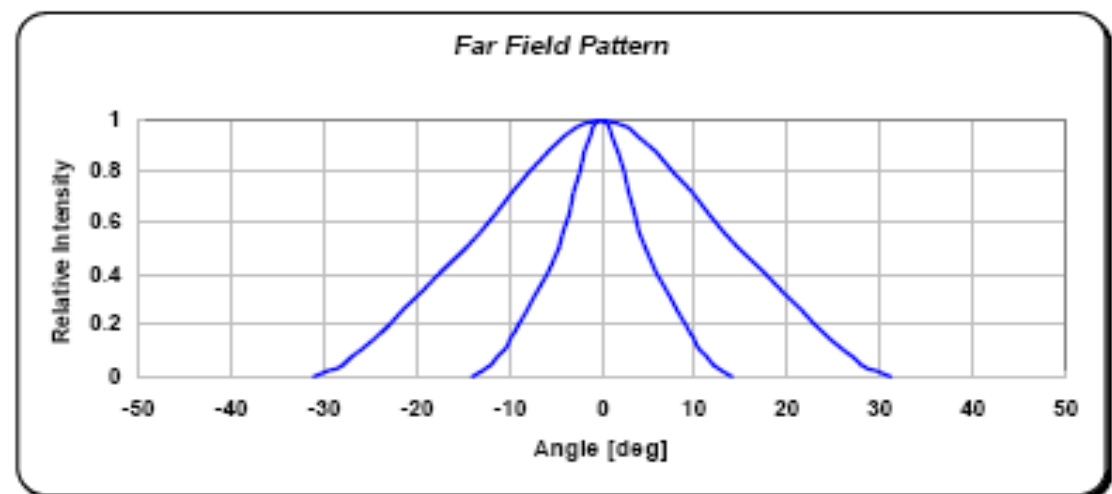
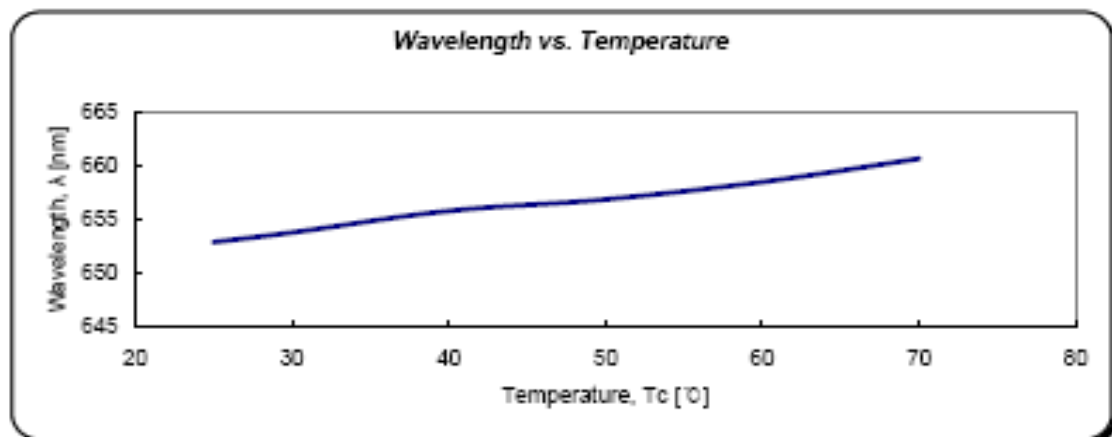
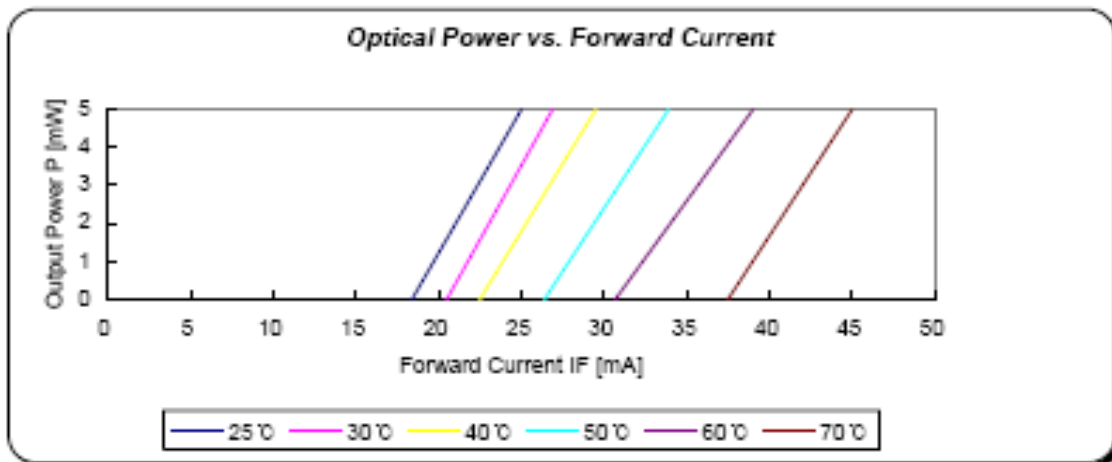
◆ ELECTRICAL and OPTICAL CHARACTERISTICS at Tc=25°C

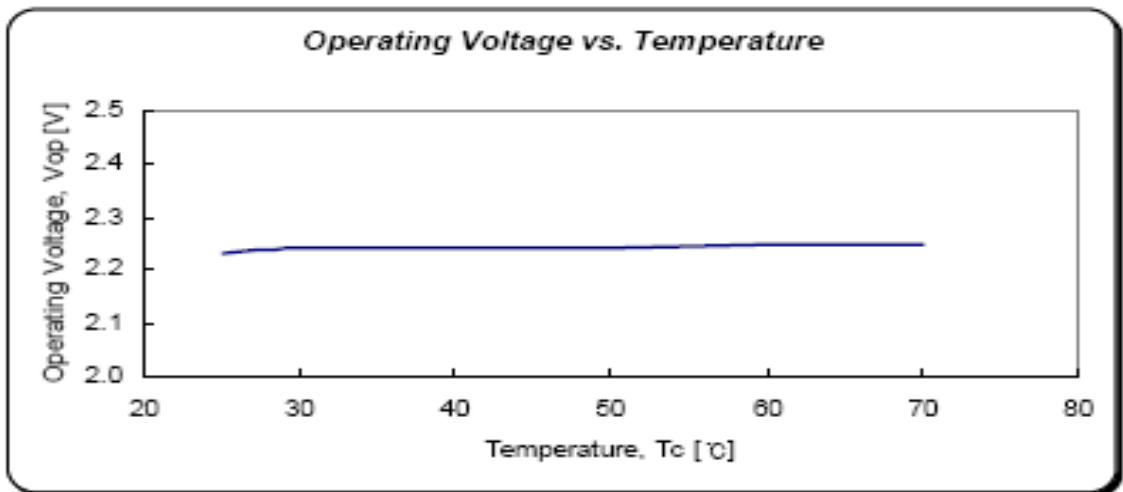
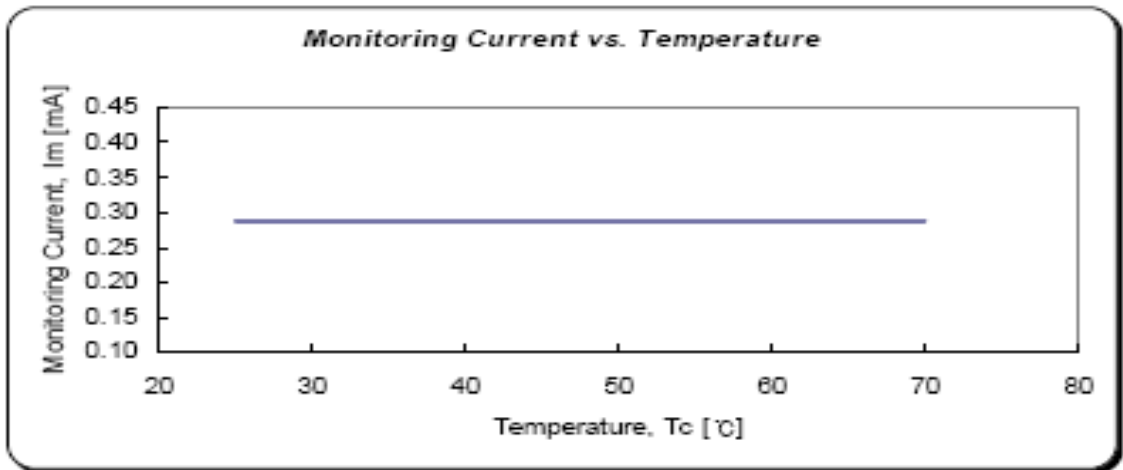
Items	Symbols	Min.	Typ.	Max.	Unit	Condition
Optical Output Power	Po	-	5	-	mW	-
Threshold Current	Ith	-	20	30	mA	-
Operating Current	Iop	-	27	35	mA	Po=5mW
Slope Efficiency	SE	0.5	0.65	0.95	mA/mW	3~5mW
Operating Voltage	Vop	-	2.15	2.5	V	Po=5mW
Lasing Wavelength	$\lambda_p$	650	655	660	nm	Po=5mW
Beam Divergence	$\theta_{  }$	7	8	10	deg	Po=5mW
	$\theta_{\perp}$	25	28	32	deg	Po=5mW
Beam Angle	$\Delta\theta_{  }$	-	-	$\pm 2$	deg	Po=5mW
	$\Delta\theta_{\perp}$	-	-	$\pm 3$	deg	Po=5mW
Monitor Current	I <sub>m</sub>	0.1	0.2	0.5	mA	Po=5mW
Optical Distance	$\Delta X, \Delta Y, \Delta Z$	-	-	$\pm 60$	$\mu\text{m}$	-

**NOTICE : QL65D7S-A/B/C-L to be operated on APC**

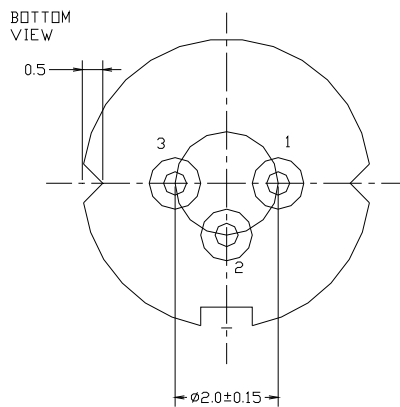
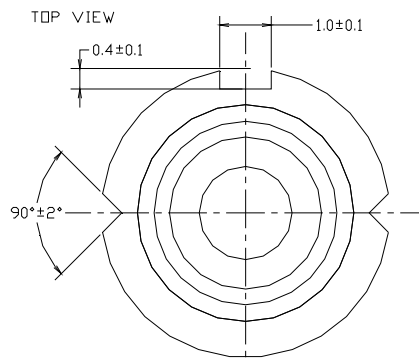
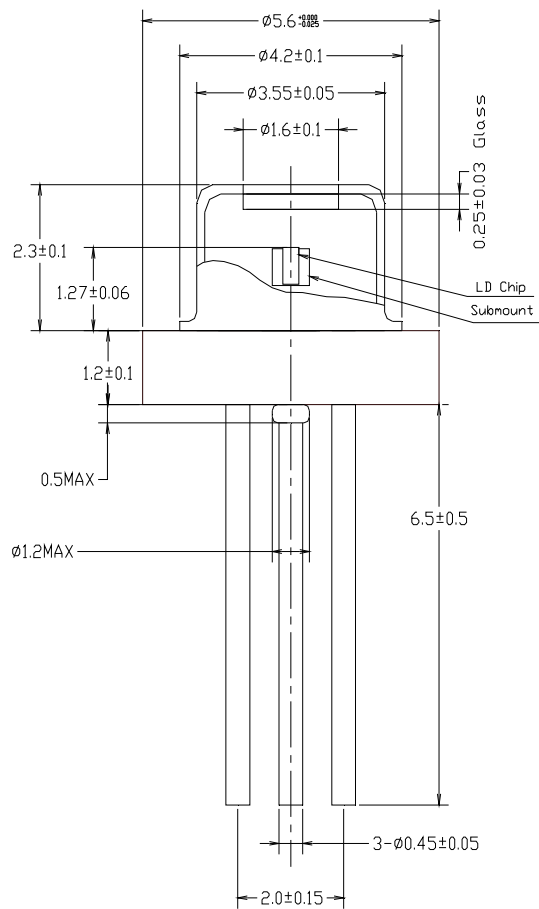
The above product specifications are subject to change without notice.

◆ EXAMPLE of REPRESENTATIVE CHARACTERISTICS





# ◆ PACKAGE DIMENSION



◆PACKING

