

# QSI LASER DIODE SPECIFICATIONS FOR APPROVAL

**Customer :**

**Model : QL65D7SB**

**Signature of Approval**

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

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

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

**Approval by Customer**

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***WWW.QSILaser.com***

# QL65D7SB

## InGaAlP Laser Diode

Quantum Semiconductor International Co., Ltd.

2003. Rev 0

### ◆ OVERVIEW

QL65D7SB 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 DVD-P/ROM.

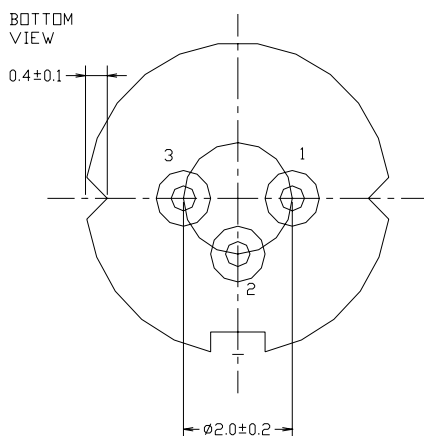
### ◆ APPLICATION

- DVD-P/ROM
- Optical Leveler
- Bar Code Reader

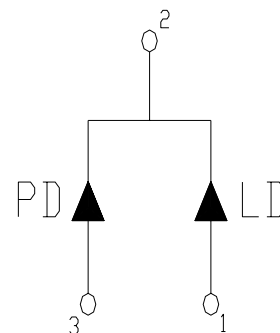
### ◆ FEATURES

- 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

◆ ABSOLUTE MAXIMUM RATING at Tc=25°C

Items	Symbols	Values	Unit
Optical Output Power	P	5	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

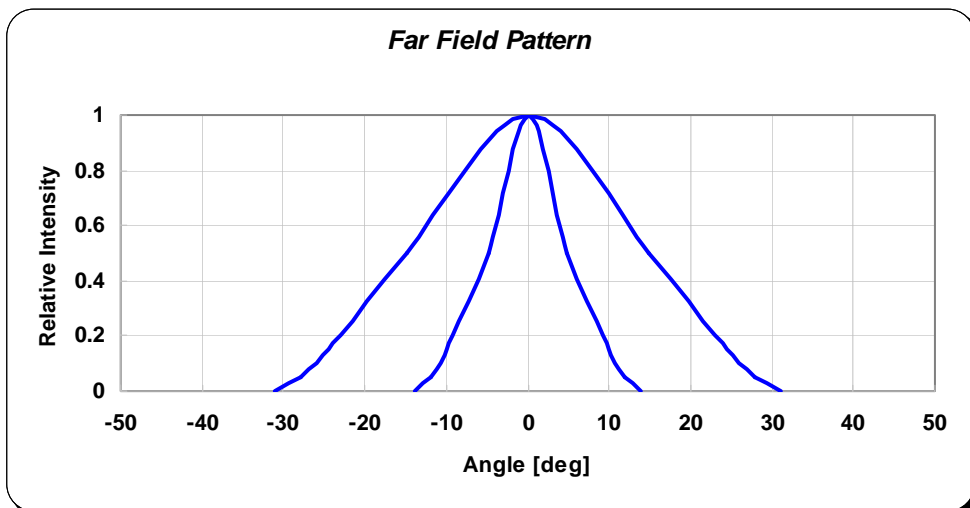
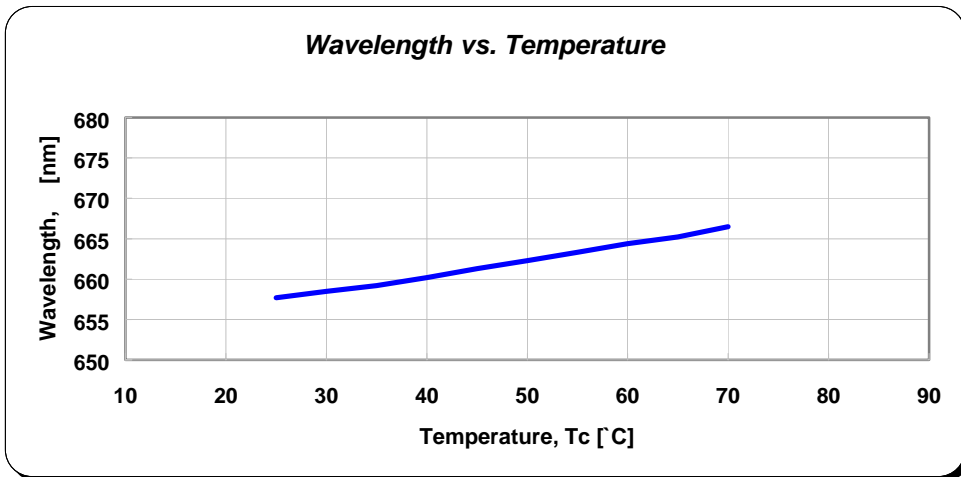
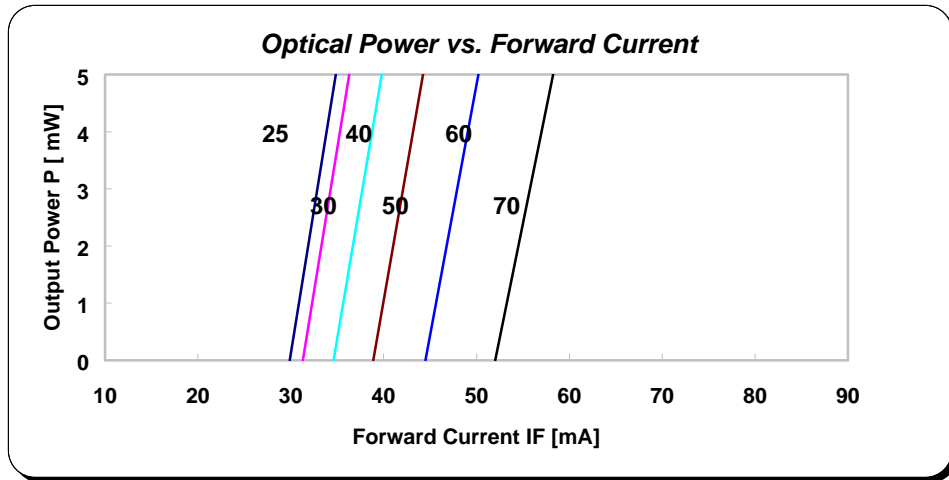
◆ ELECTRICAL and OPTICAL CHARACTERISTICS at Tc=25°C

Items	Symbols	Min.	Typ.	Max.	Unit	Condition
Optical Output Power	Po	-	5	-	mW	-
Threshold Current	Ith	-	30	40	mA	-
Operating Current	Iop	-	40	50	mA	Po=5mW
Operating Voltage	Vop	-	2.3	2.6	V	Po=5mW
Lasing Wavelength	$\lambda_p$	645	655	660	nm	Po=5mW
Beam Divergence	$\theta_{  }$	7	8	10	deg	Po=5mW
	$\theta_{\perp}$	25	29	32	deg	Po=5mW
Beam Angle	$\Delta\theta_{  }$	-	-	±1.5	deg	Po=5mW
	$\Delta\theta_{\perp}$	-	-	±2.5	deg	Po=5mW
Monitor Current	Im	0.1	0.2	0.5	mA	Po=5mW
Optical Distance	$\Delta X, \Delta Y, \Delta Z$	-	-	±60	$\mu\text{m}$	
Astigmatism	As		8		$\mu\text{m}$	

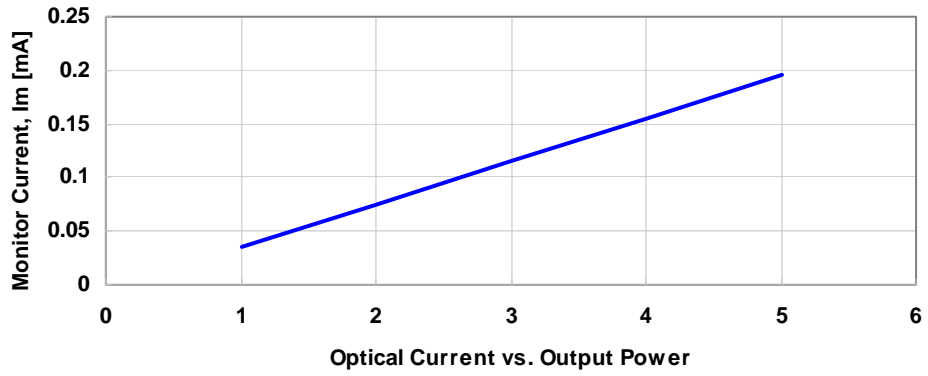
**NOTICE : QL65D7SB to be operated on APC circuit.**

The above product specifications are subject to change without notice.

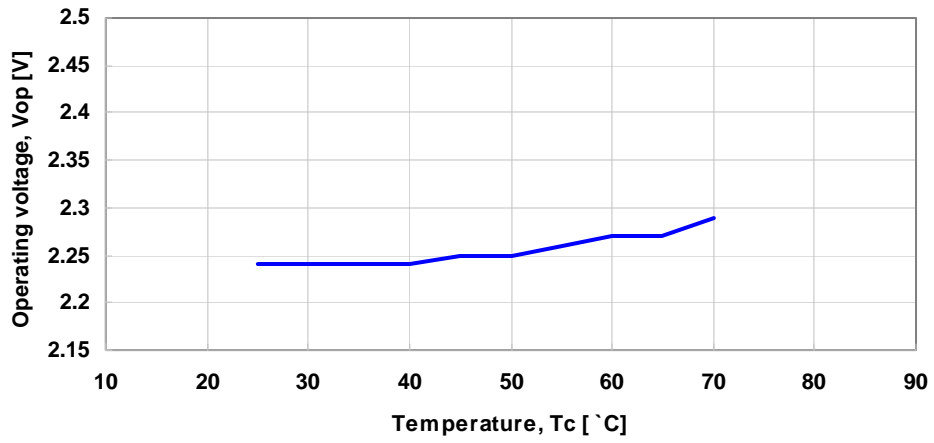
## ◆ EXAMPLE of REPRESENTATIVE CHARACTERISTICS



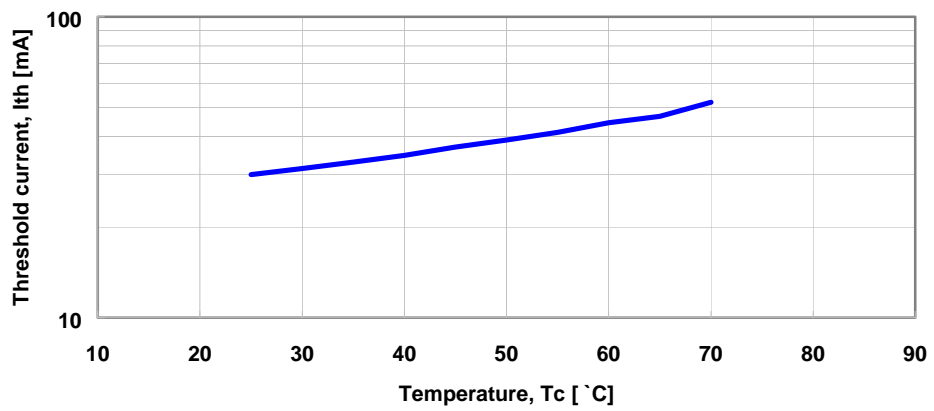
**Monitor Current vs. Optical Output Power**



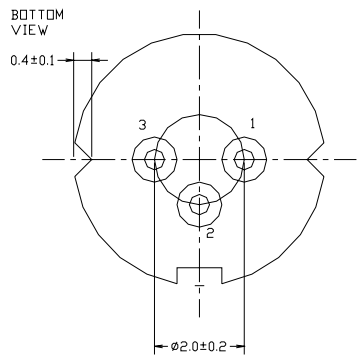
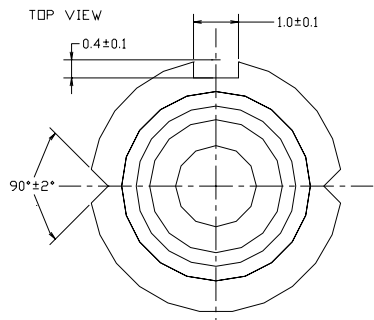
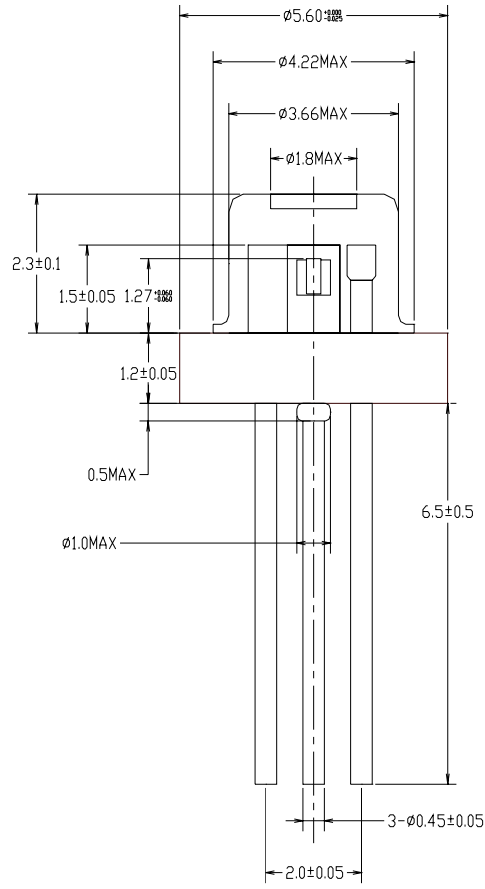
**Operating Voltage vs. Temperature**



**Threshold Current vs. Temperature**



# ◆ PACKAGE DIMENSION



◆PACKING

