

# QSI LASER DIODE SPECIFICATIONS FOR APPROVAL

Customer :

Model : QL63D5S-A/B/C

**Signature of Approval**

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

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

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

**Approval by Customer**

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[WWW.QSILaser.com](http://WWW.QSILaser.com)

# QL63D5S-A/B/C

## InGaAlP Laser Diode

Quantum Semiconductor International Co., Ltd.

Ver. 5 2006

### ◆ OVERVIEW

QL63D5S-A/B/C is a MOCVD grown 635nm 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 Optical Leveler and Modules.

### ◆ APPLICATION

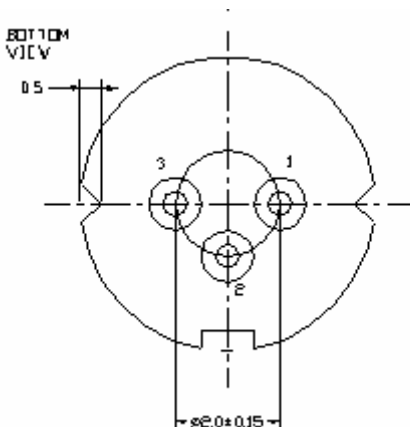
- Laser Pointer
- Bar Code Reader
- Laser Module

### ◆ FEATURES

- Visible Light Output :  $\lambda_p = 635 \text{ nm}$
- 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)

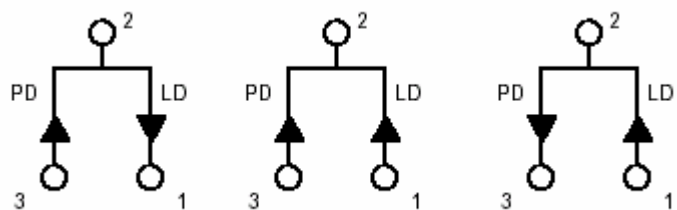


Fig. 1

QL63D5SA

Fig. 2

QL63D5SB

Fig. 3

QL63D5SC

## ◆ ABSOLUTE MAXIMUM RATING at Tc=25°C

Items	Symbols	Values	Unit
Optical Output Power	P	6	mW
Laser Diode Reverse Voltage	V	2	V
Photo Diode Reverse Voltage	V	30	V
Operating Temperature	Topr	-10 ~ +50	°C
Storage Temperature	Tstg	-40 ~ +85	°C

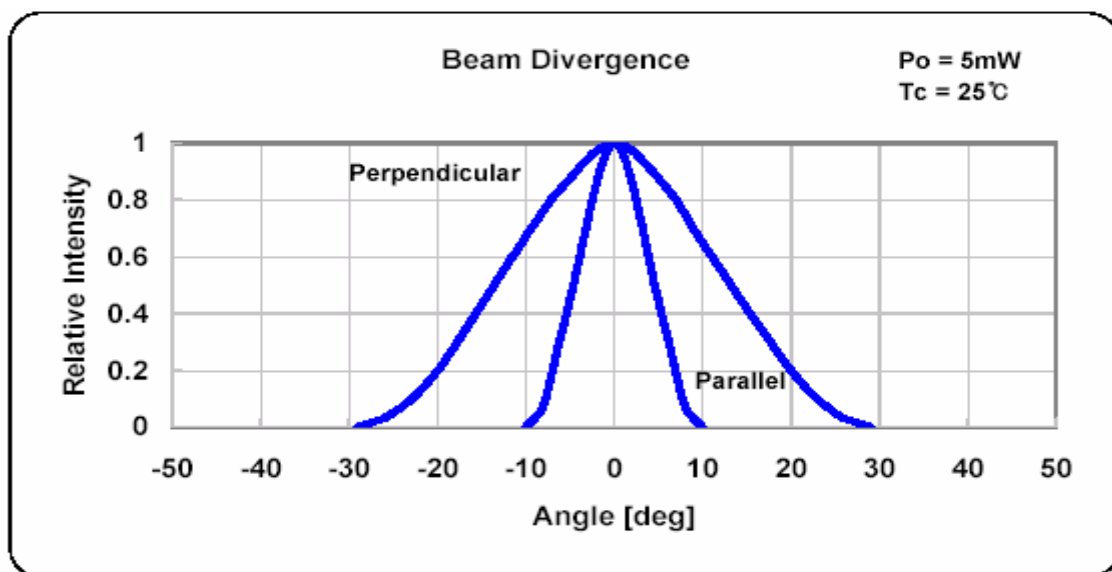
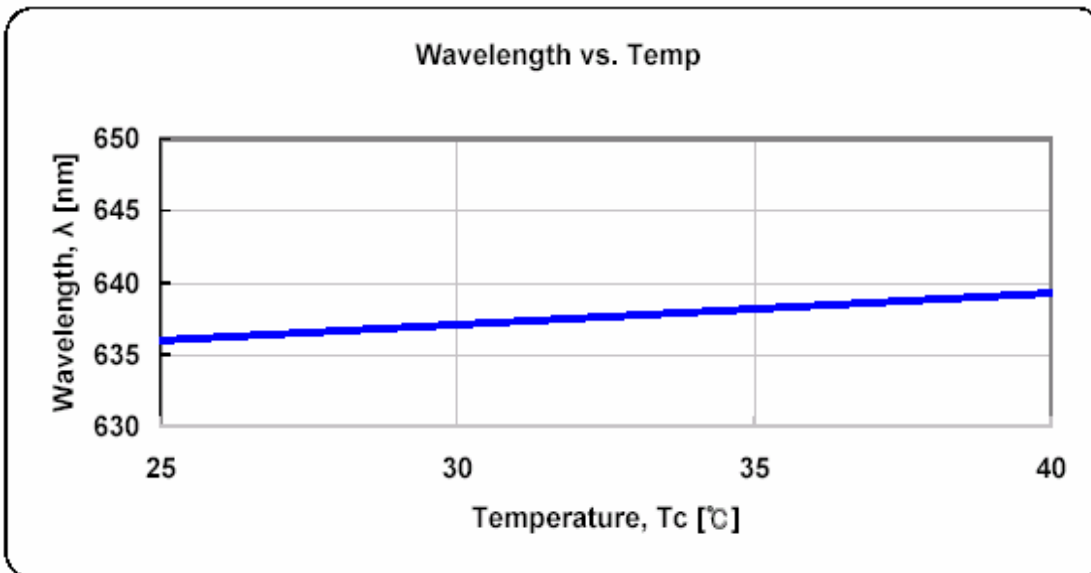
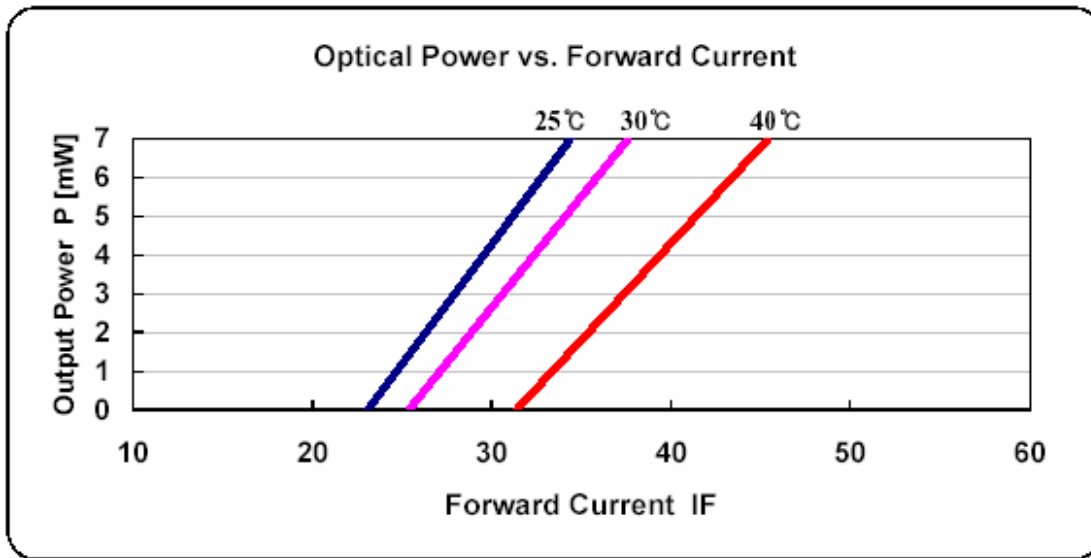
## ◆ ELECTRICAL and OPTICAL CHARACTERISTICS at Tc=25°C

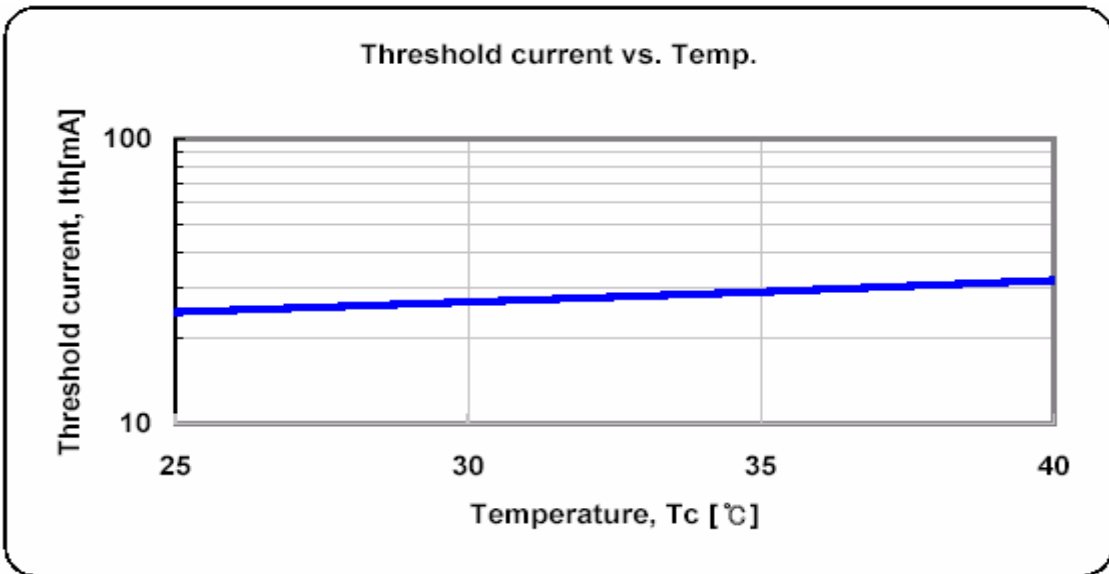
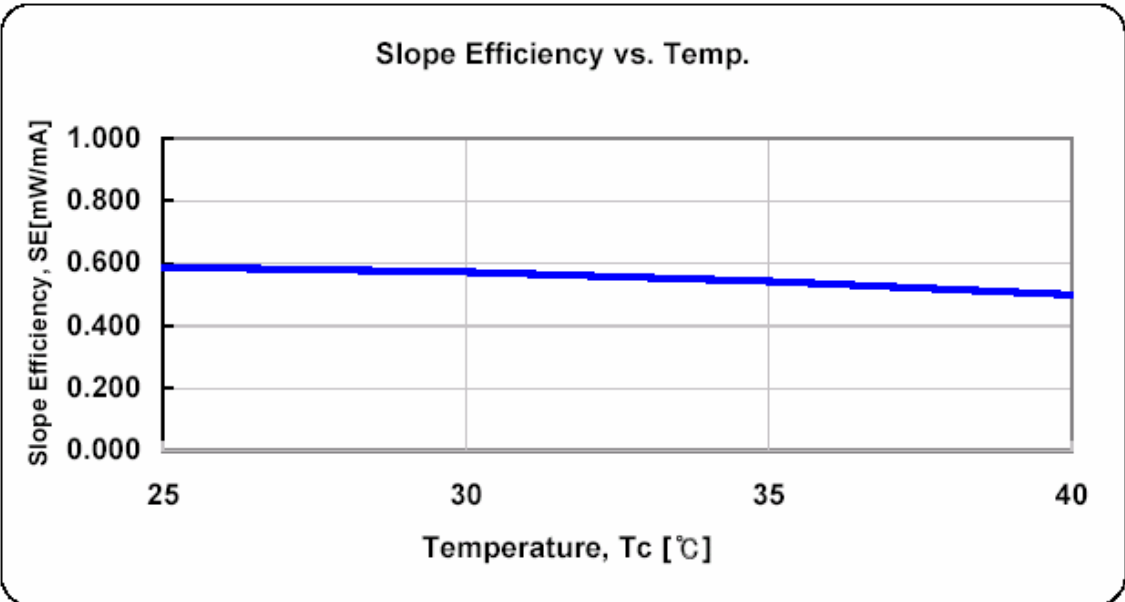
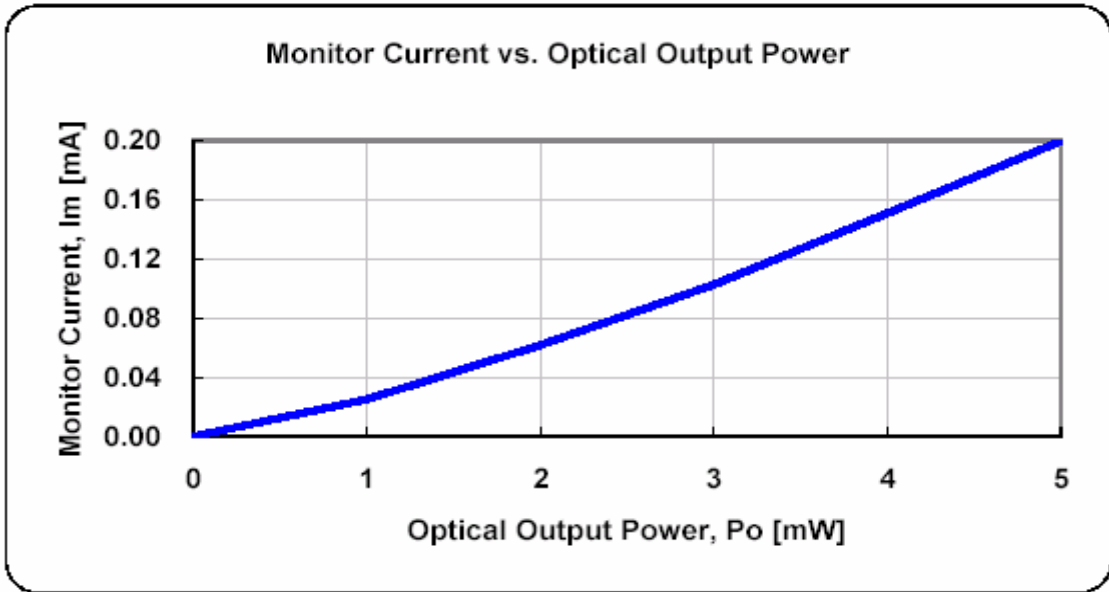
Items	Symbols	Min.	Typ.	Max.	Unit	Condition
Optical Output Power	Po	-	5	-	mW	-
Threshold Current	Ith	-	30	40	mA	-
Operating Current	Iop	-	34	50	mA	Po=5mW
Operating Voltage	Vop	-	2.2	2.7	V	Po=5mW
Lasing Wavelength	$\lambda_p$	630	635	640	nm	Po=5mW
Beam Divergence	$\theta_{  }$	6	8	12	deg	Po=5mW
	$\theta_{\perp}$	28	34	40	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	0.15	0.5	mA	Po=5mW
Optical Distance	$\Delta X, \Delta Y, \Delta Z$	-	-	±60	$\mu\text{m}$	-

**NOTICE : QL63D5S-A/B/C to be operated on APC**

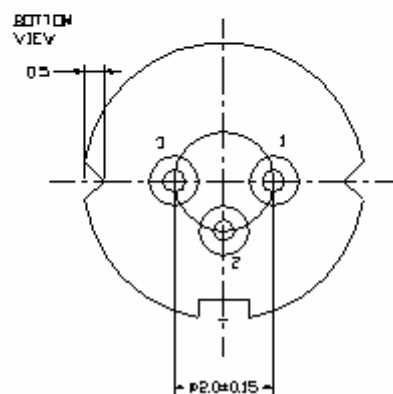
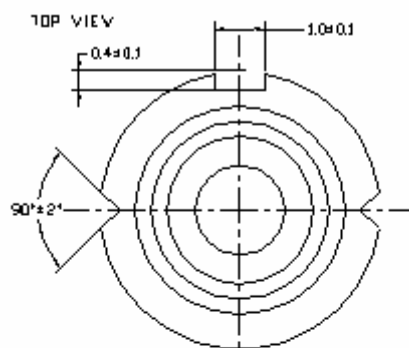
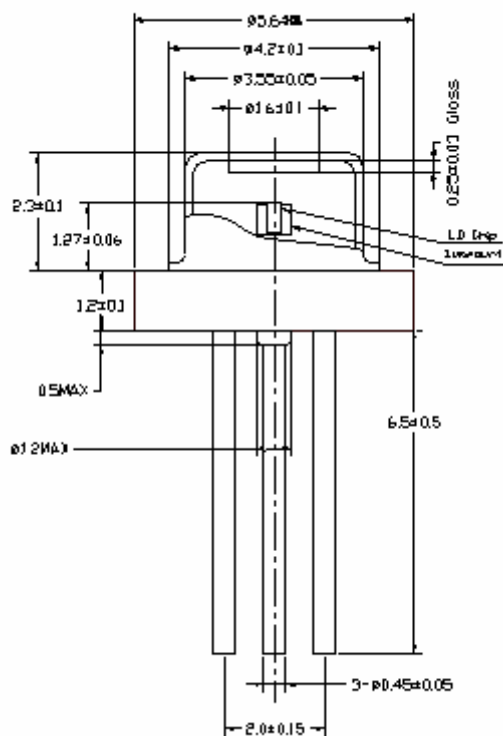
The above product specifications are subject to change without notice.

# EXAMPLE of REPRESENTATIVE CHARACTERISTICS





## ◆ PACKAGE DIMENSION



◆PACKING

