

# QSI LASER DIODE

## SPECIFICATIONS FOR APPROVAL

**Customer :**

**Model : QL65D6SA**

**Signature of Approval**

**Approvaed by** \_\_\_\_\_

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

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

**Approval by Customer**

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# QL65D6SA

## InGaAIP Laser Diode

Quantum Semiconductor International Co., Ltd.

2003. Rev 0

### ◆ OVERVIEW

QL65D6SA 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 5mW for optoelectronic devices such as Bar Code Reader.

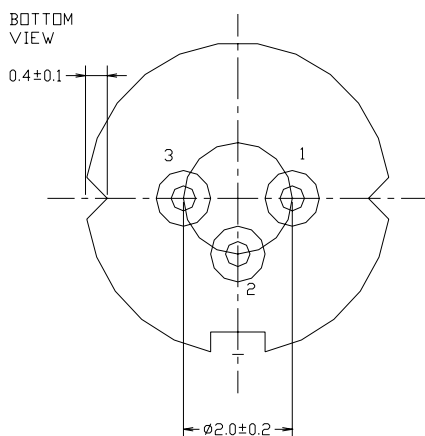
### ◆ APPLICATION

- Optical Leveler
- Laser Module
- Bar Code Reader

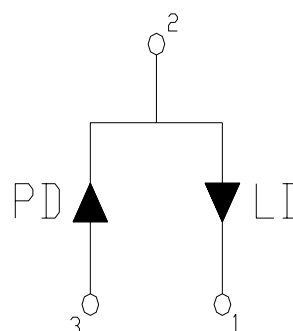
### ◆ FEATURES

- 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 ~ +60	°C
Storage Temperature	Tstg	-40 ~ +85	°C

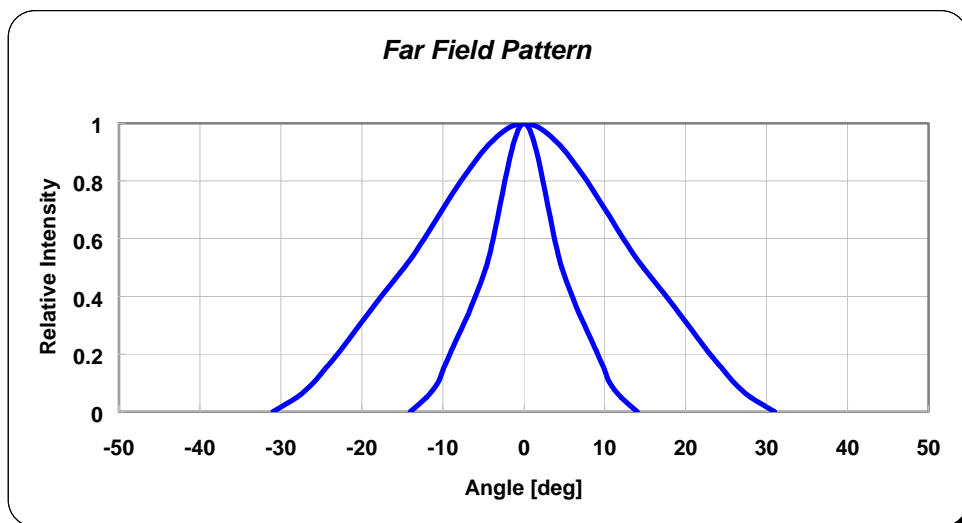
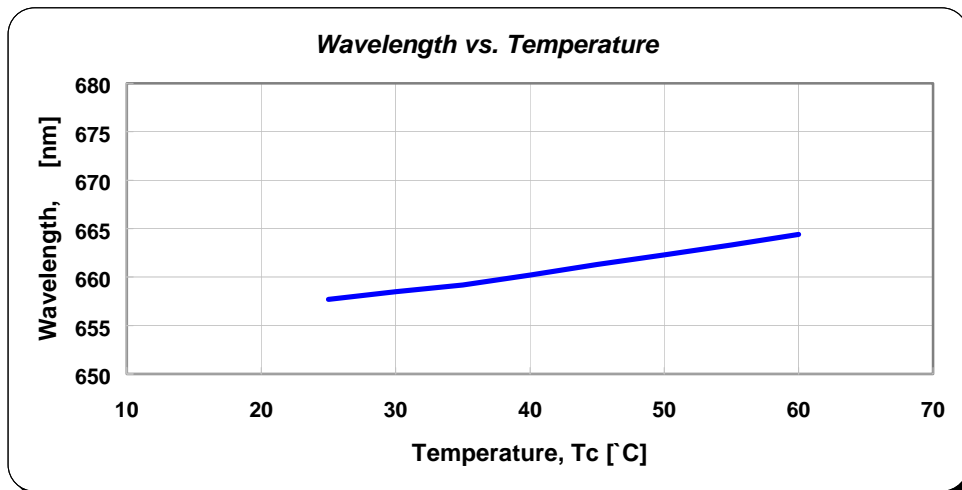
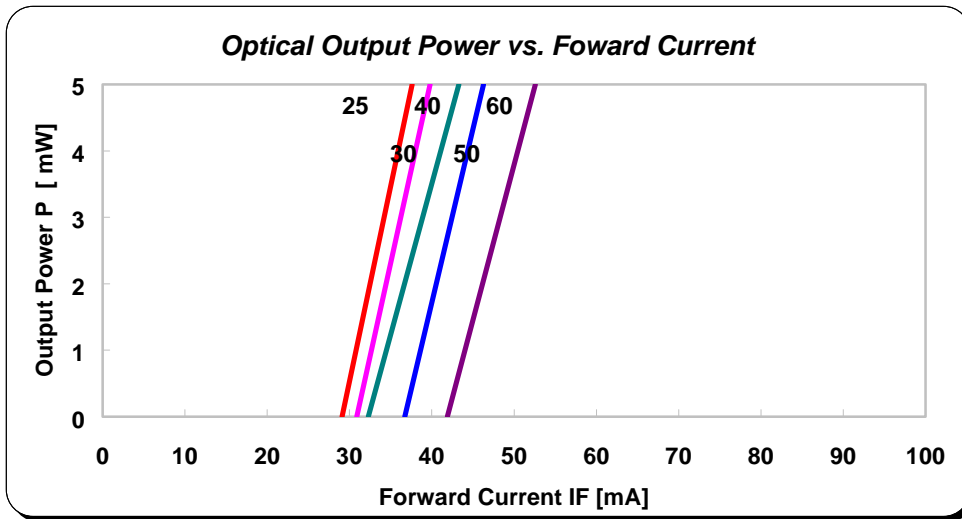
### ◆ ELECTRICAL and OPTICAL CHARACTERISTICS at Tc=25°C

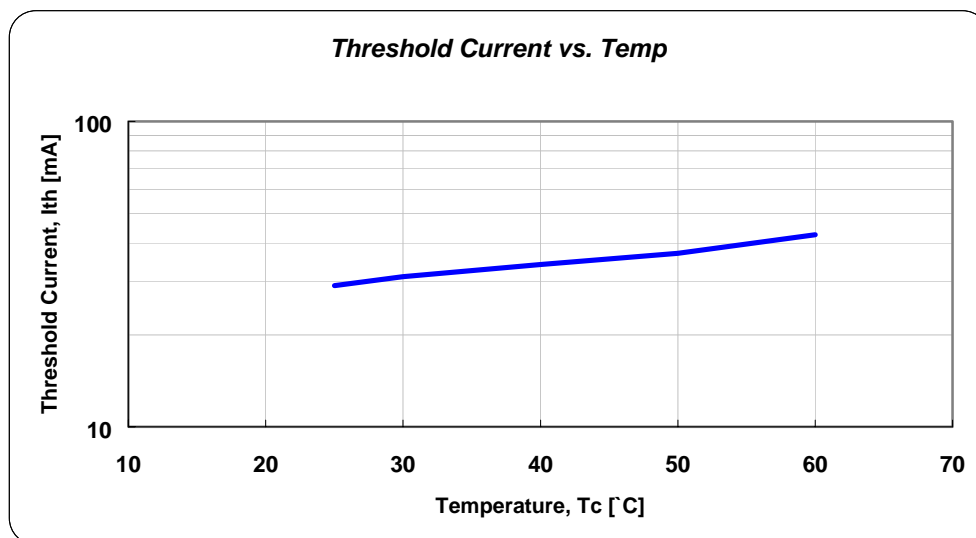
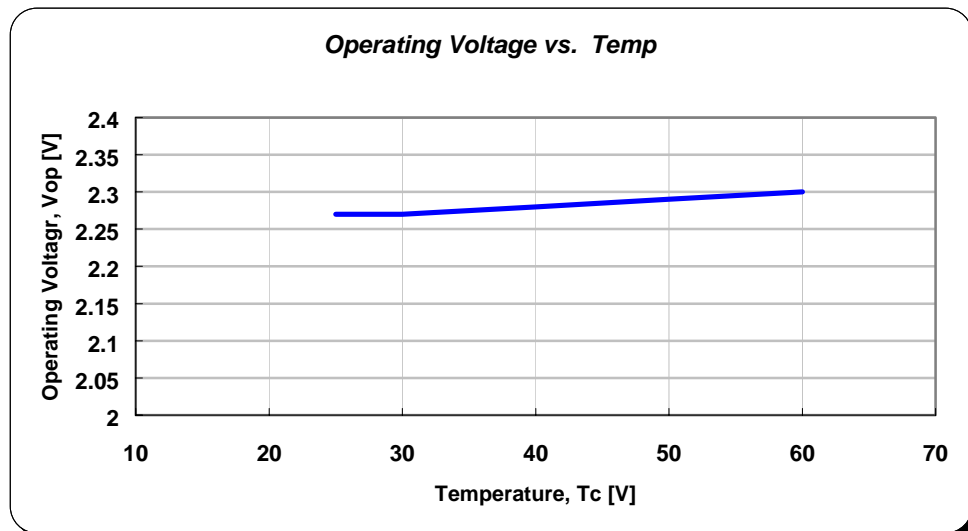
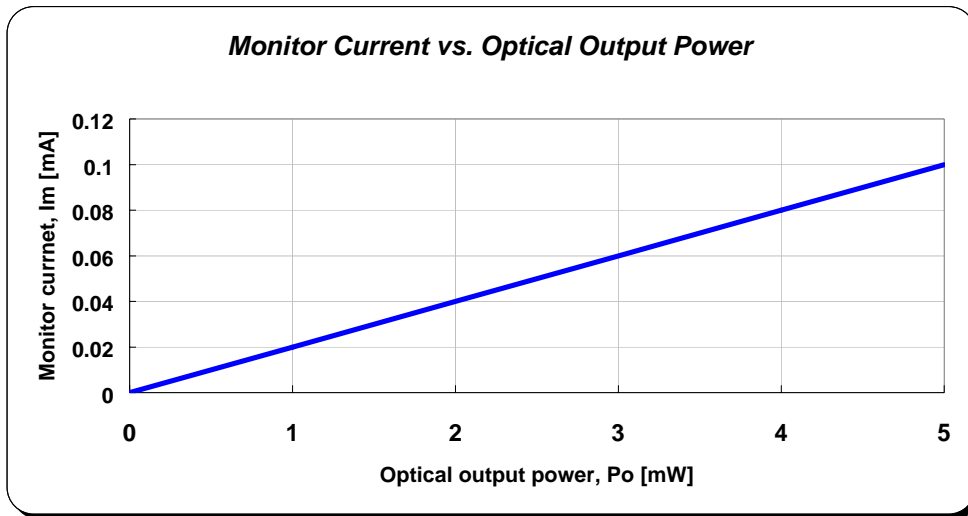
Items	Symbols	Min.	Typ.	Max.	Unit	Condition
Optical Output Power	Po	-	5	-	mW	-
Threshold Current	Ith	-	30	45	mA	-
Operating Current	Iop	-	40	55	mA	Po=5mW
Slope Efficiency	SE	0.4	0.5	0.8	mW/mA	3~5 mW
Operating Voltage	Vop	-	2.2	2.6	V	Po=5mW
Lasing Wavelength	$\lambda_p$	650	655	660	nm	Po=5mW
Beam Divergence	$\theta_{  }$	7	8.5	10	deg	Po=5mW
	$\theta_{\perp}$	26	28	32	deg	Po=5mW
Beam Angle	$\Delta\theta_{  }$	-	-	$\pm 1.5$	deg	Po=5mW
	$\Delta\theta_{\perp}$	-	-	$\pm 2.5$	deg	Po=5mW
Monitor Current	I <sub>m</sub>	0.1	0.2	0.5	mA	Po=5mW
KINK	K-LI			10	%	
Astigmatism	As			10	$\mu\text{m}$	
Optical Distance	$\Delta X, \Delta Y, \Delta Z$	-	-	$\pm 60$	$\mu\text{m}$	
PD DARK CURRENT	I <sub>D</sub>		5	10	nA	V <sub>R</sub> =10V
PD Capacitance	C <sub>t</sub>		-5	-10	pF	V <sub>rd</sub> =0.5V f=1MHZ

**NOTICE : QL65D6SA to be operated on APC circuit.**

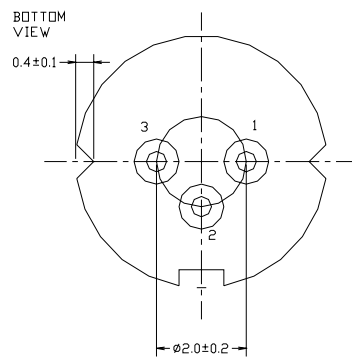
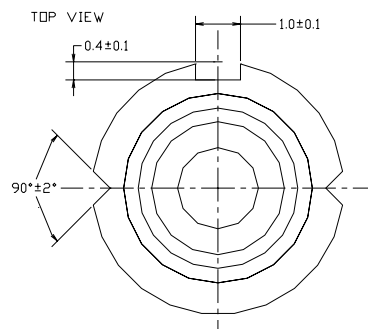
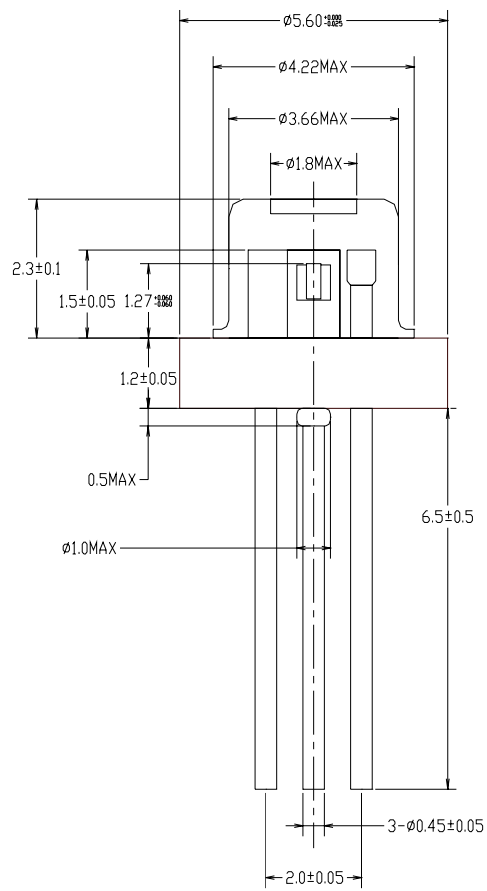
The above product specifications are subject to change without notice.

◆ EXAMPLE of REPRESENTATIVE CHARACTERISTICS





## ◆ PACKAGE DIMENSION



### ◆PACKING

