

# QSI LASER DIODE SPECIFICATIONS FOR APPROVAL

Customer :

Model : QL78C6S-A/B/C-L

**Signature of Approval**

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

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

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

**Approval by Customer**

---



QSI Co., Ltd.

315-9, Cheonheung-ri, Sungger-eup,  
Cheonan-city, Chungnam, Korea 330-836

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

# QL78C6S-A/B/C-L

## AlGaAs Laser Diode

Quantum Semiconductor International Co., Ltd.

Ver.2 2004

### ◆ OVERVIEW

QL78C6S-A/B/C-L is a MOCVD grown 780nm band AlGaAs laser diode with quantum well structure. It's an attractive light source, with a typical light output power of 3mW for Laser Beam Printer, industrial optical module and sensor application

### ◆ APPLICATION

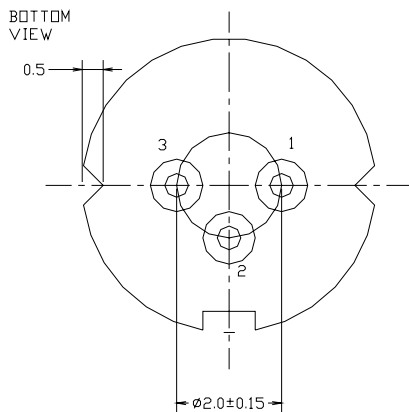
- Laser Beam Printer
- Sensor

### ◆ FEATURES

- Visible Light Output :  $\lambda_p = 780 \text{ nm}$
- Optical Power Output : 3mW 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)

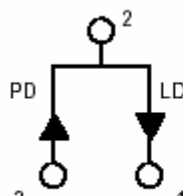


Fig. 1

QL78C6SA-L

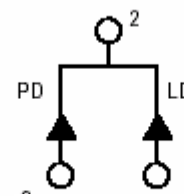


Fig. 2

QL78C6SB-L

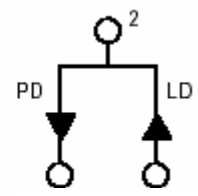


Fig. 3

QL78C6SC-L

◆ ABSOLUTE MAXIMUM RATING at Tc=25°C

Item	Symbols	Values	Unit
Optical Output Power	P	5	mW
Laser Diode Reverse Voltage	V	2	V
Photo Diode Reverse Voltage	V	25	V
Operating Temperature	Topr	-10 ~ +60	°C
Storage Temperature	Tstg	-40 ~ +85	°C

◆ ELECTRICAL and OPTICAL CHARACTERISTICS at Tc=25°C

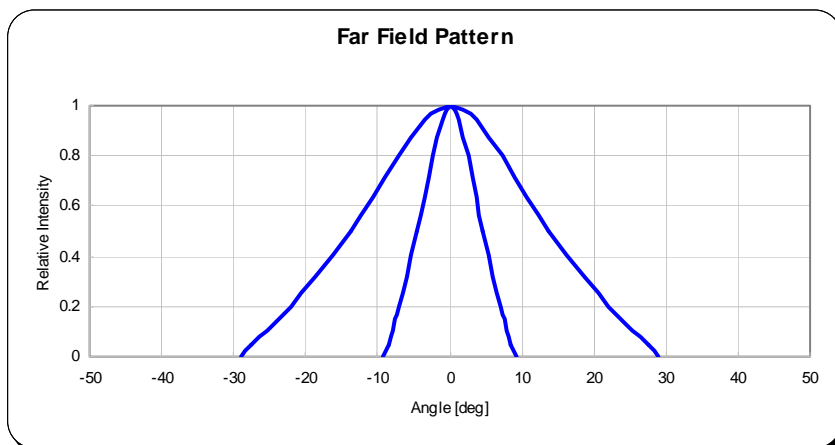
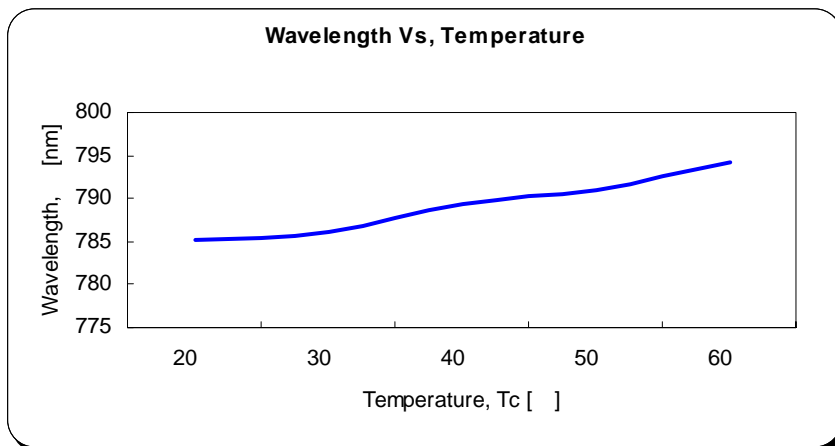
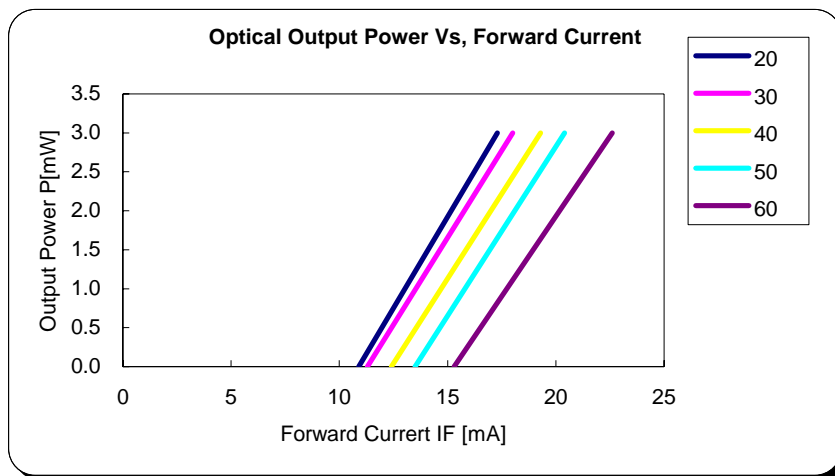
Items	Symbols	Min.	Typ.	Max.	Unit	Condition
Optical Output Power	Po	-	3	-	mW	-
Threshold Current	Ith	8	13	20	mA	-
Operating Current	Iop	-	20	33	mA	Po=3mW
Operating Voltage	Vop	-	1.9	2.5	V	Po=3mW
Slope Efficiency	SE	-	0.4	0.5	mW/mA	2mW/(3mW)-(1mW)
Lasing Wavelength	$\lambda_p$	770	785	795	nm	Po=3mW
Beam Divergence	$\theta_{  }$	8	10	12	deg	Po=3mW
	$\theta_{\perp}$	26	28	30	deg	Po=3mW
Beam Angle	$\Delta\theta_{  }$	-	-	±2.0	deg	Po=3mW
	$\Delta\theta_{\perp}$	-	-	±3.0	deg	Po=3mW
Monitor Current	I <sub>m</sub>	0.15	0.25	0.45	mA	Po=3mW
Optical Distance	$\Delta X, \Delta Y, \Delta Z$	-	-	±80	μm	Po=3mW
Astigmatism	As		5	10	μm	Po=3mW
Droop	$\Delta P$		5	10	%	Po=3mW

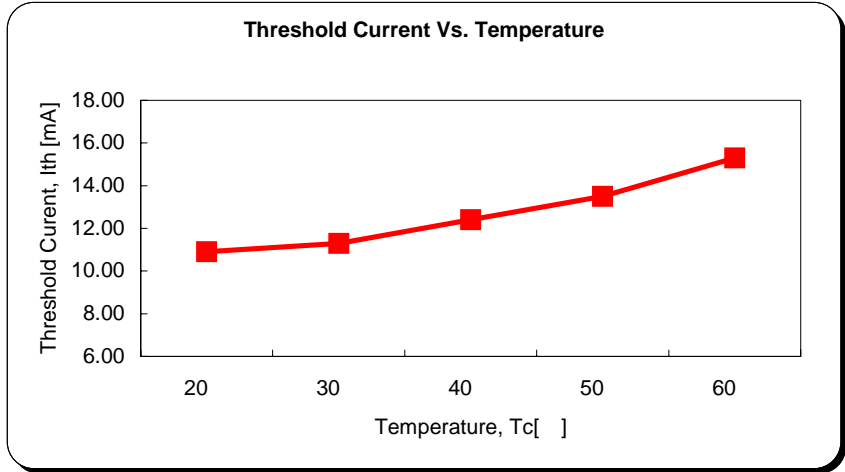
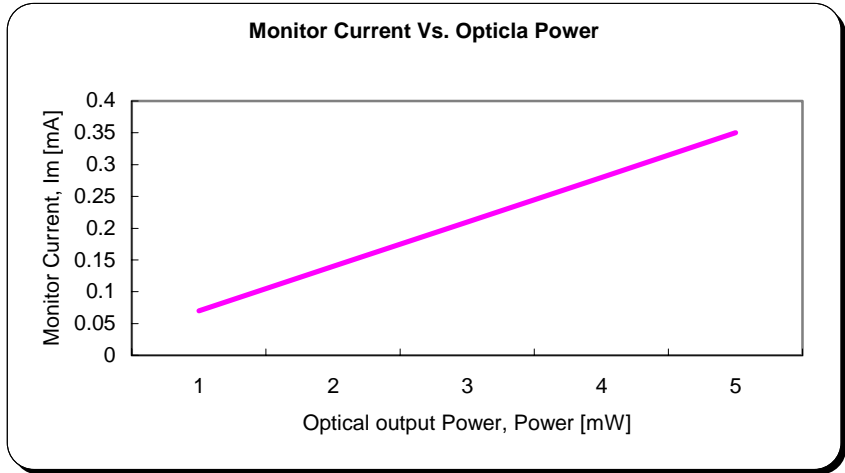
**NOTICE : QL78C6S-A/B/C-L to be operated on APC**

The above product specifications are subject to change without notice.

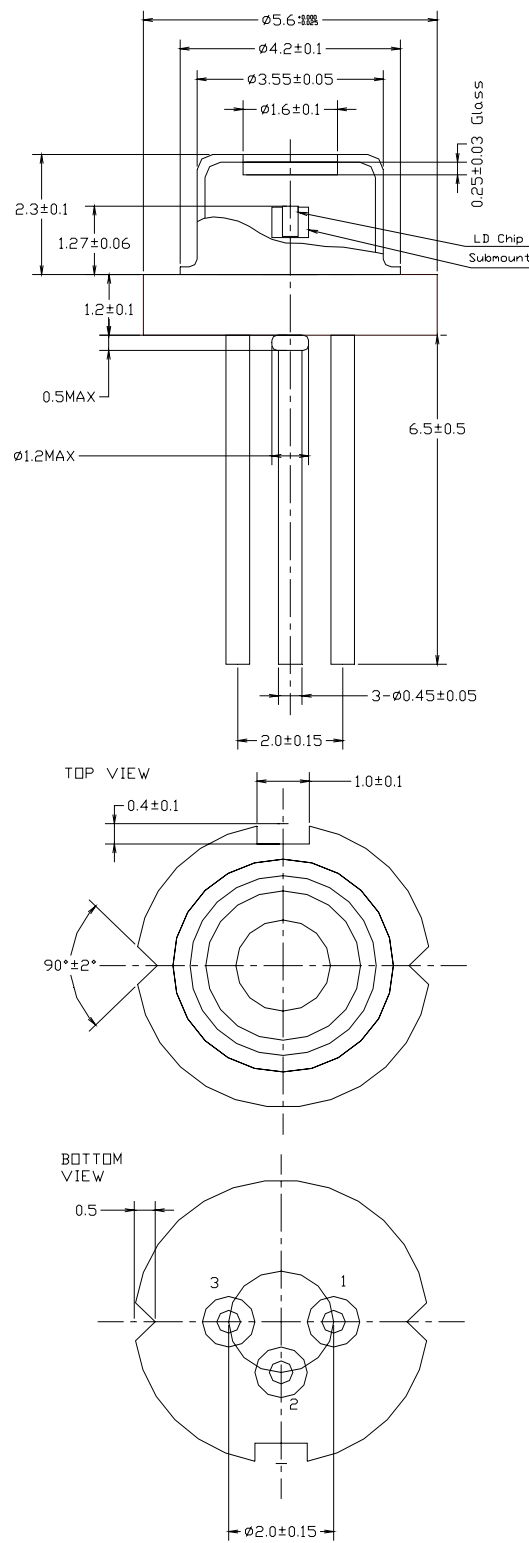


## ◆ EXAMPLE of PRESENTATIVE CHARACTERISTICS





# ◆ PACKAGE DIMENSION



◆PACKING

