

# QSI LASER DIODE

## SPECIFICATIONS FOR APPROVAL

**Customer :**

**Model : QL78D6S-A/B/C**

### Signature of Approval

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

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

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

### Approval by Customer

\_\_\_\_\_



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# QL78D6S-A/B/C

AlGaAs Laser Diode

Quantum Semiconductor International Co., Ltd

Ver.0 JAN 2004

## OVERVIEW

**QL78D6S-A/B/C** 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 5mW for industrial optical module and sensor applications.

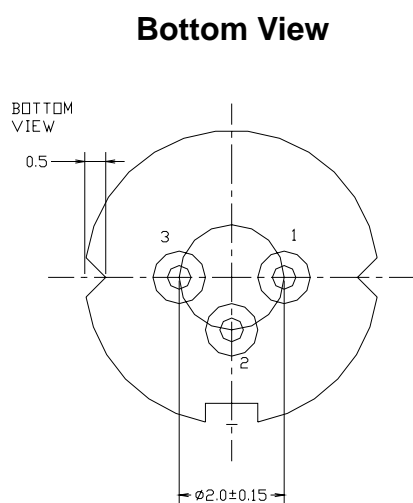
## APPLICATION

- CD-P

## FEATURES

- Lasing Wavelength :  $\lambda = 780\text{nm}$
- Optical Power Output : 5mW CW
- Package Type : TO-18 (5.6mm $\Phi$ )
- Built-in Photo Diode for Monitoring Laser Output

## ELECTRICAL CONNECTION



### Pin Configuration

A	LD cathod, PD anode (Fig. 1)
B	LD , PD anode (Fig. 2)
C	LD anode, PD cathod (Fig. 3)

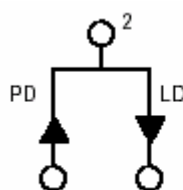


Fig. 1

QL78D6SA

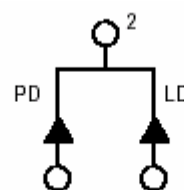


Fig. 2

QL78D6SB

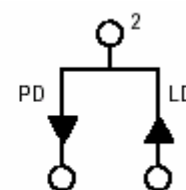


Fig. 3

QL78D6SC

## ABSOLUTE MAXIMUM RATING

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 +60	
Storage Temperature	Tstg	-40 +80	

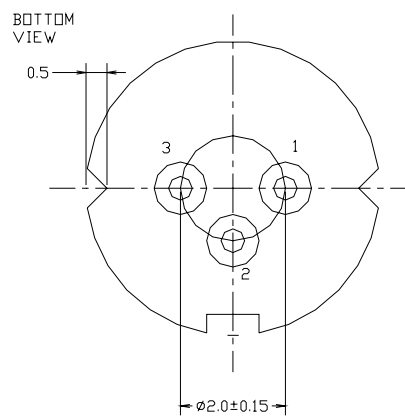
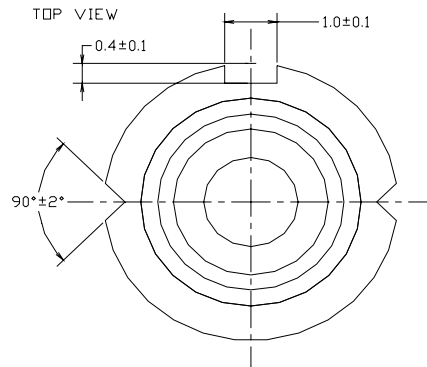
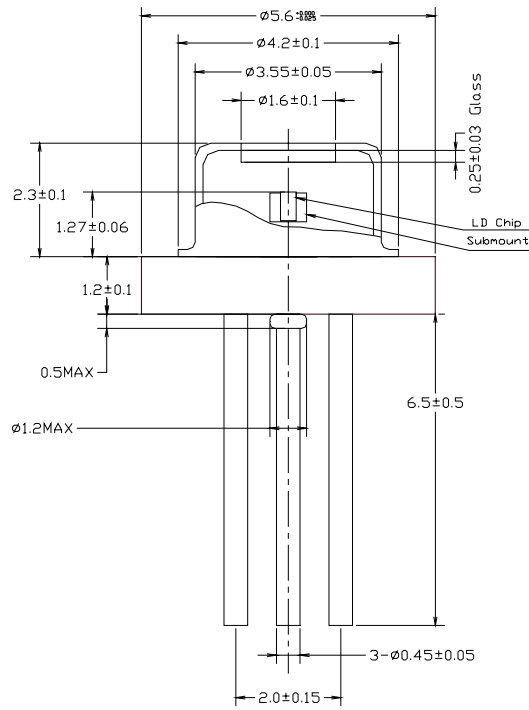
## ELECTRICAL and OPTICAL CHARACTERISTICS

Items	Symbols	Min.	Typ.	Max.	Unit	Condition
Optical Output Power	Po	-	5	-	mW	-
Threshold Current	Ith	-	20	30	mA	-
Operating Current	Iop	-	30	40	mA	Po=5mW
Operating Voltage	Vop	-	1.9	2.3	V	Po=5mW
Slope Efficiency	SE	0.3	0.5	0.7	mW/mA	Po=3 ~ 5mW
Lasing Wavelength	$\lambda$	770	785	800	nm	Po=5mW
Beam Divergence		8	11	15	deg	Po=5mW
		25	34	40	deg	Po=5mW
Beam Angle		-	-	$\pm 1.5$	deg	Po=5mW
		-	-	$\pm 2.5$	deg	Po=5mW
Monitor Current	Im	0.1	0.3	0.6	mA	Po=5mW
Optical Distance	X, Y, Z	-	-	$\pm 60$	$\mu\text{m}$	Po=5mW
Astigmatism	As	-	-	15	$\mu\text{m}$	Po=5mW

**NOTICE : QL78D6S-A/B/C to be operated on APC**

The above product specifications are subject to change without notice.

# PACKAGE DIMENSION



# PACKING

