

QSI LASER DIODE SPECIFICATIONS FOR APPROVAL

Customer :

Model : QL78I6S-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

QL78I6S-A/B/C-L

AlGaAs Laser Diode

Quantum Semiconductor International Co., Ltd.

2008-07-15

◆ OVERVIEW

QL78I6S-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 25mW for industrial optical module and sensor application

◆ APPLICATION

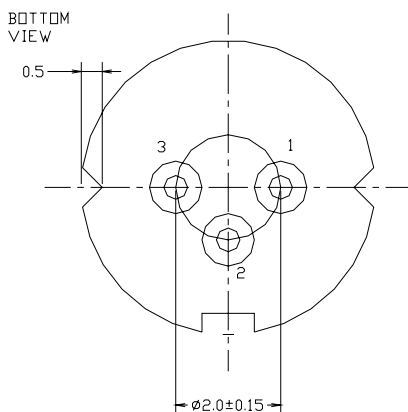
- Laser scanner unit
- Industrial optical module

◆ FEATURES

- Visible Light Output : $\lambda_p = 785 \text{ nm}$
- Optical Power Output : 25mW CW
- Package Type : TO-18 (5.6mm ϕ)
- 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)

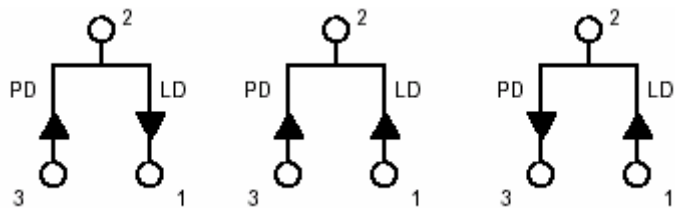


Fig. 1

QL78I6SA-L

Fig. 2

QL78I6SB-L

Fig. 3

QL78I6SC-L

◆ ABSOLUTE MAXIMUM RATING at Tc=25°C

Items	Symbols	Values	Unit
Optical Output Power	P	30	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

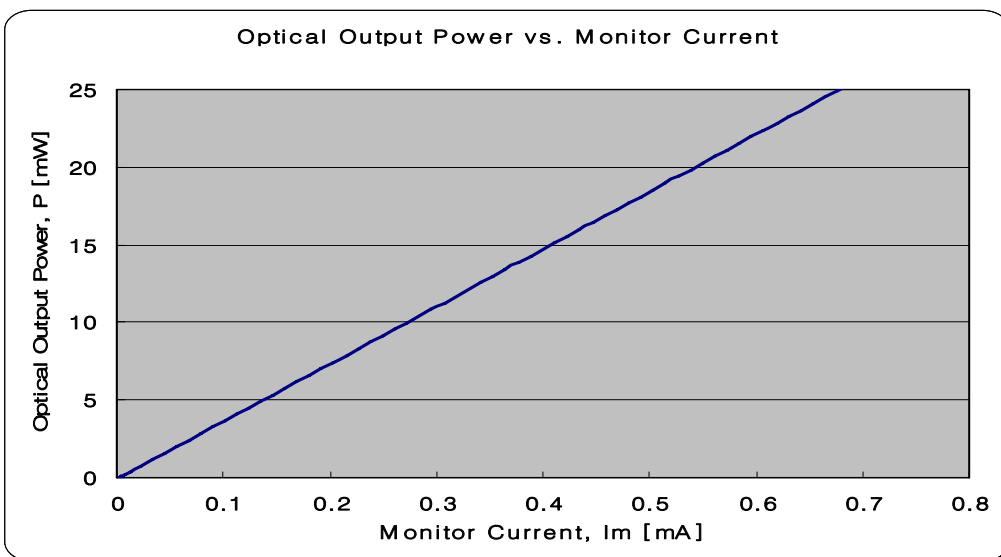
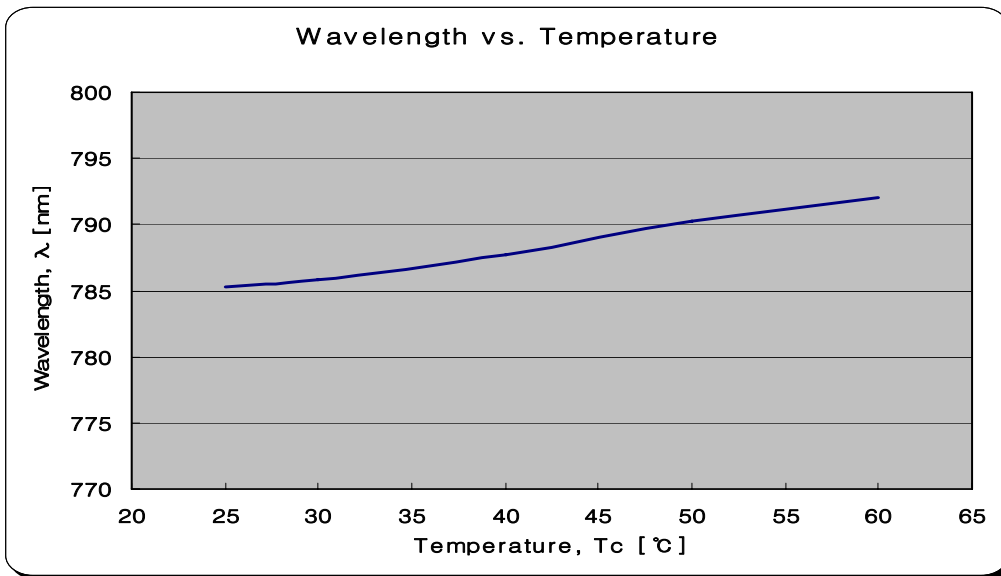
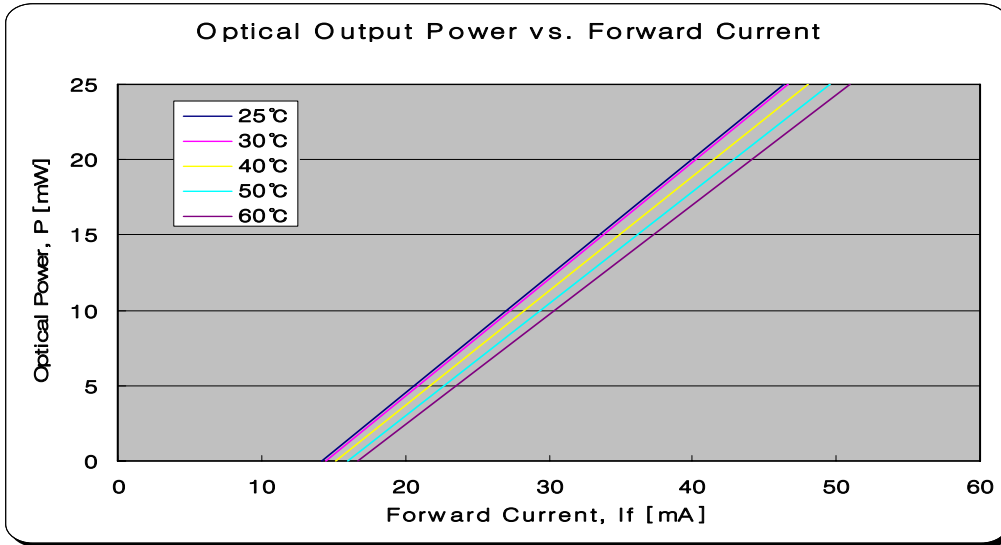
Items	Symbols	Min.	Typ.	Max	Unit	Condition
Optical Output Power	Po	-	25	-	mW	-
Threshold Current	Ith	-	15	25	mA	-
Operating Current	Iop	30	45	60	mA	Po=25mW
Differential efficiency	η	0.5	0.9	1.4	mW/mA	Po=25mW
Operating Voltage	Vop	1.6	1.9	2.3	V	Po=25mW
Lasing Wavelength	λ_p	770	785	800	nm	Po=25mW
Beam Divergence	$\theta_{ }$	6	8	13	deg	Po=25mW
	θ_{\perp}	25	30	34	deg	Po=25mW
Beam Angle	$\Delta\theta_{ }$	-	-	± 2.0	deg	Po=25mW
	$\Delta\theta_{\perp}$	-	-	± 3.0	deg	Po=25mW
Monitor Current	I _m	0.5	-	1.5	mA	Po=25mW
Optical Distance	$\Delta X, \Delta Y, \Delta Z$	-	-	± 60	μm	Po=25mW
Astigmatism	As			10	μm	Po=25mW

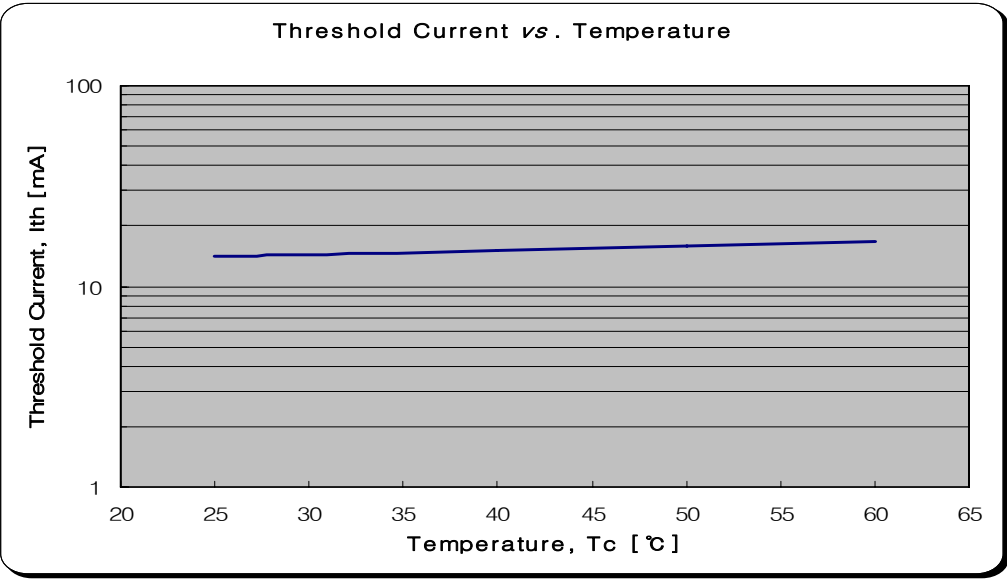
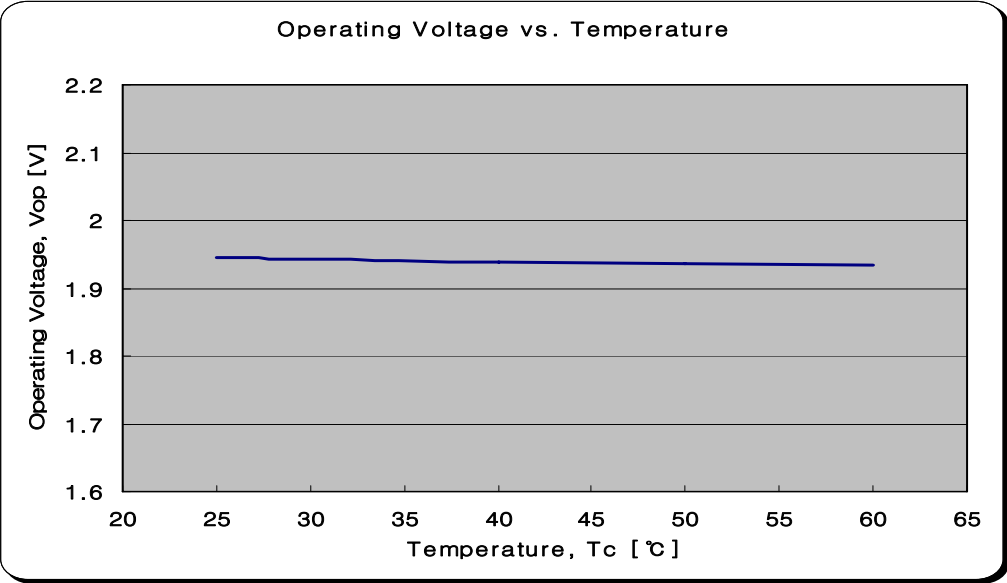
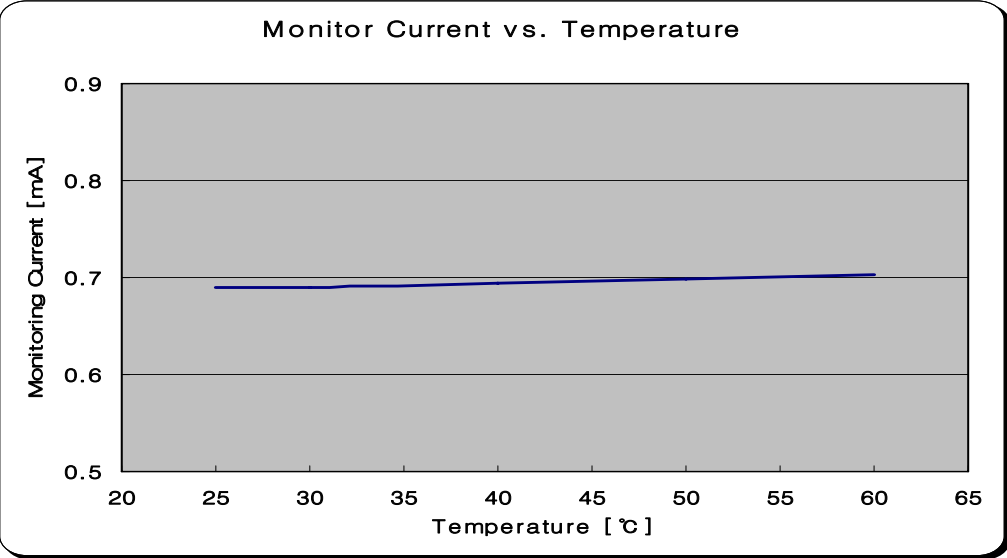
NOTICE : QL78I6S-A/B/C-L to be operated on APC

The above product specifications are subject to change without notice.

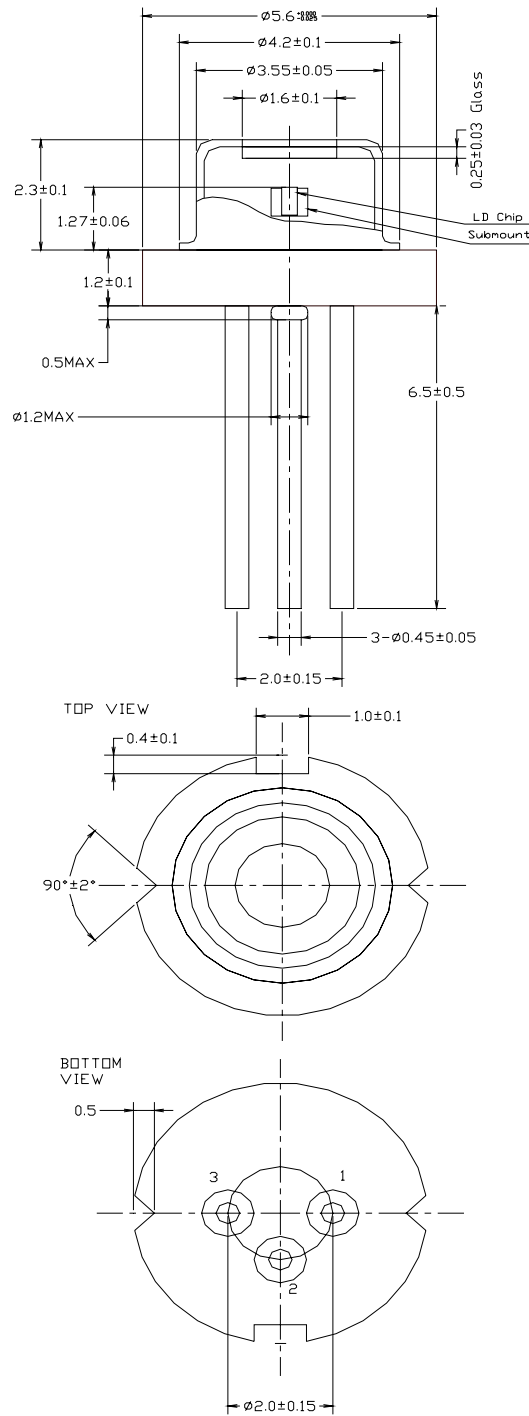


◆ EXAMPLE of PRESENTATIVE CHARACTERISTICS





◆ PACKAGE DIMENSION



◆PACKING

