

QSI LASER DIODE SPECIFICATIONS FOR APPROVAL

Customer :

Model : QL85D6S-A/B/C

Signature of Approval

Approved by _____

Checked by _____

Issued by _____

Approval by Customer



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QL85D6S-A/B/C

AlGaAs Laser Diode

Quantum Semiconductor International Co., Ltd.

Ver.2 APR.2005

◆ OVERVIEW

QL85D6SA is a MOCVD grown 850nm 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

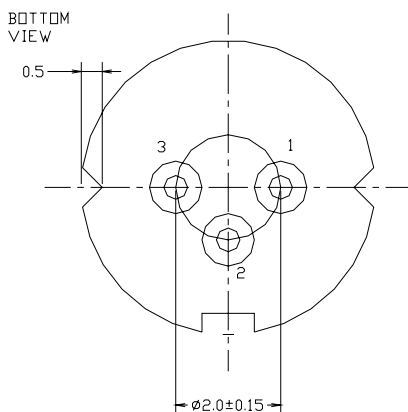
- Sensor
- Industrial Optical Module

◆ FEATURES

- Visible Light Output : $\lambda_p = 850 \text{ nm}$
- Optical Power Output : 5mW 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)

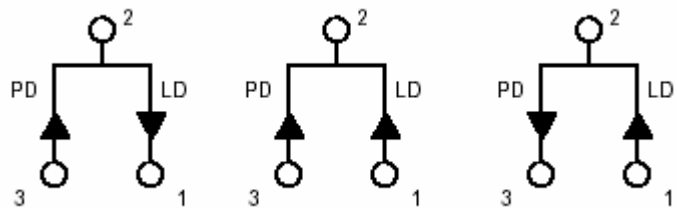


Fig. 1

QL85D6SA

Fig. 2

QL85D6SB

Fig. 3

QL85D6SC

◆ ABSOLUTE MAXIMUM RATING at Tc=25°C

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

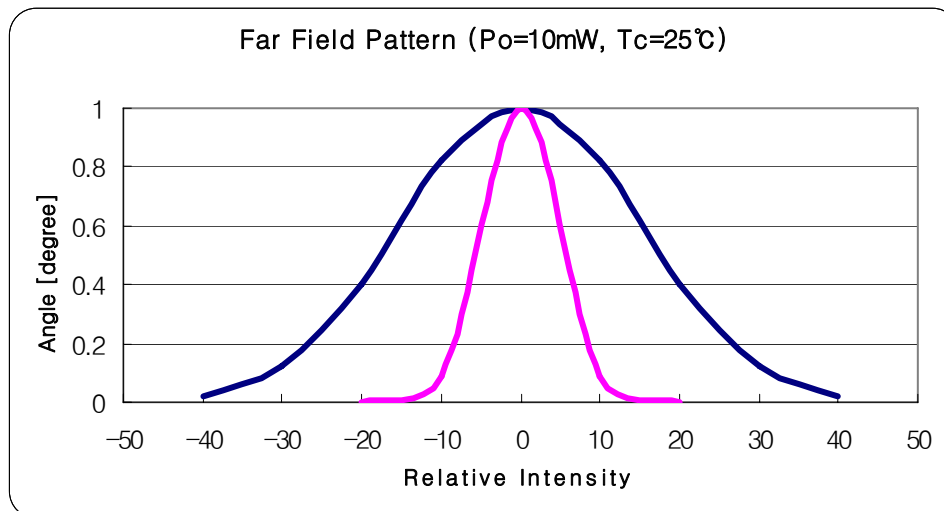
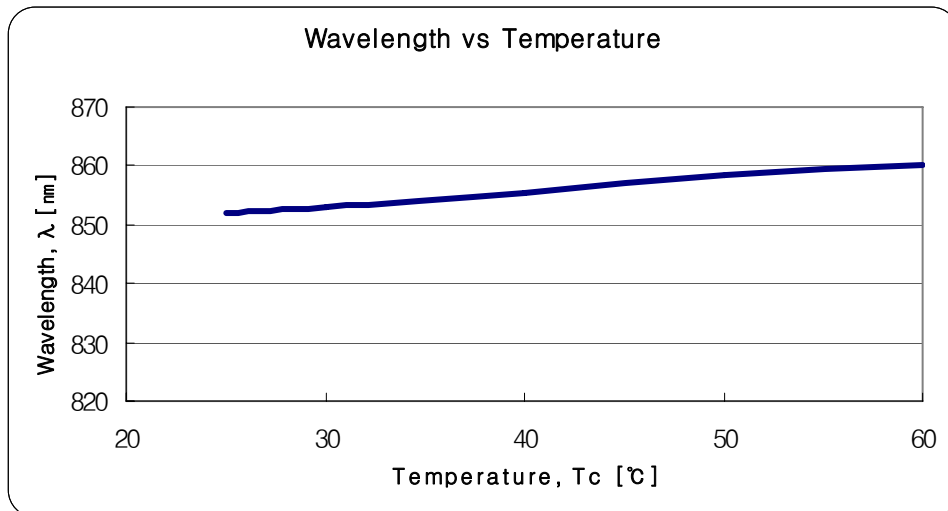
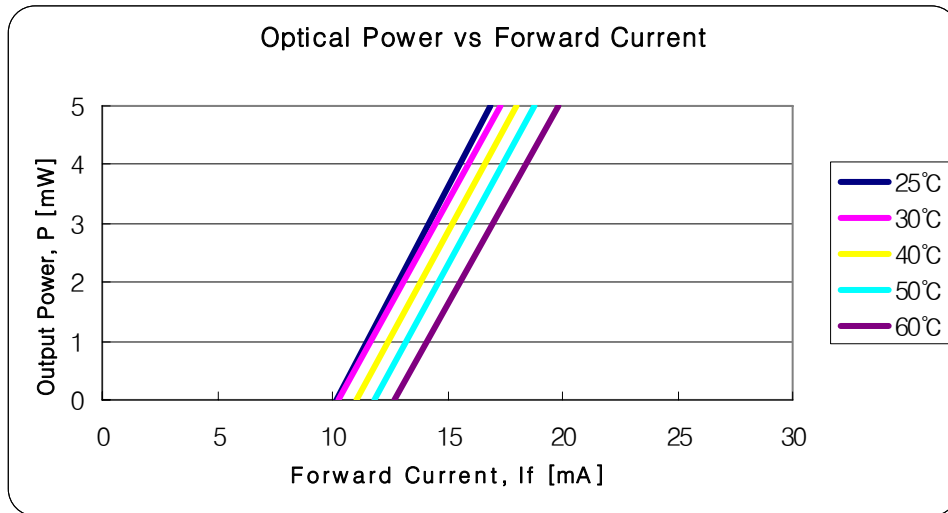
◆ ELECTRICAL and OPTICAL CHARACTERISTICS at Tc=25°C

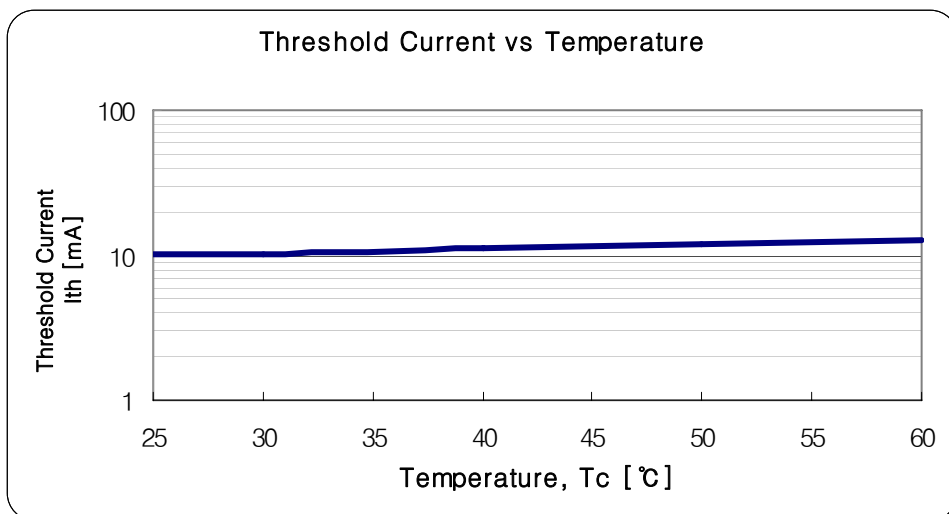
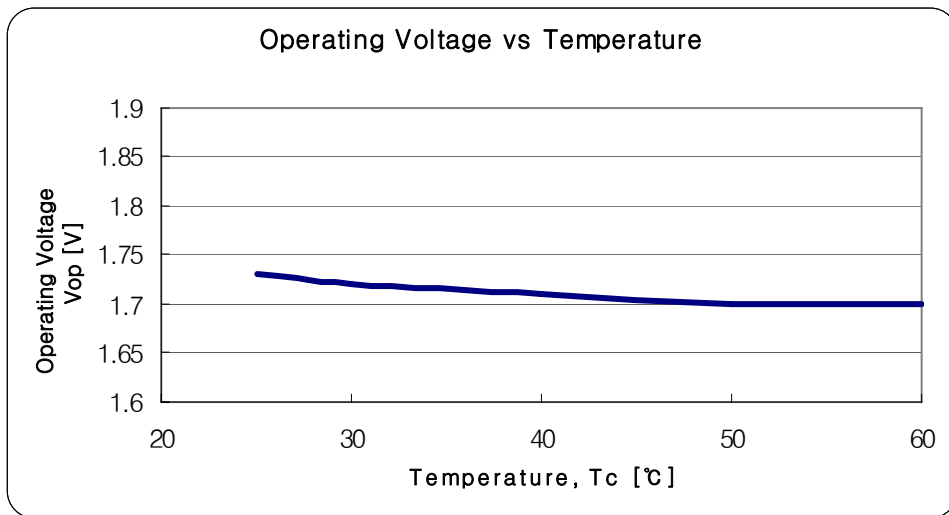
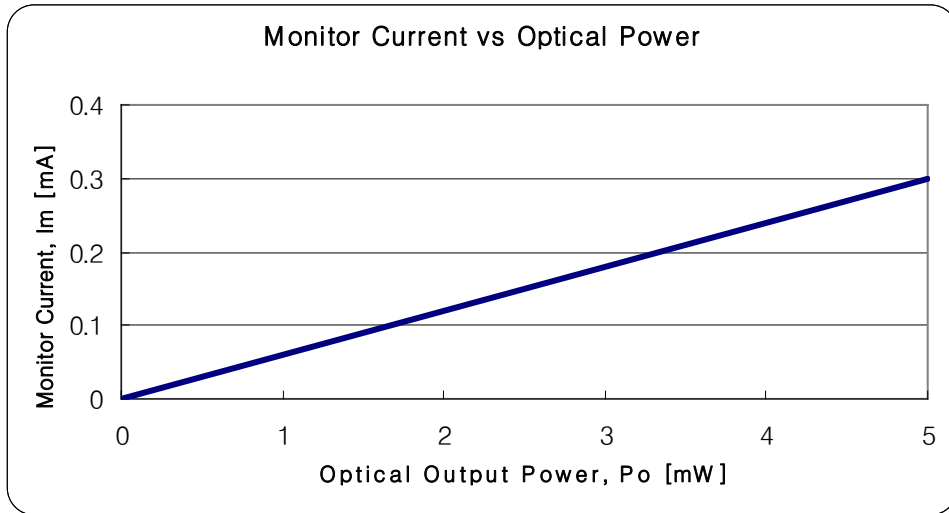
Items	Symbols	Min.	Typ.	Max.	Unit	Condition
Optical Output Power	Po	-	5	-	mW	-
Threshold Current	Ith	5	10	20	mA	-
Operating Current	Iop	15	20	30	mA	Po=5mW
Slope Efficiency	SE	0.4	0.7	0.9	mW/mA	2~5 mW
Operating Voltage	Vop	-	1.9	2.5	V	Po=5mW
Lasing Wavelength	λ_p	845	850	855	nm	Po=5mW
Beam Divergence	$\theta_{ }$	7	9	12	deg	Po=5mW
	θ_{\perp}	25	32	40	deg	Po=5mW
Beam Angle	$\Delta\theta_{ }$	-	-	± 2	deg	Po=5mW
	$\Delta\theta_{\perp}$	-	-	± 3	deg	Po=5mW
Monitor Current	I _m	0.2	0.4	0.6	mA	Po=5mW
Astigmatism	As			15	μm	
Optical Distance	$\Delta X, \Delta Y, \Delta Z$	-	-	± 60	μm	

NOTICE : QL85D6S-A/B/C to be operated on APC

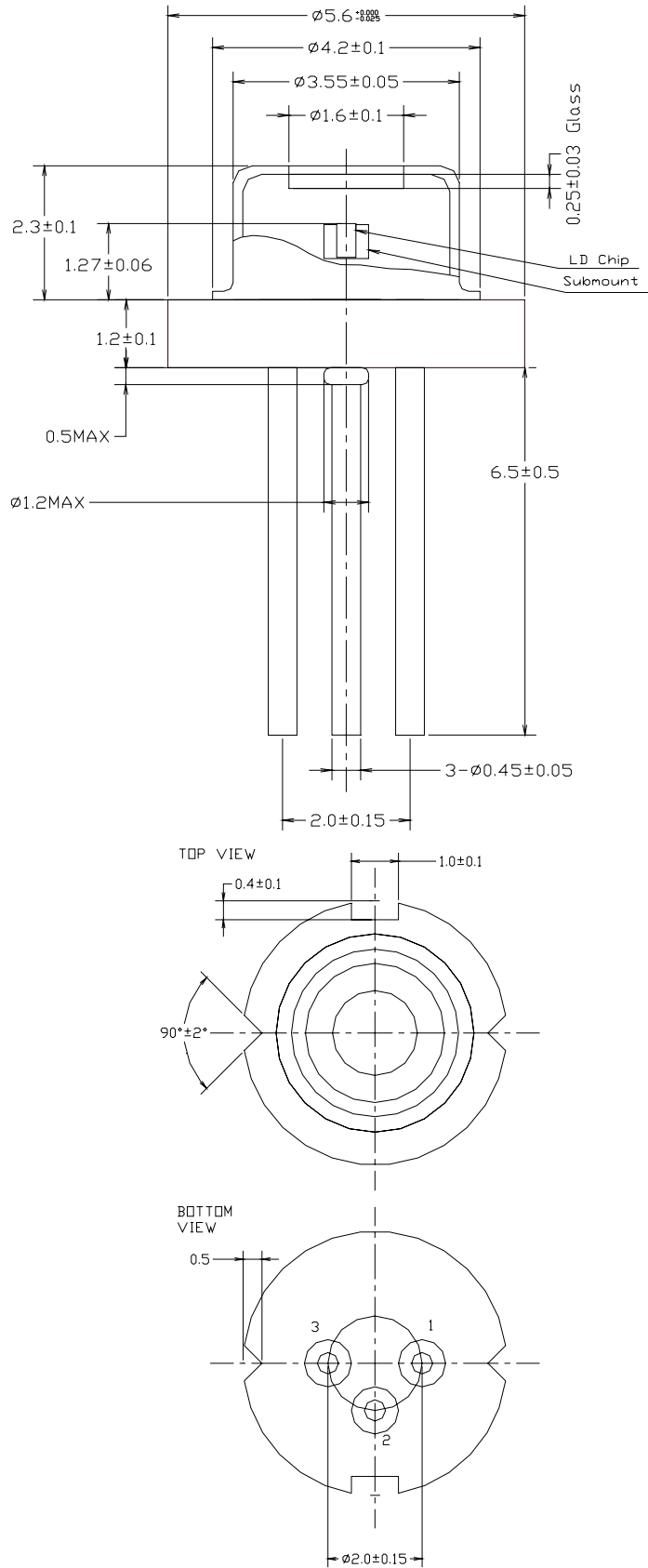
The above product specifications are subject to change without notice.

EXAMPLE of REPRESENTATIVE CHARACTERISTICS





◆ PACKAGE DIMENSION



◆PACKING

