

QSI LASER DIODE SPECIFICATIONS FOR APPROVAL

Customer :

Model : QL83F6S-A/B/C

TENTATIVE

Signature of Approval

Approved by _____

Checked by _____

Issued by _____

Approval by Customer



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Tentative

QL83F6S-A/B/C

GaAs Laser Diode

Quantum Semiconductor International Co., Ltd.

Ver.0 Jun. 2013

◆ OVERVIEW

QL83F6S-A/B/C is a MOCVD grown 830nm band GaAs laser diode with quantum well structure. It's an attractive light source, with a typical light output power of 10mW for Medical applications.

◆ APPLICATION

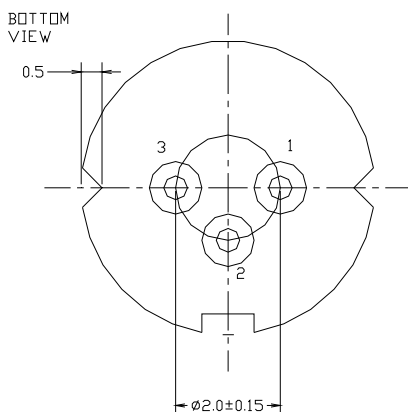
- Medical applications, IR Sensor

◆ FEATURES

- Visible Light Output : $\lambda_p = 830 \text{ nm}$
- Optical Power Output : 10mW 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)

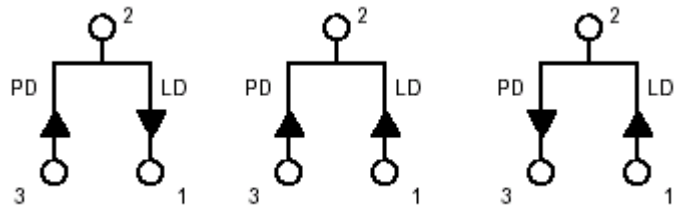


Fig. 1

QL83F6SA

Fig. 2

QL83F6SB

Fig. 3

QL83F6SC

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◆ ABSOLUTE MAXIMUM RATING at Tc=25°C

Items	Symbols	Values	Unit
Optical Output Power	P	12	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

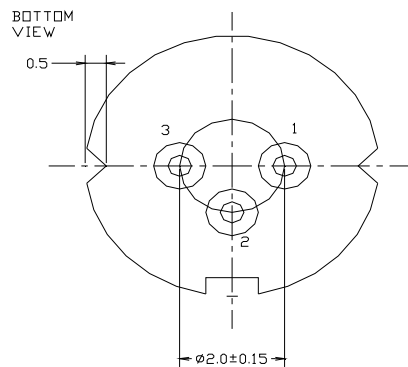
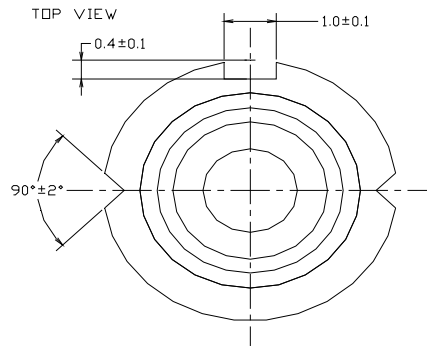
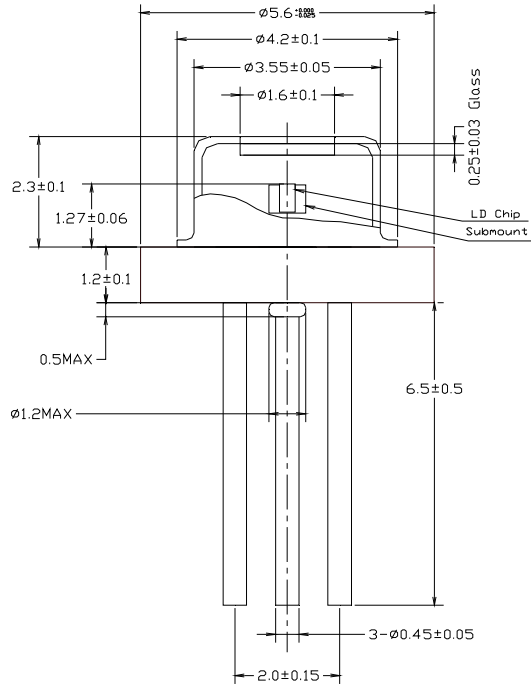
◆ ELECTRICAL and OPTICAL CHARACTERISTICS at Tc=25°C

Items	Symbols	Min.	Typ.	Max.	Unit	Condition
Optical Output Power	Po	-	10	-	mW	-
Threshold Current	Ith	-	13	25	mA	-
Operating Current	Iop	-	30	55	mA	Po=10mW
Slope Efficiency	SE	0.3	0.6	1.0	mW/mA	5~10mW
Operating Voltage	Vop	-	1.7	2.4	V	Po=10mW
Lasing Wavelength	λ_p	820	830	840	nm	Po=10mW
Beam Divergence	$\theta_{ }$	5	9	13	deg	Po=10mW
	θ_{\perp}	24	30	36	deg	Po=10mW
Beam Angle	$\Delta\theta_{ }$	-	-	± 3	deg	Po=10mW
	$\Delta\theta_{\perp}$	-	-	± 3	deg	Po=10mW
Monitor Current	I _m	0.05	0.4	1.1	mA	Po=10mW
Astigmatism	As	-	-	15	μm	
Optical Distance	$\Delta X, \Delta Y, \Delta Z$	-	-	± 60	μm	

NOTICE : QL83F6S-A/B/C to be operated on APC

The above product specifications are subject to change without notice.

◆ PACKAGE DIMENSION



◆PACKING

