

QSI LASER DIODE SPECIFICATIONS FOR APPROVAL

Customer :

Tentative

Model : QL83H6S-A/B/C

Signature of Approval

Approved by _____

Checked by _____

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Approval by Customer



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Tentative

QL83H6S-A/B/C

GaAs Laser Diode

Quantum Semiconductor International Co., Ltd.

Ver.0 Jan. 2009

◆ OVERVIEW

QL83H6S-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 20mW for Medical applications.

◆ APPLICATION

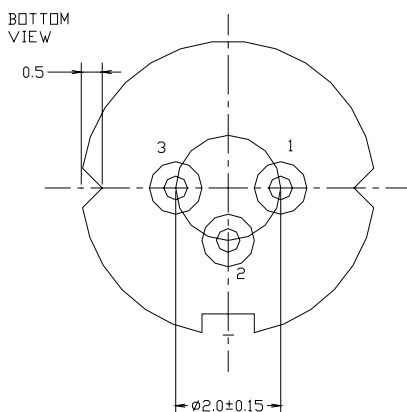
- Medical applications

◆ FEATURES

- Visible Light Output : $\lambda_p = 830 \text{ nm}$
- Optical Power Output : 20mW 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)

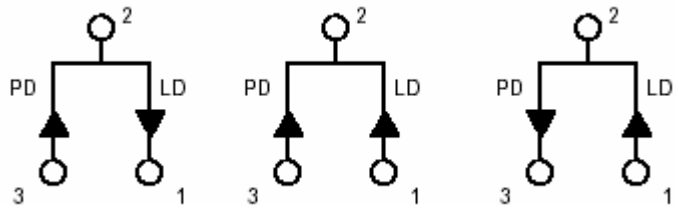


Fig. 1

QL83H6SA

Fig. 2

QL83H6SB

Fig. 3

QL83H6SC

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◆ ABSOLUTE MAXIMUM RATING at Tc=25°C

Items	Symbols	Values	Unit
Optical Output Power	P	22	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

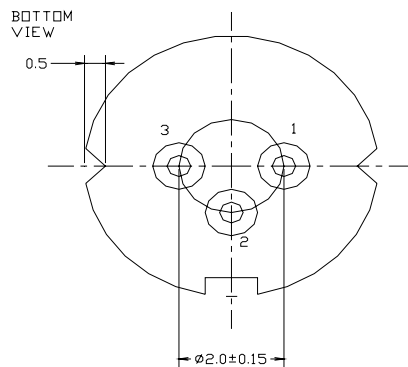
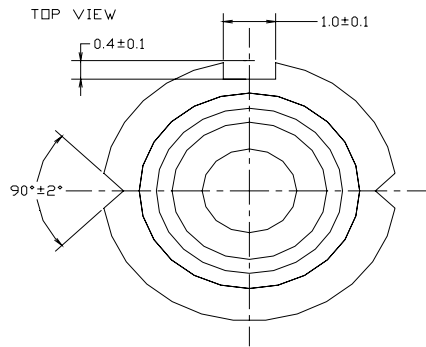
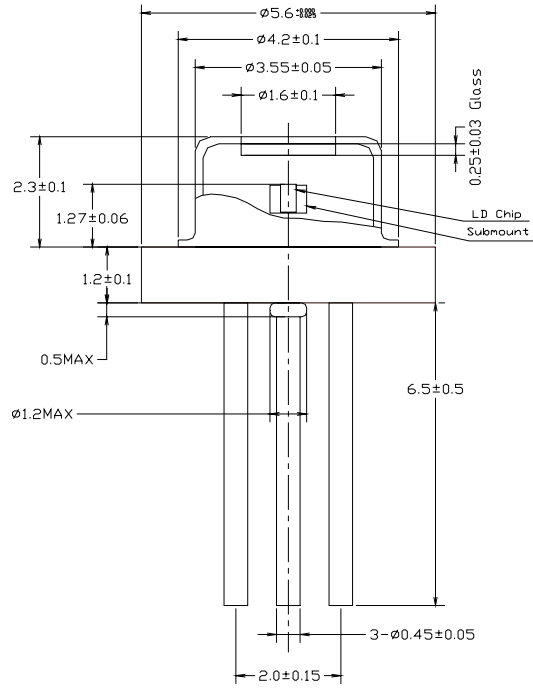
◆ ELECTRICAL and OPTICAL CHARACTERISTICS at Tc=25°C

Items	Symbols	Min.	Typ.	Max.	Unit	Condition
Optical Output Power	Po	-	20	-	mW	-
Threshold Current	Ith	-	15	30	mA	-
Operating Current	Iop	-	45	70	mA	Po=20mW
Slope Efficiency	SE	0.3	0.6	0.9	mW/mA	10~20 mW
Operating Voltage	Vop	-	1.9	2.5	V	Po=20mW
Lasing Wavelength	λ_p	820	830	840	nm	Po=20mW
Beam Divergence	$\theta_{ }$	7	9	12	deg	Po=20mW
	θ_{\perp}	25	30	35	deg	Po=20mW
Beam Angle	$\Delta\theta_{ }$	-	-	± 3	deg	Po=20mW
	$\Delta\theta_{\perp}$	-	-	± 3	deg	Po=20mW
Monitor Current	I _m	0.1	0.5	1.0	mA	Po=20mW
Astigmatism	As	-	-	15	μm	
Optical Distance	$\Delta X, \Delta Y, \Delta Z$	-	-	± 60	μm	

NOTICE : QL83H6S-A/B/C to be operated on APC

The above product specifications are subject to change without notice.

◆ PACKAGE DIMENSION



◆PACKING

