

QSI LASER DIODE SPECIFICATIONS FOR APPROVAL

Customer :

Model : QL83R6S-A/B/C/L

TENTATIVE

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

QL83R6S-A/B/C/L

AlGaAs Laser Diode

Quantum Semiconductor International Co., Ltd.

Ver.2 Aug. 2014

◆ OVERVIEW

QL83R6S-A/B/C/L is a MOCVD grown 830nm band AlGaAs laser diode with quantum well structure. It's an attractive light source, with a typical light output power of 200mW for industrial optical module and sensor applications.

◆ APPLICATION

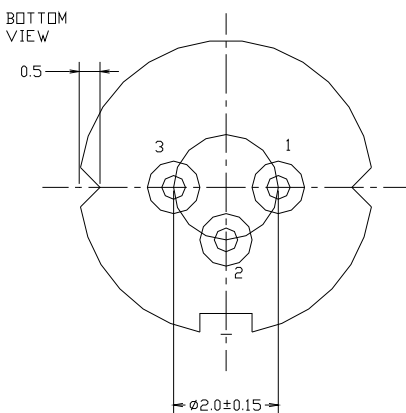
- Motion Recognition Sensor
- Industrial Optical Module

◆ FEATURES

- Visible Light Output : $\lambda_p = 830 \text{ nm}$
- Optical Power Output : 200mW 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)
L	LD cathode, Floating (Fig. 4)

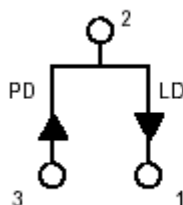


Fig. 1
QL83R6SA

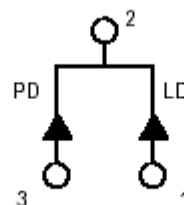


Fig. 2
QL83R6SB

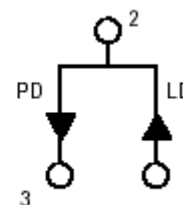


Fig. 3
QL83R6SC

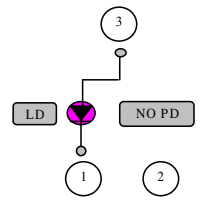


Fig. 4
QL83R6SL

◆ ABSOLUTE MAXIMUM RATING at Tc=25°C

Items	Symbols	Values	Unit
Optical Output Power	P	210	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

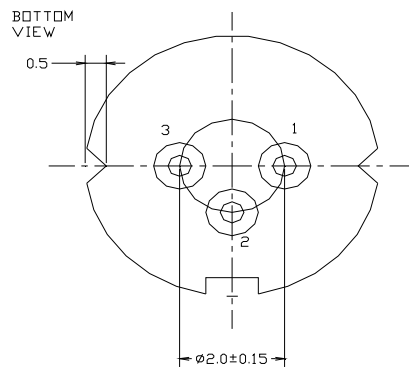
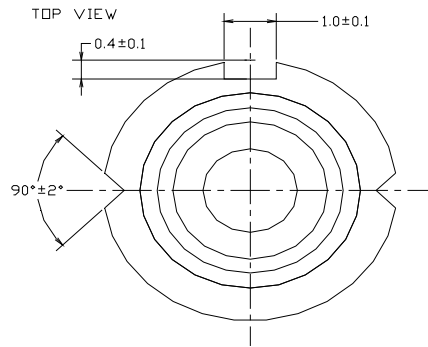
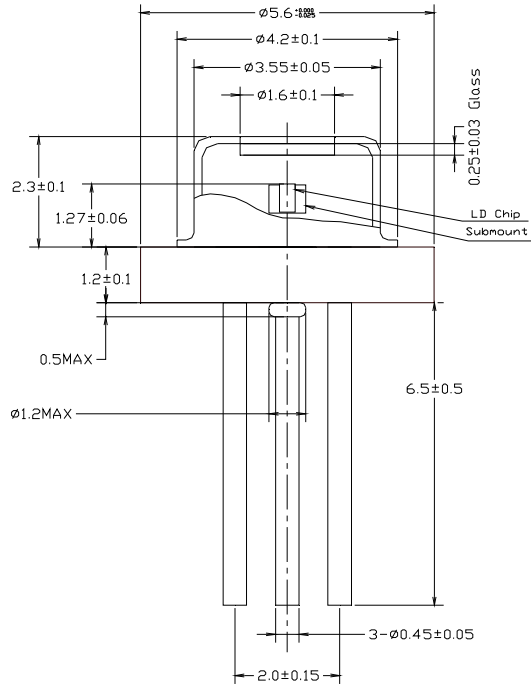
◆ ELECTRICAL and OPTICAL CHARACTERISTICS at Tc=25°C

Items	Symbols	Min.	Typ.	Max.	Unit	Condition
Optical Output Power	Po	-	200	-	mW	-
Threshold Current	Ith	30	50	70	mA	-
Operating Current	Iop	200	230	260	mA	Po=200mW
Slope Efficiency	SE	0.7	1.0	1.3	mW/mA	Po=200mW
Operating Voltage	Vop	1.8	2.1	2.5	V	Po=200mW
Lasing Wavelength	λ_p	815	825	835	nm	Po=200mW
Beam Divergence	$\theta_{ }$	5	9	13	deg	Po=200mW
	θ_{\perp}	12	18	24	deg	Po=200mW
Beam Angle	$\Delta\theta_{ }$	-	-	± 2	deg	Po=200mW
	$\Delta\theta_{\perp}$	-	-	± 3	deg	Po=200mW
Monitor Current	Im	0.01	0.3	1.0	mA	Po=200mW
Optical Distance	$\Delta X, \Delta Y, \Delta Z$	-	-	± 60	μm	

NOTICE : QL83R6S-A/B/C/L to be operated on APC

The above product specifications are subject to change without notice.

◆ PACKAGE DIMENSION



◆PACKING

