

QSI LASER DIODE SPECIFICATIONS FOR APPROVAL

Customer : Fuji-Xerox

Model : QL78F6SA-L

Signature of Approval

Approved by _____

Checked by _____

Issued by _____

Approval by Customer



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QL78F6SA-L

AlGaAs Laser Diode

Quantum Semiconductor International Co., Ltd.

2007-10-24

◆ OVERVIEW

QL78F6SA-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 8mW for industrial optical module and sensor application

◆ APPLICATION

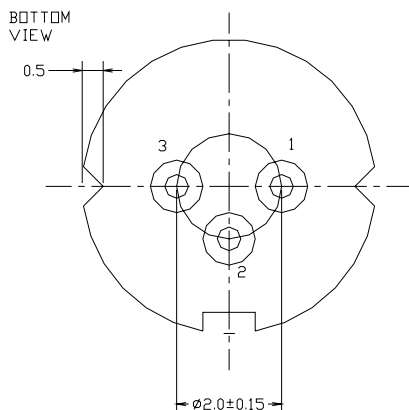
- Sensor
- Industrial optical module

◆ FEATURES

- Visible Light Output : $\lambda_p = 780 \text{ nm}$
- Optical Power Output : 8mW CW
- Package Type : TO-18 (5.6mm ϕ)
- Built-in Photo Diode for Monitoring Laser Diode

◆ ELECTRICAL CONNECTION

Bottom View



Pin Configuration

A	LD cathod, PD anode (Fig. 1)
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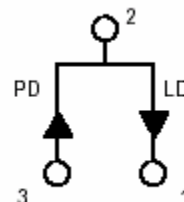


Fig. 1

QL78F6SA-L

◆ ABSOLUTE MAXIMUM RATING at Tc=25°C

Items	Symbols	Values	Unit
Optical Output Power	P	10	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

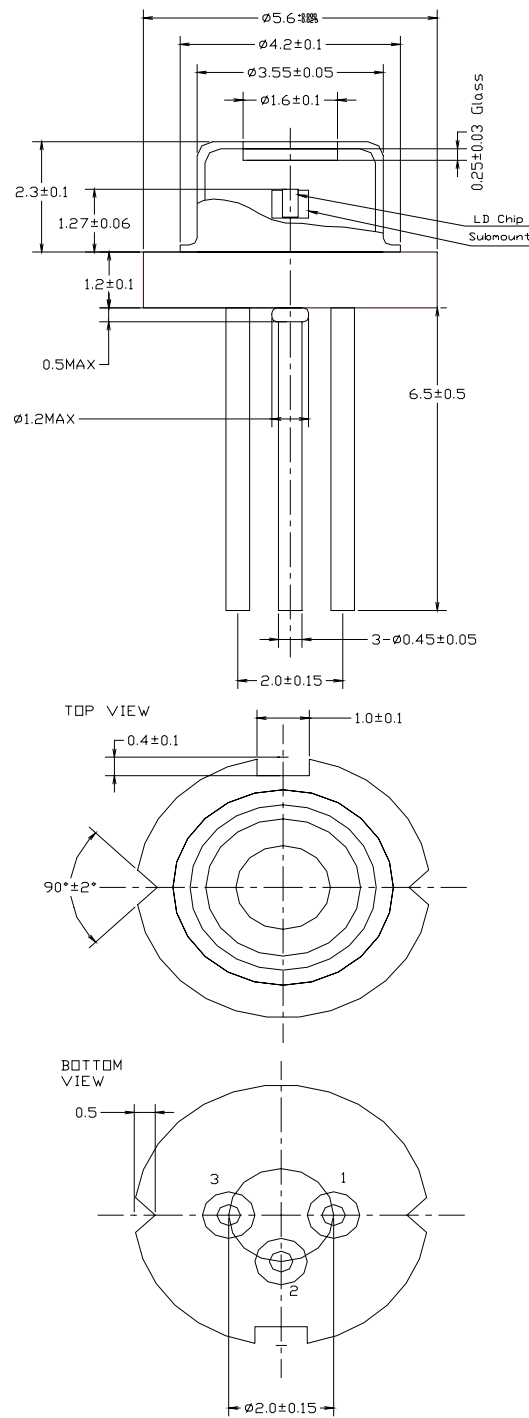
Items	Symbols	Min.	Typ.	Max	Unit	Condition
Optical Output Power	Po	-	8	-	mW	-
Threshold Current	Ith	6	12	18	mA	-
Operating Current	Iop	-	25	40	mA	Po=8mW
Differential efficiency		0.3	0.55	0.8	mW/mA	$\frac{4mW}{I(8mW)-I(4mW)}$
Operating Voltage	Vop	1.5	1.8	2.4	V	Po=8mW
Lasing Wavelength	λ_p	775	788	800	nm	Po=8mW
Beam Divergence	$\theta_{ }$	7	10	13	deg	Po=8mW
	θ_{\perp}	25	30	35	deg	Po=8mW
Beam Angle	$\Delta\theta_{ }$	-	-	±2.0	deg	Po=8mW
	$\Delta\theta_{\perp}$	-	-	±3.0	deg	Po=8mW
Monitor Current	I _m	0.4	-	1.6	mA	Po=8mW
Optical Distance	$\Delta X, \Delta Y, \Delta Z$	-	-	±60	μm	Po=8mW
Astigmatism	As			10	μm	Po=8mW

NOTICE : QL78F6SA-L to be operated on APC circuit.

The above product specifications are subject to change without notice.



◆ PACKAGE DIMENSION



◆PACKING

