

QSI LASER DIODE SPECIFICATIONS FOR APPROVAL

Tentative

Customer :

Model : QL78F6GI-O1

Signature of Approval

Approved by _____

Checked by _____

Issued by _____

Approval by Customer



QSI Co., Ltd.

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QL78F6GI-O1

AlGaAs Laser Diode

Quantum Semiconductor International Co., Ltd.

2015-6-1

◆ OVERVIEW

QL78F6GI-O1 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 10mW for laser print, digital copiers and industrial optical module application.

◆ APPLICATION

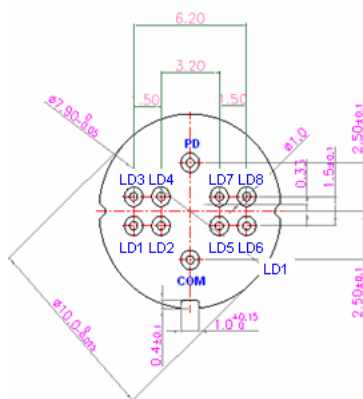
- Laser Printer
- Digital Copiers
- Industrial optical module

◆ FEATURES

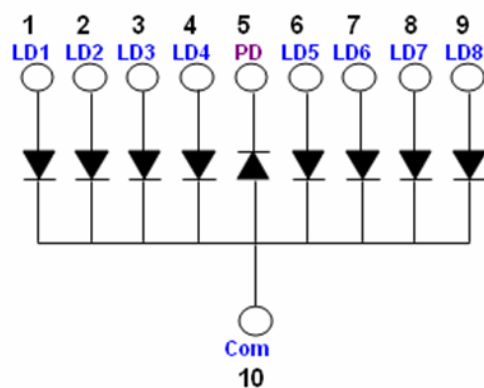
- Visible Light Output : $\lambda_p = 780 \text{ nm}$
- Optical Power Output : 10mW CW
- Number of Beams : 8
- Nominal Beam to Beam Separation : 14um pitch (beam to beam distance)
- Package Type : TO-100 (10mm ϕ)
- Built-in Photo Diode for Monitoring Laser Diode

◆ ELECTRICAL CONNECTION

Bottom View



Pin Configuration



◆ ABSOLUTE MAXIMUM RATING at Tc=25°C

Items	Symbol	Values	Unit
Optical Output Power	P	15	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.	Diff.	Unit	Condition
Optical Output Power	Po	-	10	-		mW	-
Threshold Current	Ith	-	12	18	2	mA	-
Operating Current	Iop	-	33	44	3	mA	Po=10mW
Differential efficiency	η	0.3	0.6	1.2	0.2	mA	$\frac{9\text{mW}}{I(10\text{mW})-I(1\text{mW})}$
Operating Voltage	Vop	-	2	2.5		V	Po=10mW
Lasing Wavelength	λ_p	775	785	800	2	nm	Po=10mW
Beam Divergence	θ_{\parallel}	7	10	12	2		Po=10mW
	θ_{\perp}	25	30	35	4		Po=10mW
Beam Angle	$\Delta\theta_{\parallel}$	-	-	± 2		Deg	Po=10mW
	$\Delta\theta_{\perp}$	-	-	± 3		Deg	Po=10mW
Monitor Current	I _m	0.4	1.0	1.5	30%	mA	Po=10mW
Center to Center spacing between adjacent beams		13.7	14	14.3		um	SEM measurement
Beam Spacing		97.7	98	98.3		um	LD1 to LD8

NOTICE : QL78F6GI-O1 to be operated on APC circuit.

The above product specifications are subject to change without notice.



◆ PACKAGE DIMENSION

