

QSI LASER DIODE SPECIFICATIONS FOR APPROVAL

Customer :

Model : QL68G5HF-L4

Signature of Approval

Approved by _____

Checked by _____

Issued by _____

Approval by Customer



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QL68G5HF-L4

AlGaInP Laser Diode

Quantum Semiconductor International Co., Ltd.

Ver.1 APR. 2009

◆ OVERVIEW

QL68G5HF-L4 is a MOCVD grown 680nm band *AlGaInP* laser diode with quantum well structure. It's an attractive light source with a typical light output power of 12mW for industrial optical module and sensor application.

◆ APPLICATION

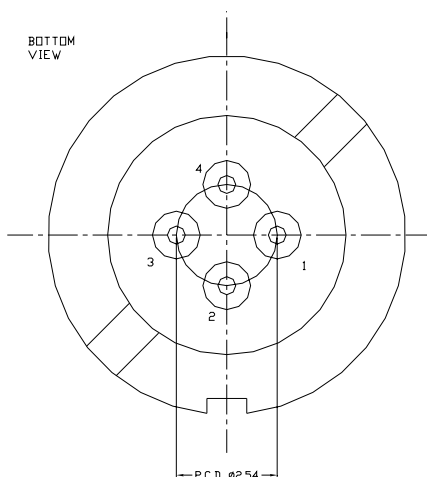
- Laser Printer
- Digital Copiers
- Industrial optical module

◆ FEATURES

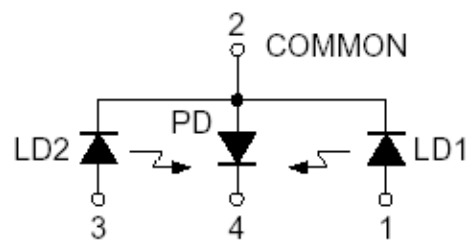
- Visible Light Output : $\lambda_p = 680 \text{ nm}$
- Optical Power Output : 12mW CW
- Dual Beam : 25um pitch (beam to beam)
- Package Type : TO-5 (9.0mm ϕ)
- Built-in Photo Diode for Monitoring Laser Diode

◆ ELECTRICAL CONNECTION

Bottom View



Pin Configuration



QL68G5HF-L4

◆ ABSOLUTE MAXIMUM RATING at Tc=25°C

Items	Symbols	Values	Unit
Optical Output Power	P	15	mW
Laser Diode Reverse Voltage	V	3	V
Photo Diode Reverse Voltage	V	30	V
Operating Temperature	Topr	-10 ~ +50	°C
Storage Temperature	Tstg	-40 ~ +80	°C

◆ ELECTRICAL and OPTICAL CHARACTERISTICS at Tc=25°C

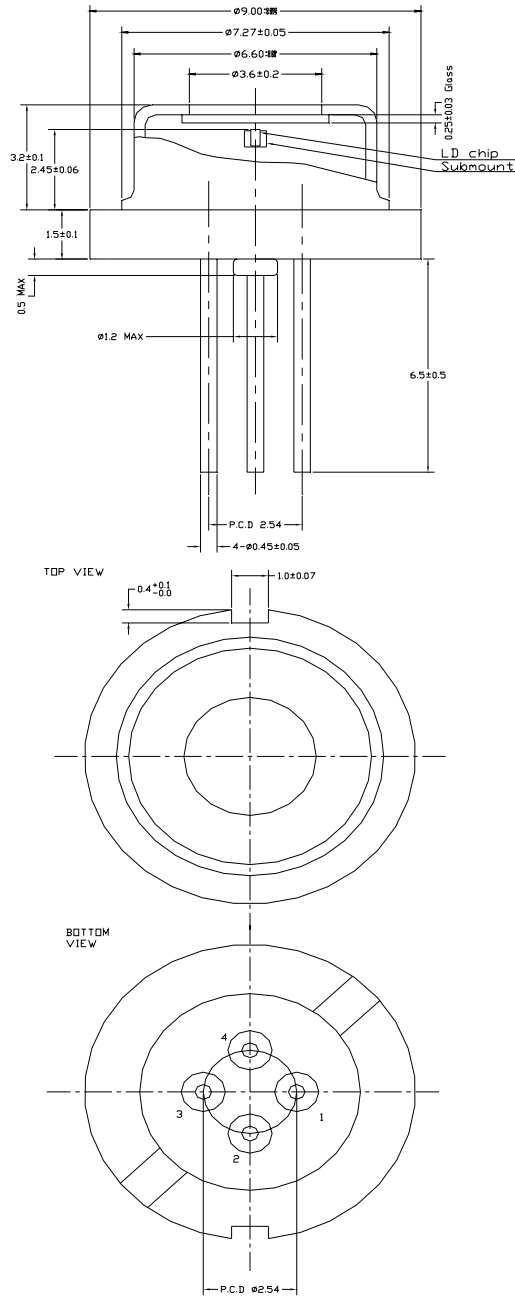
Items	Symbols	Min.	Typ.	Max.	Diff.	Unit	Condition
Optical Output Power	Po	-	12	-		mW	-
Threshold Current	Ith	15	20	24	5	mA	-
Operating Current	Iop	-	30	50	3	mA	Po=12mW
Slope efficiency	η	0.8	1.0	1.2	0.2	mW/mA	$\frac{12\text{mW}}{I(12\text{mW})-I(2\text{mW})}$
Operating Voltage	Vop	1.5	2.2	2.5	-	V	Po=12mW
Lasing Wavelength	λ_p	670	680	690	2	nm	Po=12mW
Beam Divergence	$\theta_{ }$	7	9	12	2	deg	Po=12mW
	θ_{\perp}	28	30	35	3	deg	Po=12mW
Beam Angle	$\Delta\theta_{ }$	-3	-	+3	-	deg	Po=12mW
	$\Delta\theta_{\perp}$	-3	-	+3	-	deg	Po=12mW
Monitor Current	I _m	0.05	-	0.3	±30%	mA	Po=12mW
Optical Distance	$\Delta X, \Delta Y, \Delta Z$	-80	-	+80		μm	Po=12mW
Astigmatism	As			10	±5	μm	Po=12mW
PD Dark Current	I _d	-	-	100	-	nA	-

NOTICE : QL68G5HF- L4 to be operated on APC circuit.

The above product specifications are subject to change without notice.



◆ PACKAGE DIMENSION



◆PACKING

