

QSI LASER DIODE SPECIFICATIONS

Customer :

Tentative

Model : QL90U8SM-4

Signature of Approval

Approved by _____

Checked by _____

Issued by _____

Approval by Customer



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QL90U8SM-4

InGaAs Laser Diode

Quantum Semiconductor International Co., Ltd.

Ver.1 2018

◆ OVERVIEW

QL90U8SM-4 is a MOCVD grown 905nm band *InGaAs* laser diode with quantum well structure.

It's an attractive light source, with a optical peak output power of 7W (pulse operation) for industrial optical module and sensor applications.

◆ APPLICATION

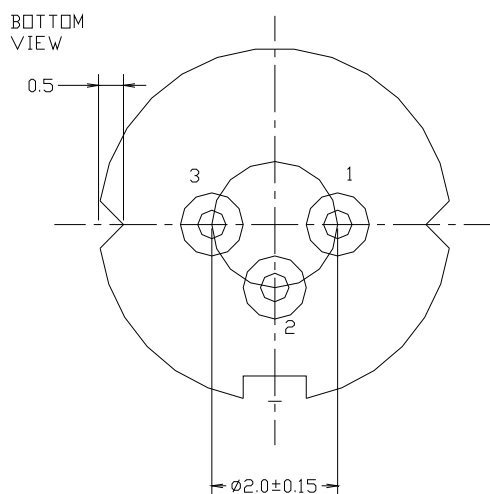
- Laser Range Finder (LRF) , Automotive applications

◆ FEATURES

- Light Output : $\lambda_p = 905 \text{ nm}$
- Optical Power Output : 7W (Pulse Operation)
- Package Type : TO-18 (5.6mm ϕ)

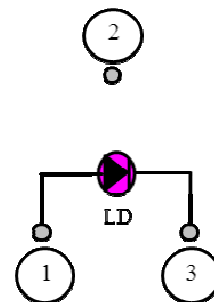
◆ ELECTRICAL CONNECTION

Bottom View



Pin Configuration

M	1: anode (+)	3: Cathode (-)
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◆ ABSOLUTE MAXIMUM RATING (Short time Operation, Tc=25°C)

Items	Symbols	Values	Unit
Peak Output Power	$P_{\max}$	10	W
Forward Current	I_F	7	A
Pulse width (FWHM)	t_p	100	ns
Duty Ratio	dr	0.1	%
Operating Temperature	T_{opr}	-40 ~ 85	°C
Storage Temperature	T_{stg}	-40 ~125	°C

◆ ELECTRICAL and OPTICAL CHARACTERISTICS at Tc=25°C

Items	Symbols	Min.	Typ.	Max.	Unit
Optical Output Power	P_{op}	5	7	-	W
Emission Wavelength	λ_p	885	905	915	nm
Spectral Width (FWHM)	$\Delta\lambda$	-	5	-	nm
Threshold Current	I_{th}	-	-	0.5	A
Operating Current	I_{op}	-	4	-	A
Operating Voltage	V_{op}	-	-	10	V
Beam Divergence	$\theta_{ }$	-	10	-	deg
	$\theta_{\perp}$	-	28	-	deg

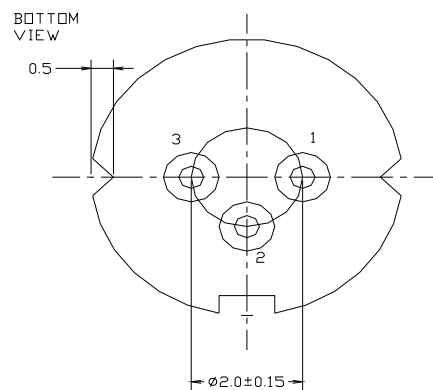
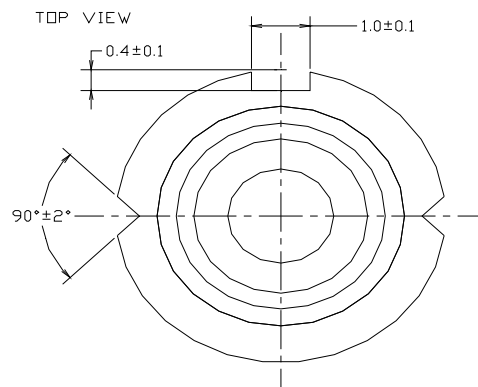
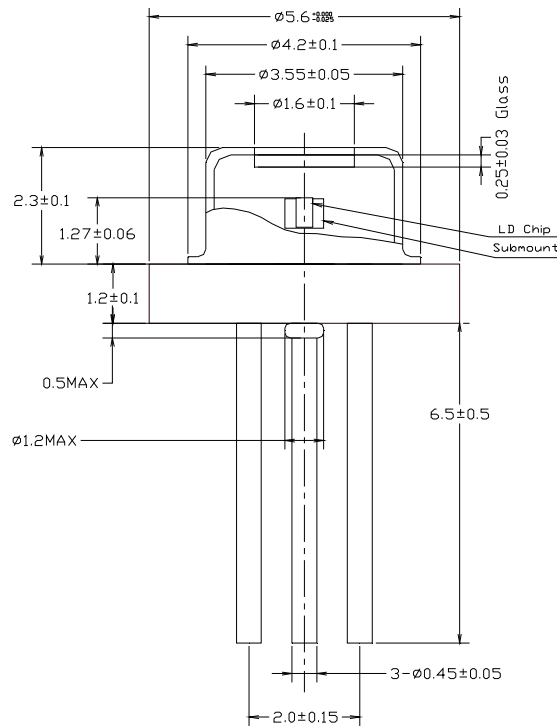
*Operating condition - Pulse Width $P_w = 100\text{nsec}$, Repetition Frequency $Fr=1\text{kHz}$, Duty Ratio $Dr=0.01\%$

◆ CHIP CHARACTERISTICS

Size	symbols	Min.	Type.	Max.	Unit
Aperture Size	$W \times H$	—	40×10	—	μm^2

The above product specifications are subject to change without notice.

◆ PACKAGE DIMENSION



◆PACKING

