QSI LASER DIODE

SPECIFICATIONS FOR APPROVAL

Tentative

Customer :

Model : QL63H5SA/B/C-R1

Signature of Approval

Approved by _____

Checked by _____

Issued by _____

Approval by Customer

_____

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QL63H5SA/B/C-R1

InGaAlP Laser Diode

Quantum Semiconductor International Co., Ltd.

Ver.1, Jun. 2014

◆ OVERVIEW

QL63H5SA/B/C-R1 is a MOCVD grown 635nm band InGaAlP laser diode with quantum well structure. It's an attractive light source, with a typical light output power of 20mW for optoelectronic devices such as Optical Leveler and Modules.

◆ APPLICATION

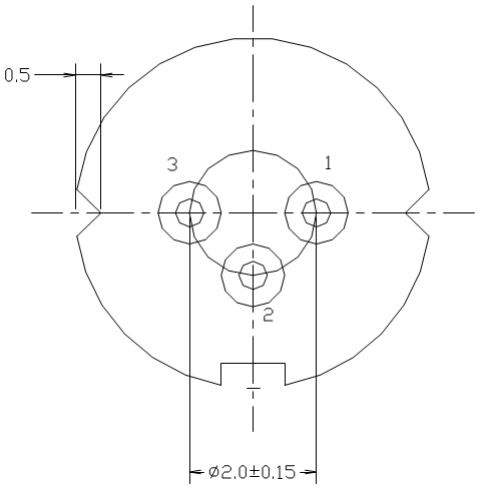
- Optical Leveler
- Laser Module

◆ FEATURES

- Visible Light Output ： λp = 639 nm
- Optical Power Output ： 20mW CW
- Package Type ： TO-18(Φ5.6mm)
- Built-in Photo Diode for Monitoring Laser Diode
- TM mode oscillation, Single mode

◆ 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)

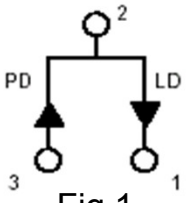


Fig.1

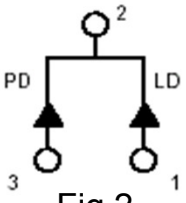


Fig.2

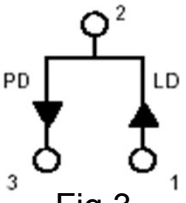


Fig.3

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◆ ABSOLUTE MAXIMUM RATING at Tc=25℃

Items	Symbols	Values	Unit
Optical Output Power	P	22	mW
Laser Diode Reverse Voltage	V	10	V
Photo Diode Reverse Voltage	V	30	V
Operating Temperature	T_{opr}	-10 ~ +50	℃
Storage Temperature	T_{stg}	-40 ~ +85	℃

◆ ELECTRICAL and OPTICAL CHARACTERISTICS at Tc=25℃

Items	Symbols	Min.	Typ.	Max.	Unit	Condition
Optical Output Power	P_o	-	20	-	mW	-
Threshold Current	I_{th}	-	50	60	mA	-
Operating Current	I_{op}	-	75	85	mA	Po=20mW
Operating Voltage	V_{op}	-	2.3	2.6	V	Po=20mW
Slope Efficiency	η_s	0.4	0.7	1.0	mW/mA	Po=20mW
Lasing Wavelength	λ_p	634	639	644	nm	Po=20mW
Beam Divergence	$\theta_{//}$	6	9	12	deg	Po=20mW
	$\theta_{\perp}$	25	30	35	deg	Po=20mW
Beam Angle	$\Delta\theta_{//}$	-3	-	3	deg	Po=20mW
	$\Delta\theta_{\perp}$	-3	-	3	deg	Po=20mW
Monitor Current	I_m	0.1	0.2	0.4	mA	Po=20mW
Optical Distance	ΔX, ΔY, ΔZ	-	-	± 60	um	-

NOTICE : QL63H5SA/B/C-R1 to be operated on APC

The above product specifications are subject to change without notice.

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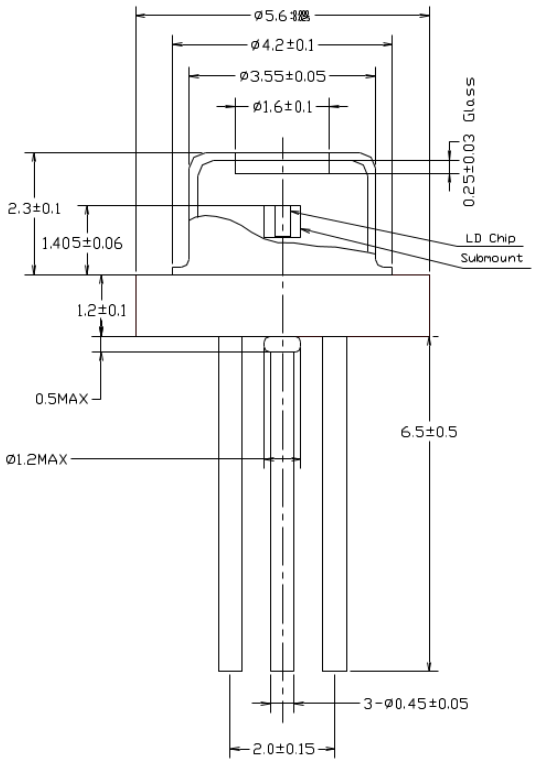
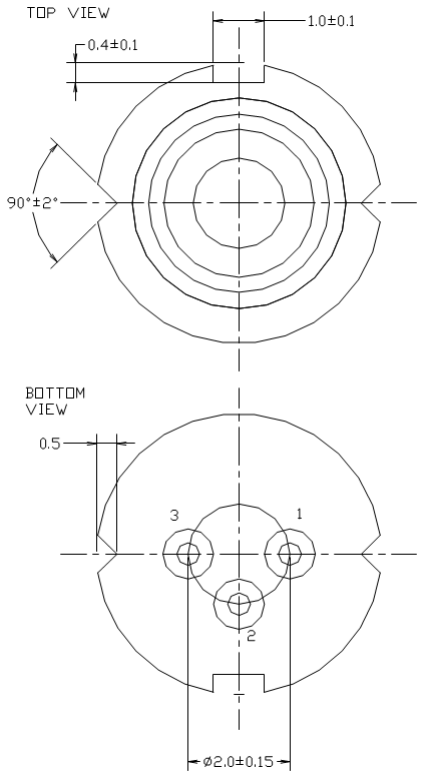
◆ PACKAGE DIMENSION





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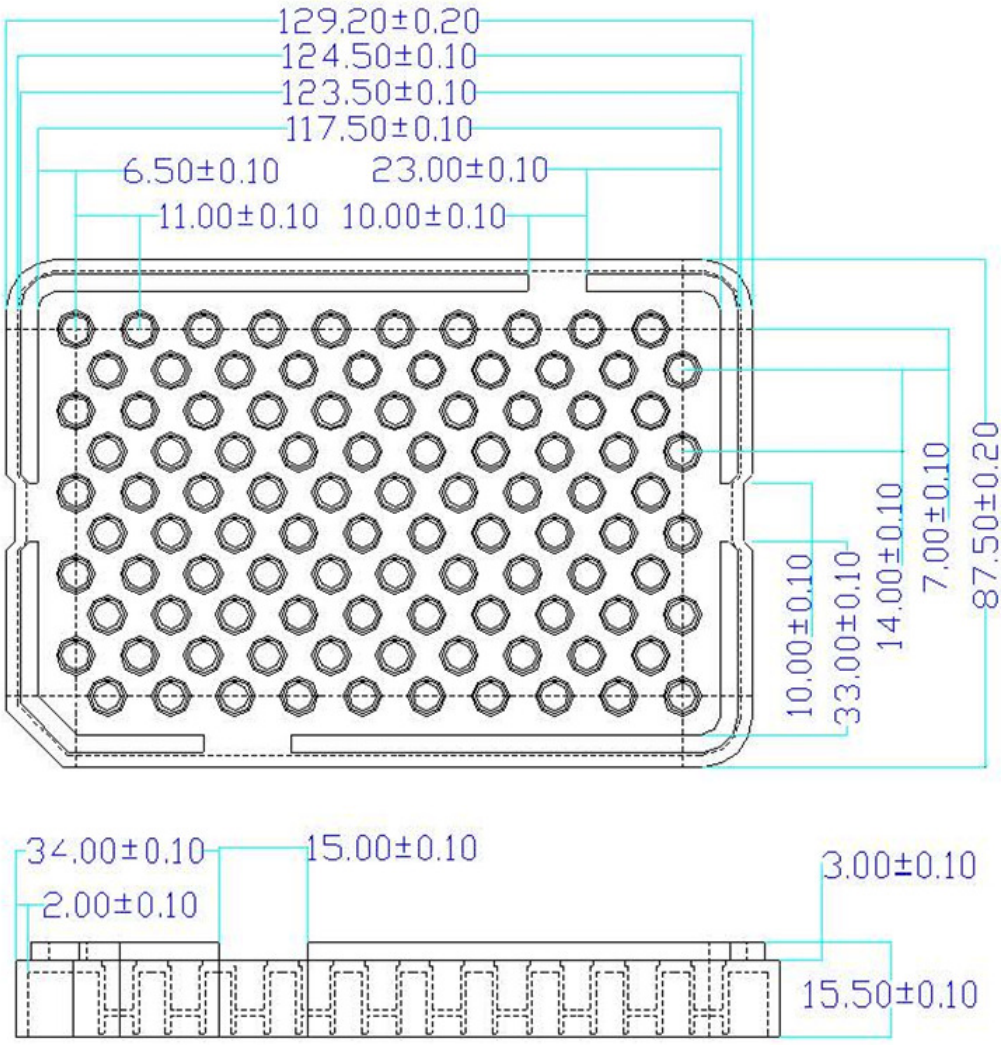
◆ PACKING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124.50±0.10
123.50±0.10
117.50±0.10
6.50±0.10
23.00±0.10
11.00±0.10
10.00±0.10
87.50±0.20
7.00±0.10
14.00±0.10
33.00±0.10
10.00±0.10
34.00±0.10
15.00±0.10
2.00±0.10
3.00±0.10
15.50±0.10