

QSI LASER DIODE SPECIFICATIONS FOR APPROVAL

Tentative

Customer :

Model : QL63G5SA/B/C-R1

Signature of Approval

Approved by _____

Checked by _____

Issued by _____

Approval by Customer



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QL63G5SA/B/C-R1

InGaAlP Laser Diode

Quantum Semiconductor International Co., Ltd.

Ver.2, Aug. 2014

◆ OVERVIEW

QL63G5SA/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 15mW for optoelectronic devices such as Optical Leveler and Modules.

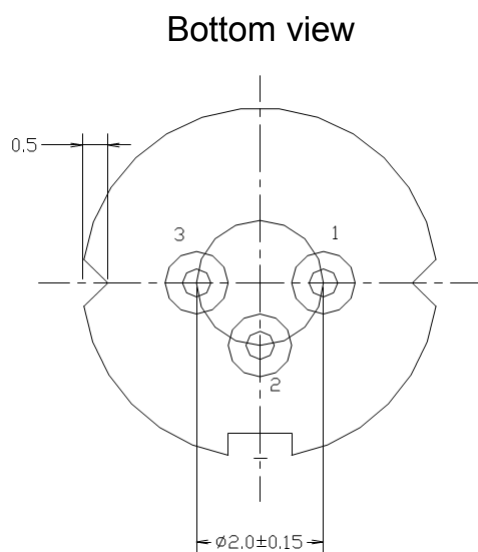
◆ APPLICATION

- Optical Leveler
- Laser Module

◆ FEATURES

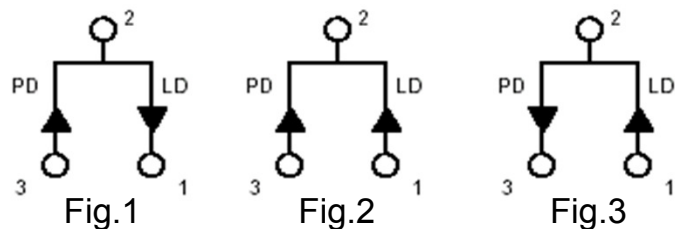
- Visible Light Output : $\lambda_p = 638 \text{ nm}$
- Optical Power Output : 15mW CW
- Package Type : TO-18($\phi 5.6\text{mm}$)
- Built-in Photo Diode for Monitoring Laser Diode
- TM mode oscillation, Single mode

◆ ELECTRICAL CONNECTION



Pin Configuration

| | |
|---|-------------------------------|
| A | LD cathode, PD anode (Fig. 1) |
| B | LD , PD anode (Fig. 2) |
| C | LD anode, PD cathode (Fig. 3) |



◆ **ABSOLUTE MAXIMUM RATING at Tc=25 °C**

| Items | Symbols | Values | Unit |
|-----------------------------|------------------|-----------|------|
| Optical Output Power | P | 18 | mW |
| Laser Diode Reverse Voltage | V | 10 | V |
| Photo Diode Reverse Voltage | V | 30 | V |
| Operating Temperature | T _{opr} | -10 ~ +50 | °C |
| Storage Temperature | T _{stg} | -40 ~ +85 | °C |

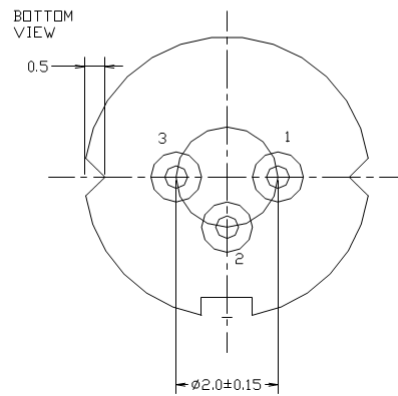
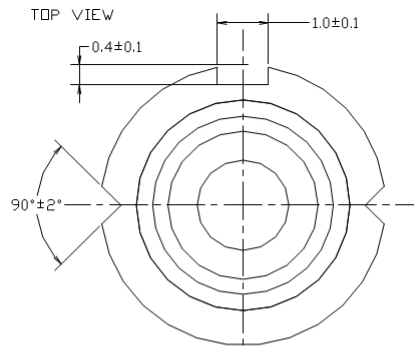
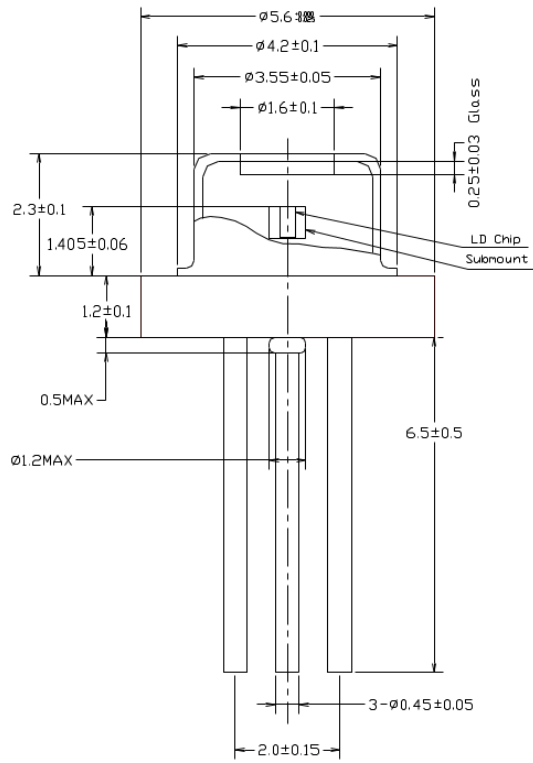
◆ **ELECTRICAL and OPTICAL CHARACTERISTICS at Tc=25 °C**

| Items | Symbols | Min. | Typ. | Max. | Unit | Condition |
|----------------------|------------------|------|------|------|-------|-----------|
| Optical Output Power | P _o | - | 15 | - | mW | - |
| Threshold Current | I _{th} | - | 40 | 50 | mA | - |
| Operating Current | I _{op} | - | 60 | 70 | mA | Po=15mW |
| Operating Voltage | V _{op} | - | 2.3 | 2.6 | V | Po=15mW |
| Slope Efficiency | η _s | 0.5 | 0.8 | 1.1 | mW/mA | Po=15mW |
| Lasing Wavelength | λ _p | 633 | 638 | 643 | nm | Po=15mW |
| Beam Divergence | θ | 6 | 9 | 12 | deg | Po=15mW |
| | θ _⊥ | 25 | 30 | 35 | deg | Po=15mW |
| Beam Angle | Δθ | -3 | - | 3 | deg | Po=15mW |
| | Δθ _⊥ | -3 | - | 3 | deg | Po=15mW |
| Monitor Current | I _m | 0.05 | 0.15 | 0.3 | mA | Po=15mW |
| Optical Distance | ΔX, ΔY, ΔZ | - | - | ± 60 | um | - |

NOTICE : QL63G5SA/B/C-R1 to be operated on APC

The above product specifications are subject to change without notice.

◆ PACKAGE DIMENSION



◆ PACKING

