

# **QSI LASER DIODE**

## **SPECIFICATIONS FOR APPROVAL**

**Customer :**

**Model : QL63G5S-A/B/C-L**

**Signature of Approval**

**Approved by** \_\_\_\_\_

**Checked by** \_\_\_\_\_

**Issued by** \_\_\_\_\_

**Approval by Customer**

\_\_\_\_\_



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**[WWW.QSILaser.com](http://WWW.QSILaser.com)**

# QL63G5S-A/B/C-L

## InGaAlP Laser Diode

Quantum Semiconductor International Co., Ltd.

ver.0 Nov. 2009

### ◆ OVERVIEW

QL63G5S-A/B/C-L 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

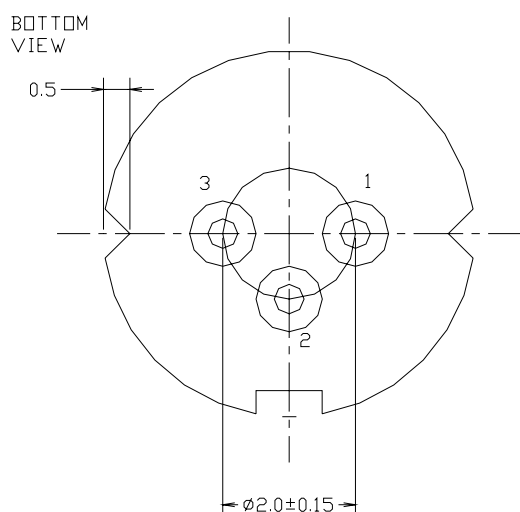
- Laser Pointer
- Optical Leveler
- Laser Module

### ◆ FEATURES

- Visible Light Output :  $\lambda_p = 635 \text{ nm}$
- Optical Power Output : 15mW CW
- Package Type : TO-18 (5.6mm $\phi$ )
- Built-in Photo Diode for Monitoring Laser Diode

### ◆ 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) |

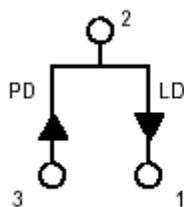


Fig. 1

QL63G5SA-L

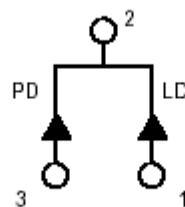


Fig. 2

QL63G5SB-L

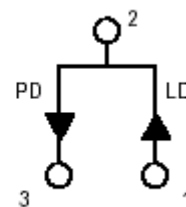


Fig. 3

QL63G5SC-L

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

| Items                       | Symbols | Values    | Unit |
|-----------------------------|---------|-----------|------|
| Optical Output Power        | P       | 18        | mW   |
| Laser Diode Reverse Voltage | V       | 2         | V    |
| Photo Diode Reverse Voltage | V       | 30        | V    |
| Operating Temperature       | Topr    | -10 ~ +50 | °C   |
| Storage Temperature         | Tstg    | -40 ~ +85 | °C   |

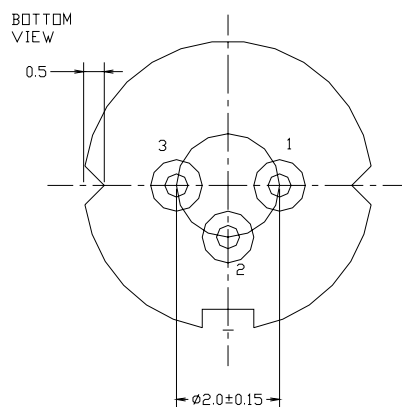
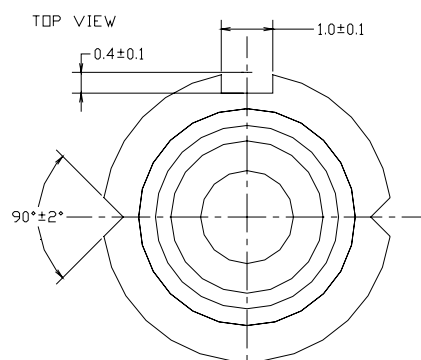
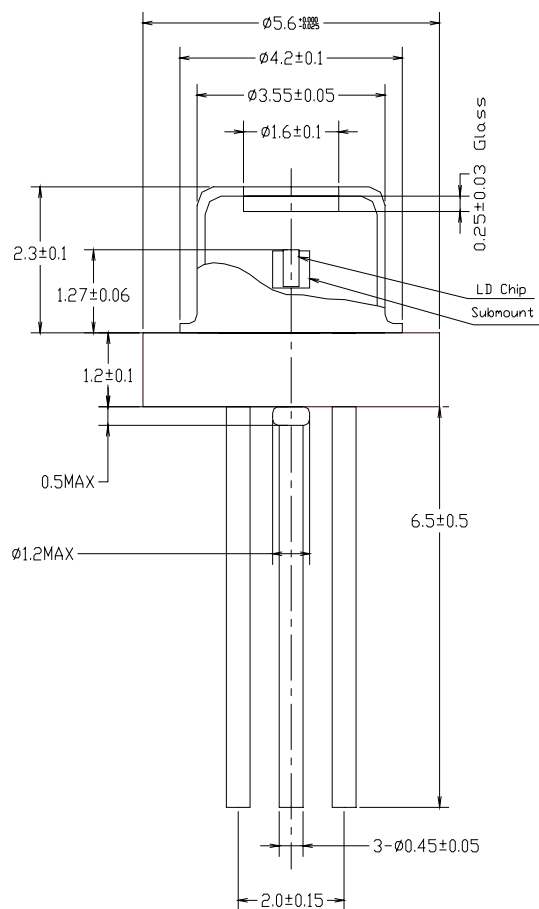
◆ **ELECTRICAL and OPTICAL CHARACTERISTICS at Tc=25°C**

| Items                | Symbols          | Min. | Typ. | Max. | Unit | Condition            |
|----------------------|------------------|------|------|------|------|----------------------|
| Optical Output Power | P <sub>o</sub>   | -    | 15   | -    | mW   | -                    |
| Threshold Current    | I <sub>th</sub>  | -    | 30   | 40   | mA   | -                    |
| Operating Current    | I <sub>op</sub>  | -    | 50   | 65   | mA   | P <sub>o</sub> =15mW |
| Operating Voltage    | V <sub>op</sub>  | -    | 2.3  | 2.6  | V    | P <sub>o</sub> =15mW |
| Lasing Wavelength    | λ <sub>p</sub>   | -    | 639  | 645  | nm   | P <sub>o</sub> =15mW |
| Beam Divergence      | θ <sub>  </sub>  | 6    | 9    | 13   | deg  | P <sub>o</sub> =15mW |
|                      | θ <sub>⊥</sub>   | 25   | 30   | 35   | deg  | P <sub>o</sub> =15mW |
| Beam Angle           | Δθ <sub>  </sub> | -    | -    | ±2.0 | deg  | P <sub>o</sub> =15mW |
|                      | Δθ <sub>⊥</sub>  | -    | -    | ±3.0 | deg  | P <sub>o</sub> =15mW |
| Monitor Current      | I <sub>m</sub>   | 0.05 | 0.15 | 0.5  | mA   | P <sub>o</sub> =15mW |
| Optical Distance     | ΔX, ΔY, ΔZ       | -    | -    | ±60  | μm   |                      |

**NOTICE : QL63G5S-A/B/C-L to be operated on APC**

The above product specifications are subject to change without notice.

## ◆ PACKAGE DIMENSION



## ◆PACKING

