

# QSI LASER DIODE SPECIFICATIONS FOR APPROVAL

Customer :.

Model : QL85R63A/B/D/E

**TENTATIVE**

Signature of Approval

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

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

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

Approval by Customer

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QSI Co., Ltd.

315-9, Cheonheung-ri, Sungger-eup,  
Cheonan-city, Chungnam, Korea 330-836

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

# QL85R63A/B/D/E

## AlGaAs Laser Diode

Quantum Semiconductor International Co., Ltd.

Ver. 2 JAN. 2017

### ◆ OVERVIEW

QL85R63A/B/D/E is a MOCVD grown 850nm band AlGaAs laser diode with quantum well structure. It's an attractive light source, with a typical light output power of 200mW for industrial optical module and sensor applications.

### ◆ APPLICATION

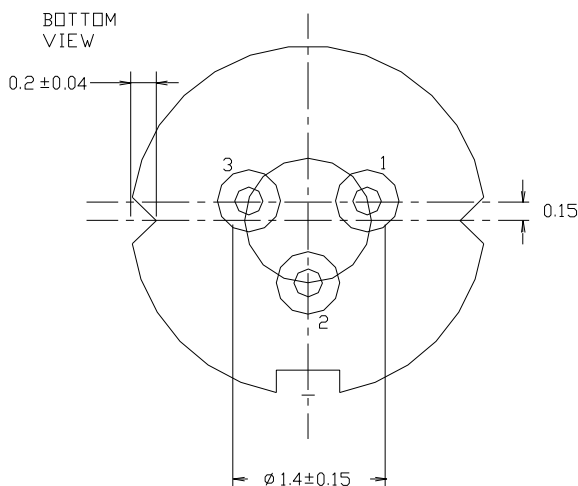
- Motion Recognition Sensor
- Industrial Optical Module

### ◆ FEATURES

- Visible Light Output :  $\lambda_p = 850 \text{ nm}$
- Optical Power Output : 200mW CW
- Package Type : TO-CAN (3.3mm  $\phi$ , with window glass)

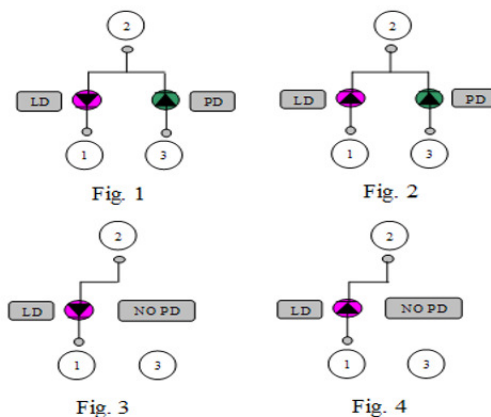
### ◆ ELECTRICAL CONNECTION

#### Bottom View



#### Pin Configuration

|          |                               |
|----------|-------------------------------|
| <b>A</b> | LD Cathode, PD Anode (Fig. 1) |
| <b>B</b> | LD Anode, PD Anode (Fig. 1)   |
| <b>D</b> | LD Cathode, w/o PD (Fig. 3)   |
| <b>E</b> | LD Anode, w/o PD (Fig. 4)     |



◆ ABSOLUTE MAXIMUM RATING at Tc=25°C

| Items                       | Symbols | Values    | Unit |
|-----------------------------|---------|-----------|------|
| Optical Output Power        | P       | 210       | mW   |
| Laser Diode Reverse Voltage | V       | 2         | V    |
| Operating Temperature       | Topr    | -10 ~ +60 | °C   |
| Storage Temperature         | Tstg    | -40 ~ +85 | °C   |

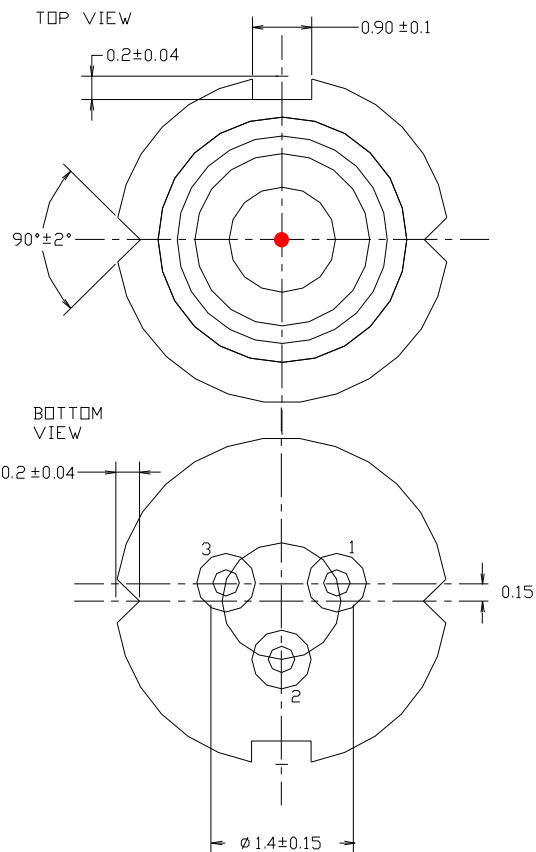
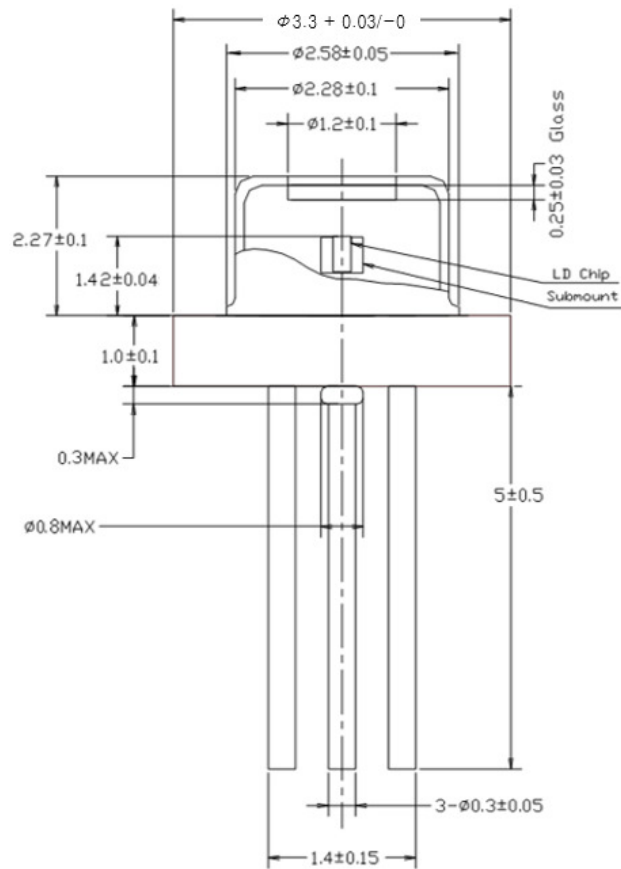
◆ ELECTRICAL and OPTICAL CHARACTERISTICS at Tc=25°C

| Items                | Symbols                        | Min. | Typ. | Max. | Unit  | Condition |
|----------------------|--------------------------------|------|------|------|-------|-----------|
| Optical Output Power | Po                             | -    | 200  | -    | mW    | -         |
| Threshold Current    | Ith                            | -    | 60   | 80   | mA    | -         |
| Operating Current    | Iop                            | 180  | 210  | 240  | mA    | Po=200mW  |
| Operating Voltage    | Vop                            | 1.8  | 2.4  | 2.7  | V     | Po=200mW  |
| Slope Efficiency     | SE                             | 0.8  | 1.2  | 1.6  | mW/mA | Po=200mW  |
| Lasing Wavelength    | $\lambda_p$                    | 840  | 850  | 860  | nm    | Po=200mW  |
| Beam Divergence      | $\theta_{  }$                  | 5    | 9    | 12   | deg   | Po=200mW  |
|                      | $\theta_{\perp}$               | 13   | 18   | 23   | deg   | Po=200mW  |
| Beam Angle           | $\Delta\theta_{  }$            | -    | -    | ±3.0 | deg   | Po=200mW  |
|                      | $\Delta\theta_{\perp}$         | -    | -    | ±3.0 | deg   | Po=200mW  |
| Monitor Current      | I <sub>m</sub>                 | 0.01 | 0.25 | 1.2  | mA    | Po=200mW  |
| Optical Distance     | $\Delta X, \Delta Y, \Delta Z$ | -    | -    | ±60  | μm    | -         |

**NOTICE : QL85R63A/B to be operated on APC circuit.**

The above product specifications are subject to change without notice.

# ◆ PACKAGE DIMENSION



◆ PACKING

