

QSI LASER DIODE SPECIFICATIONS FOR APPROVAL

Customer :.

Model : QL65D53A/B

TENTATIVE

Signature of Approval

Approved by _____

Checked by _____

Issued by _____

Approval by Customer



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QL65D53A/B

InGaAIP Laser Diode

Quantum Semiconductor International Co., Ltd.

Ver. 1 OCT. 2014

◆ OVERVIEW

QL65D53A/B is a MOCVD grown 650nm band *InGaAIP* laser diode with quantum well structure.

It's an attractive light source, with a typical light output power of 5mW for optoelectronic devices such as Laser Pointer & Bar Code Reader.

◆ APPLICATION

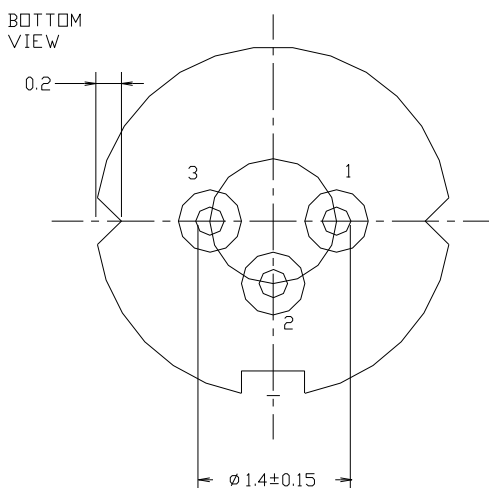
- Gun Sight
- Medical Device
- Sensor

◆ FEATURES

- Visible Light Output : $\lambda_p = 650 \text{ nm}$
- Optical Power Output : 5mW CW
- Package Type : TO-CAN (3.3mm ϕ , with window glass)
- 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) |

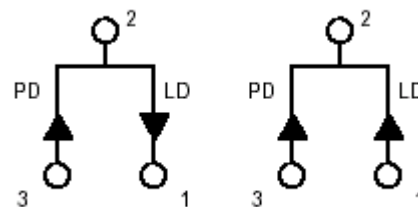


Fig. 1

QL65D53A

Fig. 2

QL65D53B

◆ ABSOLUTE MAXIMUM RATING at Tc=25°C

| Items | Symbols | Values | Unit |
|-----------------------------|---------|-----------|------|
| Optical Output Power | P | 7 | 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 |

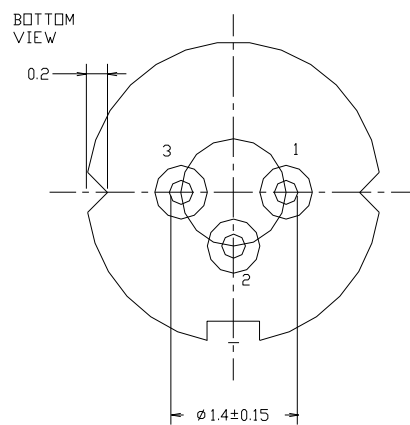
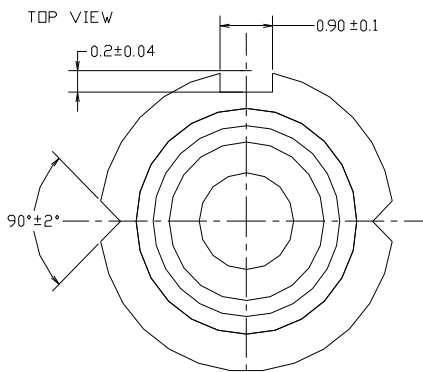
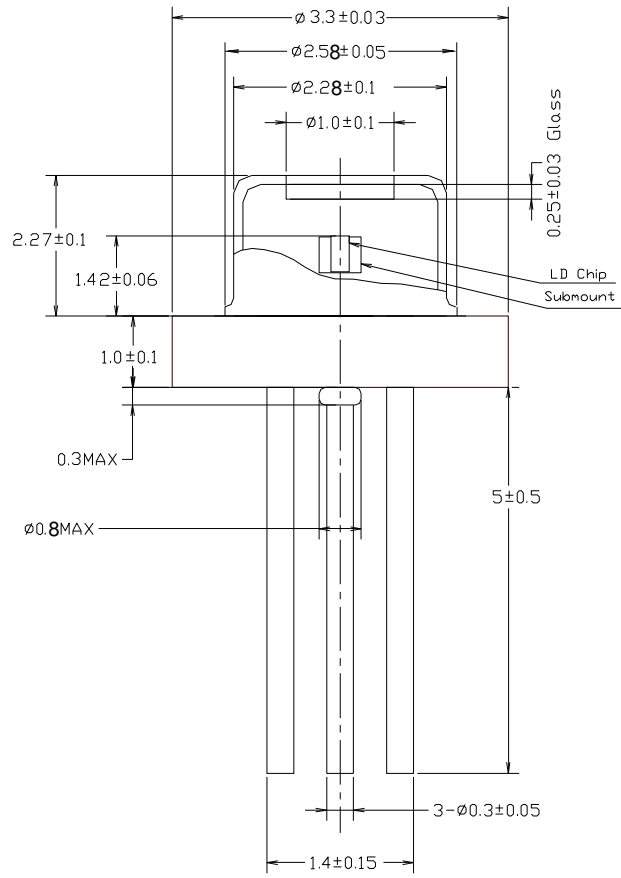
◆ ELECTRICAL and OPTICAL CHARACTERISTICS at Tc=25°C

| Items | Symbols | Min. | Typ. | Max. | Unit | Condition |
|----------------------|--------------------------------|------|------|------|-------|-----------|
| Optical Output Power | Po | - | 5 | - | mW | - |
| Threshold Current | Ith | - | 10 | 17 | mA | - |
| Operating Current | Iop | - | 17 | 25 | mA | Po=5mW |
| Operating Voltage | Vop | 2.0 | 2.3 | 2.5 | V | Po=5mW |
| Slope Efficiency | SE | 0.6 | 0.9 | 1.2 | mW/mA | Po=5mW |
| Lasing Wavelength | λ_p | 645 | 650 | 660 | nm | Po=5mW |
| Beam Divergence | $\theta_{ }$ | 4 | 9 | 14 | deg | Po=5mW |
| | θ_{\perp} | 25 | 35 | 45 | deg | Po=5mW |
| Beam Angle | $\Delta\theta_{ }$ | - | - | ±3.0 | deg | Po=5mW |
| | $\Delta\theta_{\perp}$ | - | - | ±3.0 | deg | Po=5mW |
| Monitor Current | I _m | 0.05 | 0.15 | 0.4 | mA | Po=5mW |
| Optical Distance | $\Delta X, \Delta Y, \Delta Z$ | - | - | ±60 | μm | - |

NOTICE : QL65D53A/B to be operated on APC circuit.

The above product specifications are subject to change without notice.

◆ PACKAGE DIMENSION



◆ PACKING

