

LASER DIODE SPECIFICATIONS

Customer :

Model : QL63H5S-A/B/C

Approved by

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QL63H5S-A/B/C

InGaAlP Laser Diode

Ver. 2 2005

◆ OVERVIEW

QL63H5S-A/B/C is a MOCVD grown 635 nm band *InGaAlP* laser diode with quantum well structure. It's an attractive light source, with a typical light output power of 20 mW for optoelectronic devices such as Optical Leveler and Modules.

◆ APPLICATION

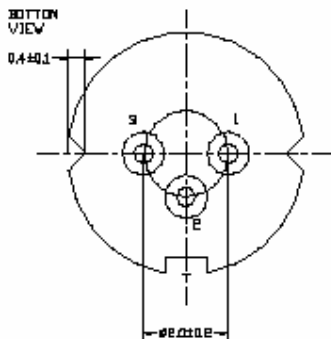
- Bar Code Scanner
- Laser Module

◆ FEATURES

- Visible Light Output : $\lambda_p = 635 \text{ nm}$
- Optical Power Output : 20 mW CW
- Package Type : TO-18 (5.6 mm)
- 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) |

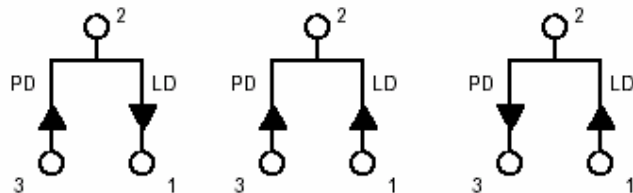


Fig. 1

QL63H5SA

Fig. 2

QL63H5SB

Fig. 3

QL63H5SC

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

| Items | Symbols | Values | Unit |
|-----------------------------|---------|-----------|------|
| Optical Output Power | P | 24 | 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 ¹⁾²⁾**

| Items | Symbols | Min. | Typ. | Max. | Unit | Condition |
|-------------------------------|--------------------------------|------|------|------|------|-----------|
| Optical Output Power | Po | - | 20 | - | mW | - |
| Threshold Current | Ith | - | 30 | 50 | mA | Po=20mW |
| Operating Current | Iop | - | 60 | 80 | mA | Po=20mW |
| Operating Voltage | Vop | - | 2.3 | 2.6 | V | Po=20mW |
| Lasing Wavelength | λ_p | 630 | 639 | 645 | nm | Po=20mW |
| Beam Divergence ³⁾ | $\theta_{ }$ | 6 | 8 | 11 | deg | Po=20mW |
| | θ_{\perp} | 25 | 30 | 35 | deg | Po=20mW |
| Beam Angle | $\Delta\theta_{ }$ | - | - | ±3.0 | deg | Po=20mW |
| | $\Delta\theta_{\perp}$ | - | - | ±3.0 | deg | Po=20mW |
| Monitor Current | I _m | 0.05 | 0.25 | 0.7 | mA | Po=20mW |
| Optical Distance | $\Delta X, \Delta Y, \Delta Z$ | - | - | ±60 | μm | - |

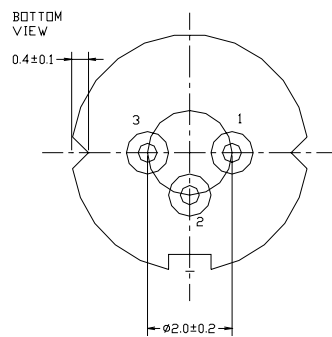
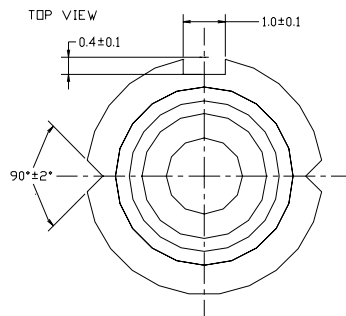
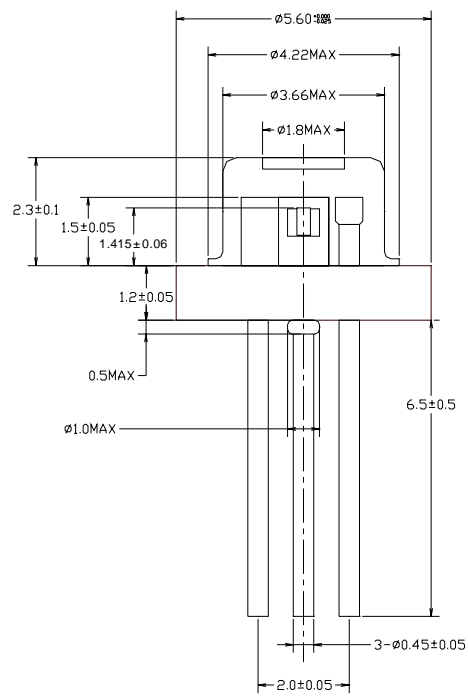
1) Initial values 2) All above values are evaluated with lab measuring apparatus

3) Full angle at half maximum

NOTICE : QL63H5-A/B/C to be operated on APC

The above product specifications are subject to change without notice.

◆ PACKAGE DIMENSION



◆PACKING

