

LD65F5S-A/B/C

InGaAlP Laser Diode

Quantum Semiconductor International Co., Ltd.

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◆ OVERVIEW

LD65F5S-A/B/C is a MOCVD grown 650nm band *InGaAlP* laser diode with quantum well structure. It's an attractive light source, with a typical light output power of 10mW for optoelectronic devices such as Laser Pointer & Bar Code Reader.

◆ APPLICATION

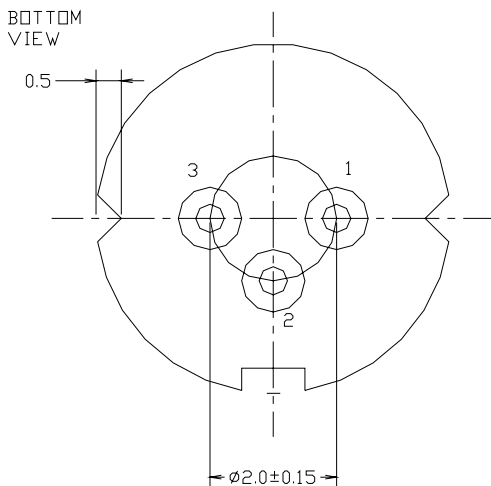
- Optical Leveler
- Laser Pointer
- Bar Code Reader

◆ FEATURES

- Visible Light Output : $\lambda_p = 650 \text{ nm}$
- Optical Power Output : 10mW CW
- Package Type : TO-18 (5.6mm ϕ)
- 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) |

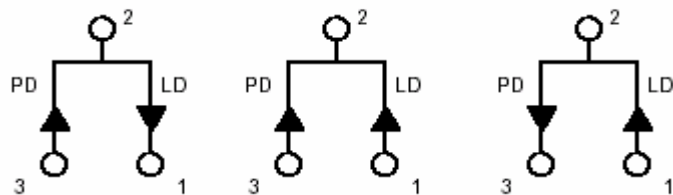


Fig. 1

LD65F5SA

Fig. 2

LD65F5SB

Fig. 3

LD65F5SC

◆ ABSOLUTE MAXIMUM RATING at Tc=25°C

| Items | Symbols | Values | Unit |
|-----------------------------|---------|-----------|------|
| Optical Output Power | P | 12 | 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 |

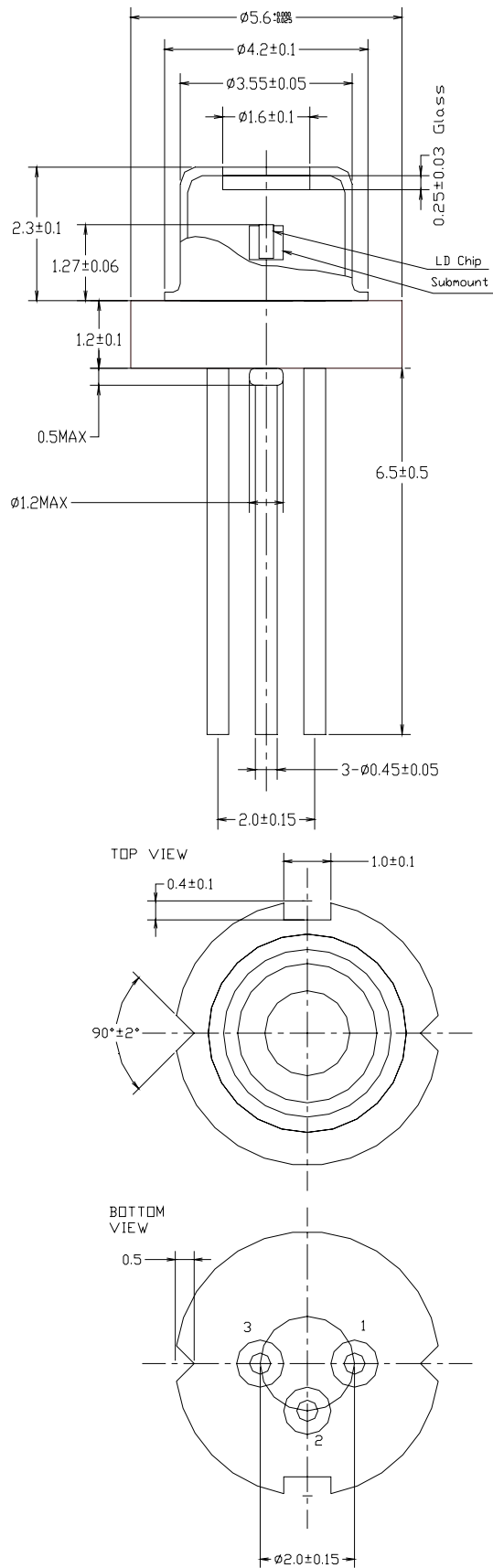
◆ ELECTRICAL and OPTICAL CHARACTERISTICS at Tc=25°C

| Items | Symbols | Min. | Typ. | Max. | Unit | Condition |
|----------------------|--------------------------------|------|------|------|-------|-----------|
| Optical Output Power | Po | - | 10 | - | mW | - |
| Threshold Current | Ith | - | 20 | 25 | mA | - |
| Operating Current | Iop | - | 36 | 45 | mA | Po=10mW |
| Slope Efficiency | SE | 0.4 | 0.6 | 1.0 | mW/mA | 5~10mW |
| Operating Voltage | Vop | - | 2.3 | 2.6 | V | Po=10mW |
| Lasing Wavelength | λ_p | 645 | 655 | 660 | nm | Po=10mW |
| Beam Divergence | $\theta_{ }$ | 6 | 8 | 12 | deg | Po=10mW |
| | θ_{\perp} | 22 | 30 | 36 | deg | Po=10mW |
| Beam Angle | $\Delta\theta_{ }$ | - | - | ±2 | deg | Po=10mW |
| | $\Delta\theta_{\perp}$ | - | - | ±3 | deg | Po=10mW |
| Monitor Current | Im | 0.05 | 0.15 | 0.3 | mA | Po=10mW |
| Optical Distance | $\Delta X, \Delta Y, \Delta Z$ | - | - | ±80 | μm | - |

NOTICE : LD65F5S-A/B/C to be operated on APC

The above product specifications are subject to change without notice.

◆ PACKAGE DIMENSION



◆ PACKING

