

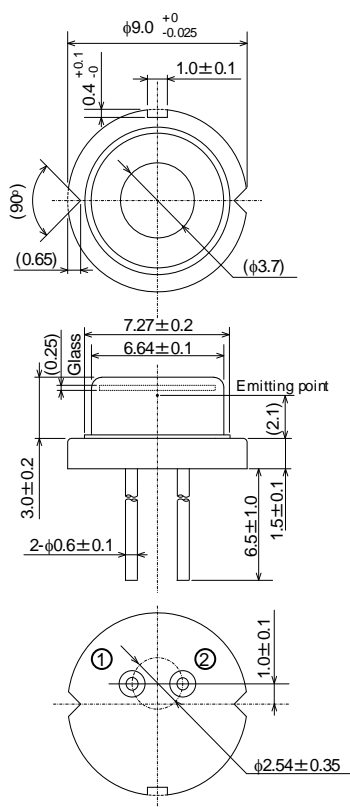
Data Sheet

HL65213HD (PRELIMINARY)

659nm / 1.2W (CW) / 1.5W (Pulse)
AlGaInP Laser Diode

USHIO

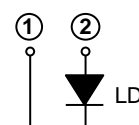
Outline



(unit:mm)

Internal Circuit

HL65213HD



Features

- Single emitter
- Optical output power: 1.2W (CW)
1.5W (Pulse)
- Wavelength: 659nm Typ.
- High wall plug efficiency: 39% Typ.
- High heat dissipation ϕ 9mm CAN package
- Multi transverse mode
- TE mode oscillation

Application

- Medical
- Laser module
- Sensing
- Light source of optical equipments

Absolute Maximum Ratings (Tc=25°C)

| Item | Symbol | Ratings | Unit |
|-----------------------------------------------------|-----------|-----------|------|
| Optical output power ^{Note3)} | Po | 1.2 | W |
| Pulse optical output power ^{Note2) Note3)} | Po(Pulse) | 1.5 | W |
| LD reverse voltage | VR(LD) | 2 | V |
| Operating temperature ^{Note3)} | Topr | -10 ~ +45 | °C |
| Storage temperature | Tstg | -40 ~ +85 | °C |

Note1) Operating temperature is defined by Case temperature "Tc". High increase in temperature of LD chip itself is expected during operation due to high current density. Thus, without proper heat dissipation, it is observed that no specific output power is achieved or it results to LD degradation. It is advised that sufficient measure of heat dissipation should be taken so that LD's maximum operating temperature is not exceeded during actual operation.

Note2) Pulse condition: Pulse frequency \geq 50Hz, duty=33%

Note3) The relation of optical output power vs operating temperature is based on Fig.1.

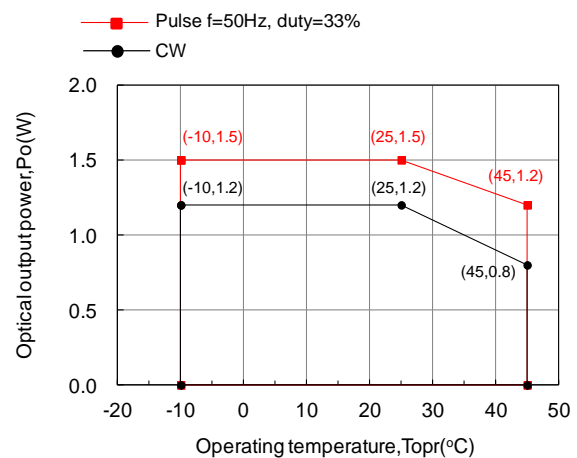


Fig.1 The relation of optical output power vs operating temperature

Optical and Electrical Characteristics (Tc=25°C)

| Parameter | Symbol | Min | Typ | Max | Unit | Test Condition |
|--------------------------------------------------------------------|------------------|-----|------|------|------|------------------|
| Threshold current | Ith | - | 400 | 550 | mA | - |
| Operating current | Iop | - | 1350 | 1600 | mA | Po=1.2W |
| Operating voltage | Vop | - | 2.3 | 2.7 | V | Po=1.2W |
| Beam divergence ^{Note4)} Parallel to the junction | $\theta_{//}$ | 3 | 10 | 20 | ° | Po=1.2W, FWHM |
| Beam divergence ^{Note4)} Perpendicular to the junction | θ_{\perp} | 23 | 33 | 43 | ° | Po=1.2W, FWHM |
| Lasing Wavelength | λ_p | 654 | 659 | 664 | nm | Po=1.2W |

Note4) Designed value

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