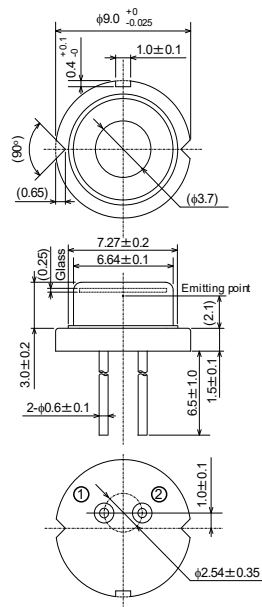


## Data Sheet

# HL63283HD

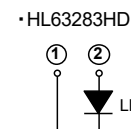
637nm / 1.2W [CW] / 1.5W [Pulse]  
AlGaInP Laser Diode

### Outline



(unit:mm)

### Internal Circuit



### Features

- Single emitter
- Optical output power: 1.2W (CW)  
1.5W (Pulse)
- Shorter wavelength: 637nm Typ.
- High wall plug efficiency: 40% Typ.
- High heat dissipation  $\phi 9$ mm CAN package
- Multi transverse mode
- TM mode oscillation

### Application

- Laser Projector
- Show Laser
- Light source of optical equipments

### Absolute Maximum Ratings (Tc=25°C)

Item	Symbol	Ratings	Unit
Optical output power <sup>Note3)</sup>	Po	1.2	W
Pulse optical output power <sup>Note2) Note3)</sup>	Po(Pulse)	1.5	W
LD reverse voltage	V <sub>R(LD)</sub>	2	V
Operating temperature <sup>Note3)</sup>	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≥50Hz, duty=33%

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

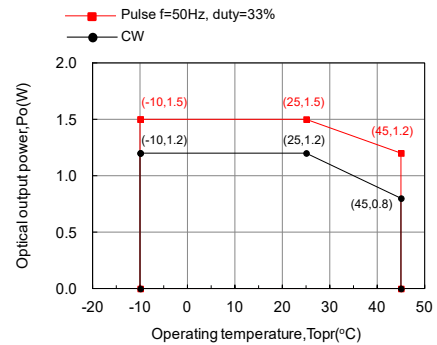


Fig. 1 The relation of optical output power vs operating temperature

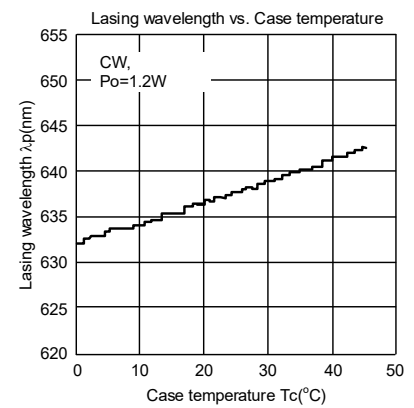
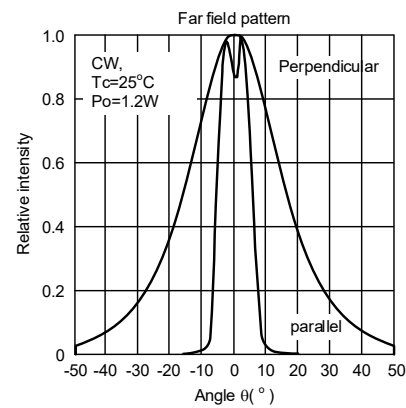
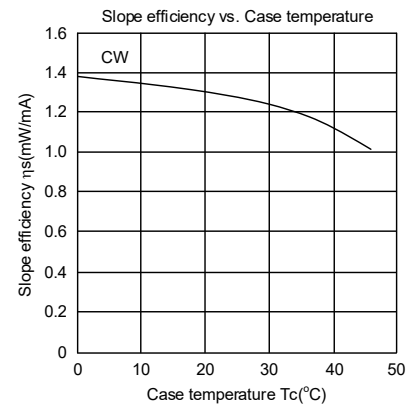
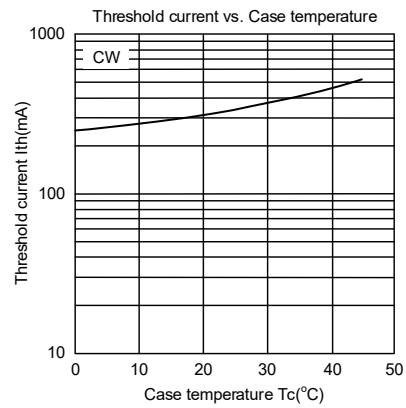
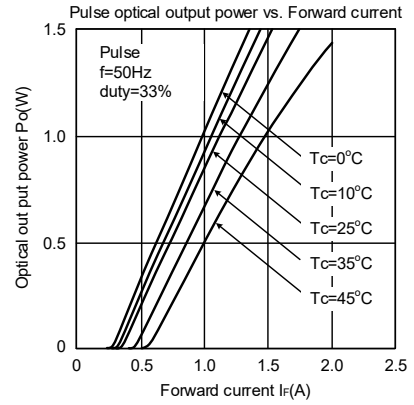
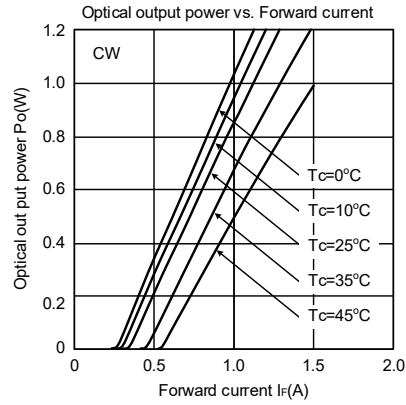
### Optical and Electrical Characteristics (Tc=25°C)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Threshold current	I <sub>th</sub>	-	340	440	mA	-
Operating current	I <sub>op</sub>	-	1300	1600	mA	Po=1.2W
Operating voltage	V <sub>op</sub>	-	2.3	2.7	V	Po=1.2W
Beam divergence <sup>Note4)</sup> Parallel to the junction	θ <sub>//</sub>	3	10	20	°	Po=1.2W, FWHM
Beam divergence <sup>Note4)</sup> Perpendicular to the junction	θ <sub>⊥</sub>	23	33	43	°	Po=1.2W, FWHM
Lasing Wavelength	λ <sub>p</sub>	632	637	641	nm	Po=1.2W

Note4) Designed value

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### Typical Characteristic Curves



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