

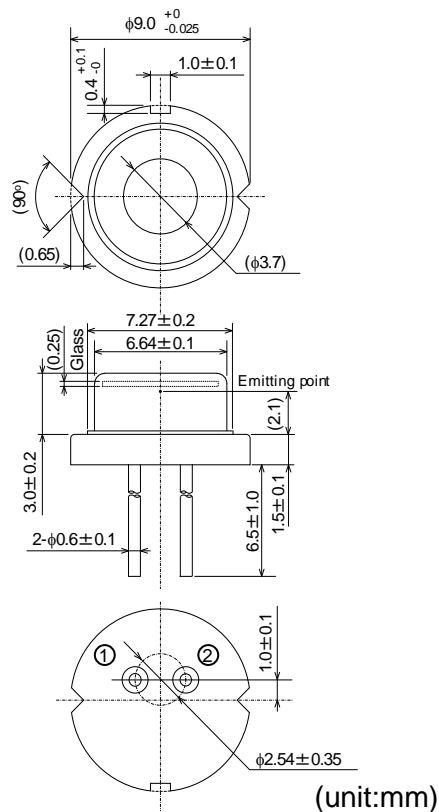
## Data Sheet

# HL63290HD

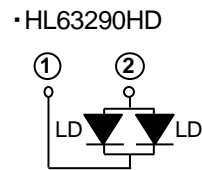
638nm / 2.2W (CW) / 2.5W (Pulse)  
AlGaInP Laser Diode

USHIO

### Outline



### Internal Circuit



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

#### Features

- Dual emitters
- Optical output power: 2.2W (CW)  
2.5W (Pulse)
- Shorter wavelength: 638nm Typ.
- High heat dissipation  $\phi$ 9mm CAN package
- Multi transverse mode
- TM mode oscillation

#### Application

- Laser Projector
- Light source of optical equipments

Item	Symbol	Ratings	Unit
Operating current <sup>Note3)</sup>	I <sub>op</sub>	2.4	A
Pulse operating current <sup>Note2) Note3)</sup>	I <sub>op</sub> (Pulse)	2.5	A
LD reverse voltage	V <sub>R(LD)</sub>	2	V
Operating temperature <sup>Note3)</sup>	T <sub>opr</sub>	-10 ~ +55	°C
Storage temperature	T <sub>stg</sub>	-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 ≥ 120Hz, duty = 30%

Note3) The relation of operating current vs operating temperature is based on Fig.1.

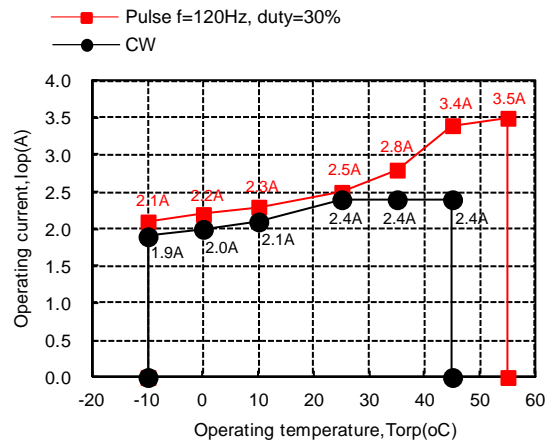


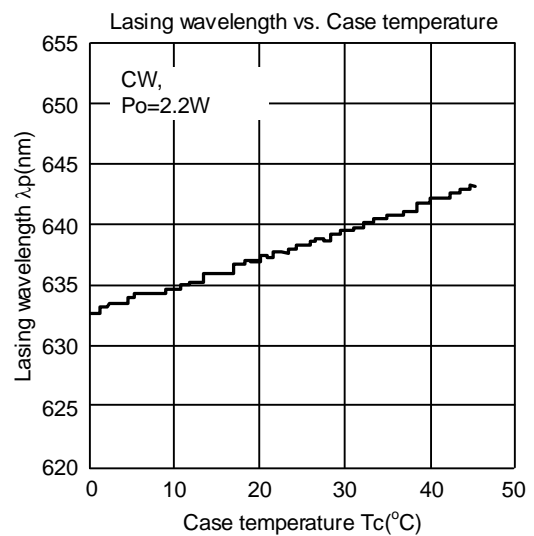
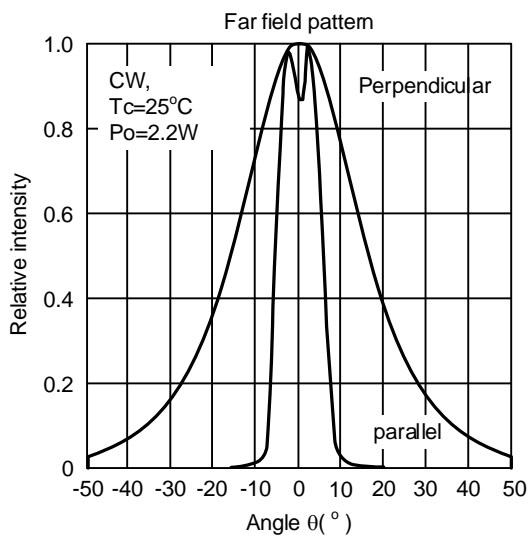
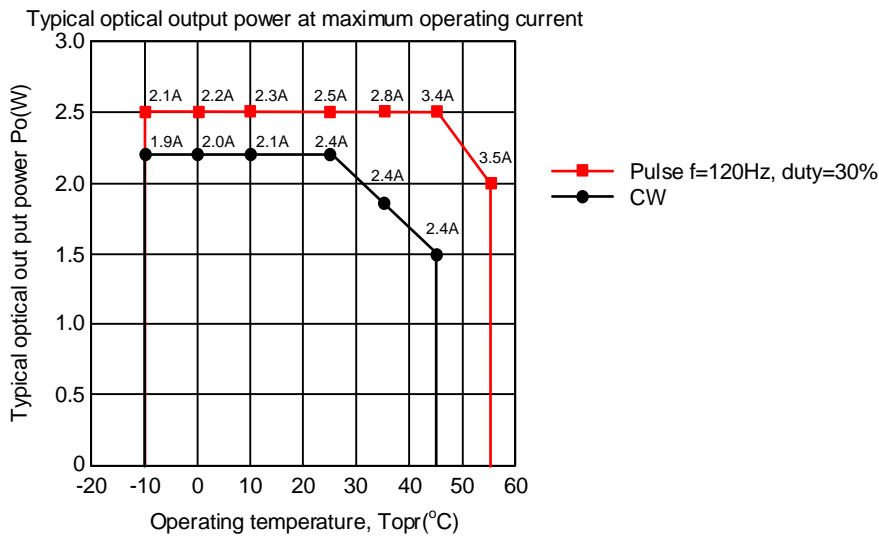
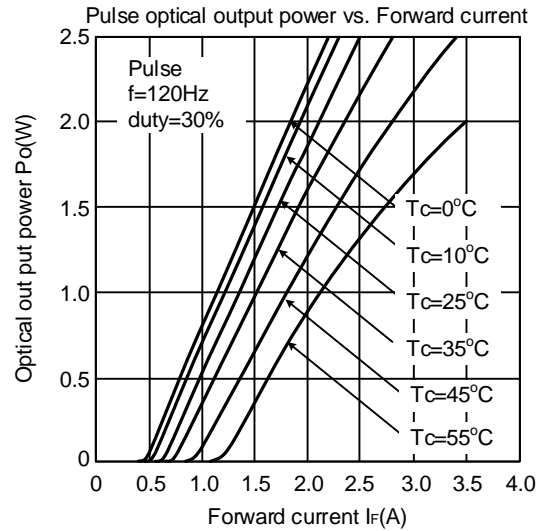
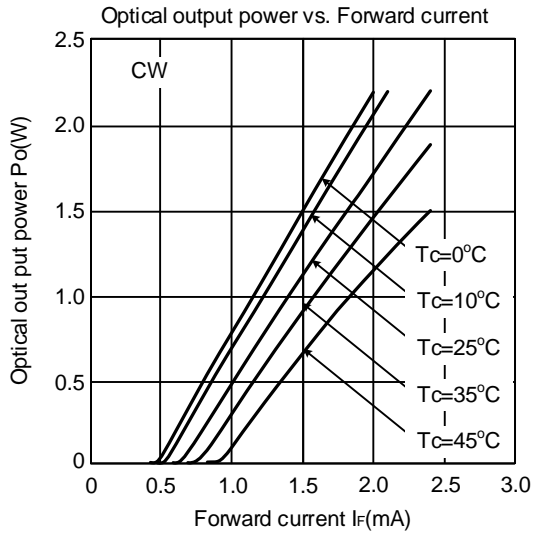
Fig.1 The relation of optical output power vs operating temperature

## Optical and Electrical Characteristics (T<sub>c</sub>=25°C, CW)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Optical output power	P <sub>o</sub>	-	2.2	-	W	I <sub>op</sub> =2.4A
Pulse optical output power	P <sub>o</sub> (Pulse)	-	2.5	-	W	I <sub>op</sub> (Pulse)=2.5A, f=120Hz, duty=30%
Threshold current	I <sub>th</sub>	-	600	750	mA	-
Operating voltage	V <sub>op</sub>	-	2.4	2.8	V	P <sub>o</sub> =2W
Beam divergence <sup>Note4)</sup> Parallel to the junction	θ <sub>//</sub>	3	10	20	°	P <sub>o</sub> =2W, FWHM
Beam divergence <sup>Note4)</sup> Perpendicular to the junction	θ <sub>⊥</sub>	23	33	43	°	P <sub>o</sub> =2W, FWHM
Lasing Wavelength	λ <sub>p</sub>	632	638	642	nm	P <sub>o</sub> =2W

Note4) Designed value

## Typical Characteristic Curves



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