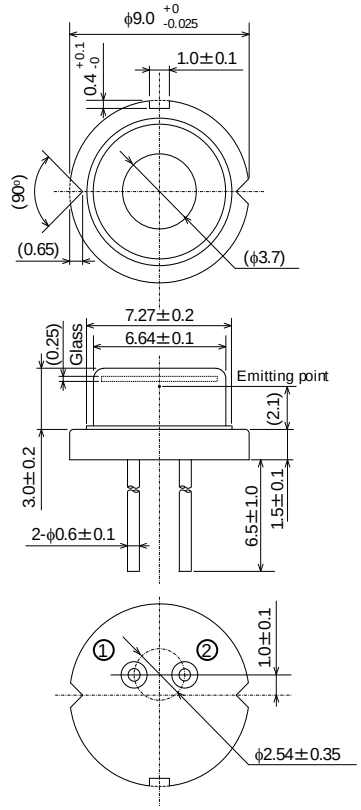
USHIO

Data Sheet

HL63283HD

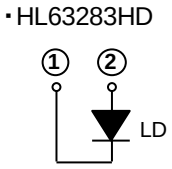
637nm／1.2W (CW)／1.5W (Pulse)
AlGaInP Laser Diode

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 ϕ9mm 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 Note3)	Po	1.2	W
Pulse optical output power Note2) Note3)	Po(Pulse)	1.5	W
LD reverse voltage	$V_{R(LD)}$	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≥50Hz, duty=33%

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

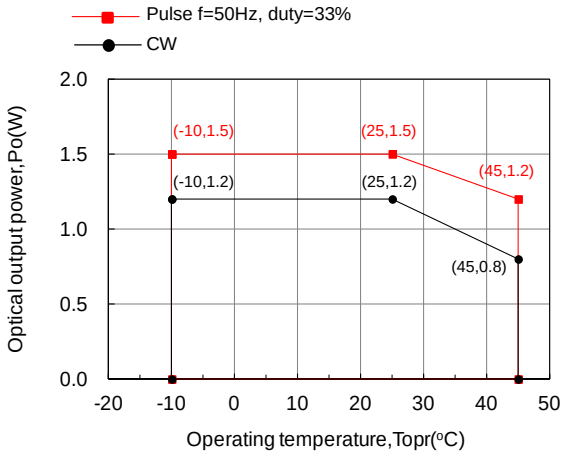


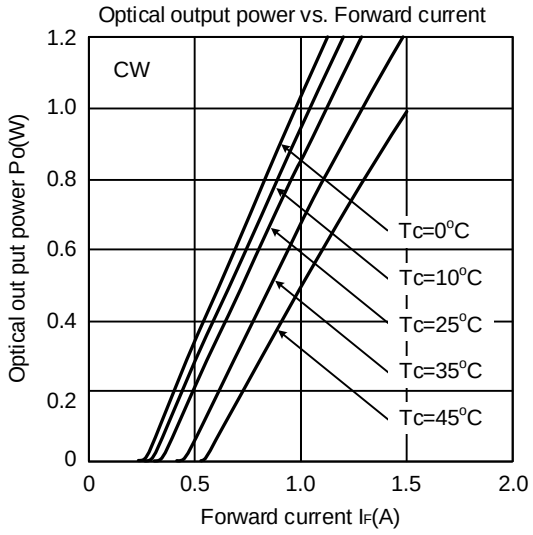
Fig.1 The relation of optical output power vs operating temperature

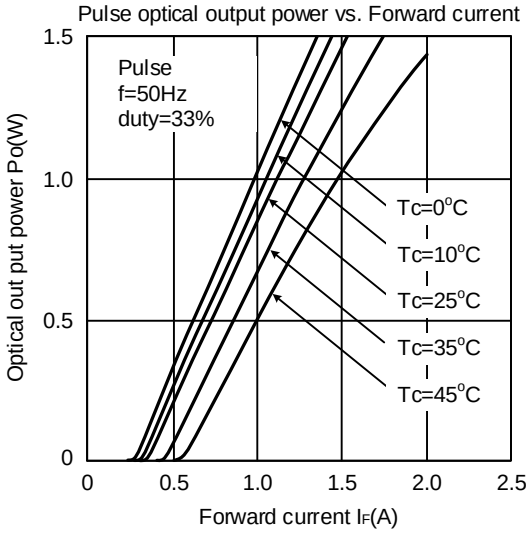
Optical and Electrical Characteristics (Tc=25°C)

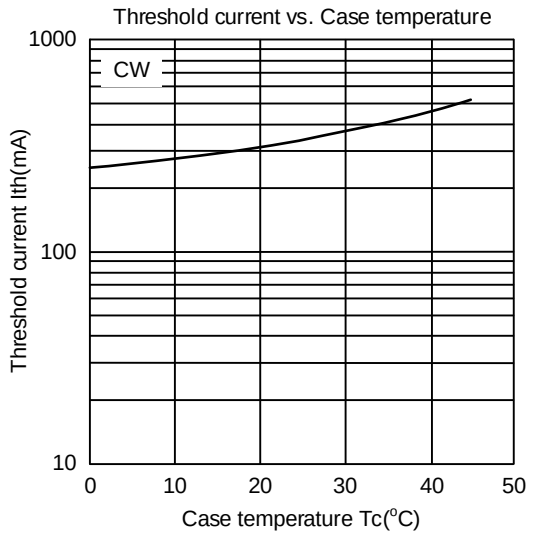
Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Threshold current	Ith	-	340	440	mA	-
Operating current	Iop	-	1300	1600	mA	Po=1.2W
Operating voltage	Vop	-	2.3	2.7	V	Po=1.2W
Beam divergence Note4) Parallel to the junction	θ//	3	10	20	o	Po=1.2W, FWHM
Beam divergence Note4) Perpendicular to the junction	θ⊥	23	33	43	o	Po=1.2W, FWHM
Lasing Wavelength	λp	632	637	641	nm	Po=1.2W

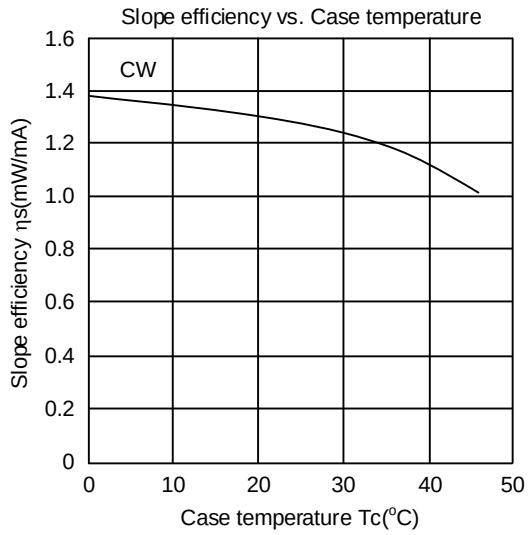
Note4) Designed value

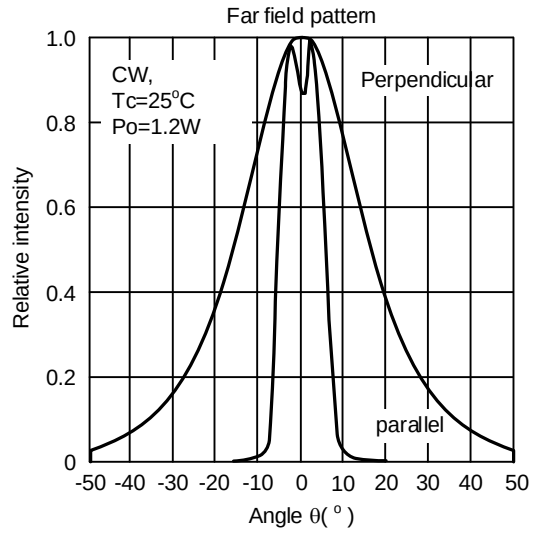
Typical Characteristic Curves

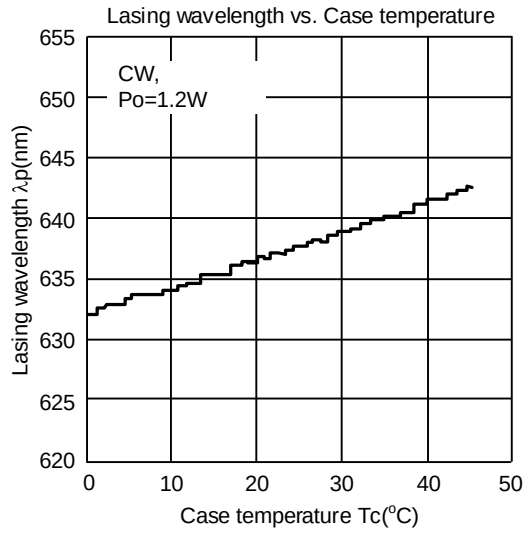












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