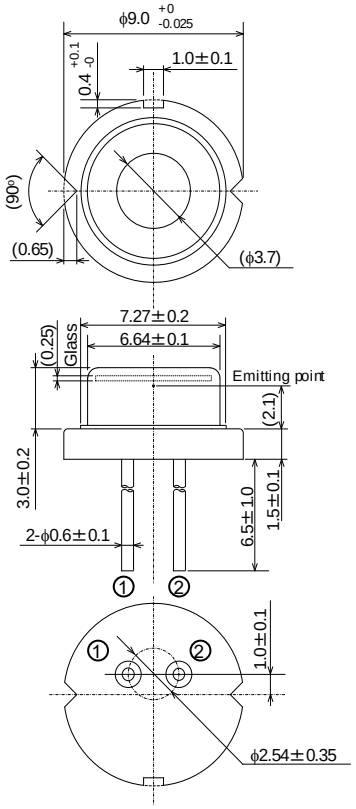
Preliminary Data Sheet

HL65293HD

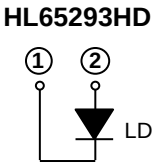
652nm／1.3W AlGaInP Laser Diode

Outline



(Unit: mm)

Internal Circuit



Features

- Single emitter
- Optical output power: 1.3W (CW)
- Wavelength: 652nm Typ.
- High wall plug efficiency: 40% Typ.
- High heat dissipation ϕ 9mm CAN package
- Multi transverse mode
- TE mode oscillation

Application

- Photodynamic therapy
- Medical, healthcare
- Life science
- Laser modules

Absolute Maximum Ratings (Tc=25°C)

Item	Symbol	Ratings	Unit
Optical output power Note2)	Po	1.3	W
LD Reverse Voltage	$V_{R(LD)}$	2	V
Operating Temperature Note1) Note2)	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) The relation of optical output power vs operating temperature is based on Fig.1.

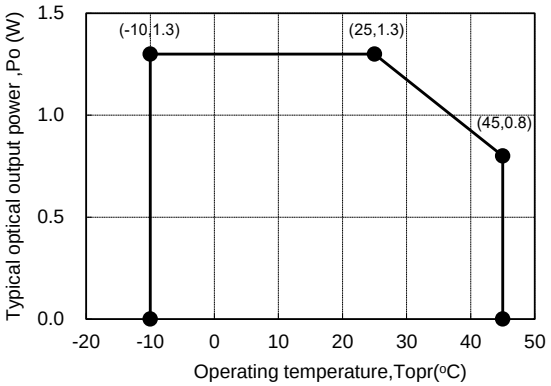
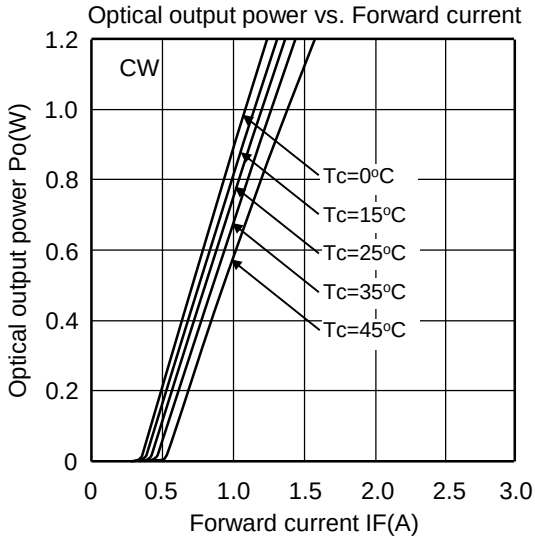


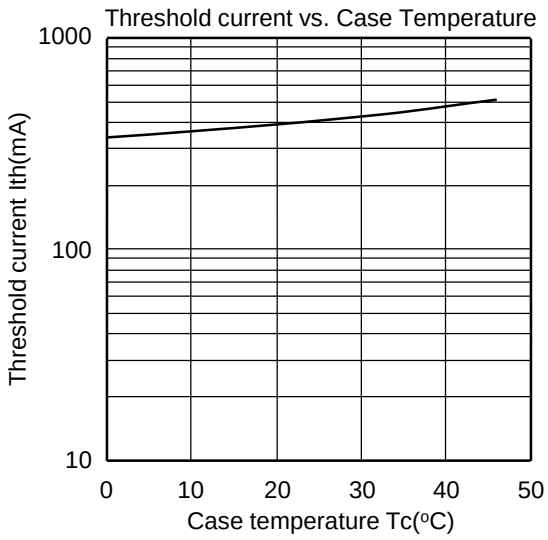
Fig.1 The relation of optical output power vs operating temperature

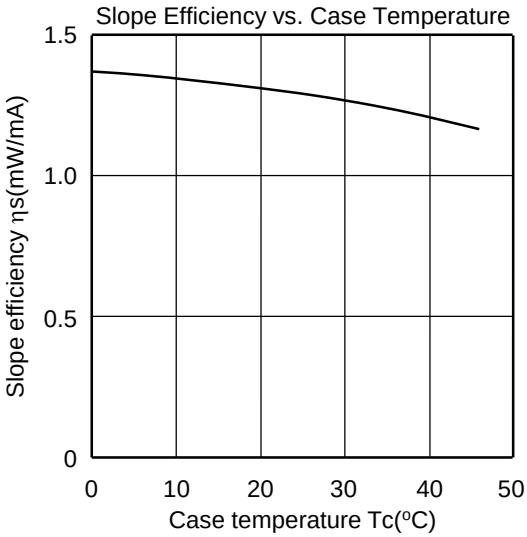
Optical and Electrical Characteristics (Tc=25°C)

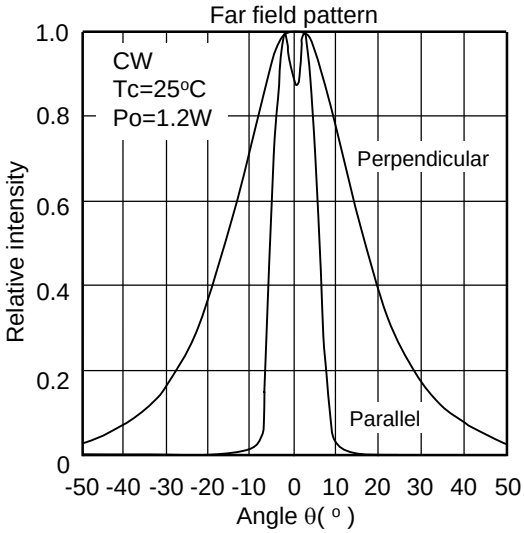
Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Threshold current	Ith	-	400	600	mA	-
Operating current	Iop	-	1350	1650	mA	Po=1.2W
Operating voltage	Vop	-	2.25	2.7	V	Po=1.2W
Beam divergence Parallel to the junction	θ//	3	10	20	°	Po=1.2W, FWHM
Beam divergence Perpendicular to the junction	θ⊥	23	32	43	°	Po=1.2W, FWHM
Lasing Wavelength	λp	647	652	657	nm	Po=1.2W

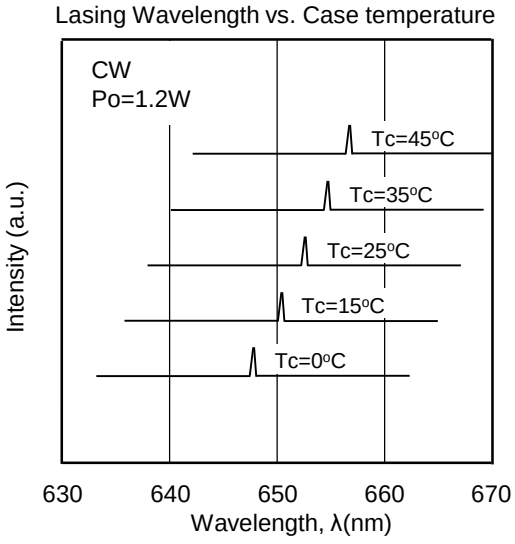
Typical Characteristic Curves











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