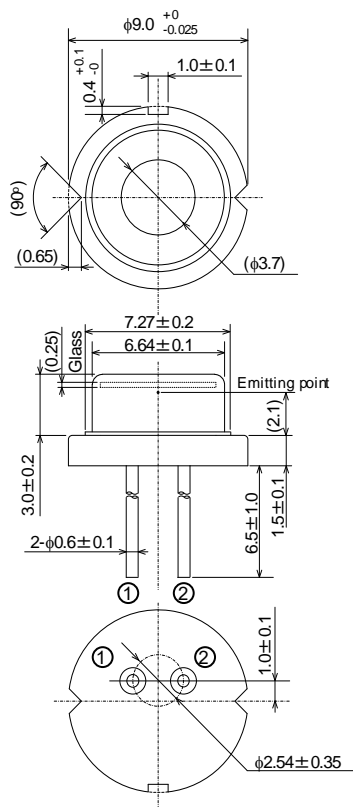


## HL65213HD

659nm / 1.2W (CW) / 1.5W (Pulse)

AlGaInP Laser Diode

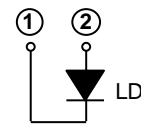
### Outline



(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  $\phi$  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 <sup>Note3)</sup>	Po	1.2	W
Pulse optical output power <sup>Note2) Note3)</sup>	Po(Pulse)	1.5	W
LD reverse voltage	VR(LD)	2	V
Operating temperature <sup>Note1) 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.

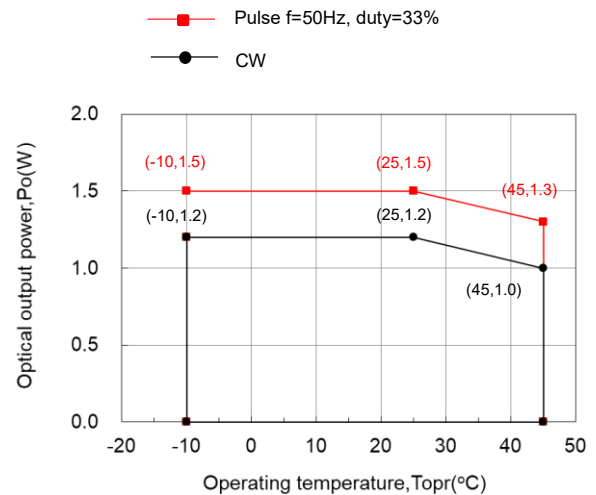


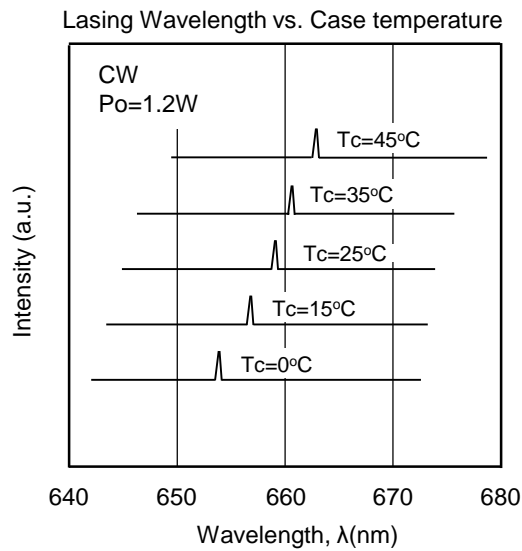
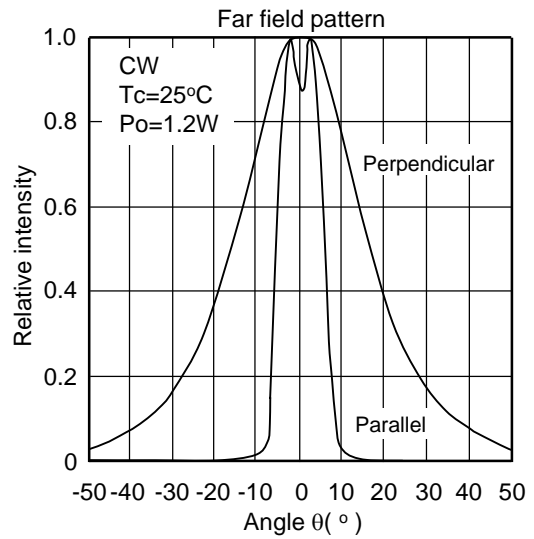
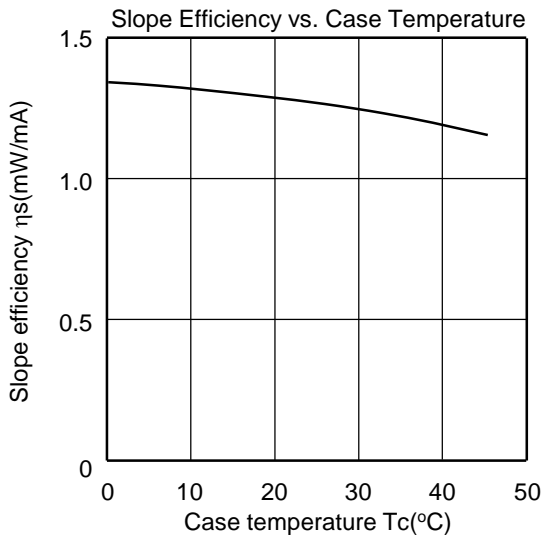
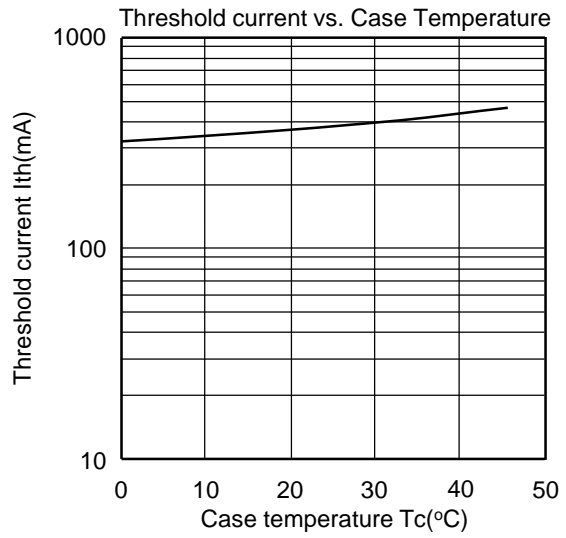
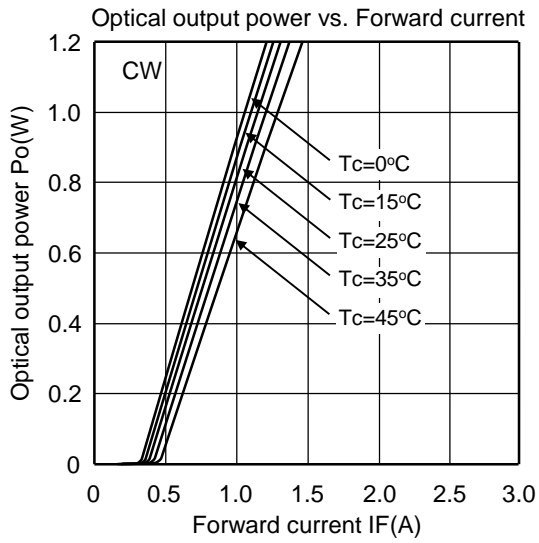
Fig.1 The relation of optical output power vs operating temperature

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

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Threshold current	Ith	-	450	600	mA	-
Operating current	Iop	-	1350	1600	mA	Po=1.2W
Operating voltage	Vop	-	2.3	2.7	V	Po=1.2W
Beam divergence <sup>Note4)</sup> Parallel to the junction	θ//	3	10	20	°	Po=1.2W, FWHM
Beam divergence <sup>Note4)</sup> Perpendicular to the junction	θ⊥	23	33	43	°	Po=1.2W, FWHM
Lasing Wavelength	λp	654	659	664	nm	Po=1.2W

Note4) Designed value

## Typical Characteristic Curves



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