

## High Power Red Laser (HL63520HD)

New Release

World highest output power of 3.5W Pulse, 2.4W CW at 638nm

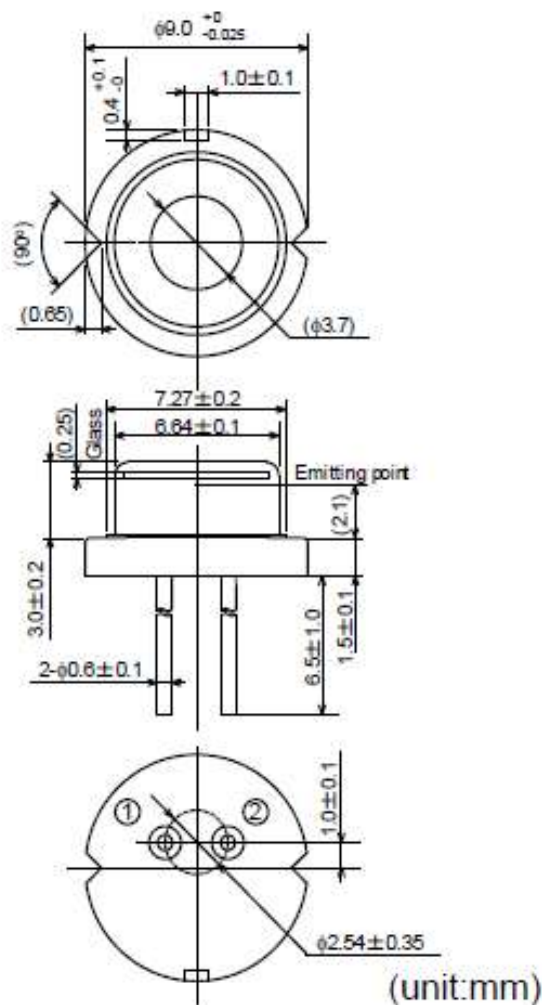
### Feature

- Dual emitters
- Optical output power: 3.5W (Pulse), 2.4W (CW)
- Red light emitting: 638 nm
- High wall plug efficiency: 43% typ.
- High heat dissipation  $\phi$  9mm CAN Package

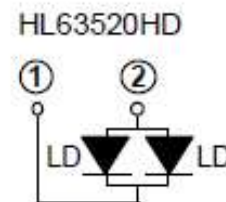
### Applications

- Laser Projector
- Light source of optical equipment

### Outline



### Internal Circuit



## Absolute Maximum Ratings (Tc=25°C)

Item	Symbol	Ratings	Unit
Operating current	Iop	2.4	A
Pulse operating current <sup>Note1)</sup>	Iop(Pulse)	3.3	A
LD reverse voltage	V <sub>R(LD)</sub>	2	V
Operating temperature <sup>Note2)</sup>	Topr	-10 ~ +55	°C
Storage temperature	Tstg	-40 ~ +85	°C

Note1) Pulse condition: Pulse frequency ≥ 120Hz, duty=30%

Note2) 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.

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

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Optical output power	Po	-	2.4	-	W	Iop=2.4A
Pulse optical output power	Po(Pulse)	-	3.5	-	W	Iop(Pulse)=3.3A, f=120Hz,duty=30%
Threshold current	Ith	-	570	750	mA	-
Operating voltage	Vop	-	2.4	2.8	V	Po=2.2W
Beam divergence <sup>Note3)</sup> Parallel to the junction	θ <sub>//</sub>	3	10	20	°	Po=2.2W, FWHM
Beam divergence <sup>Note3)</sup> Perpendicular to the junction	θ <sub>⊥</sub>	23	33	43	°	Po=2.2W, FWHM
Lasing Wavelength	λ <sub>p</sub>	632	638	644	nm	Po=2.2W

Note3) Designed value