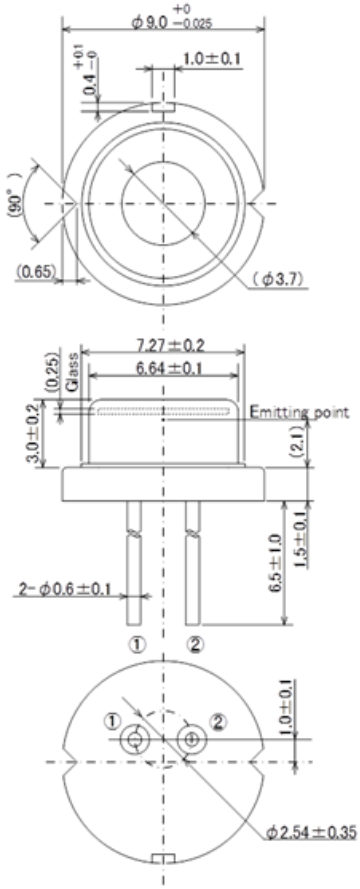
Preliminary Data Sheet

HL40103HD

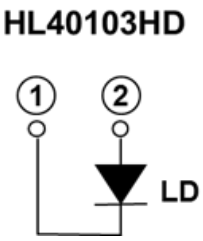
405nm / 3.5W (Pulse)　1W (CW)　Violet Laser

Outline



(Unit: mm)

Internal Circuit



Features

- Optical output power: 3.5W (Pulse)
- Violet Lasing: 405nm Typ.
- Low operating current: 2,500mA Typ.
- Package: ϕ9.0mm
- Multiple transverse mode
- TE mode oscillation
- Suffix code “01” means the special spec for Necsel.

Application

- Direct imaging
- Industry
- Display
- Bio & Medical

Absolute Maximum Ratings (Tc=25°C)

Item	Symbol	Ratings	Unit
Optical output power (CW)	Po	1,100	mW
Optical output power (Pulse)	Po(Pulse)*	3,500	mW
LD Reverse Voltage	$V_{R(LD)}$	2	V
Operating Temperature	Topr	0 ~ +30	°C
Storage Temperature	Tstg	-40 ~ +85	°C

Optical and Electrical Characteristics (Tc=25°C)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Threshold current	Ith	-	300	T.B.D	mA	CW
Operating current	Iop	-	900	T.B.D	mA	CW, Po=1,000W
Operating voltage	Vop	-	4.0	T.B.D	V	CW, Po=1,000W
Beam divergence Parallel to the junction	θ//	T.B.D	11	T.B.D	º	CW, Po=1,000W, Full angle 1/e^2
Beam divergence Perpendicular to the junction	θ⊥	T.B.D	45	T.B.D	º	CW, Po=1,000W, Full angle 1/e^2
Lasing Wavelength	λp	400	405	410	nm	CW, Po=1,000W
Operating current	Iop	-	2,500	2,800	mA	Po=3,500mW*
Operating voltage	Vop	-	-	4.7	V	Po=3,500mW*
Beam divergence Parallel to the junction	θ//	5	11	25	º	Po=3,500mW*, Full angle 1/e^2
Beam divergence Perpendicular to the junction	θ⊥	30	45	50	º	Po=3,500mW*, Full angle 1/e^2
Lasing Wavelength	λp	400	405	410	nm	Po=3,500mW*

* Pulse condition: f=13kHz, duty=2%

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