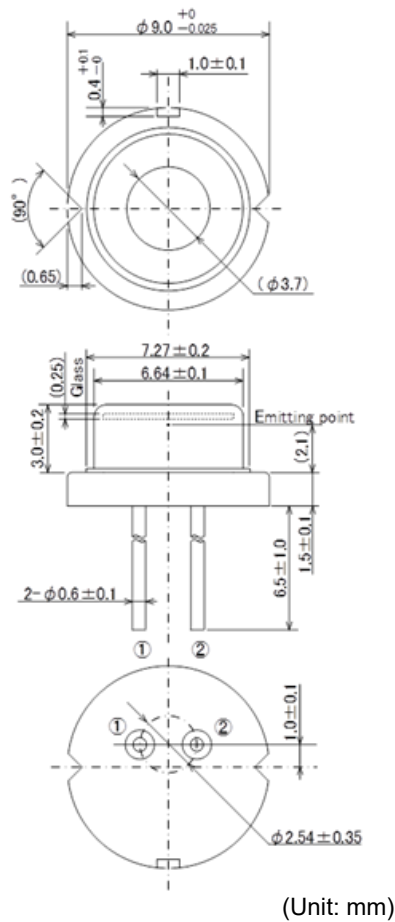




HL40103HD

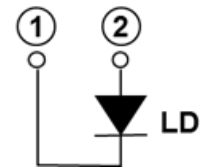
405nm/3.5W [Pulse] 1W [CW] Violet Laser

Outline



Internal Circuit

HL40103HD



Features

- Optical output power: 3.5W (Pulse)
- Violet Lasing: 405nm Typ.
- Low operating current: 2,500mA Typ.
- Package: $\phi 9.0\text{mm}$
- 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	T _{opr}	0 ~ +30	°C
Storage Temperature	T _{stg}	-40 ~ +85	°C

Optical and Electrical Characteristics (Tc=25°C)

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

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

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2. This product (without violet laser diode) contains gallium arsenide (GaAs), which may seriously endanger your health even at very low doses. Please avoid treatment which may create GaAs powder or gas, such as disassembly or performing chemical experiments, when you handle the product. When disposing of the product, please follow the laws of your country and separate it from other waste such as industrial waste and household garbage.

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