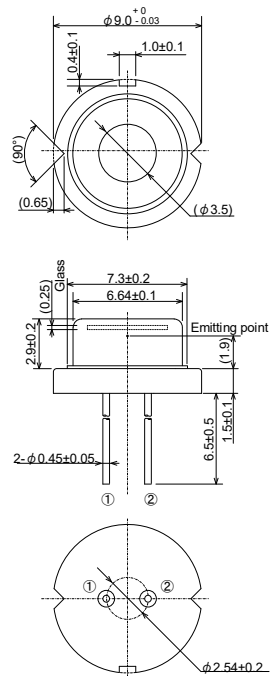


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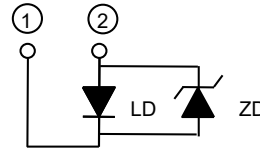
405nm / 1.2W Violet Laser Diode

Outline



() are reference figures

Internal Circuit



(Unit: mm)

Features

- Optical output power: 1,200mW (CW)
- Violet Lasing: 405nm Typ.
- Low operating current: 900mA Typ.
- Package: $\phi 9.0$ mm
- Multiple transverse mode
- TE mode oscillation
- Built in Zener Diode

Application

- Direct imaging for PCB
- Industry
- Display
- Bio & Medical

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Absolute Maximum Ratings (Tc=25°C)

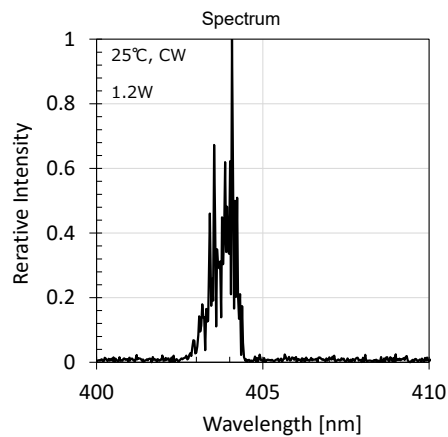
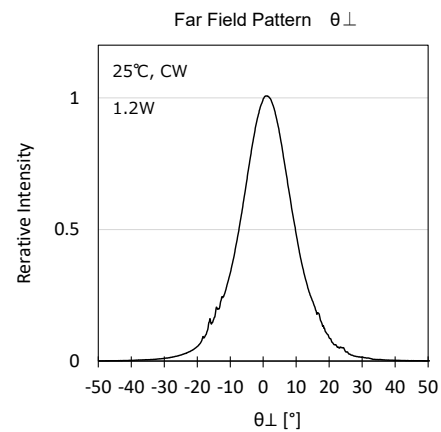
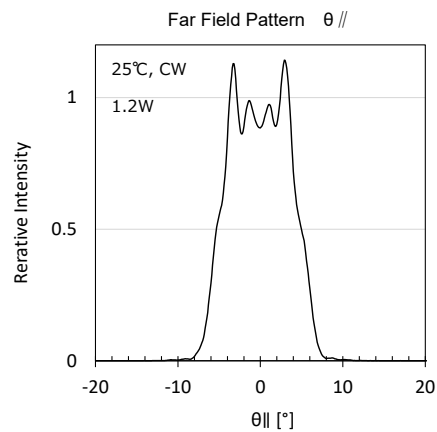
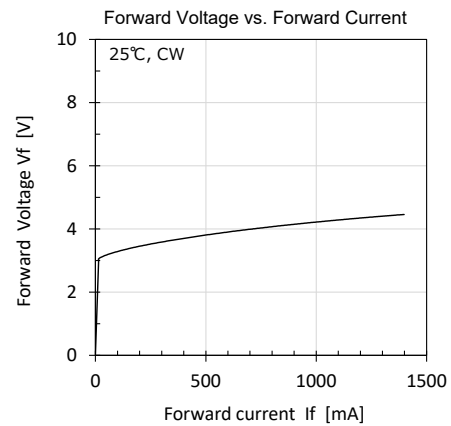
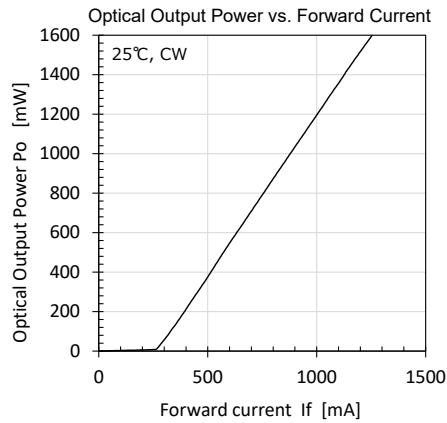
Item	Symbol	Ratings	Unit
Optical output power	Po	1,400	mW
LD Reverse Current	I _{R(LD)}	85	mA
Operating Temperature	Topr	0 ~ +30	°C
Storage Temperature	Tstg	-40 ~ +85	°C

Optical and Electrical Characteristics (Tc=25°C)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Threshold current	I _{th}	90	220	400	mA	-
Operating current	I _{op}	650	900	1,400	mA	Po=1,200mW
Operating voltage	V _{op}	3.9	4.5	5.1	V	Po=1,200mW
Beam divergence Parallel to the junction	θ _{//}	5	12	20	°	Po=1,200mW, Full angle 1/e ²
Beam divergence Perpendicular to the junction	θ _⊥	28	39	48	°	Po=1,200mW, Full angle 1/e ²
Lasing Wavelength	λ _p	400	—	410	nm	Po=1,200mW

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Typical Characteristic Curves



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4. Design your application so that the products is used within the ranges guaranteed by Ushio. Particularly for maximum rating, operating supply voltage range, heat radiation characteristics, installation conditions and other characteristics. Ushio bears no responsibility for failure or damage when used beyond the guaranteed ranges. Even within the guaranteed ranges, consider normally foreseeable failure rates or failure modes in semiconductor devices and employ systemic measures such as fail-safes, so that the equipment incorporating Ushio product does not cause bodily injury, fire or other consequential damage due to operation of the Ushio product.
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7. Contact our sales office for any questions regarding this document or Ushio products.

1. The laser light is harmful to human body especially to eye no matter what directly or indirectly. The laser beam shall be observed or adjusted through infrared camera or equivalent.
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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