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Under development	
New product	●

GH04125A2A

Blue violet Laser Diode

High Power Blue violet Laser Diode

■ Features

(1) Wavelength : 406 nm(Typ.)

(2) Optical power output :

CW 125mW

(3) Φ 5.6mm CAN package

■ Applications

(1) 406nm band light source

(2) Laser sensor

(3) other application

■ Absolute Maximum Ratings

(Tc=25℃※1)

	Parameter		Symbol	Ratings	unit
※2	Optical power output(CW)		P_o	150	mW
	Reverse voltage	Laser	V_{rl}	2	V
		Photo diode	V_{rd}	30	V
	Operatings temperature(case temp.)		$T_{opc(c)}$	-10～+70	℃
	Storage temperature		T_{stg}	-40～+85	℃
※3	Soldering temperature		T_{sld}	350	℃

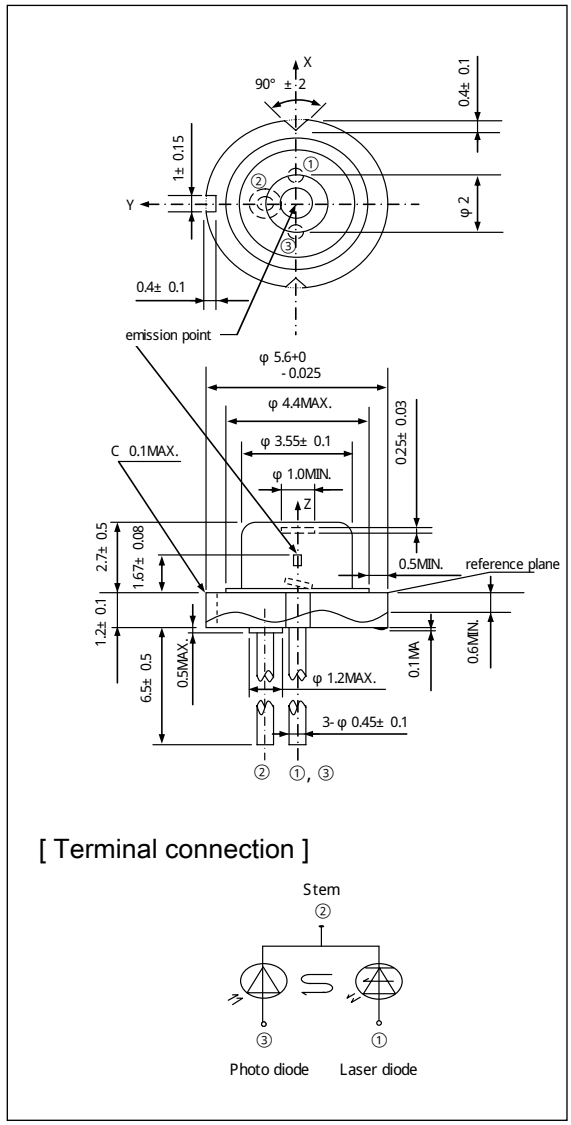
※1 T_c : Case temperature

※2 CW :Continuous Wave Operation

※3 Soldering position is 1.6mm apart from bottom edge of the case.
(Immersion time: 3s)

■ Outline Dimensions

(Unit :mm)



[Terminal connection]

■ Specifications

(Tc=25℃※1 ※2)

Parameter		Symbol	Conditions	MIN.	TYP.	MAX.	unit
Threshold current		Ith	-	-	35	50	mA
Operating current		Iop	Po=125mW	-	125	155	mA
Operating voltage		Vop		-	5.4	6.4	V
Wavelength		λp		400	406	413	nm
Half intensity angle ※3 ※4	Parallel	θ ∥		6	9.5	12	°
	Perpendicular	θ⊥		16	19	24.5	°
Misalignment angle ※4	Parallel	Δθ ∥		-2.5	-	2.5	°
	Perpendicular	Δθ⊥		-3.0	-	3.0	°
Differential efficiency		ηd	$\frac{115mW}{I(125mW)-I(10mW)}$	0.9	1.3	-	mW/mA
Monitor Photo diode current		Im	Po=125mW, Vrd=5V	0.1	0.3	0.5	mA

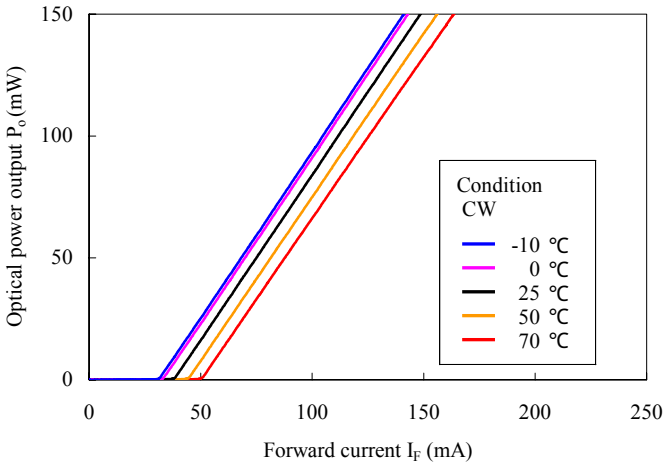
※1 T_c : Case temperature

※2 Initial value, Continuous Wave Operation. Initial value is measured by the standard Laser tester of the sharp possession.

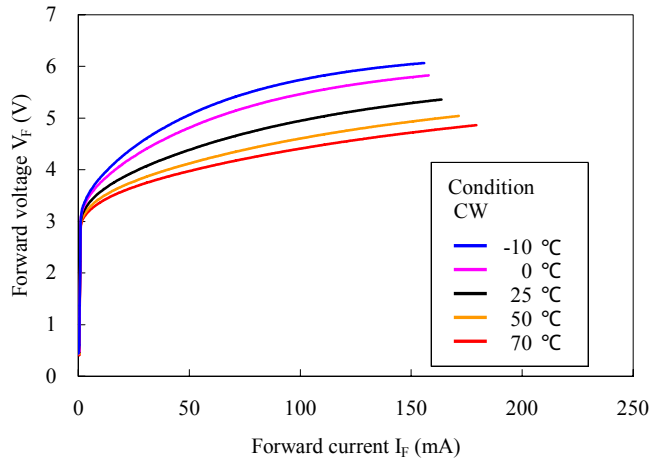
※3 Angle of 50% peak intensity.(Full angle at half-maximum)

※4 Paralel to the junction plane.(X-Z plane)
Perpendicular to the junction plane.(Y-Z plane)

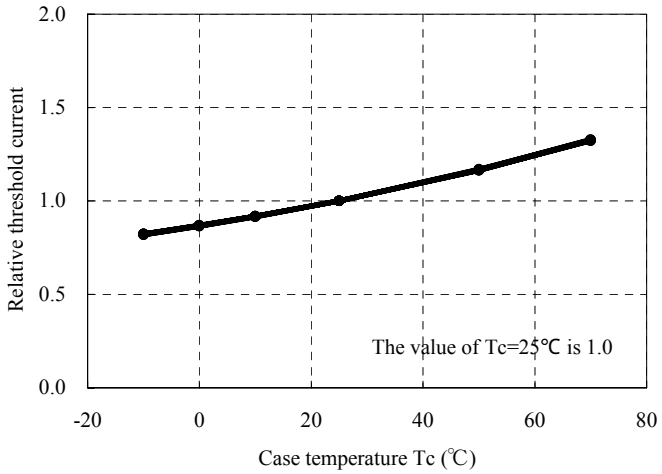
■ Optical power output – Forward current



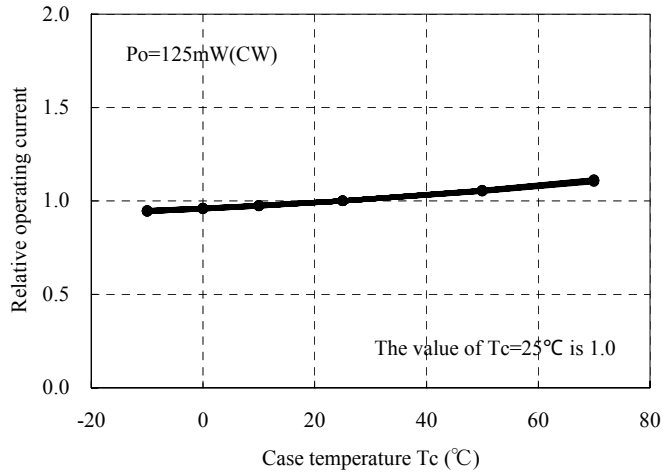
■ Forward voltage – Forward current



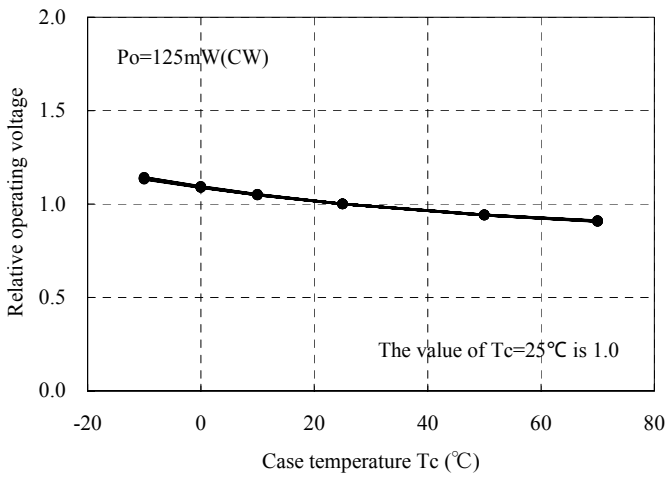
■ Case temperature dependence of threshold current(Ith)



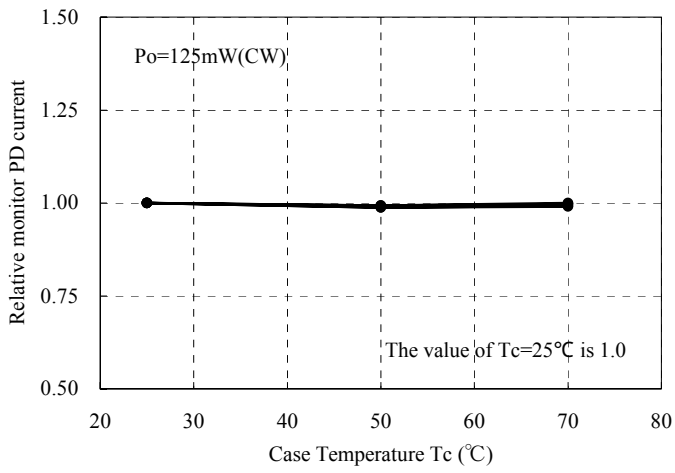
■ Case temperature dependence of operating current(Iop)



■ Case temperature dependence of operating voltage(Vop)

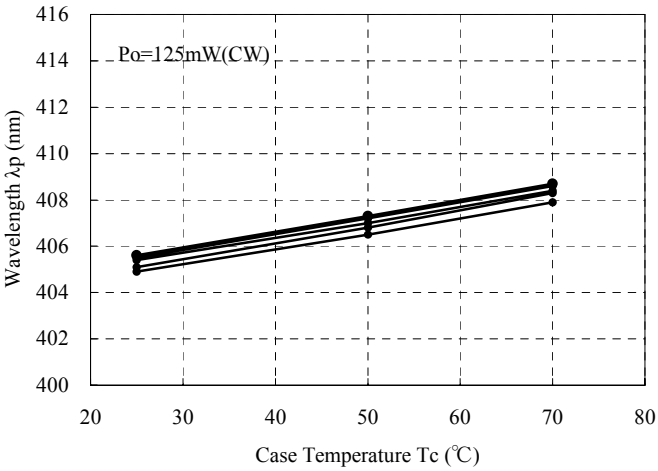


■ Case temperature dependence of monitor PD current(Im)

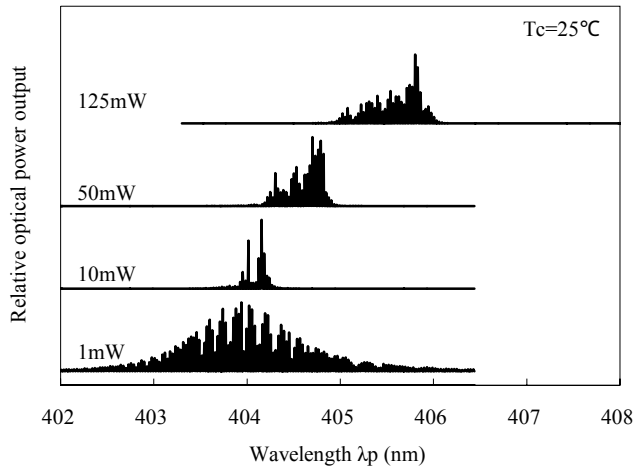


Note) Characteristics shown in diagrams are typical values.(not assurance value)

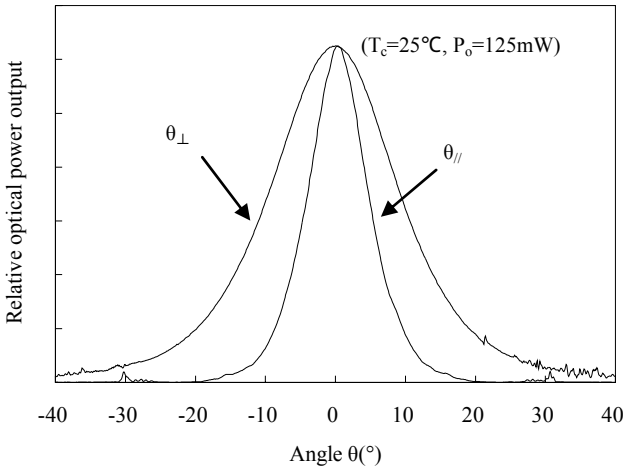
■ Case temperature dependence of wavelength



■ Optical power dependence of Lasing spectrum



■ Far field pattern (FFP)



Note) Characteristics shown in diagrams are typical values.(not assurance value)

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