Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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Under development	
New product	●

GH04P21A2GE

Blue violet Laser Diode

High Power Blue violet Laser Diode

■ Features

(1) Wavelength : 406 nm(Typ.)

(2) Optical power output :

CW 105mW (Max)

Pulse 210mW (Max)

(3) Φ 5.6mm CAN package

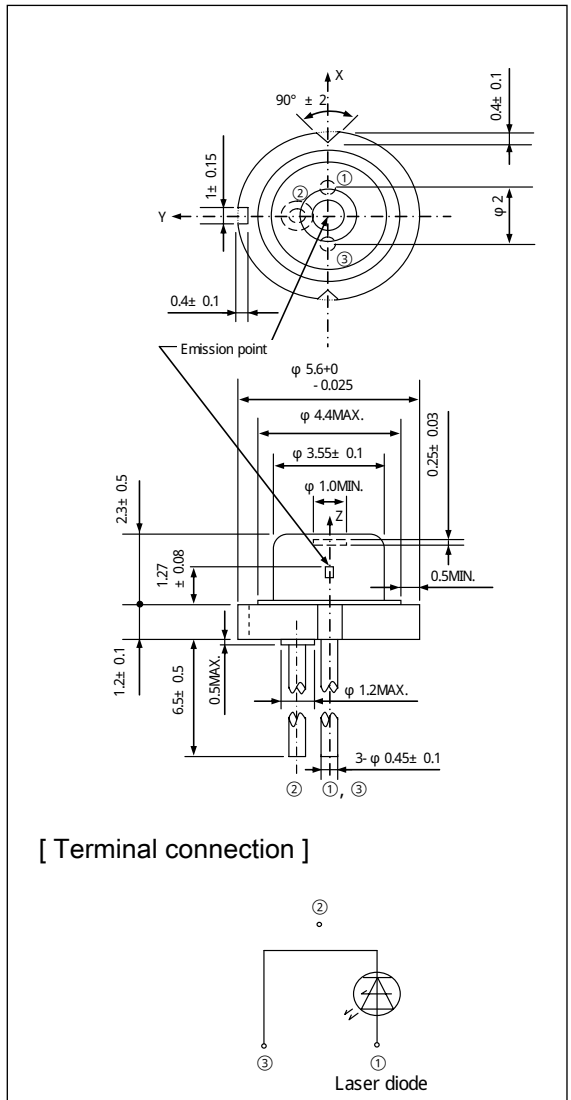
■ Applications

(1) Blu-ray Disc/HD DVD drive

(2) other new application

■ Outline Dimensions

(Unit : mm)



[Terminal connection]

■ Absolute Maximum Ratings

(Tc=25℃※1)

	Parameter		Symbol	Ratings	unit
※2	Optical power output(CW)		P_o	105	mW
※3	Optical power output(Pulse)		P_p	210	mW
	Reverse voltage		V_{rl}	2	V
	Operatings temperature	CW ※2	$T_{opc(c)}$	-10～+70	℃
	(case temp.)	Pulse ※3	$T_{opp(c)}$	-10～+70	℃
	Storage temperature(case temp.)		T_{stg}	-40～+85	℃
※4	Soldering temperature		T_{sld}	350	℃

※1 T_c : Case temperature

※2 CW :Continuous Wave Operation

※3 Pulse :Pulse Operation(Pulse Width 50ns Duty:50%)

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

■ Specifications

(Tc=25℃※1 ※2)

Parameter		Symbol	Conditions	MIN.	TYP.	MAX.	unit
Threshold current		Ith	-	-	40	60	mA
Operating current		Iop	Po=105mW	-	120	150	mA
Operating voltage		Vop		-	5.4	6.5	V
Wavelength		λp		400	406	413	nm
Half intensity angle ※3 ※4	Parallel	θ ∥		6	9	12	°
	Perpendicular	θ ⊥		16	19	22	°
Half intensity angle ※3 ※4	Parallel	θ ∥	Po=5mW	5.5	8.5	11.5	°
	Perpendicular	θ ⊥		16	19	22	°
Misalignment angle ※4	Parallel	Δθ ∥		-2.5	-	2.5	°
	Perpendicular	Δθ ⊥		-3.0	-	3.0	°
Differential efficiency		ηd	$\frac{95mW}{I(105mW)-I(10mW)}$	0.9	1.3	-	mW/mA
Kink (Pulse) ※5 ※6		K-LI	P1=42mW P2=126mW P3=210mW	-10	-	10	%

※1 T_c : Case temperature

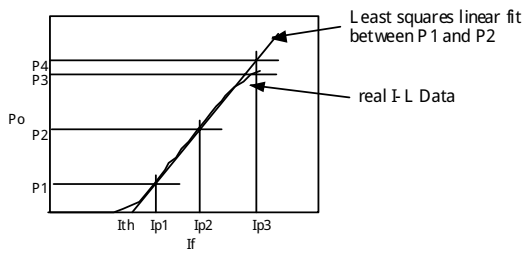
※2 Initial value, Continuous Wave Operation.

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

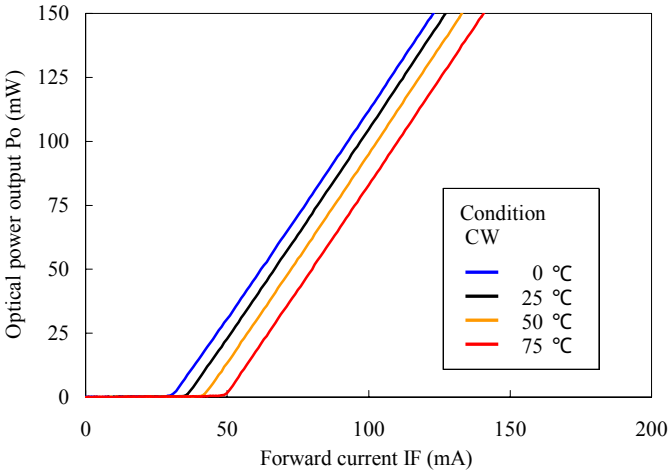
※4 Paralel to the junction plane.(X-Z plane)
Perpendicular to the junction plane.(Y-Z plane)

※5 Pulse :Pulse Operation(Pulse Width 50ns Duty:50%)

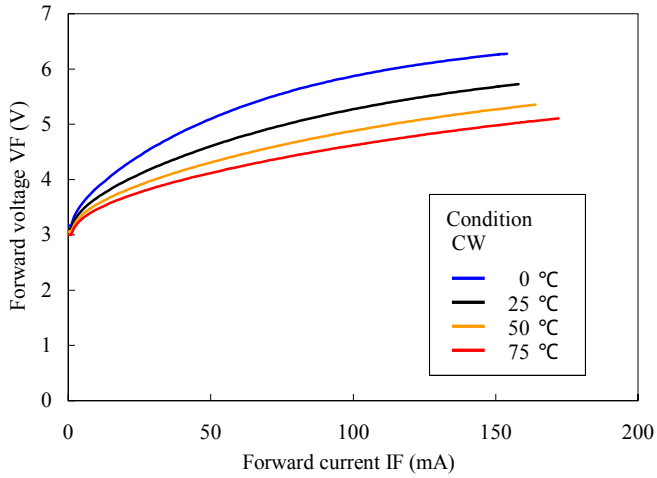
※6 Definition of Kink
:K-LI= (P4-P3)/P3



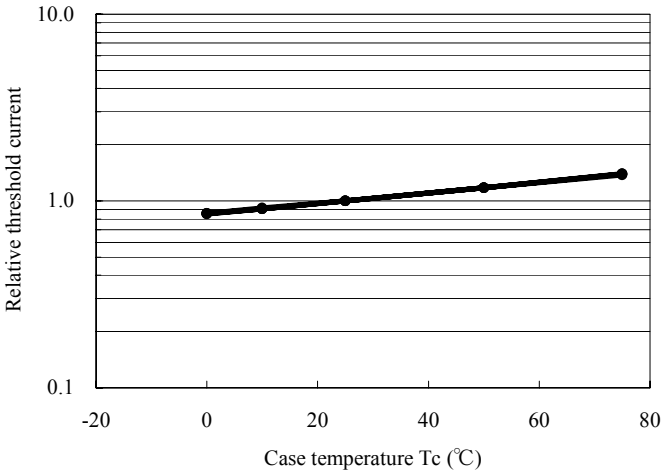
■ Optical power output – Forward current



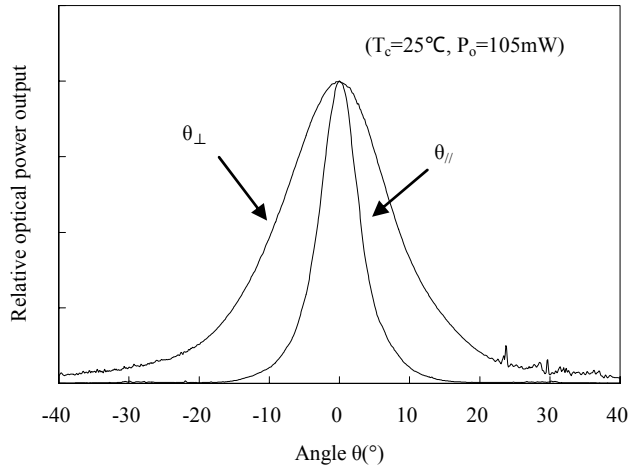
■ Forward voltage – Forward current



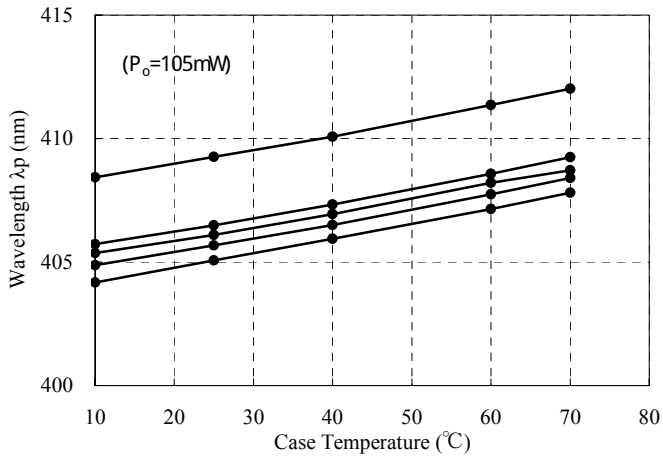
■ Case temperature dependence of threshold current



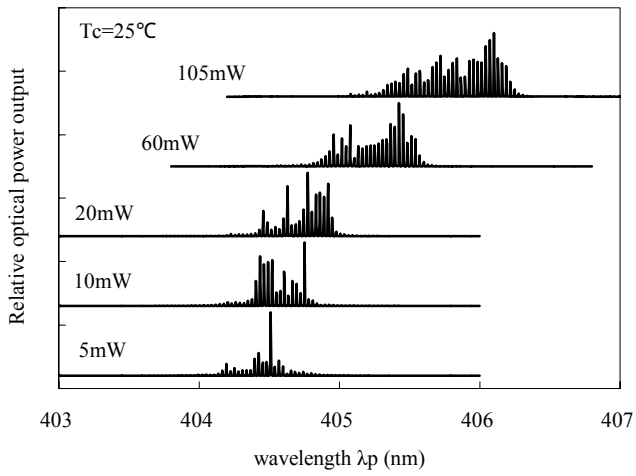
■ Far field pattern (FFP)



■ Case temperature dependence of wavelength



■ Optical power dependence of Lasing spectrum



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

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