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We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



GH0781JA2C

High Power Laser Diode for MAX. X32
Speed CD-R Drive(784nm-pulse 180mW)

Features

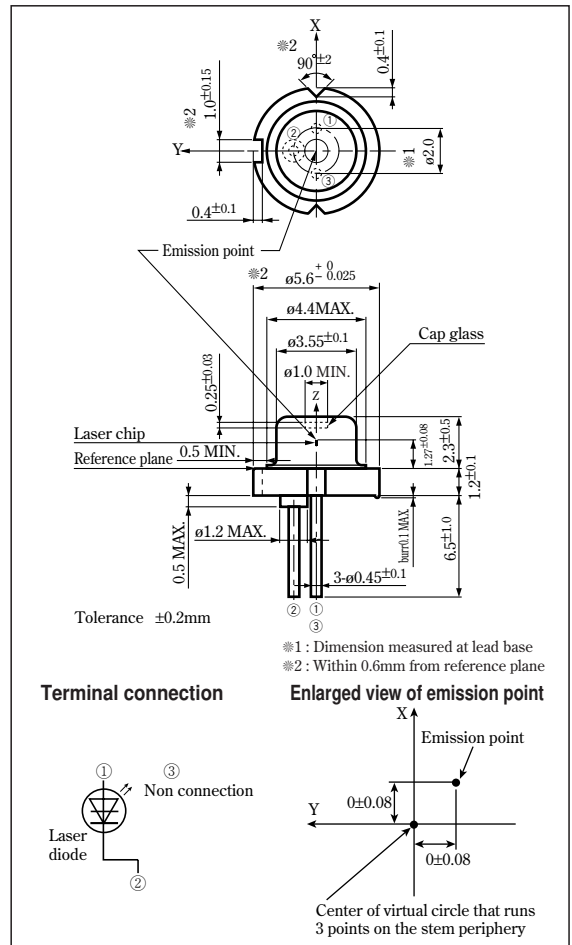
- (1) Maximum optical power output : 120mW (CW)
- (2) High power (pulse MAX. 180mW), MAX. X32 speed writing
- (3) High coupling efficiency.
The ellipticity ($\theta_{\perp}/\theta_{//}$) is close to 1.
- (4) Wavelength : TYP. 784nm
- (5) $\phi 5.6$ mm package

Applications

- (1) CD-R drives
- (2) CD-RW drives

Outline Dimensions

(Unit : mm)



Absolute Maximum Ratings

(T_C=25°C *1)

Parameter	Symbol	Rating	Unit
*3 Optical power output	P _O	120	mW
*2 Optical power output (pulse)	P _p	180	mW
Reverse voltage	Laser V _{rl}	2	V
*1 Operating temperature	*3 CW	T _{opc(c)}	-10 to +65 °C
	*2 Pulse	T _{opp(c)}	-10 to +75 °C
Storage temperature	T _{stg}	-40 to +85	°C
*4 Soldering temperature	T _{slid}	300	°C

- *1 Case temperature
- *2 Pulse width : 0.5 μ s, Duty : 50%
- *3 CW (Continuous Wave) drive
- *4 At the position of 1.6mm or more from the lead base (Within 3s)

SHARP

■ Electro-optical Characteristics^{※1}

(T_c=25°C)

Parameter		Symbol	Conditions	MIN.	TYP.	MAX.	Unit	
Threshold current		I _{th}	-	-	30	40	mA	
Operating current		I _{op}	P _o =100mW	-	141	167	mA	
Operating voltage		V _{op}		-	2.1	2.5	V	
Wavelength		λ _p		780	784	787	nm	
Half intensity angle	^{※2※3} Parallel	θ//		7.8	8.7	9.6	°	
	^{※2※3} Perpendicular	θ⊥		14.5	16	17.5	°	
^{※4} Ripple		R _i		-20	-	+20	%	
Misalignment angle	^{※3} Parallel	Δθ//		-1.5	-	+1.5	°	
	^{※3} Perpendicular	Δθ⊥		-2.5	-	+2.5	°	
Differential efficiency		η _d		$\frac{70\text{mW}}{I(100\text{mW})-I(30\text{mW})}$	0.8	0.9	1.2	mW/mA
Interference pattern intensity		α		P _o =100mW	-	-	1	-
^{※5} Kink		K-LI	P1=36mW, P2=108mW, P3=180mW	-	-	10	%	
Polarization ratio		P ₁	P _o =3mW, NA=0.13	20	-	-	-	

^{※1} Initial value, CW (Continuous Wave) drive

^{※2} Angle at 50% peak intensity (full-width at half-maximum)

^{※3} Parallel to the junction plane (X-Z plane)

Perpendicular to the junction plane (Y-Z plane)

^{※4} R=ΔP/P ΔP : the maximum deviation of the far field pattern from its approximate curve P : the peak of the approximate curve

^{※5} Pulse drive (Pulse width : 0.5μs, Duty : 50%)

• Please refer to the chapter "Handling Precautions"

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 - Alarm equipment
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