

GH0781JA2C

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

Features

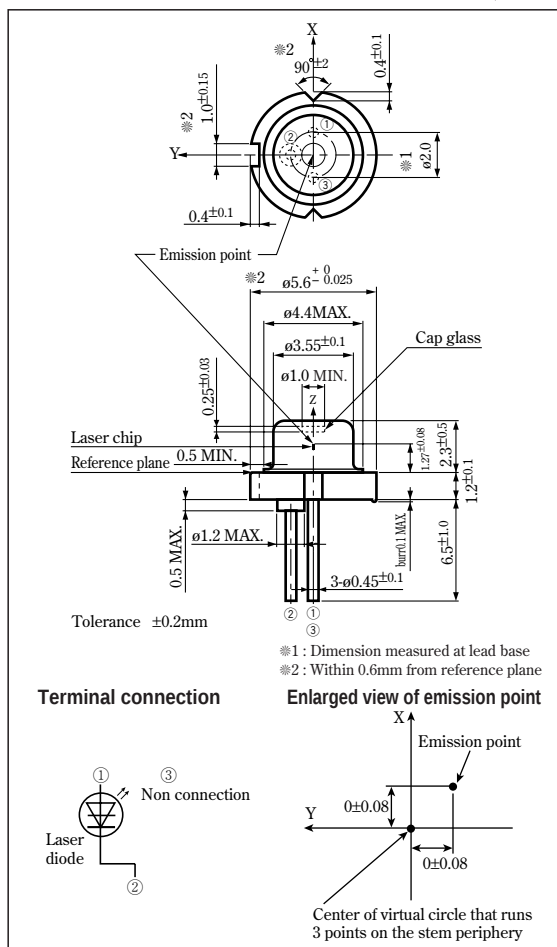
- (1) Maximum optical power output : 120mW (CW)
- (2) High power (pulse MAX. 180mW), MAX. X32 speed writing
- (3) High coupling efficiency.
The ellipticity ($\theta_{\perp}/\theta_{//}$) is close to 1.
- (4) Wavelength : TYP. 784nm
- (5) $\phi 5.6$ mm package

Applications

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

Outline Dimensions

(Unit : mm)



Absolute Maximum Ratings

(Tc=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		V _{rl}	2	V
*1	Operating temperature	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 _{sld}	300	°C

*1 Case temperature

*2 Pulse width : 0.5μs, Duty : 50%

*3 CW (Continuous Wave) drive

*4 At the position of 1.6mm or more from the lead base (Within 3s)

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■ 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 _i	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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