

GH0780MA4C

(Under development)

■ Features

- (1) Maximum optical power output : 100mW (CW)
- (2) High power (pulse MAX. 200mW), MAX. ×40 speed writing
- (3) High coupling efficiency.
The ellipticity ($\theta_{\perp}/\theta_{//}$) is close to 1.
- (4) Wavelength : TYP. 784nm
- (5) Small ϕ 3.3mm package

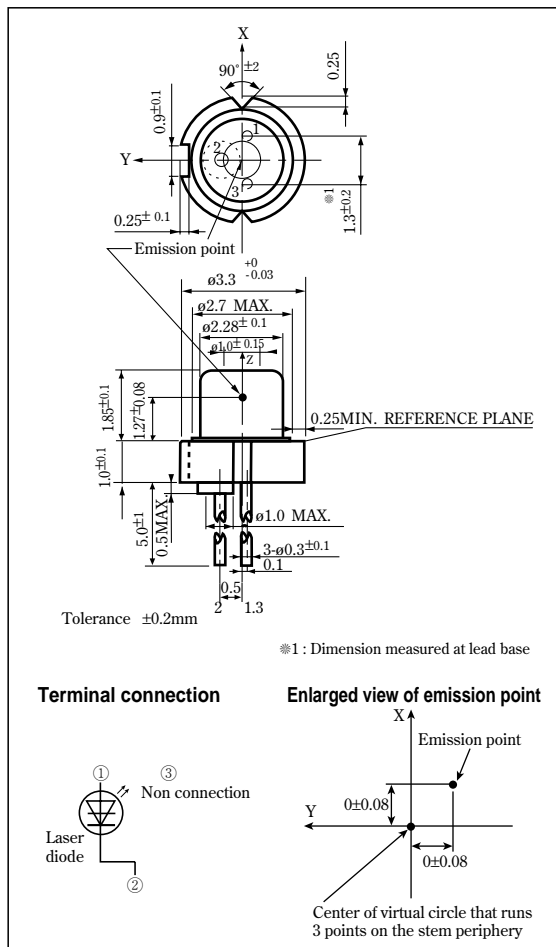
■ Applications

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

ø3.3mm High Power Laser Diode for MAX. X40 Speed CD-R Drive(784nm-Pulse 200mW)

■ Outline Dimensions

(Unit : mm)



■ Absolute Maximum Ratings

($T_c = 25^\circ\text{C}$ ※1)

Parameter		Symbol	Rating	Unit
※3	Optical power output	P_o	100	mW
※2	Optical power output (pulse)	P_p	200	mW
Reverse voltage		V_{rl}	2	V
※1	Operating temperature	$T_{op(c)}$	-10 to +65	$^\circ\text{C}$
		$T_{opp(c)}$	-10 to +75	$^\circ\text{C}$
Storage temperature		T_{stg}	-40 to +85	$^\circ\text{C}$
※4	Soldering temperature	T_{slid}	300	$^\circ\text{C}$

※1 Case temperature

※2 Pulse width : 0.1 μ s, 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 =90mW	-	120	152	mA	
Operating voltage	V _{op}		-	2.1	2.5	V	
Wavelength	λ _p		780	784	787	nm	
Half intensity angle	^{*2*} Parallel		θ//	7.8	8.7	9.8	°
	^{*2*} 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		$\frac{60\text{mW}}{I(90\text{mW})-I(30\text{mW})}$	0.8	1.0	1.3	mW/mA
Interference pattern intensity	α		P _o =90mW	-	-	1	-
^{*5} Kink	K-LI	P ₁ =40mW, P ₂ =120mW, P ₃ =200mW	-	-	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 : 0.1μs, Duty : 50%)

• Please refer to the chapter "Handling Precautions"

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