Laser Diodes GH0781HA2C

GH0781HA2C

■ Features

- (1) Maximum optical power output: 110mW (CW)
- (2) High power (pulse MAX. 160mW), MAX. ×24 speed writing
- (3) High coupling efficiency. The ellipticity $(\theta \perp / \theta / /)$ is close to 1.
- (4) Wavelength: TYP. 784nm
- (5) \$\phi 5.6mm package

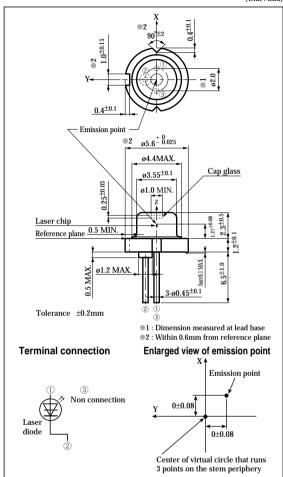
Applications

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

High Power Laser Diode for MAX. ×24 Speed CD-R Drive(784nm-110mW)

Outline Dimensions

(Unit : mm)



■ Absolute Maximum Ratings

(Tc=25°C *1)

Param	Symbol	Rating	Unit	
*3 Optical power outp	Po	110	mW	
*2 Optical power outp	Pp	160	mW	
Reverse voltage	Laser	$V_{\rm rl}$	2	V
*1 Operating temperature	*3 CW	Topc(c)	-10 to +65	°C
	*2 Pulse	Topp(c)	-10 to +70	°C
Storage temperatur	Tstg	-40 to +85	°C	
*4 Soldering temperat	Tsld	300	°C	

^{*1} Case temperature

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^{*2} Pulse width: 0.5μs, Duty: 50%

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

^{*3} CW (Continuous Wave) drive

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■ Electro-optical Characteristics*1

(Tc=25°C)

Parameter		Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Threshold current		Ith -		-	30	40	mA
Operating current		Iop		-	130	155	mA
1 0 0		Vop		-	2.1	2.5	V
		λ_p		780	784	787	nm
Half intensity angle	*2*3 Parallel	θ//	Po=90mW	8	9	10	۰
	*2*3 Perpendicular	θΤ		15	17	19	۰
*4 Ripple		Rı		-20	-	+20	%
Misalignment angle	*3 Parallel	$\Delta \theta //$		-1.5	-	+1.5	۰
	*3 Perpendicular	$\Delta \theta \perp$		-2.5	-	+2.5	۰
Differential efficiency		ηd	60mW I(90mW)-I(30mW)	0.7	0.9	1.2	mW/mA
Interference pattern intensity		α	Po=90mW	-	-	1	-
*5 Kink		K-LI	P1=32mW, P2=96mW, P3=160mW	-	-	10	%
Polarization ratio		Pı	Po=3mW, NA=0.13	20	-	-	-

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

• Please refer to the chapter "Handling Precautions"

^{*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= $\Delta P/P$ 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%)

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