

■ Features

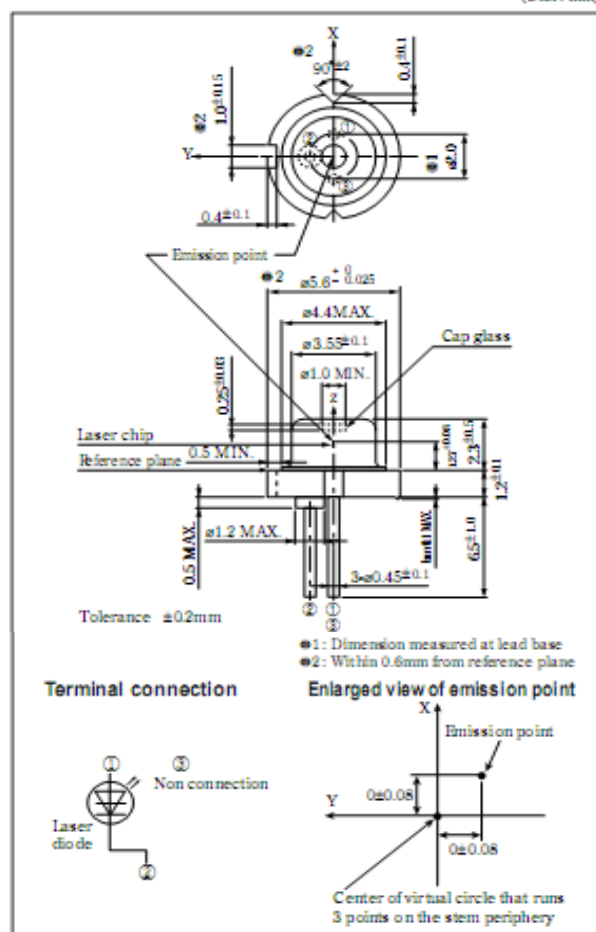
- (1) Maximum optical power output: 200mW (CW)
- (2) High power (pulse MAX. 425mW), MAX. $\times 48$ speed writing
- (3) High coupling efficiency.
The ellipticity ($\theta_{\perp}/\theta_{\parallel}$) is close to 1.
- (4) Wavelength: TYP. 784nm
- (5) $\phi 5.6$ mm package

■ Applications

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

■ Outline Dimensions

(Unit : mm)



■ Absolute Maximum Ratings

($T_c=25^{\circ}\text{C}$ ^①)

Parameter		Symbol	Rating	Unit
*3	Optical power output	P _o	200	mW
*2	Optical power output (pulse)	P _p	425	mW
	Reverse voltage	V _r	2	V
	Laser			
*1	Operating temperature	T _{op(c)}	-10 to +65	°C
		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 : 0.1us, Duty : 50%

- CW (Continuous Wave) drive

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

■ Electro-optical Characteristics*1

(Tc=25°C)

Parameter		Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Threshold current		I_{th}	—	-	30	40	mA
Operating current		I_{op}	Po=200mW	-	260	280	mA
Operating voltage		V_{op}		-	2.1	2.5	V
Wavelength		λ_p		780	784	787	nm
Half intensity angle	*2 ³ Parallel	$\theta_{//}$		7.8	8.7	9.8	°
	*2 ³ Perpendicular	$\theta_{\perp}$		14.5	16	17.5	°
*4 Ripple		R		-20	-	+20	%
Misalignment angle	*3 Parallel	$\Delta\theta_{//}$		-1.5	-	+1.5	°
	*3 Perpendicular	$\Delta\theta_{\perp}$		-2.5	-	+2.5	°
Differential efficiency		η_d	$\frac{150mW}{I(150mW)-I(50mW)}$	0.8	1.0	1.3	mW/mA
Interference pattern intensity		α	Po=200mW-1-				
*5 Kink		K-LI	P1=45mW, P2=200mW, P3=425mW	-	1	0	%
Polarization ratio		P ₁	Po=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 $R=\Delta P/P$ 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: 0.1μs, Duty: 50%)