

Though it is an open type package, by using a metal cap, pressing structure correspondence and protection of a laser element are enabled, and reliability is secured.

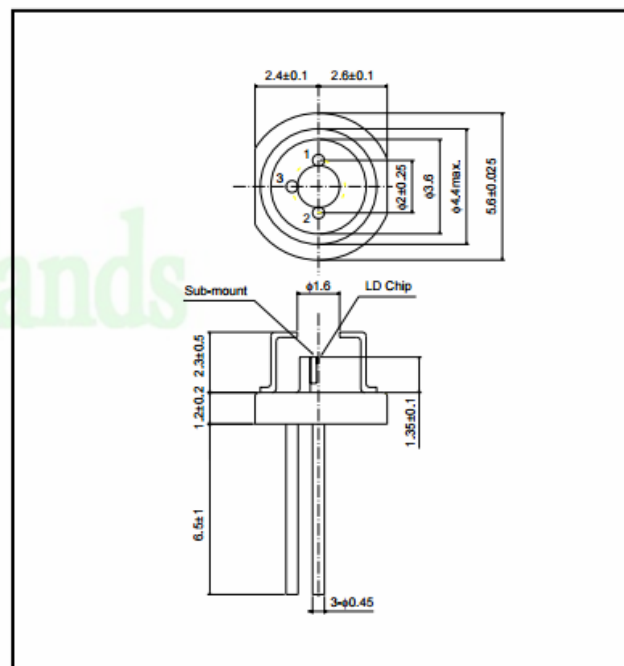
●Applications

Compact disc players
CD-ROM

●Features

- 1) $\phi 5.6$ metal shell type open package.
- 2) A laser element is protected by using a metal cap.
- 3) Interchangeability reservation with $\phi 5.6$ metal package of an industry standard.

●External dimensions (Units : mm)

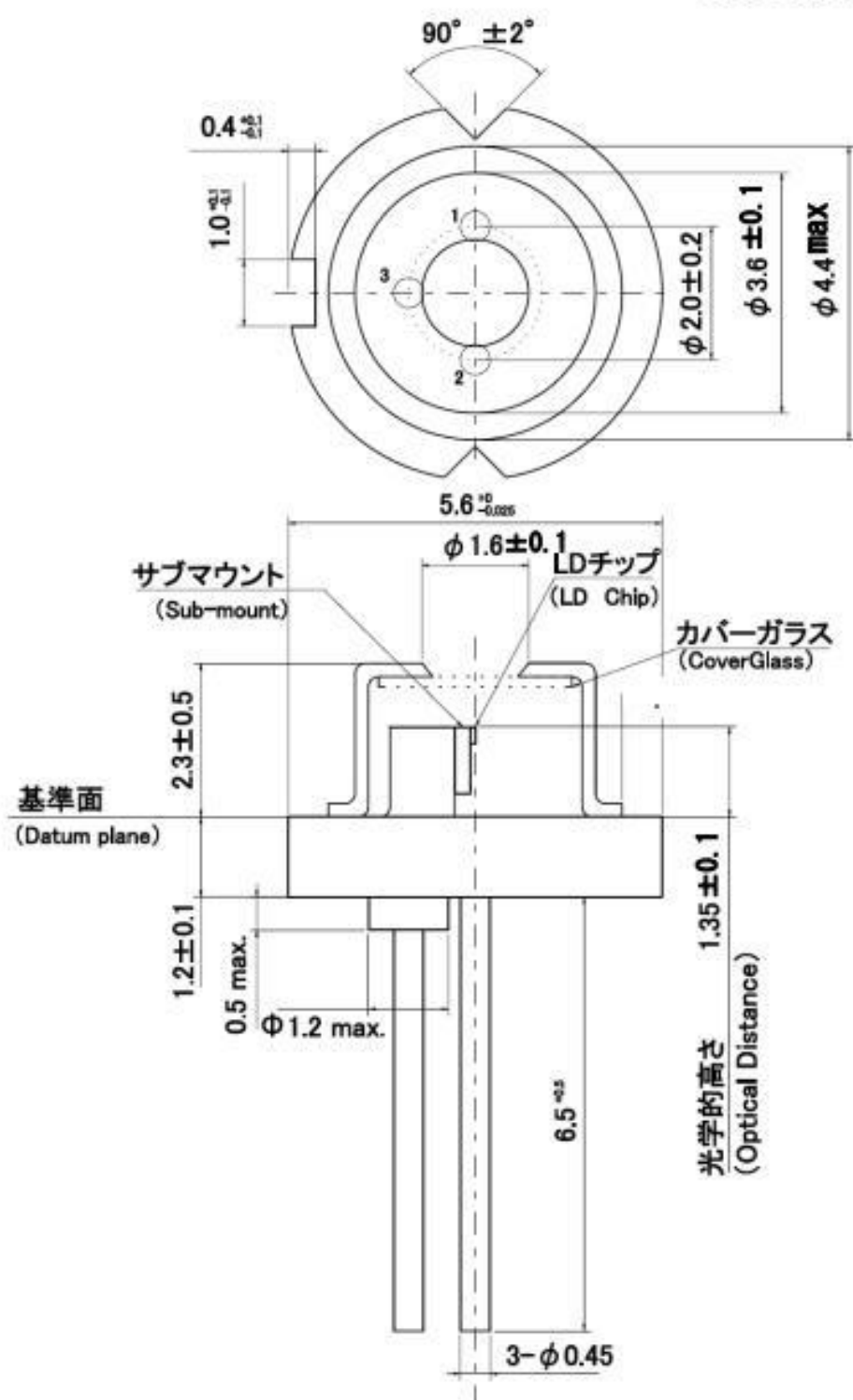


●Absolute maximum ratings ($T_c=25^\circ\text{C}$)

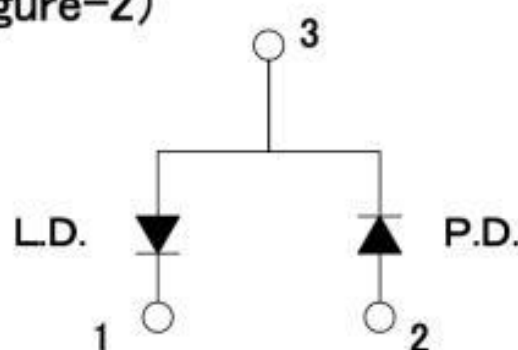
Parameter		Symbol	Limits	Unit
Output		P_o	5	mW
Reverse voltage	Laser	V_R	2	V
	PIN photodiode	V_R (PIN)	30	V
Operating temperature		T_{opr}	-10 to +70	$^\circ\text{C}$
Storage temperature		T_{stg}	-40 to +85	$^\circ\text{C}$

図－１ (Figure-1)

Unit : mm



図－２ (Figure-2)



● Electrical and optical characteristics (Tc=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Threshold current	I_{th}	—	35	60	mA	—
Operating current	I_{op}	—	45	70	mA	Po=3mW
Operating voltage	V_{op}	—	1.9	2.3	V	Po=3mW
Differential efficiency	η	0.1	0.25	0.6	mW/mA	$\frac{2mW}{I(3mW)-I(1mW)}$
Monitor current	I_m	0.05	0.15	0.3	mA	Po=3mW, V _{R(PIN)} =15V
Parallel divergence angle	$\theta_{ }^*$	8	11	15	deg	Po=3mW
Perpendicular divergence angle	$\theta_{\perp}^*$	20	37	45	deg	
Parallel deviation angle	$\Delta\phi_{ }$	—	—	±2	deg	
Perpendicular deviation angle	$\Delta\phi_{\perp}$	—	—	±3	deg	
Emission point accuracy	ΔX	—	—	±100	μm	—
	ΔY					
	ΔZ					
Peak emission wavelength	λ	770	785	810	nm	Po=3mW
Signal-to-noise ratio	S / N	60	—	—	dB	f=720kHz, Δf=10kHz

* $\theta_{||}$ and $\theta_{\perp}$ are defined as the angle within which the intensity is 50% of the peak value.

● Electrical and optical characteristic curves

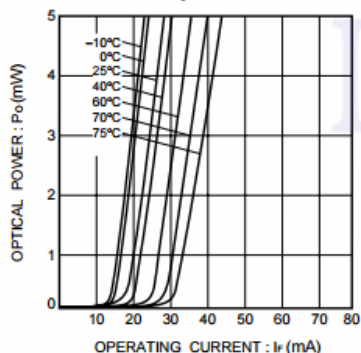


Fig.1 Optical output vs. operating current

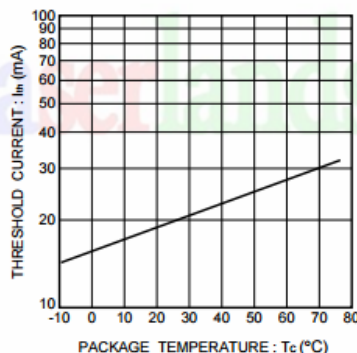


Fig.2 Dependence of threshold current on temperature

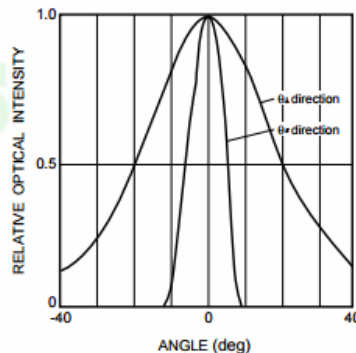


Fig.3 Far field pattern

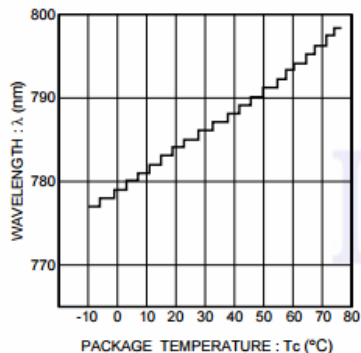


Fig.4 Dependence of wavelength on temperature

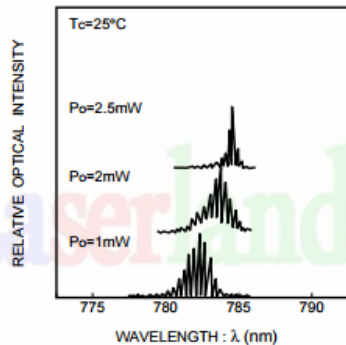


Fig.5 Dependence of emission spectrum on optical output

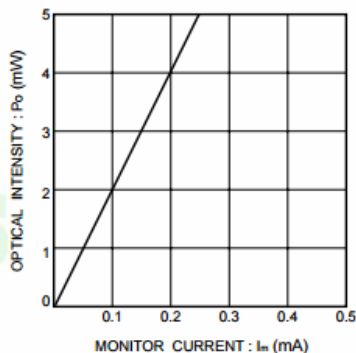


Fig.6 Monitor current vs. optical output