

Features

- Wavelength : 783 nm (Typ.)
- Low threshold current : $I_{th} = 30$ mA (Typ.)
- High output power : 150mW(pulse)
- Small package : $\phi 5.6$ mm

Applications

- Optical disc system (CD-R)

Usage condition

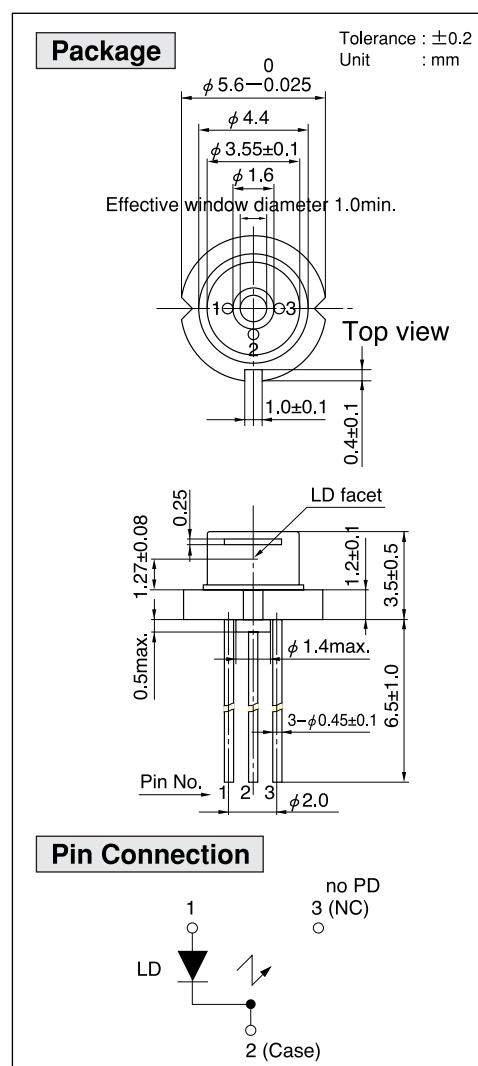
- CW : ≤ 70 mW Pulse : ≤ 150 mW(peak power)

Absolute Maximum Ratings

($T_c = 25^\circ\text{C}$)

Parameter		Symbol	Ratings	Unit
Light Output	CW	P_o (CW)	80	mW
	Pulse ¹⁾	P_o (pulse)	150	
Reverse Voltage(LD)		V_R	2	V
Operating Temperature	CW ²⁾	T_{opr}	-10 to +60	$^\circ\text{C}$
	Pulse ¹⁾²⁾	T_{opr}	-10 to +65	
Storage Temperature		T_{stg}	-40 to +85	$^\circ\text{C}$

1) Pulse Width $\leq 0.2\mu\text{s}$, Duty 50%, Peak power 2) Case temperature



Electrical and Optical Characteristics

3) 4) 5) 7)

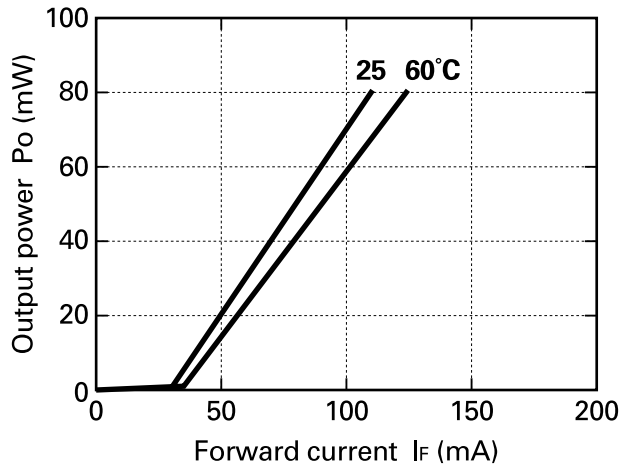
($T_c = 25^\circ\text{C}$)

Parameter		Symbol	Condition	Min.	Typ.	Max.	Unit
Threshold Current		I_{th}	CW	15	30	50	mA
Operating Current		I_{op}	$P_o = 70$ mW	60	100	130	mA
Lasing Wavelength		λ_p	$P_o = 70$ mW	778	783	788	nm
Beam Divergence ⁶⁾	Perpendicular	$\theta_{\perp}$	$P_o = 70$ mW	15	17	18	$^\circ$
	Parallel	$\theta_{//}$	$P_o = 70$ mW	7.8	8.5	9	$^\circ$
Off Axis Angle	Perpendicular	$\Delta\theta_{\perp}$	$P_o = 70$ mW	—	—	± 2	$^\circ$
	Parallel	$\Delta\theta_{//}$	$P_o = 70$ mW	—	—	± 1.5	$^\circ$
Differential Efficiency		dP_o/dI_{op}	$P_o = 70$ mW	0.9	1.1	1.3	mW/mA
Astigmatism		A_s	$P_o = 70$ mW	—	—	10	μm

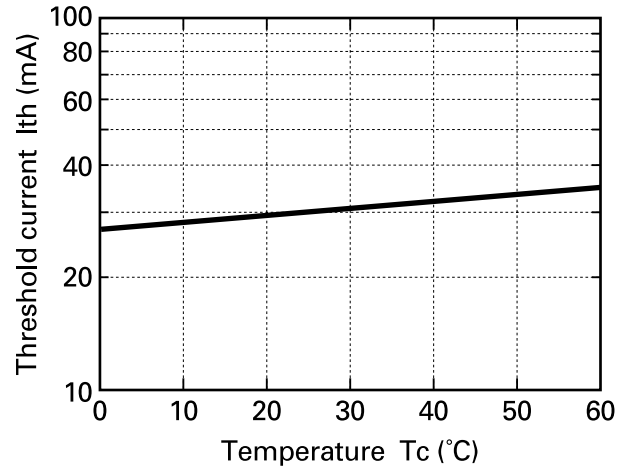
3) Initial values 4) All the above values are evaluated with Tottori Sanyo's measuring apparatus 5) Reference values 6) Full angle at half maximum
7) Measured at CW Note : The above product specifications are subject to change without notice.

Characteristics

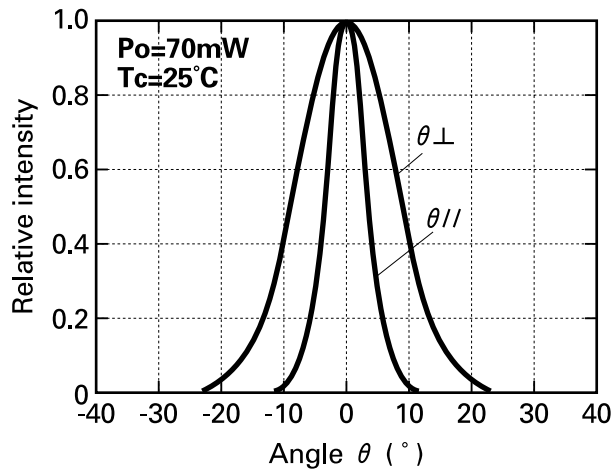
Output power vs. Forward current



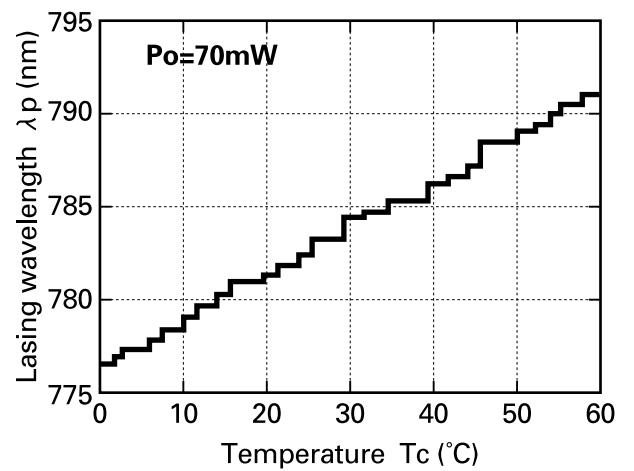
Threshold current vs. Temperature



Beam divergence



Lasing wavelength vs. Temperature



Lasing wavelength vs. Output power

