

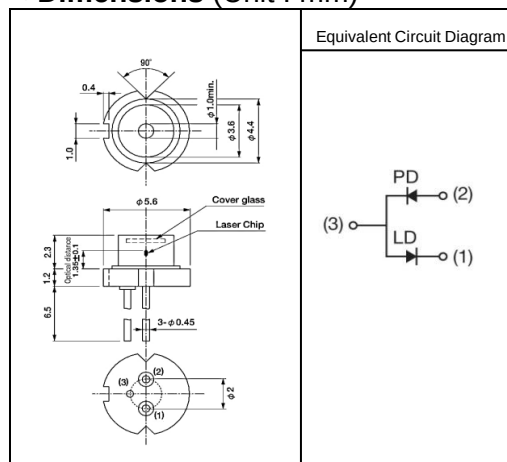
●Application

Sensors
Barcode scanner
etc

●Features

- 1) Optical output power : CW7mW
- 2) Single Mode
- 3) Highly precise $\phi 5.6$ metal stem adoption

●Dimensions (Unit : mm)



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

Parameter	Symbol	Ratings	Unit
Optical output power	P_O	7	mW
Reverse voltage	Laser diode V_R	2	V
	Photo diode $V_R(\text{PD})$	20	V
Operating temperature	T_{op}	-10 to +70	$^\circ\text{C}$
Storage temperature	T_{stg}	-40 to +85	$^\circ\text{C}$

●Electrical and optical characteristics ($T_c = 25^\circ\text{C}$)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Threshold current	I_{th}	—	25	35	mA	-
Operating current	I_{op}	—	33	45	mA	$P_O = 5\text{mW}$
Operating voltage	V_{op}	—	2.3	2.6	V	$P_O = 5\text{mW}$
Output efficiency	η	0.4	0.6	1	W/A	$2\text{mW} / (I(5\text{mW}) - I(3\text{mW}))$
Monitor current	I_m	0.08	0.2	0.5	mA	$P_O = 5\text{mW}$, $V_R(\text{PD}) = 15\text{V}$
Parallel beam divergence	$\theta_{//}$	6	8.5	12	deg.	$P_O = 5\text{mW}$
Perpendicular beam divergence	$\theta_{\perp}$	24	28	34	deg.	
Parallel beam tolerance	$\Delta\theta_{//}$	-2	0	2	deg.	
Perpendicular beam tolerance	$\Delta\theta_{\perp}$	-3	0	3	deg.	
Emission point accuracy	ΔXYZ	-80	0	80	μm	-
Lasing wavelength	λ	650	655	660	nm	$P_O = 5\text{mW}$
Astigmatic difference	As	—	5	10	nm	$NA = 0.55$, $P_O = 3.5\text{mW}$

●Electrical and Optical characteristics

Fig.1 I-L,V Temperature properties

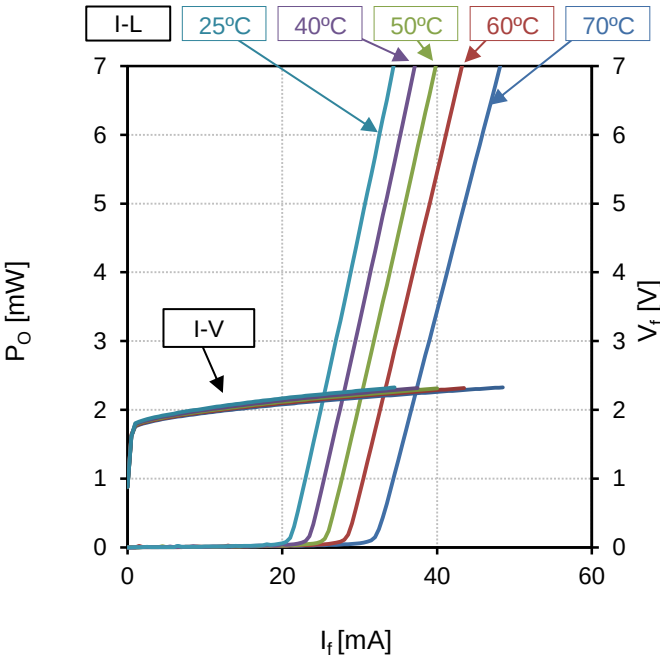


Fig.2 I_m -L

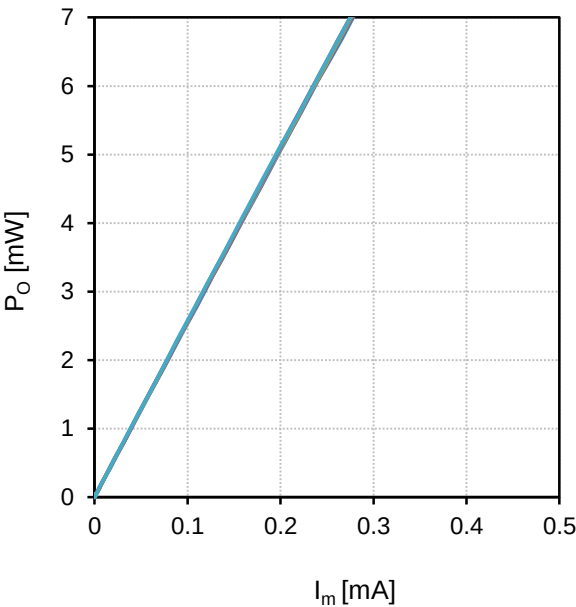


Fig.3 FFP

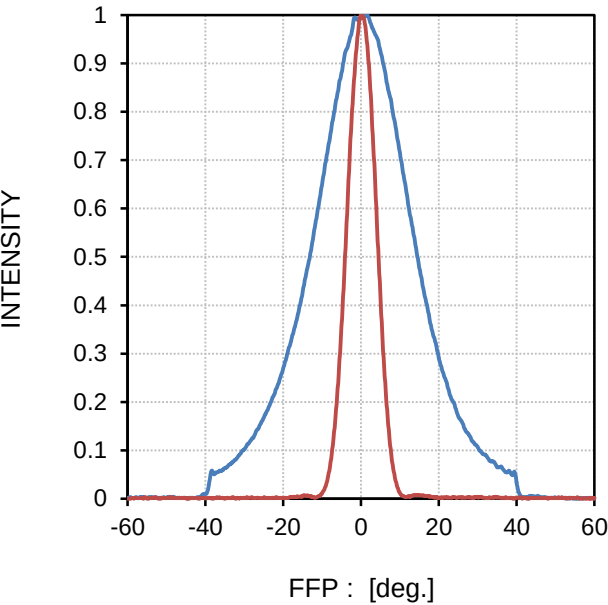
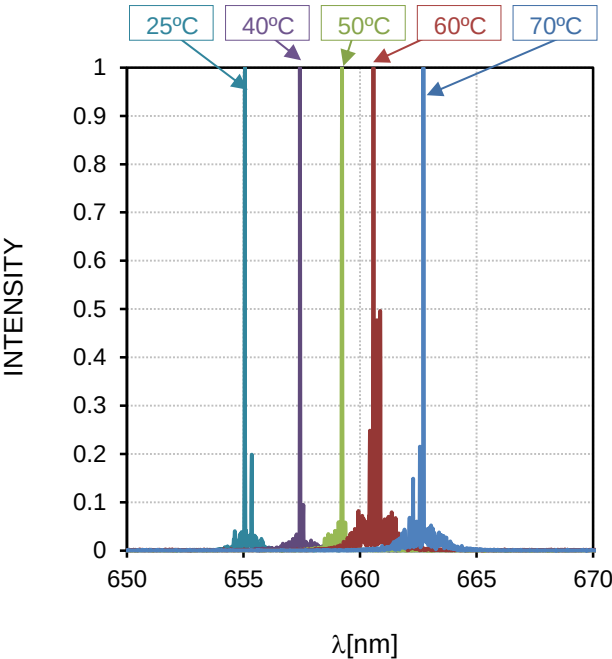


Fig.4 λ



*This data is made from the result of having measured the sample extracted at random.
Therefore, it is not what showed the ability of the whole product.

Condition : CW, P_o =5mW
Equipment : ADVANTEST LASER DIODE TEST SYSTEM Q8652
Day : 2014.10.22
Person : Kiyoko Tanaka

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