

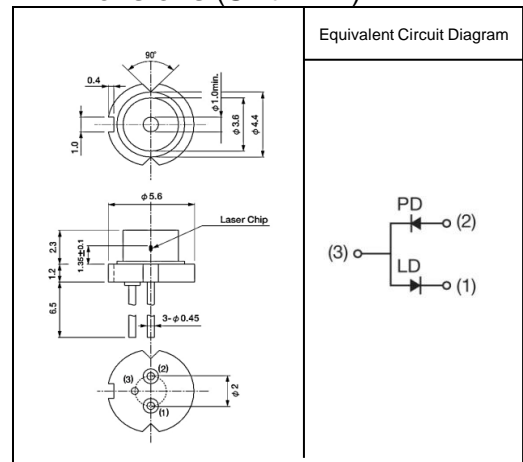
### ●Application

Sensors  
Barcode scanner  
Leveling machine  
etc

### ●Features

- 1) Optical output power : CW6mW
- 2) Single Mode
- 3) Highly precise  $\phi 5.6$  metal stem adoption
- 4) Glassless cap

### ●Dimensions (Unit : mm)



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

Parameter	Symbol	Ratings	Unit
Optical output power	$P_O$	6	mW
Reverse voltage	Laser diode $V_R$	2	V
	Photo diode $V_R(PD)$	20	V
Operating temperature	$T_{op}$	-10 to +40	$^\circ\text{C}$
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	$I_{th}$	—	24	35	mA	-
Operating current	$I_{op}$	—	33	45	mA	$P_O = 5\text{mW}$
Operating voltage	$V_{op}$	—	2.2	2.7	V	$P_O = 5\text{mW}$
Output efficiency	$\eta$	0.2	0.55	0.8	W/A	$2\text{mW} / (I(5\text{mW}) - I(3\text{mW}))$
Monitor current	$I_m$	0.05	0.18	0.5	mA	$P_O = 5\text{mW}$ , $V_R(PD) = 15\text{V}$
Parallel beam divergence	$\theta_{//}$	6	8	12	deg.	$P_O = 5\text{mW}$
Perpendicular beam divergence	$\theta_{\perp}$	28	32	40	deg.	
Parallel beam tolerance	$\Delta\theta_{//}$	-3	0	3	deg.	
Perpendicular beam tolerance	$\Delta\theta_{\perp}$	-4	0	4	deg.	
Emission point accuracy	$\Delta XYZ$	-100	0	100	$\mu\text{m}$	-
Lasing wavelength	$\lambda$	630	635	645	nm	$P_O = 5\text{mW}$

●Electrical and Optical characteristics

Fig.1 I-L,V Temperature properties

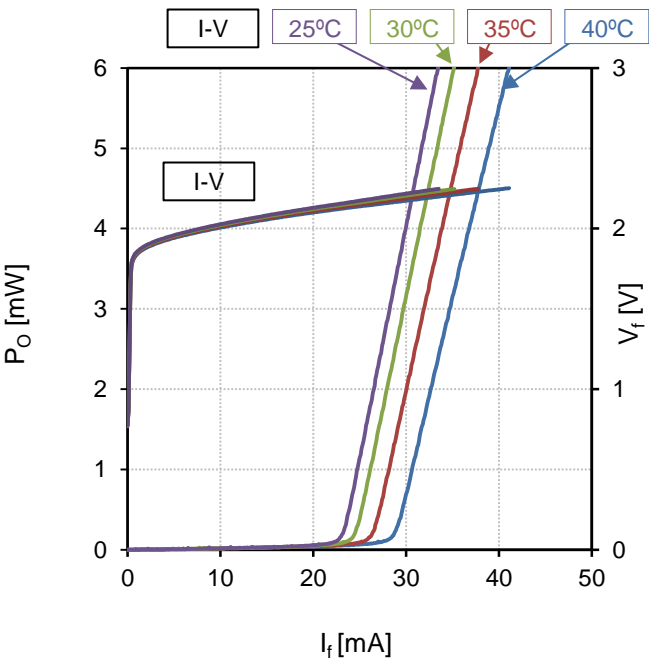


Fig.2  $I_m$ -L

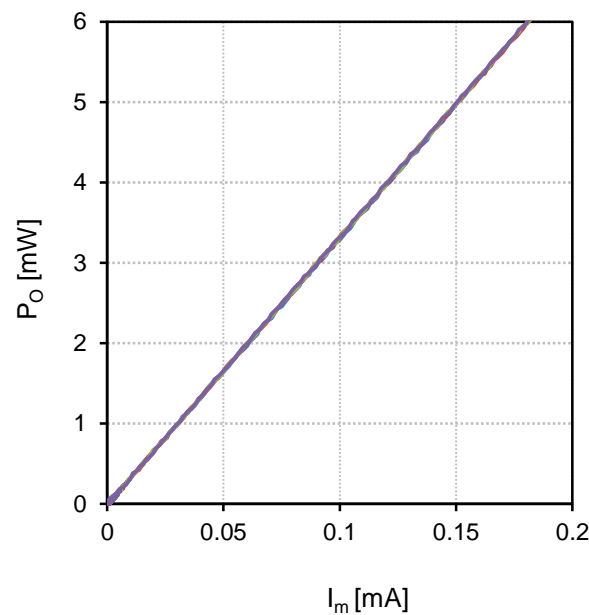


Fig.3 FFP

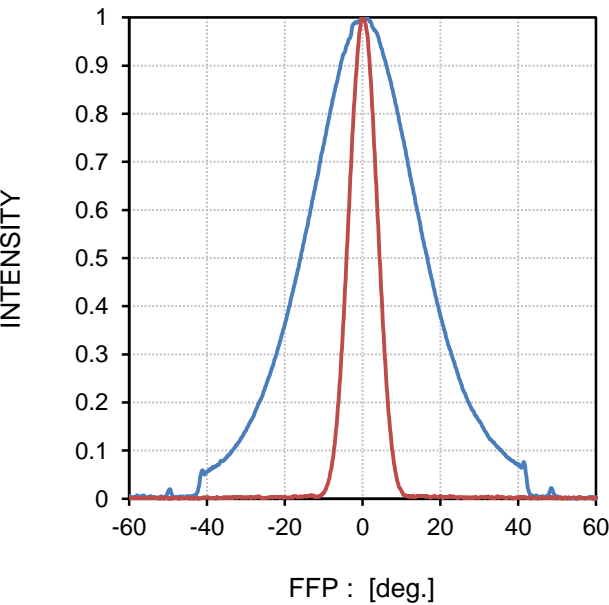
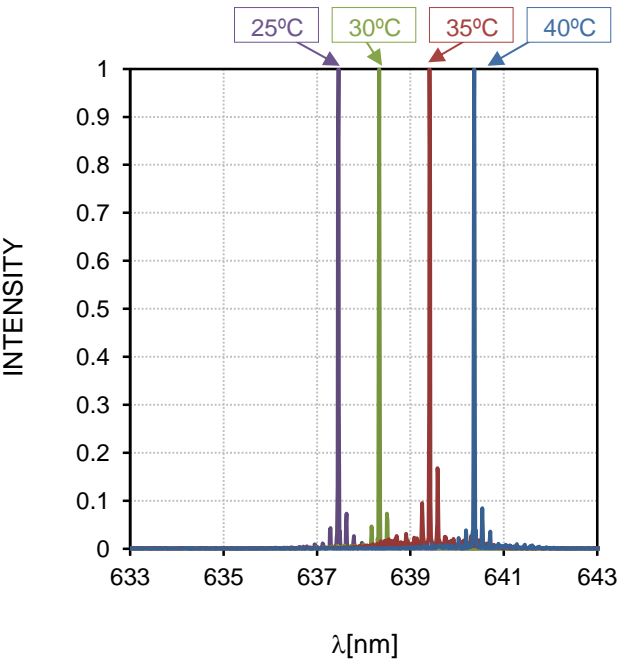


Fig.4  $\lambda$



\*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 : 2014.2.24  
Person : Eri Yamada

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