650nm low power single mode laser diode

RLD65NZX2 Data Sheet

●Application

Sensors

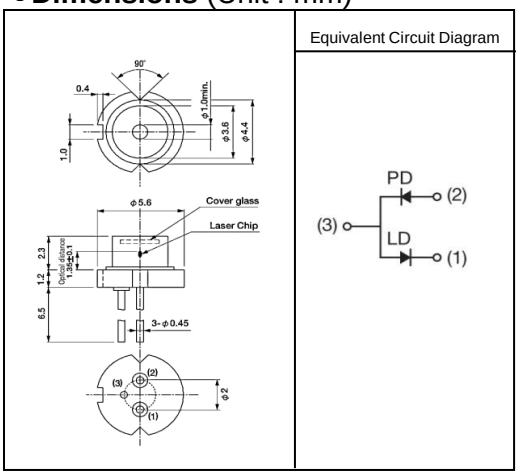
Barcode scanner

etc

●Features

1) Optical output power : CW7mW
2) Single Mode
3) Highly precise ϕ5.6metal stem adoption

●Dimensions (Unit : mm)



●Absolute maximum ratings (T_c= 25°C)

Parameter		Symbol	Ratings	Unit
Optical output power		P_O	7	mW
Reverse voltage	Laser diode	V_R	2	V
	Photo diode	V_R(PD)	20	V
Operating temperature		Top	−10 to +70	°C
Storage temperature		Tstg	−40 to +85	°C

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Threshold curret	I_{th}	−	25	35	mA	-
Operating current	I_{op}	−	33	45	mA	P_O=5mW
Operating voltage	V_{op}	−	2.3	2.6	V	P_O=5mW
Output efficiency	η	0.4	0.6	1	W/A	2mW/ (I (5mW)- I (3mW))
Monitor current	Im	0.08	0.2	0.5	mA	P_O=5mW, V_R(PD)=15V
Parallel beam divergence	$\theta_{//}$	6	8.5	12	deg.	P_O=5mW
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=5mW
Astigmatic difference	As	−	5	10	nm	NA=0.55, P_O=3.5mW

●Electrical and Optical characteristics

Fig.1 I-L,V Temperature properties

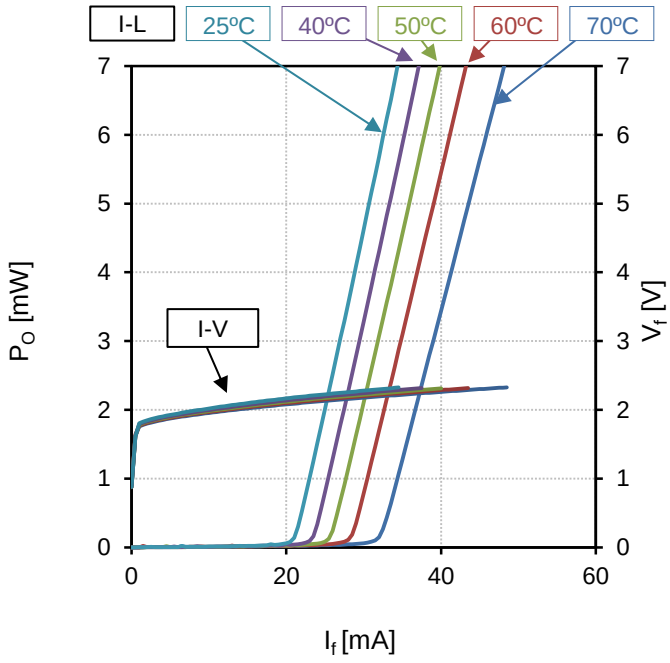


Fig.2 Im-L

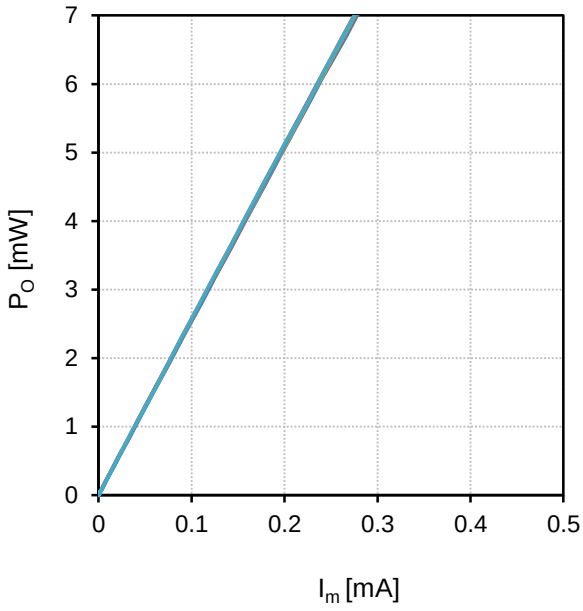


Fig.3 FFP

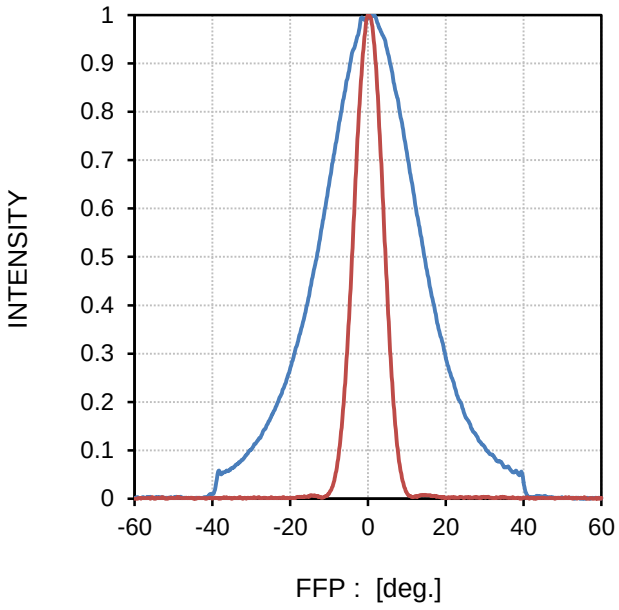
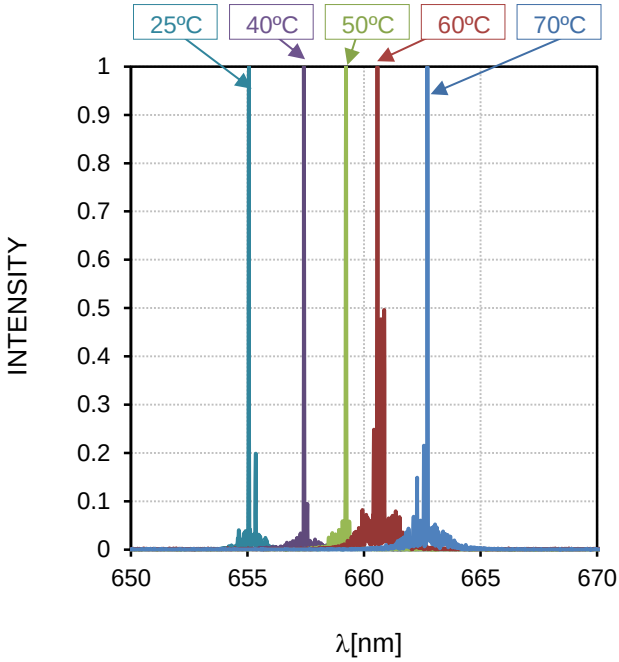


Fig.4 λ



*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, Po=5mW
Equipment :	ADVANTEST LASER DIODE TEST SYSTEM Q8652
Day :	2014.10.22
Person :	Kiyoko Tanaka

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