780nm low power single mode laser diode

RLD78MZM7 Data Sheet

●Application

Sensors

Laser Printer

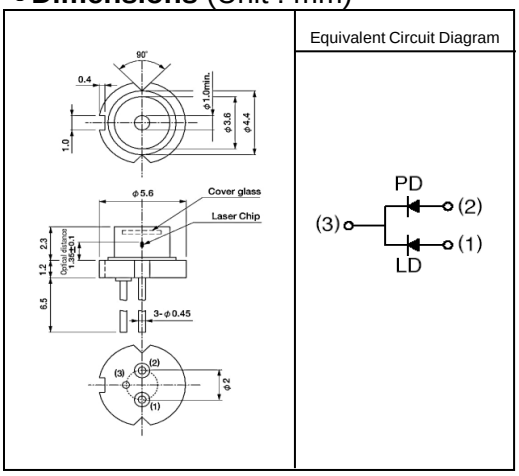
Multi Function Printer

etc

●Features

1) Optical output power : CW20mW
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	20	mW
Reverse voltage	Laser diode	V_R	2	V
	Photo diode	V_R(PD)	20	V
Operating temperature		Top	−10 to +60	°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}	7	11	20	mA	-
Operating current	I_{op}	21	33	63	mA	P_O=15mW
Operating voltage	V_{op}	1.7	1.8	2.2	V	P_O=15mW
Output efficiency	η	0.35	0.65	1.05	W/A	5mW/ (I (15mW)- I (10mW))
Monitor current	Im	0.3	0.5	0.9	mA	P_O=15mW, V_R(PD)=15V
Parallel beam divergence	$\theta_{//}$	6	8.5	12	deg.	P_O=15mW
Perpendicular beam divergence	$\theta_{\perp}$	20	24	28	deg.	
Parallel beam tolerance	$\Delta\theta_{//}$	−3	0	3	deg.	
Perpendicular beam tolerance	$\Delta\theta_{\perp}$	−4	0	4	deg.	
Emission point accuracy	ΔXYZ	−80	0	80	μm	-
Lasing wavelength	λ	775	792	800	nm	P_O=15mW
Astigmatic difference	As	—	2	10	nm	NA=0.55, P_O=3.5mW

●Electrical and Optical characteristics

Fig.1 I-L,V Temperature properties

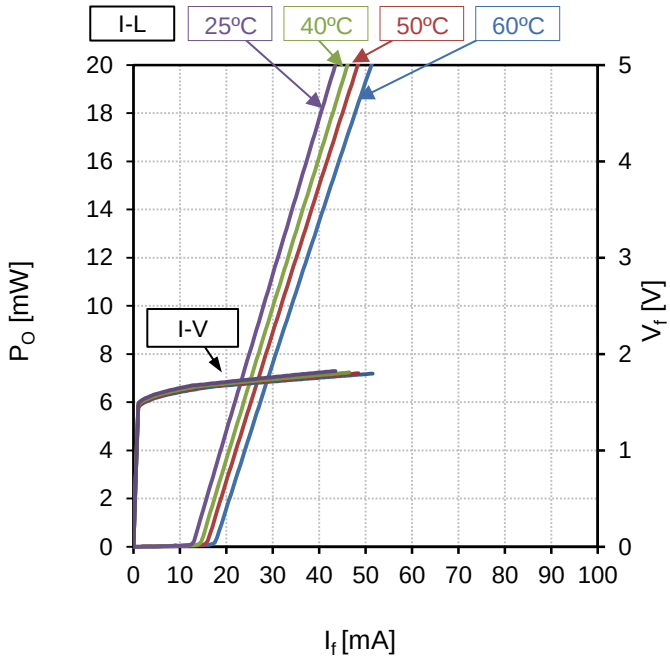


Fig.2 Im-L

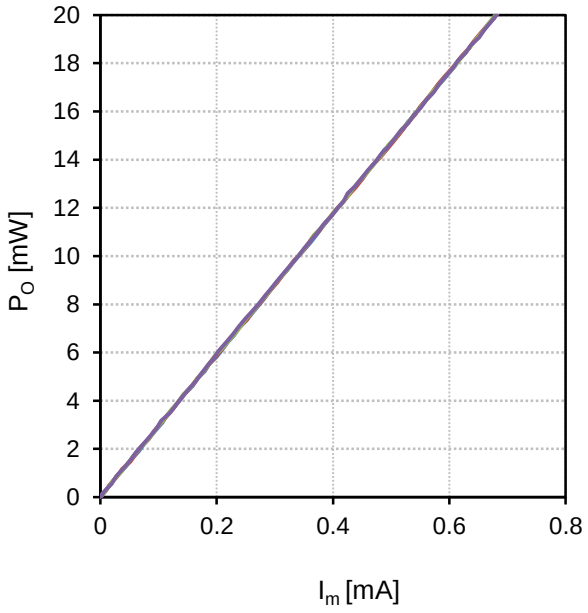


Fig.3 FFP

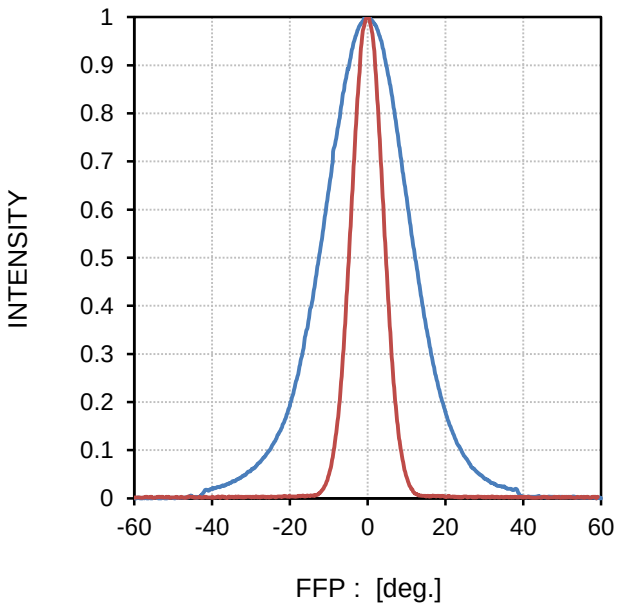
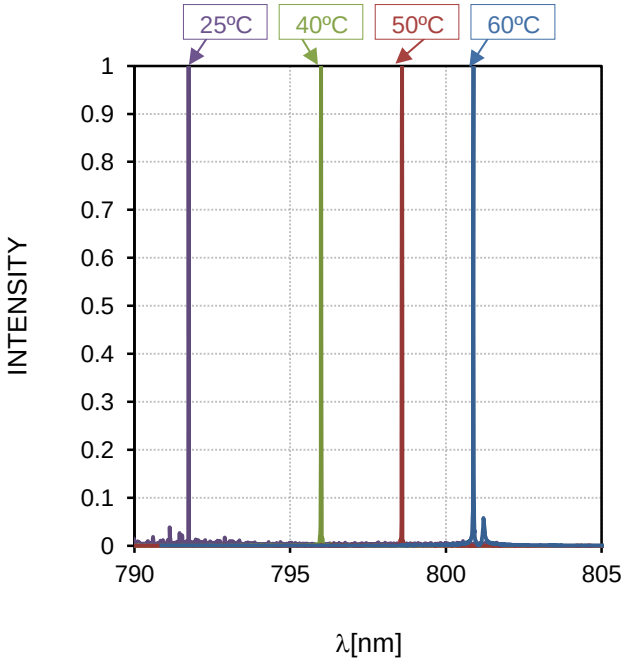


Fig.4 λ



*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=15mW
Equipment :	ADVANTEST LASER DIODE TEST SYSTEM Q8652
Day :	2014.8.28
Person :	Yuji Ishida

Notes

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ROHM SEMICONDUCTOR

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RLD78MZM7 - Web Page

Part Number	RLD78MZM7
Package	5.6mm
Unit Quantity	500
Minimum Package Quantity	500
Packing Type	Tray
Constitution Materials List	inquiry
RoHS	Yes