

For General Use

RLD78MZGM

A long-run product with market-proved high reliability. Matching to various needs.

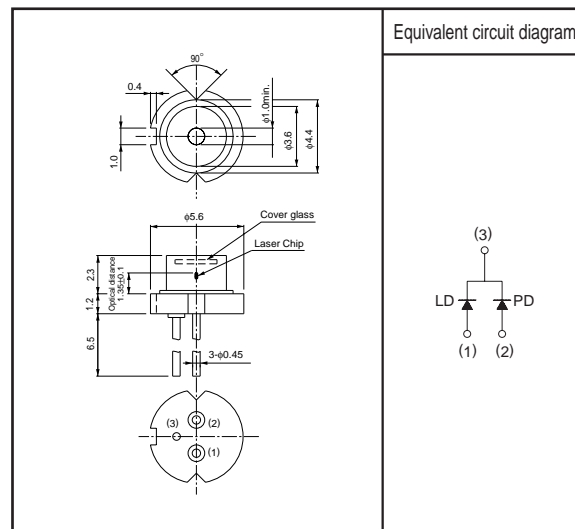
●Applications

Multipurpose
Optical sensor
Middle-speed printer
etc.

●Features

- 1) Optical power output : CW5mW
- 2) Single mode
- 3) High precision $\phi 5.6$ metal stem

●Dimensions (Unit : mm)



●Absolute maximum ratings (Tc=25°C)

Parameter	Symbol	Limits	Unit	
Output	P _o	5	mW	
Reverse voltage	Laser	V _R	2	V
	Photodiode	V _R (PIN)	20	V
Operating temperature	T _{opr}	-10 to +70	°C	
Storage temperature	T _{stg}	-40 to +85	°C	

Laser Diodes

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Threshold current	I _{th}	-	35	60	mA	-
Operating current	I _{op}	-	45	70	mA	P _o =3mW
Operating voltage	V _{op}	-	1.9	2.3	V	P _o =3mW
Differential efficiency	η	0.1	0.25	0.6	mW/mA	2mW/(I(3mW)-I(1mW))
Monitor current	I _m	0.1	0.2	0.6	mA	P _o =3mW
Parallel divergence angle	θ _{//}	8	11	15	deg	P _o =3mW
Perpendicular divergence angle	θ _⊥	20	37	45	deg	P _o =3mW
Parallel tolerance angle	Δφ _{//}	-2	0	2	deg	P _o =3mW
Perpendicular tolerance angle	Δφ _⊥	-3	0	3	deg	P _o =3mW
Emission point accuracy	ΔX	-80	0	80	μm	-
	ΔY					
	ΔZ					
Lasing wavelength	λ	770	785	810	nm	P _o =3mW
Astigmatism	As	-	(15)	-	μm	P _o =3mW

●Electrical and optical characteristics curve

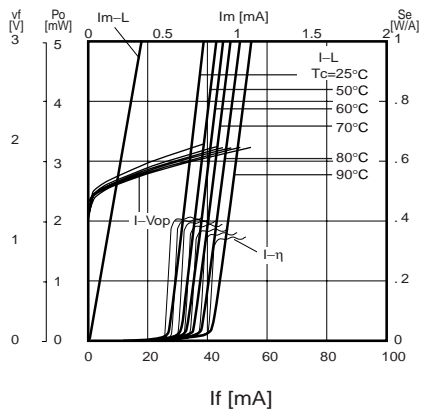


Fig.1 Electrical characteristics vs. package temperature

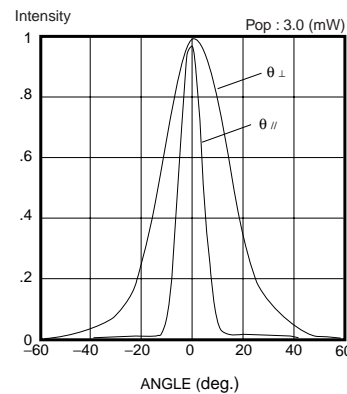


Fig.2 Far-field pattern

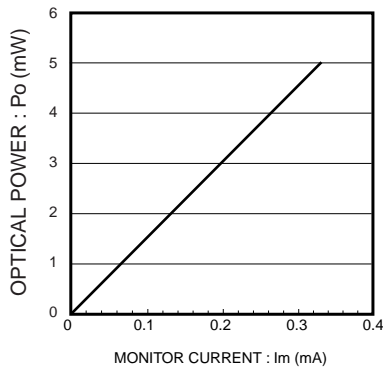


Fig.3 Monitor current vs. optical output

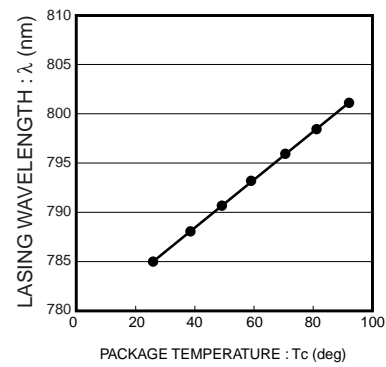


Fig.4 Package temperature vs. wavelength

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