Infra-red Laser for Sensor, Printer

RLD78MZGM

Single mode infra-red laser developed for Sensor. Good temperature characteristics made, most suitable for the printer.

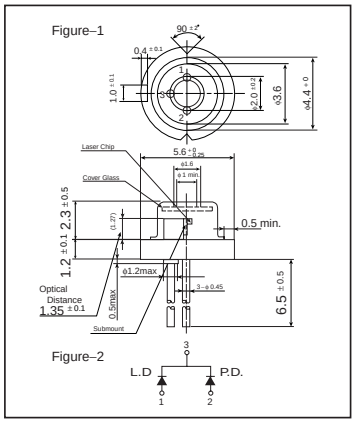
●Applications

Optical sensor
Laser printer

●Features

1) Loaded on industry's standard ϕ5.6metal package.
2) Normal pole type. (M type)
3) Excellent temperature characteristic

●External 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
	PIN photodiode	V_R (PIN)	30	V
Operating temperature		Topr	–10 to +60	°C
Storage temperature		Tstg	–40 to +85	°C

●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	Po=3mW
Operating voltage	V_{op}	–	1.9	2.3	V	Po=3mW
Differential efficiency	η	0.1	0.25	0.6	mW/mA	–
Monitor current	I_m	0.1	0.2	0.6	mA	Po=3mW
Parallel divergence angle	θ // *	8	11	15	deg	Po=3mW
Perpendicular divergence angle	$\theta \perp$ *	20	37	45	deg	Po=3mW
Parallel tolerance angle	$\Delta\phi$ //	–2	0	2	deg	Po=3mW
Perpendicular tolerance angle	$\Delta\phi \perp$	–3	0	3	deg	Po=3mW
Emission point accuracy	ΔX	–100	0	100	µm	–
	ΔY					
	ΔZ					
Lasing wavelength	λ	770	785	810	nm	Po=3mW
Astigmatism	ΔI	–	15	–	µm	Po=3mW

* θ //, $\theta \perp$ are defined as full width of half maximim

●Electrical and optical characteristics curve

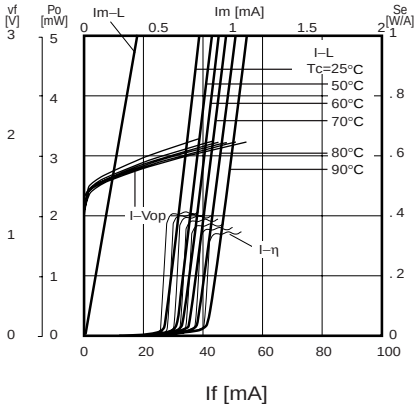


Fig.1 Electrical characteristics vs. package temperature

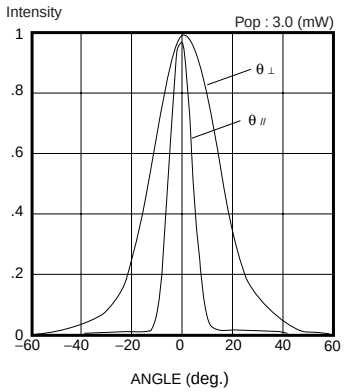


Fig.2 Far field pattern

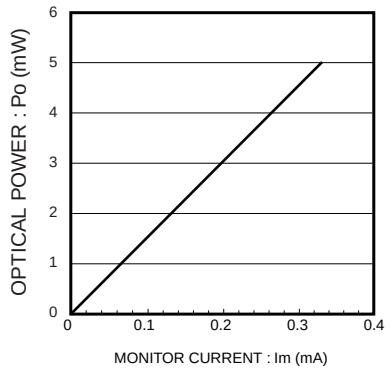


Fig.3 Monitor current vs. optical output

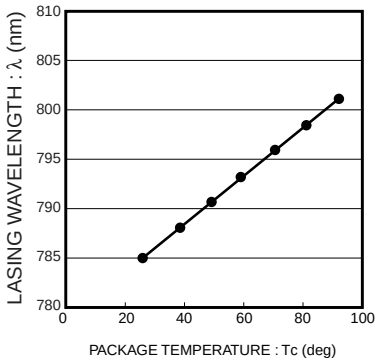


Fig.4 Package tempareture vs. wavelength

Notes

- No technical content pages of this document may be reproduced in any form or transmitted by any means without prior permission of ROHM CO.,LTD.
- The contents described herein are subject to change without notice. The specifications for the product described in this document are for reference only. Upon actual use, therefore, please request that specifications to be separately delivered.
- Application circuit diagrams and circuit constants contained herein are shown as examples of standard use and operation. Please pay careful attention to the peripheral conditions when designing circuits and deciding upon circuit constants in the set.
- Any data, including, but not limited to application circuit diagrams information, described herein are intended only as illustrations of such devices and not as the specifications for such devices. ROHM CO.,LTD. disclaims any warranty that any use of such devices shall be free from infringement of any third party's intellectual property rights or other proprietary rights, and further, assumes no liability of whatsoever nature in the event of any such infringement, or arising from or connected with or related to the use of such devices.
- Upon the sale of any such devices, other than for buyer's right to use such devices itself, resell or otherwise dispose of the same, no express or implied right or license to practice or commercially exploit any intellectual property rights or other proprietary rights owned or controlled by
- ROHM CO., LTD. is granted to any such buyer.
- Products listed in this document are no antiradiation design.

The products listed in this document are designed to be used with ordinary electronic equipment or devices (such as audio visual equipment, office-automation equipment, communications devices, electrical appliances and electronic toys).
Should you intend to use these products with equipment or devices which require an extremely high level of reliability and the malfunction of with would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), please be sure to consult with our sales representative in advance.

About Export Control Order in Japan

Products described herein are the objects of controlled goods in Annex 1 (Item 16) of Export Trade Control Order in Japan.
In case of export from Japan, please confirm if it applies to "objective" criteria or an "informed" (by MITI clause) on the basis of "catch all controls for Non-Proliferation of Weapons of Mass Destruction.