

Low power red laser diode

RLD65MPT4

Glass-less structure Red Laser.

Low lth & good temperature characteristics made by suitability of Multi Quantum Well.

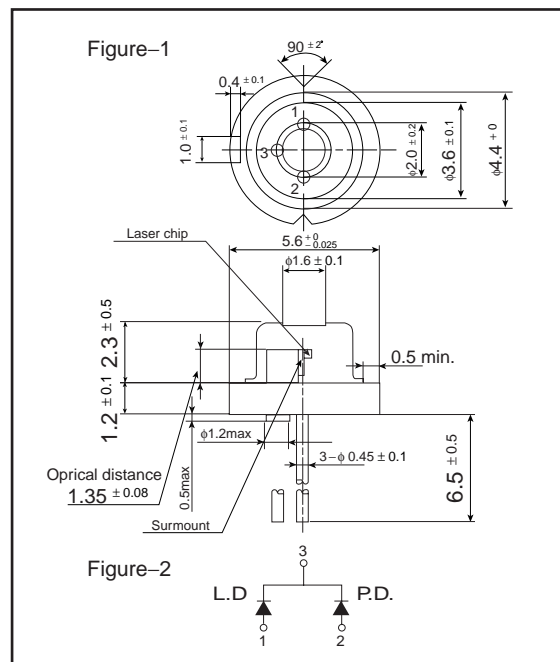
●Applications

- DVD-ROM
- COMBINATION Drive
- Sensors

●Features

- 1) The 10mW of the maximum rating corresponding to DVD-RAM read.
- 2) Optimization of a strained multi quantum well realizes the reduction in threshold current, and the good temperature characteristic.
- 3) Low threshold current : 25mA (T_c=25°C).

●Dimensions (Unit : mm)



●Absolute maximum ratings (T_c=25°C)

Parameter	Symbol	Limits	Unit	
Output	P _o	10	mW	
Reverse voltage	Raser	V _R	2	V
	PIN photodiode	V _{R(PIN)}	30	V
Operating temperature	T _{opr}	-10 to +70	°C	
Storage temperature	T _{stg}	-40 to +85	°C	

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Threshold current	I_{th}	–	25	60	mA	–
Operating current	I_{op}	–	35	70	mA	$P_o=5mW$
Operating voltage	V_{op}	–	2.3	2.6	V	$P_o=5mW$
Differential efficiency	η	0.2	0.4	0.8	mW/mA	–
Monitor current	I_m	0.07	0.12	0.35	mA	$P_o=5mW$
Parallel divergence angle	$\theta_{//}^*$	7	8	10	deg	$P_o=5mW$
Perpendicular divergence angle	θ_{\perp}^*	20	27	35	deg	$P_o=5mW$
Parallel deviation angle	$\Delta\phi_{//}$	-2	0	+2	deg	$P_o=5mW$
Perpendicular deviation angle	$\Delta\phi_{\perp}$	-3	0	+3	deg	$P_o=5mW$
Emission point accuracy	ΔX ΔY ΔZ	-80	0	+80	μm	–
Peak emission wavelength	λ	645	655	664	nm	$P_o=5mW$
Astigmatism	Δl	–	–	10	μm	$P_o=5mW$

* $\theta_{//}$ and θ_{\perp} are defined as the angle within which the intensity is 50% of the peak value.

●Electrical and optical characteristics curves

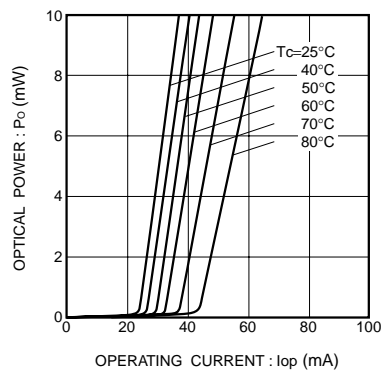


Fig.1 Optical output vs. operating current

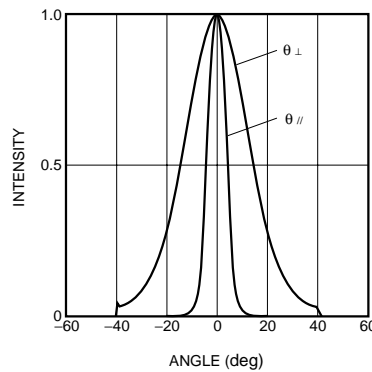


Fig.2 Far field pattern

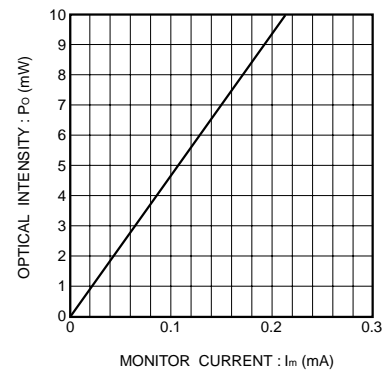


Fig.3 Monitor current vs. optical output

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