

Low power red laser diode

RLD65MPT7

Glass-less structure Red Laser.

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

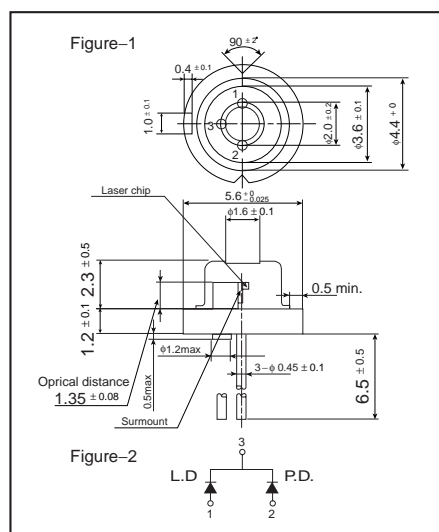
●Applications

- DVD-player
- COMBO drive
- Bar cord scanner
- Sensor

●Features

- 1) Glass less structure
- 2) Low lth : 20mA (Po=5mW, Tc=25°C)
- 3) Excellent temperature characteristic

●Dimensions (Unit : mm)



●Absolute maximum ratings (Tc=25°C)

Parameter		Symbol	Limits	Unit
Output		P _o	7	mW
Reverse voltage	Laser	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

Laser Diodes

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Threshold current	I _{th}	—	20	60	mA	—
Operating current	I _{op}	—	30	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	0.08	0.15	0.4	mA	P _o =5mW
Parallel divergence angle	θ // *	6.5	8	10	deg	P _o =5mW
Perpendicular tolerance angle	θ ⊥ *	20	27	35	deg	P _o =5mW
Parallel tolerance angle	Δφ //	-2	0	2	deg	P _o =5mW
Perpendicular tolerance angle	Δφ ⊥	-3	0	3	deg	P _o =5mW
Emission point accuracy	ΔX	-80	0	80	μm	—
	ΔY					
	ΔZ					
Lasing wavelength	λ	645	655	662	nm	P _o =5mW
Astigmatism	Δl	—	—	10	μm	P _o =5mW

* θ_⊥, θ_{//} are defined as full width of half maximum.

●Electrical and optical characteristics curves

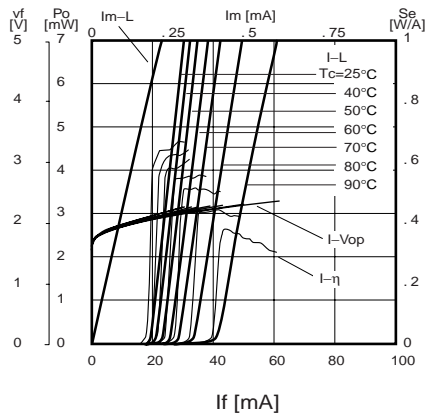


Fig.1 Electrical characteristics vs. package temperature

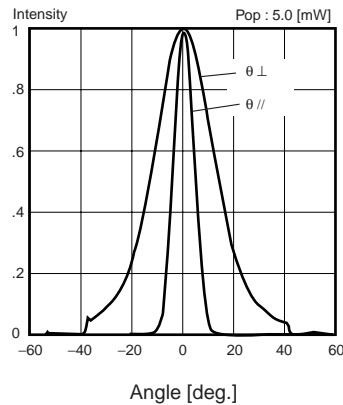


Fig.2 Far field pattern

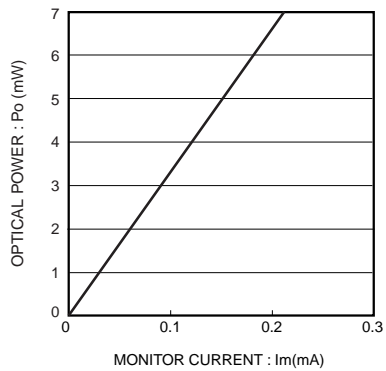


Fig.3 Monitor current vs. optical output

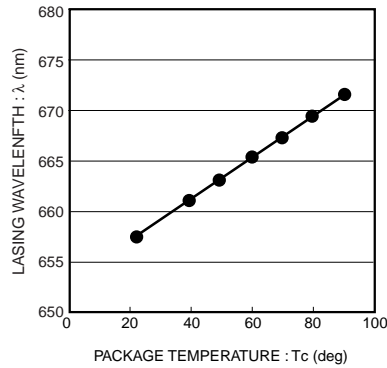


Fig.4 Package temperature vs. wavelength

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