

# Low power red laser diode

## RLD65MPT7

Glass-less structure Red Laser.

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

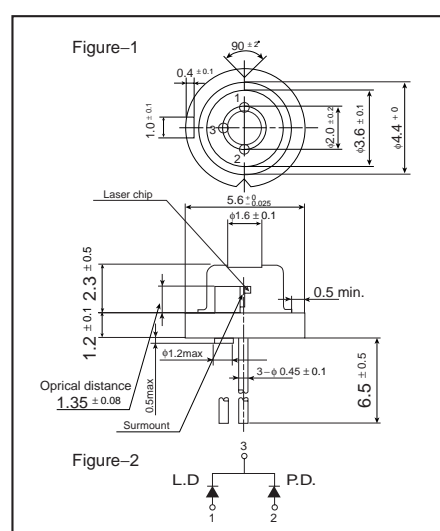
### ●Applications

DVD-player  
COMBO drive  
Bar cord scanner  
Sensor

### ●Features

- 1) Glass less structure
- 2) Low lth : 20mA ( $P_o=5\text{mW}$ ,  $T_c=25^\circ\text{C}$ )
- 3) Excellent temperature characteristic

### ●Dimensions (Unit : mm)



### ●Absolute maximum ratings ( $T_c=25^\circ\text{C}$ )

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	$^\circ\text{C}$
Storage temperature		$T_{stg}$	-40 to +85	$^\circ\text{C}$

## Laser Diodes

●Electrical and optical characteristics (T<sub>c</sub>=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Threshold current	I <sub>th</sub>	—	20	60	mA	—
Operating current	I <sub>op</sub>	—	30	70	mA	P <sub>o</sub> =5mW
Operating voltage	V <sub>op</sub>	—	2.3	2.6	V	P <sub>o</sub> =5mW
Differential efficiency	η	0.2	0.4	0.8	mW/mA	—
Monitor current	I <sub>m</sub>	0.08	0.15	0.4	mA	P <sub>o</sub> =5mW
Parallel divergence angle	θ <sub>//</sub> *	6.5	8	10	deg	P <sub>o</sub> =5mW
Perpendicular tolerance angle	θ <sub>⊥</sub> *	20	27	35	deg	P <sub>o</sub> =5mW
Parallel tolerance angle	Δφ <sub>//</sub>	-2	0	2	deg	P <sub>o</sub> =5mW
Perpendicular tolerance angle	Δφ <sub>⊥</sub>	-3	0	3	deg	P <sub>o</sub> =5mW
Emission point accuracy	ΔX	-80	0	80	μm	—
	ΔY					
	ΔZ					
Lasing wavelength	λ	645	655	662	nm	P <sub>o</sub> =5mW
Astigmatism	ΔI	—	—	10	μm	P <sub>o</sub> =5mW

\* θ<sub>⊥</sub>, θ<sub>//</sub> are defined as full width of half maximum.

## ●Electrical and optical characteristics curves

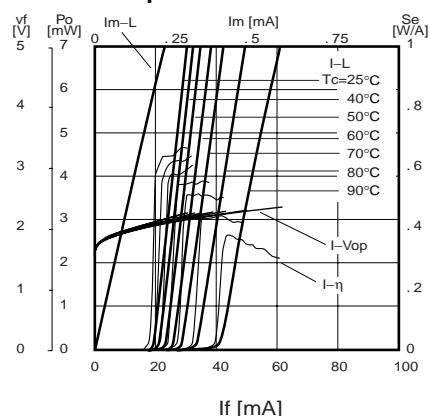


Fig.1 Electrical characteristics vs. package temperature

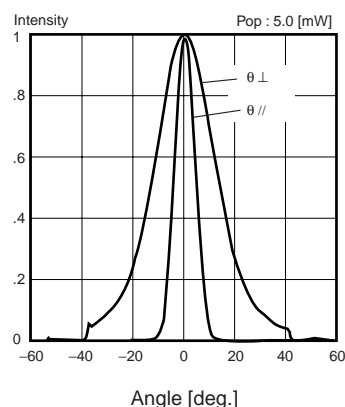


Fig.2 Far field pattern

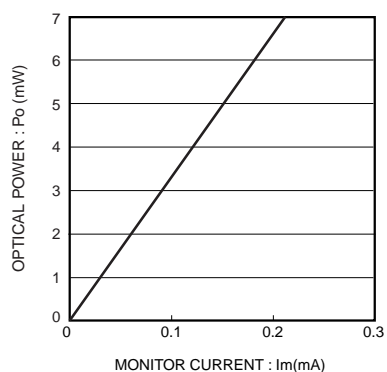


Fig.3 Monitor current vs. optical output

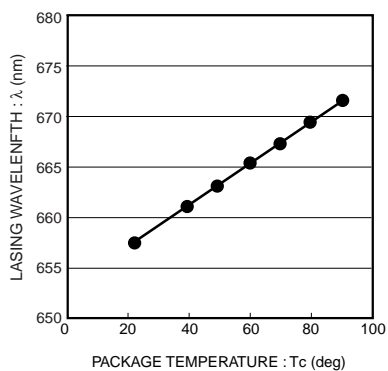


Fig.4 Package temperature vs. wavelength

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