

# Low power red laser diode

## RLD65MPT7

Glass-less structure Red Laser.

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

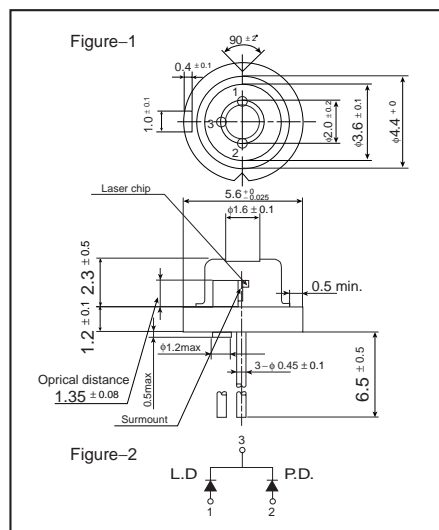
### ●Applications

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 <sub>o</sub>	7	mW
Reverse voltage	Laser	V <sub>R</sub>	2	V
	PIN photodiode	V <sub>R</sub> (PIN)	30	V
Operating temperature		T <sub>opr</sub>	-10 to +70	°C
Storage temperature		T <sub>stg</sub>	-40 to +85	°C

●Electrical and optical characteristics (Tc=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	Δl	-	-	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

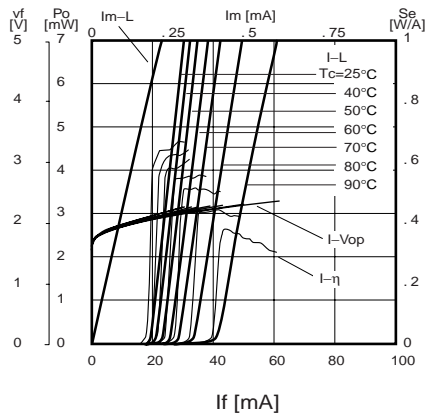


Fig.1 Electrical characteristics vs. package temperature

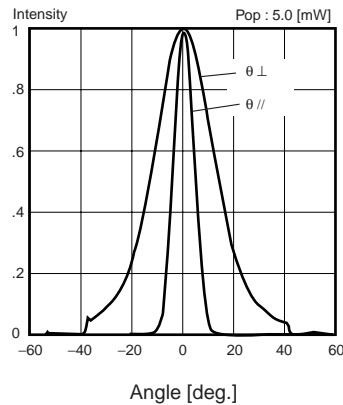


Fig.2 Far field pattern

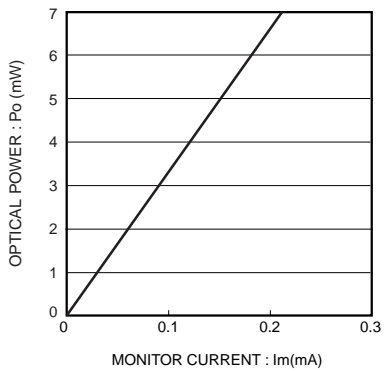


Fig.3 Monitor current vs. optical output

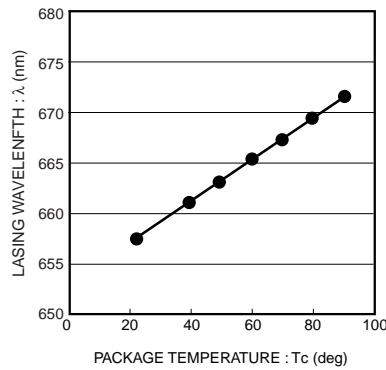


Fig.4 Package temperature vs. wavelength

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