

DVD-ROM, Combination red laser diode

RLD65MZT2

For DVD-ROM, COMBINATION. The strained multi quantum well of active layer is optimized that realized low threshold current and the good temperature characteristic.

●Applications

DVD-ROM

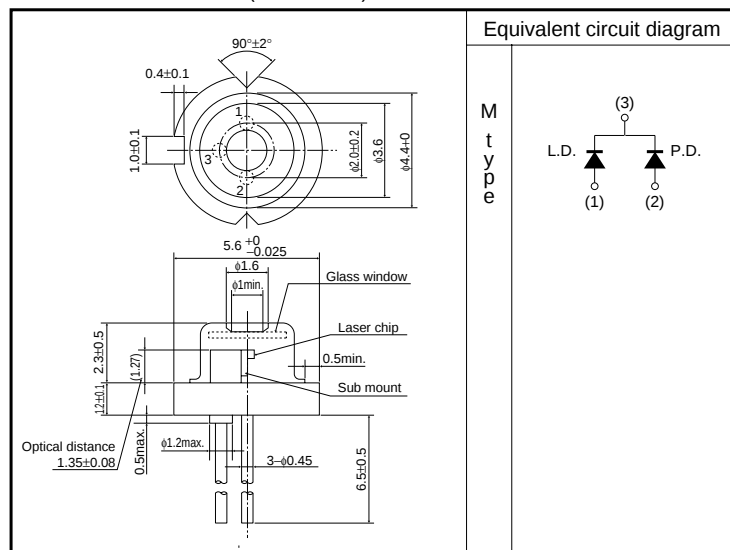
COMBINATION Drive

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 ($T_c=25^\circ\text{C}$).

●External dimensions (Units : mm)



Laser Diodes

●Absolute maximum ratings (Tc=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	0.1	0.2	0.5	mA	P _O =5mW
Parallel divergence angle	θ _{//} *	7	8	10	deg	P _O =5mW
Perpendicular divergence angle	θ _⊥ *	20	27	35	deg	P _O =5mW
Parallel deviation angle	Δφ _{//}	-2	0	+2	deg	P _O =5mW
Perpendicular deviation angle	Δφ _⊥	-3	0	+3	deg	P _O =5mW
Emission point accuracy	$\begin{matrix} \Delta X \\ \Delta Y \\ \Delta Z \end{matrix}$	-80	0	+80	μm	—
Peak emission wavelength	λ	645	655	660	nm	P _O =5mW
Astigmatism	Δℓ	—	—	10	μm	P _O =5mW

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

●Electrical and optical characteristics curves

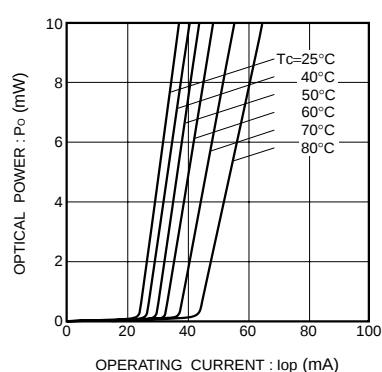


Fig.1 Optical output
vs. operating current

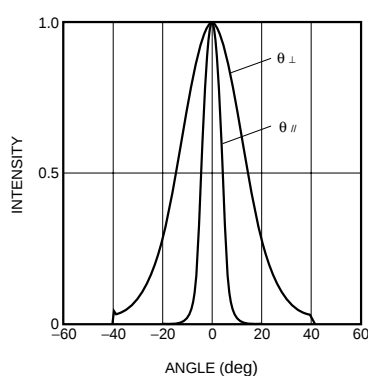


Fig.2 Far field pattern

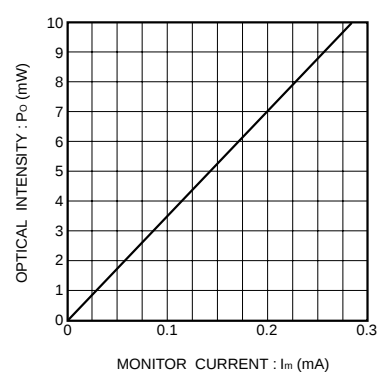


Fig.3 Monitor current
vs. optical output

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