

DVD-ROM red laser diode

RLD65MZT1

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

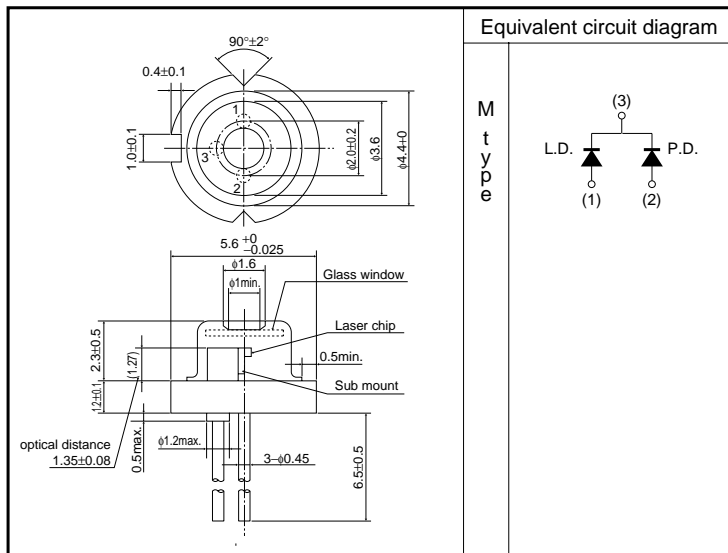
●Applications

- DVD-ROM
- DVD player
- Barcode readers
- Sensors

●Features

- 1) Optimization of a strained multi quantum well realizes the reduction in threshold current, and the good temperature characteristic.
- 2) Low threshold current : 25mA (Tc=25°C)
- 3) Low noise is realized by a high frequency modulation element..

●External dimensions (Units : mm)



●Absolute maximum ratings (Tc=25°C)

Parameter		Symbol	Limits	Unit
Output		P _o	7	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

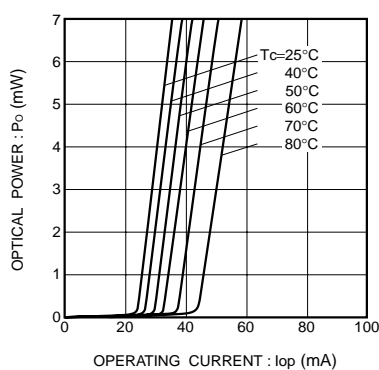


Fig.1 Optical output vs. operating current

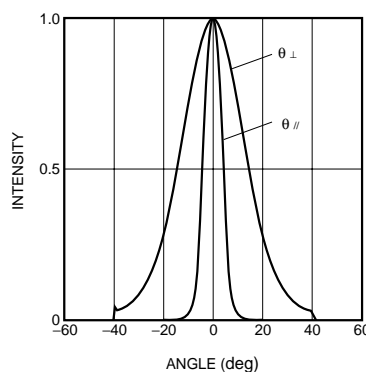


Fig.2 Far field pattern

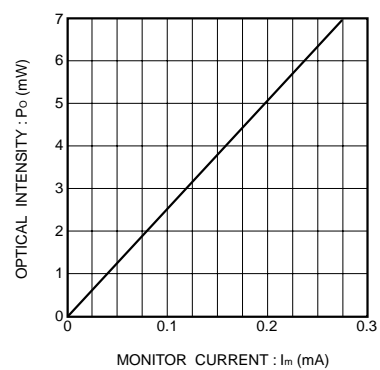


Fig.3 Monitor current vs. optical output