

# 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.

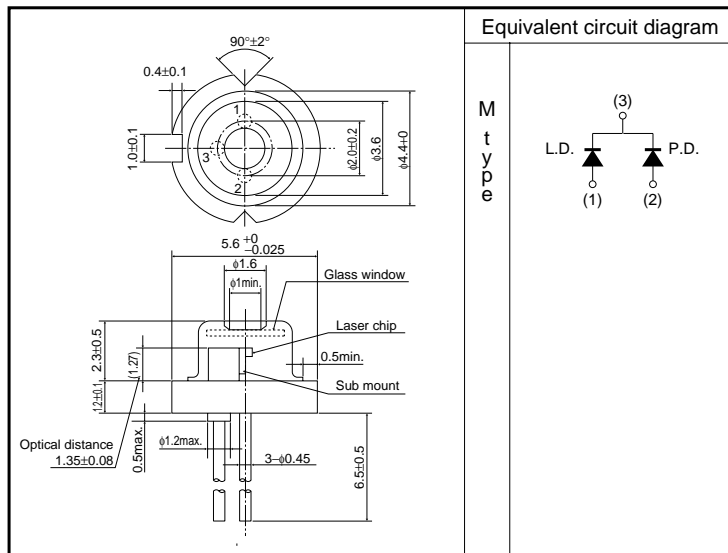
### ●Applications

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<sub>c</sub>=25°C).

### ●External dimensions (Units : mm)



Laser Diodes

●Absolute maximum ratings (Tc=25°C)

Parameter		Symbol	Limits	Unit
Output		P <sub>o</sub>	10	mW
Reverse voltage	Raser	V <sub>R</sub>	2	V
	PIN photodiode	V <sub>R(PIN)</sub>	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>	-	25	60	mA	-
Operating current	I <sub>op</sub>	-	35	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>	0.1	0.2	0.5	mA	P <sub>o</sub> =5mW
Parallel divergence angle	θ <sub>//</sub> *	7	8	10	deg	P <sub>o</sub> =5mW
Perpendicular divergence angle	θ <sub>⊥</sub> *	20	27	35	deg	P <sub>o</sub> =5mW
Parallel deviation angle	Δφ <sub>//</sub>	-2	0	+2	deg	P <sub>o</sub> =5mW
Perpendicular deviation angle	Δφ <sub>⊥</sub>	-3	0	+3	deg	P <sub>o</sub> =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 <sub>o</sub> =5mW
Astigmatism	Δl	-	-	10	μm	P <sub>o</sub> =5mW

\* θ<sub>//</sub> and θ<sub>⊥</sub> are defined as the angle within which the intensity is 50% of the peak value.

●Electrical and optical characteristics curves

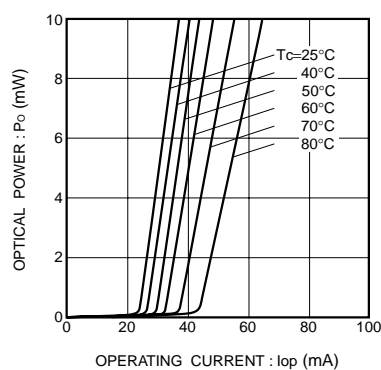


Fig.1 Optical output vs. operating current

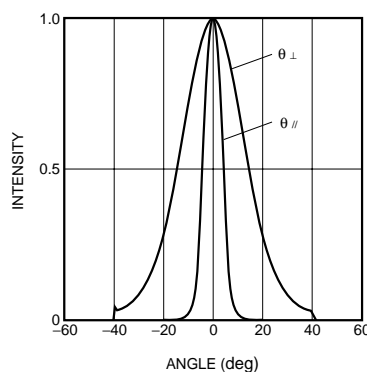


Fig.2 Far field pattern

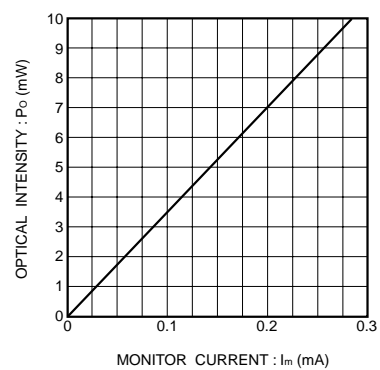


Fig.3 Monitor current vs. optical output