

RLD65PZB5

●Applications

DVD-RAM

- 1) Absolute maximum optical power output : Pulse 240mW
- 2) High speed response : ~2ns (conventional ratio 50%)
- 3) For field pattern Aspect Ratio : 1.7
- 4) ϕ 5.6mm small package (optical height 1.35mm)

Technical drawing of a laser diode assembly, showing top and side views with dimensions and labels.

Top View Dimensions:

- Top angle: $90^{\circ} \pm 2^{\circ}$
- Top left dimension: 0.4 ± 0.1
- Top left dimension: 1.0 ± 0.1
- Top right dimension: $\phi 3.6$
- Top right dimension: $\phi 2.0 \pm 0.2$
- Top right dimension: $\phi 4.4 \pm 0$
- Top center dimension: 1
- Top center dimension: 2

Side View Dimensions and Labels:

- Top dimension: 5.6 ± 0.025
- Top dimension: $\phi 1.6$
- Top dimension: $\phi 1 \text{ min.}$
- Label: Glass window
- Label: Laser chip
- Label: 0.5 min.
- Label: Sub mount
- Left dimension: 12 ± 0.1
- Left dimension: 2.3 ± 0.5
- Left dimension: (1.27)
- Left dimension: 0.5 max.
- Left dimension: $\phi 1.2 \text{ max.}$
- Left dimension: $3 - \phi 0.45$
- Right dimension: 6.5 ± 0.5

Optical distance: 1.35 ± 0.08

Equivalent circuit diagram:

L.D. (Laser Diode) symbol with terminals (1), (2), and (3).

High power type

Parameter	Symbol	Limits	Unit
Output	P _O	Pulse 240	mW
Laser reverse voltage	V _R	2	V
Operating temperature	T _{op}	−10 to +70 (Pulse)	°C
Storage temperature	T _{stg}	−40 to +85	°C

ROHM

Laser Diodes

●Electrical and optical characteristics (Tc=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Threshold current	I_{th}^{*1}	—	60	75	mA	CW
Operating current	I_{op}^{*1}	—	150	200	mA	CW : P _o =80mW
Operating voltage	V_{op}^{*1}	—	2.7	3.2	V	CW : P _o =80mW
Differential efficiency	η^{*1}	0.7	1.0	1.3	mW/mA	CW : 30mW / (I(80mW) - I(50mW))
Monitor current	I_m^{*1}	—	—	—	mA	—
Parallel divergence angle	$\theta_{//}^{*1}$	8	10	13	deg	CW : P _o =100mW
Perpendicular divergence angle	$\theta_{\perp}^{*1}$	15	17	19		
Parallel deviation angle	$\Delta\phi_{//}^{*1}$	-2.0	0	+2.0		
Perpendicular deviation angle	$\Delta\phi_{\perp}^{*1}$	-3.0	0	+3.0		
Emission point accuracy	ΔXYZ^{*1}	-80	0	+80	μm	—
Peak emission wave length	λ^{*1}	650	658	662	nm	CW : P _o =80mW
Astigmatism	AS^{*2}	—	—	6	μm	CW : P _o =80mW

* $\theta_{//}$ and $\theta_{\perp}$ are defined as the angle within which the intensity is 50% of the peak value.

●Electrical and optical characteristics curve

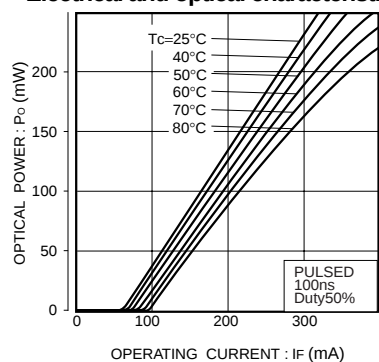


Fig.1 Optical output
vs. operating current

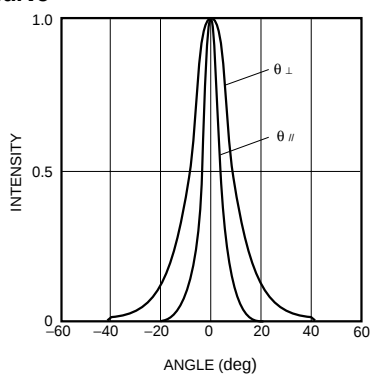


Fig.2 Far field pattern