DVD-Record, High power red laser diode

RLD65PZB5

The RLD65PZB5 is the red high-output semiconductor laser developed since it corresponded to the high speed needs of the optical pick up for DVD record.

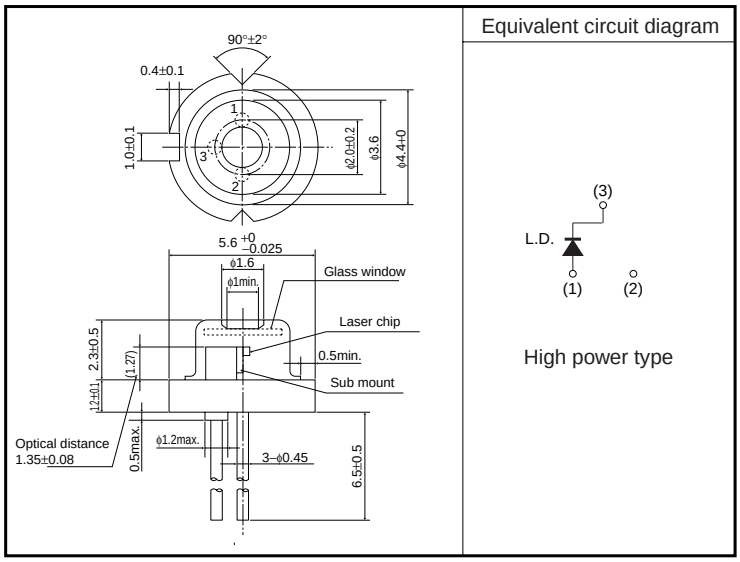
●Applications

DVD±R
DVD±RW
DVD–RAM

●Features

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) ϕ5.6mm small package (optical height 1.35mm)

●External dimensions (Unit : mm)



●Absolute maximum ratings (Tc=25°C)

Parameter	Symbol	Limits	Unit
Output	P_O	Pulse 240	mW
Laser reverse voltage	V_R	2	V
Operating temperature	Top	–10 to +70 (Pulse)	°C
Storage temperature	Tstg	–40 to +85	°C

Pulse conditions : pulse width < 80ns duty 50%

●**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**

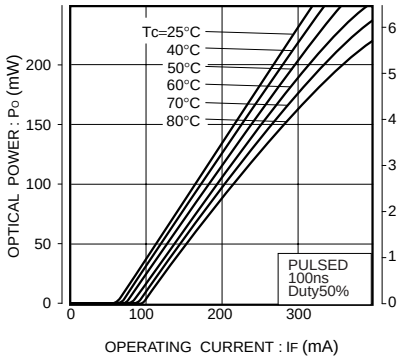


Fig.1 Optical output vs. operating current

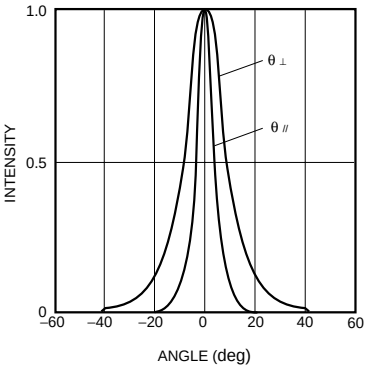


Fig.2 Far field pattern