Barcode, printer red laser diode

RLD65NZT1

For Barcode, Laser Printer. The product is the single power supply drive type which realized low threshold current and the good temperature characteristic.

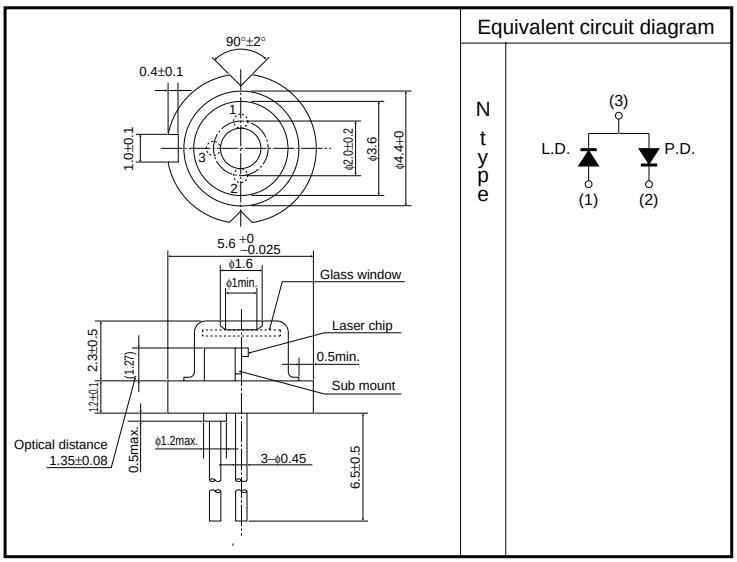
●Applications

Barcode readers
Printers
Sensors

●Features

1) Optimization of a strained multi quantum well realizes the reduction in threshold current, and the good temperature characteristic.
2) Low operation current drive type : 32mA (T_C=25°C, P_O=5mW)
3) The single power supply drive type (LD=Anode common type)

●External dimensions (Units : mm)



Laser Diodes

●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		Topr	−10 to +70	°C
Storage temperature		Tstg	−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	$\theta_{//}$*	7	8	10	deg	P_O=5mW
Perpendicular divergence angle	$\theta_{\perp}$*	20	27	35	deg	P_O=5mW
Parallel deviation angle	$\Delta\phi_{//}$	−2	0	+2	deg	P_O=5mW
Perpendicular deviation angle	$\Delta\phi_{\perp}$	−3	0	+3	deg	P_O=5mW
Emission point accuracy	ΔX ΔY ΔZ	−80	0	+80	μm	–
Peak emission wavelength	λ	645	655	660	nm	P_O=5mW
Astigmatism	$\Delta\ell$	–	–	10	μm	P_O=5mW

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

●Electrical and optical characteristics curves

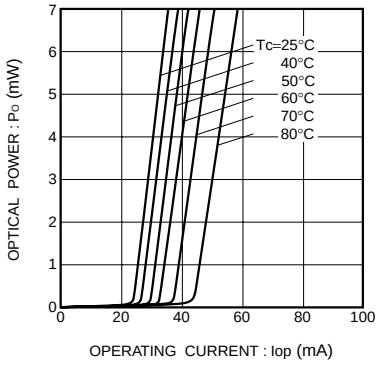


Fig.1 Optical output vs. operating current

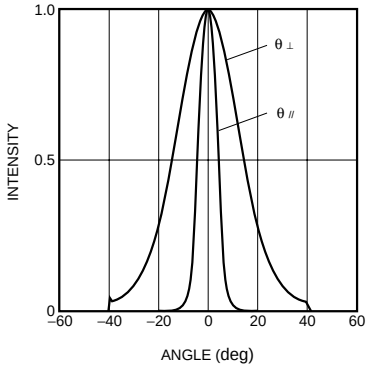


Fig.2 Far field pattern

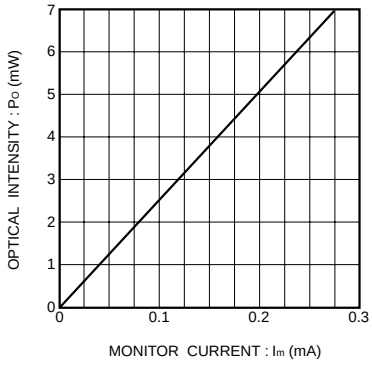


Fig.3 Monitor current vs. optical output

ROHM

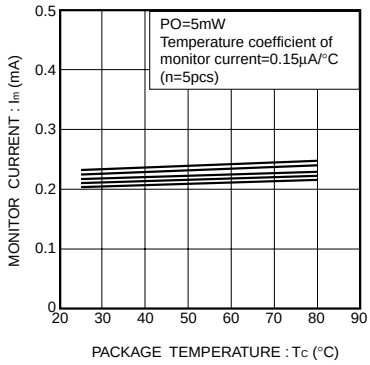


Fig.4 Temperature dependence of moritor current