

AlGaAs laser diodes

RLD78NZH2

The RLD78NZH2 is the best suitable laser diode for high-speed laser printer and PPC. The power limits is 10mW to print at high-speed.

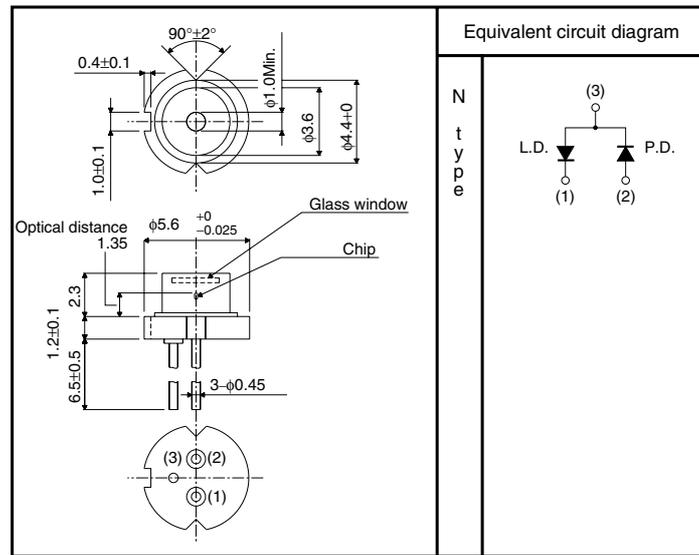
●Applications

High-speed laser printers
PPC

●Features

- 1) Absolutemax. output power 10mW.
- 2) High-precision, compact package. (φ5.6mm)
- 3) Low droop.
- 4) Can be driven by single power supply (N type).

●External dimensions (Unit : mm)



●Absolute maximum ratings (Tc=25°C)

Parameter	Symbol	Limits	Unit	
Output	P _o	10	mW	
Reverse voltage	Laser	V _R	2	V
	PIN photodiode	V _{R (PIN)}	30	V
Operating temperature	T _{opr}	-10 to +60	°C	
Storage temperature	T _{stg}	-40 to +85	°C	

Laser diodes

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Threshold current	I _{th}	-	20	45	mA	-
Operating current	I _{op}	-	40	65	mA	P _o =6mW
Operating voltage	V _{op}	-	1.9	2.3	V	P _o =6mW
Differential efficiency	η	0.2	0.4	0.8	mW/mA	$\frac{4mW}{I(6mW) - I(2mW)}$
Monitor current	I _m	0.2	0.4	1.0	mA	P _o =6mW
Parallel divergence angle	θ _∥ [*]	8	11	15	deg	P _o =6mW
Perpendicular divergence angle	θ _⊥ [*]	25	30	38	deg	
Parallel deviation angle	Δφ _∥	-	-	±2	deg	
Perpendicular deviation angle	Δφ _⊥	-	-	±3	deg	
Emission point accuracy	ΔX ΔY ΔZ	-100	-	+100	μm	-
Peak emission wavelength	λ	770	785	795	nm	P _o =6mW
Droop	ΔP	-	5	10	%	P _o =6mW

*θ_∥ and θ_⊥ are defined as the angle within which the intensity is 50% of the peak value.

●Electrical and optical characteristic curves

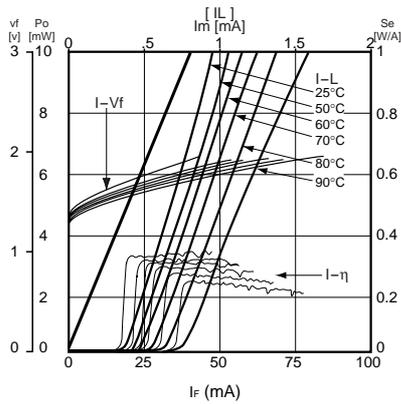


Fig.1 Dependence of I-L on temperature

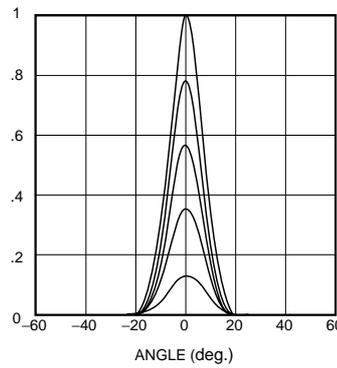


Fig.2 Parallel far field pattern

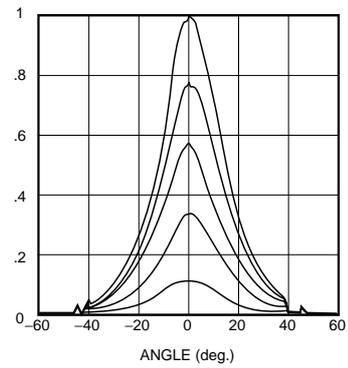


Fig.3 Perpendicular far field pattern

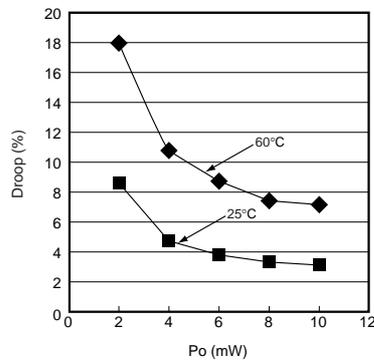


Fig.4 Dependence of droop on output power and temperature

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