

ROHM

Specification	Products LASER DIODE	Type RLD78PZU1 series
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DEVICE LASER DIODE
SERIES TYPE RLD78PZU1
STRUCTURE AlGaAs Duple-hetero Invisible L.D.
PACKAGE DIMENSIONS Figure-1
PIN CONNECTION Figure-2

ABSOLUTE MAXIMUM RATINGS (Tc=25°C)

PARAMETER		SYMBOL	RATINGS	UNIT
Optical Output		Po	pulse80/cw50	mW
Reverse Voltage	Laser	Vr	2	V
	PIN PD	Vr(PIN)	5	V
Operating Temperature		Top	-10~+60	°C
Storage Temperature		Tstg	-40~+85	°C

CHARACTERISTICS (Tc=25°C)

No.	PARAMETER		SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNIT	Control method
1	Threshold Current		Ith		—	22	50	mA	* 1
2	Operating Current		Iop	Po=50mW	—	75	100	mA	
3	Operating Voltage		Vop	Po=50mW	—	2.0	2.5	V	
4	Output Efficiency		η	40mW I(50mW)-I(10mW)	0.7	1.0	1.4	mW/mA	
5	Monitor Current		Im	Po=50mW Vrpin=5V	0.05	0.2	0.4	mA	
6	Beam	Parallel	$\theta //$	Po=50mW	7	9	11	deg	
7	Divergence (FWHM)	Perpen-dicular	$\theta \perp$		19	22	27	deg	
8	Beam	Parallel	$\Delta \theta //$		-2	0	-2	deg	
9	Tolerance	Perpen-dicular	$\Delta \theta \perp$		-3	0	-3	deg	
10	Positional Accuracy of Point Source		ΔX ΔY ΔZ	—	-80	0	+80	μm	
11	Lasing Wavelength		λ	Po=50mW	775	785	795	nm	
12	Astigmatism		As	Po=50mW	—	—	6	μm	

$\theta //$, $\theta \perp$ are defined as full width of half maximum.

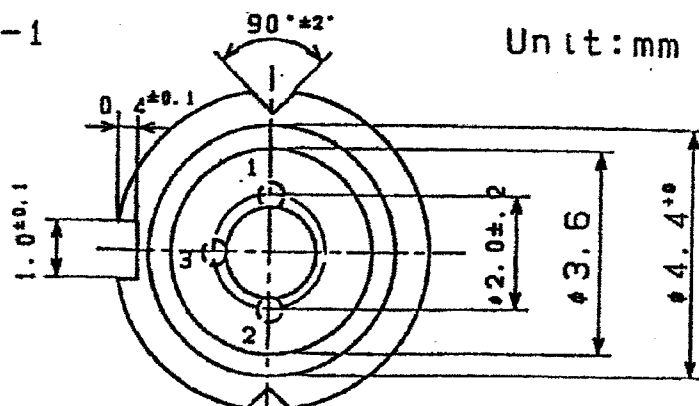
Control method * 1 100% inspection

- This product is classified into a Class IIIb Laser, emitting invisible laser radiation. Direct exposure should be avoided and never look at the emitting surface.
- Laser diodes are susceptible to deterioration or damage due to electrostatic discharges and other current surges, resulting in significantly reduced reliability. Always observe precautions for handling of electrostatic discharge sensitive devices.
- Tc: Case Temperature
In this Specification "Operating Temperature" and "Storage Temperature" are defined as case Temperature(Tc).

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Specification	Products	Type
	LASER DIODE	RLD78PZU1 series

Figure-1



Unit:mm

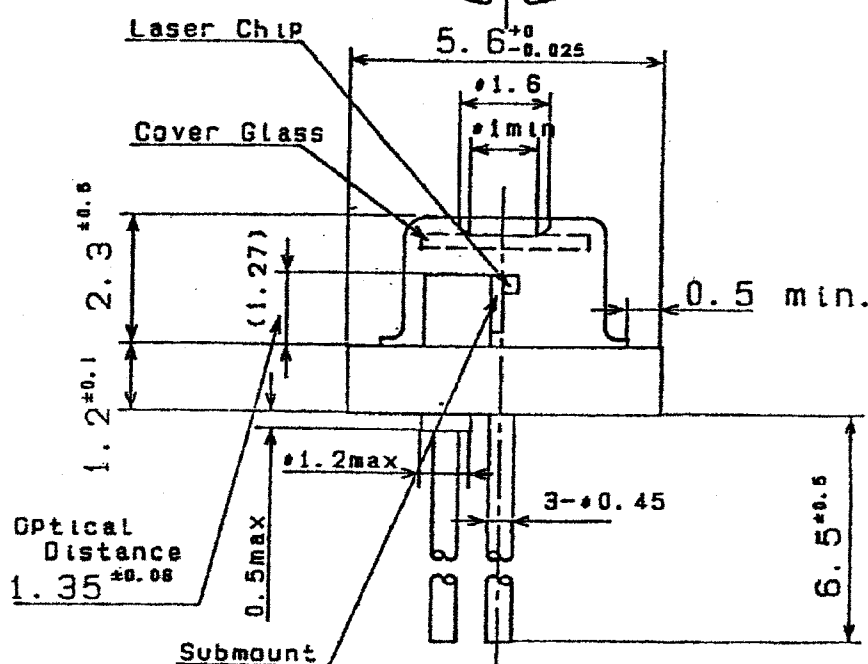
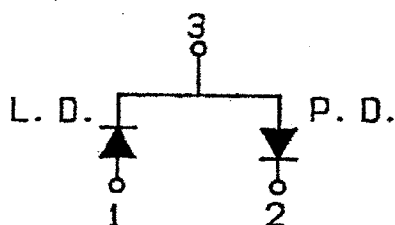


Figure-2



DANGER		INVISIBLE SEMICONDUCTOR LASER AVOID EXPOSURE -invisible Laser radiation is emitted from this aperture
 INVISIBLE LASER RADIATION-AVOID DIRECT EXPOSURE TO BEAM MAXIMUM OUTPUT 180 mW WAVELENGTH 770-810 nm CLASS II LASER PRODUCT		ROHM Laser Diode This product complies with IEC 826 Part 1040.10 and 1040.11 ROHM Co., Ltd. 3-1, Goshima-cho, Minato-ku, Kyoto 605, Japan.