

PNZ313B (PN313B)

Silicon planar type

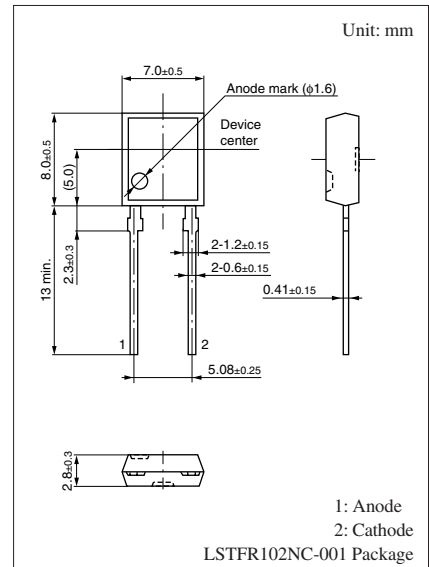
For optical control systems

■ Features

- Fast response which is well suited to high speed modulated light detection: $t_r, t_f = 50$ ns (typ.)
- High sensitivity, high reliability
- Peak emission wavelength matched with infrared light emitting diodes: $\lambda_p = 960$ nm (typ.)
- Wide detection area, wide half-power angle: $\theta = 65^\circ$ (typ.)
- Adoption of visible light cutoff resin

■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Reverse voltage	V_R	30	V
Power dissipation	P_D	100	mW
Operating ambient temperature	T_{opr}	-30 to +85	$^\circ\text{C}$
Storage temperature	T_{stg}	-40 to +100	$^\circ\text{C}$



■ Electrical-Optical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Dark current	I_D	$V_R = 10$ V			50	nA
Photocurrent ^{*1}	I_L	$V_R = 10$ V, $L = 1000$ lx	15	25		μA
Peak emission wavelength	λ_p	$V_R = 10$ V		960		nm
Rise time ^{*2}	t_r	$V_R = 10$ V, $R_L = 1$ k Ω		50		ns
Fall time ^{*2}	t_f			50		ns
Rise time ^{*2}	t_r	$V_R = 10$ V, $R_L = 100$ k Ω		5		μs
Fall time ^{*2}	t_f			5		μs
Terminal capacitance	C_t	$V_R = 10$ V, $f = 1$ MHz		70		pF
Half-power angle	θ	The angle from which photo-output becomes 50%		65		$^\circ$

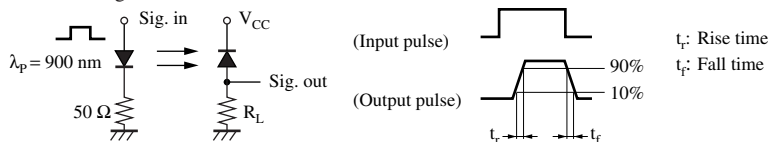
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7031 measuring methods for diodes.

2. Spectral sensitivity characteristics: Sensitivity for wave length over 400 nm maximum sensitivity ratio is 100%.

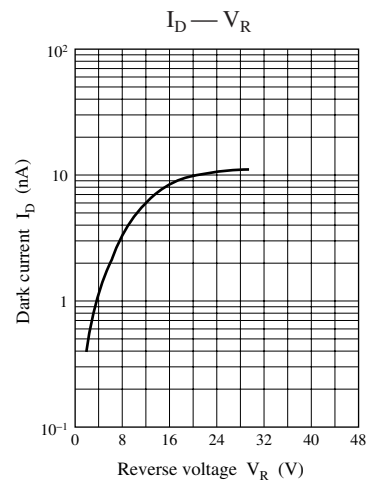
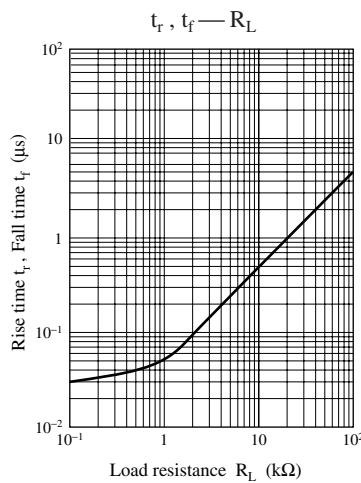
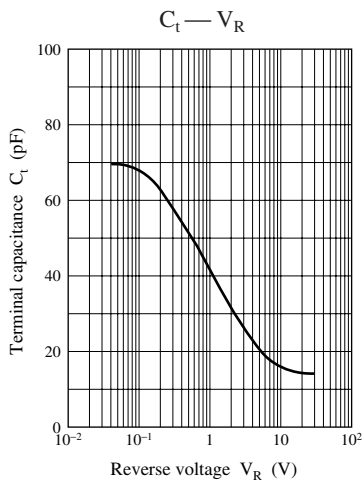
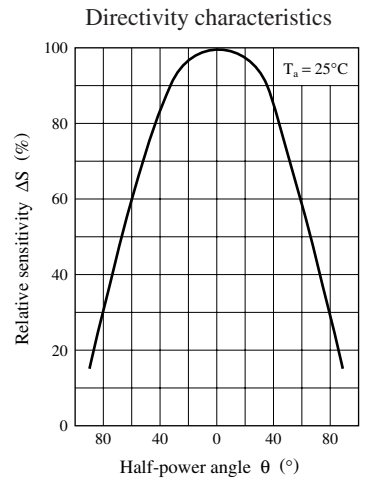
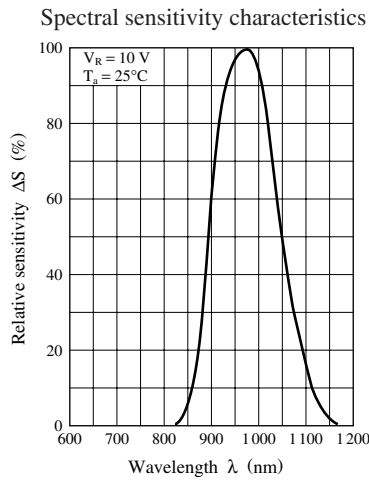
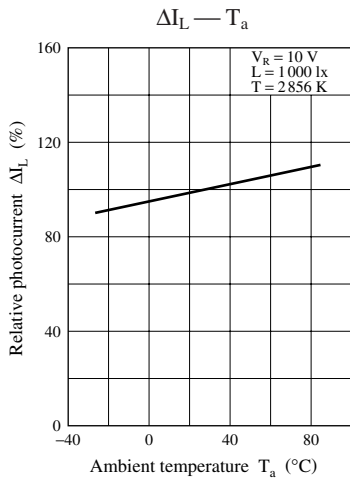
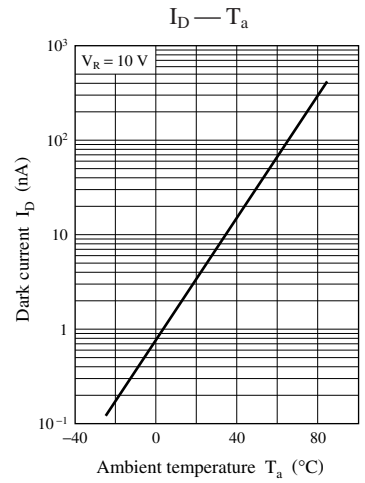
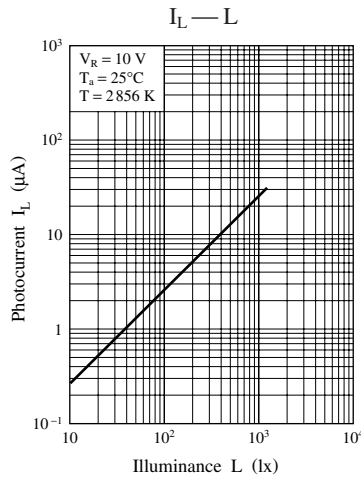
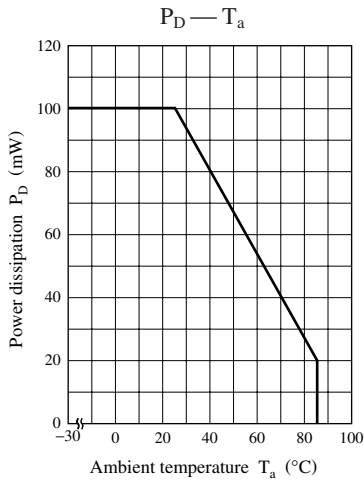
3. This device is designed be disregarded radiation.

4. *1: Source: Tungsten (color temperature 2856 K)

*2: Switching time measurement circuit



Note) The part number in the parenthesis shows conventional part number.



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