

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 sensitivity wavelength matched with infrared light emitting diodes: $\lambda_{PD} = 960$ nm (typ.)
- Wide detection area, wide half-power angle: $\theta = 65^\circ$ (typ.)
- Visible light cutoff resin is used

■ 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
Photocurrent *1	I_L	$V_R = 10$ V, $L = 1000$ lx	15	25		μA
Drain current	I_D	$V_R = 10$ V			50	nA
Terminal capacitance	C_t	$V_R = 10$ V, $f = 1$ MHz		70		pF
Peak sensitivity wavelength	λ_{PD}	$V_R = 10$ V		960		nm
Half-power angle	θ	The angle when the photocurrent is halved		65		$\Sigma\Delta\gamma_p$
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

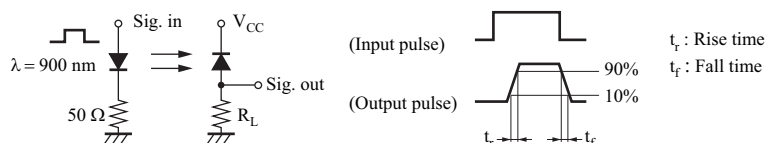
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7031 measuring methods for diodes.

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

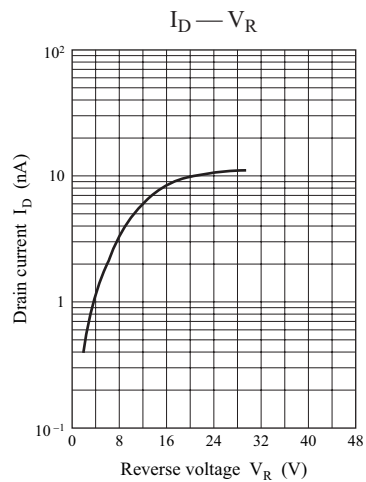
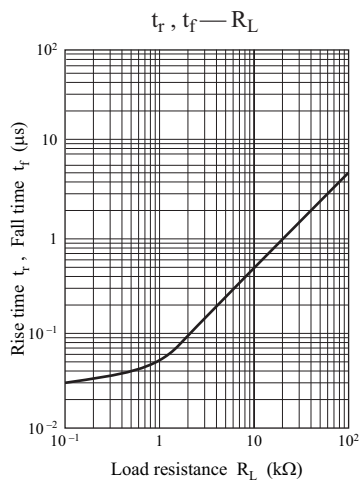
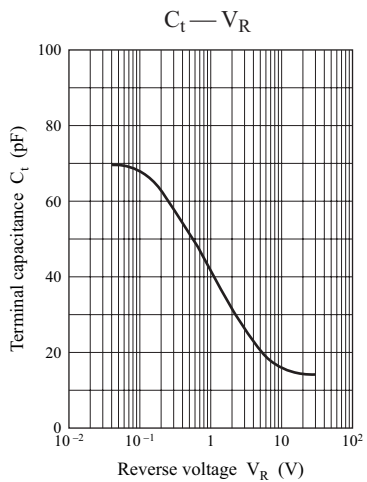
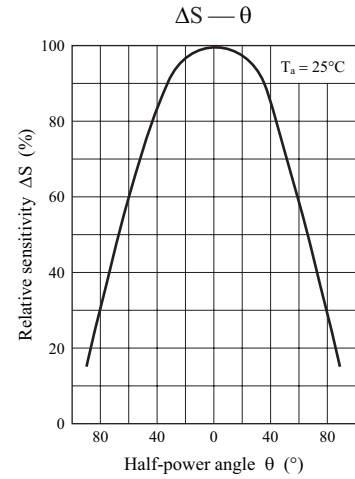
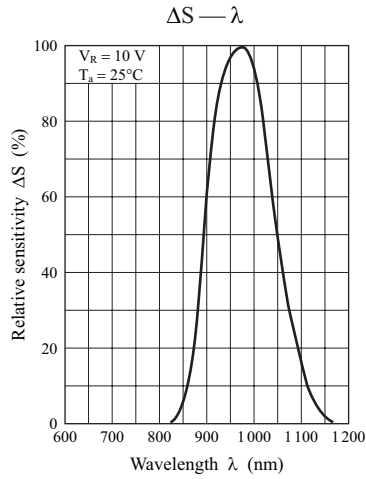
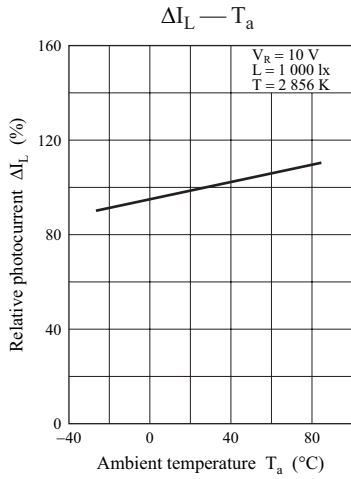
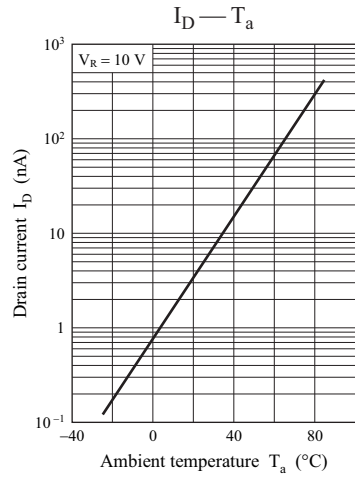
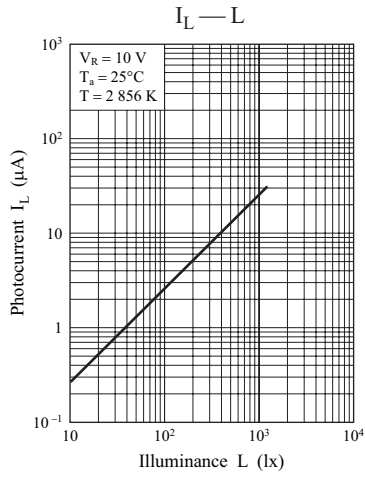
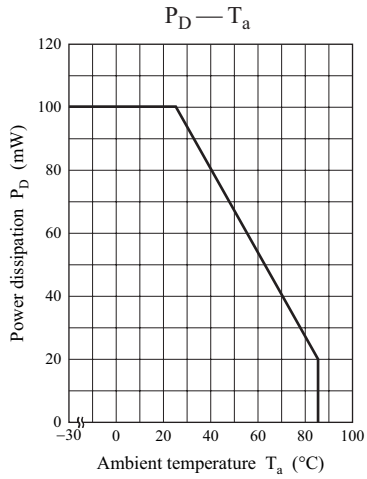
3. This device is designed by disregarding radiation.

4. *1:Source: Tungsten lamp (color temperature 2 856K)

*2: Switching time measurement circuit

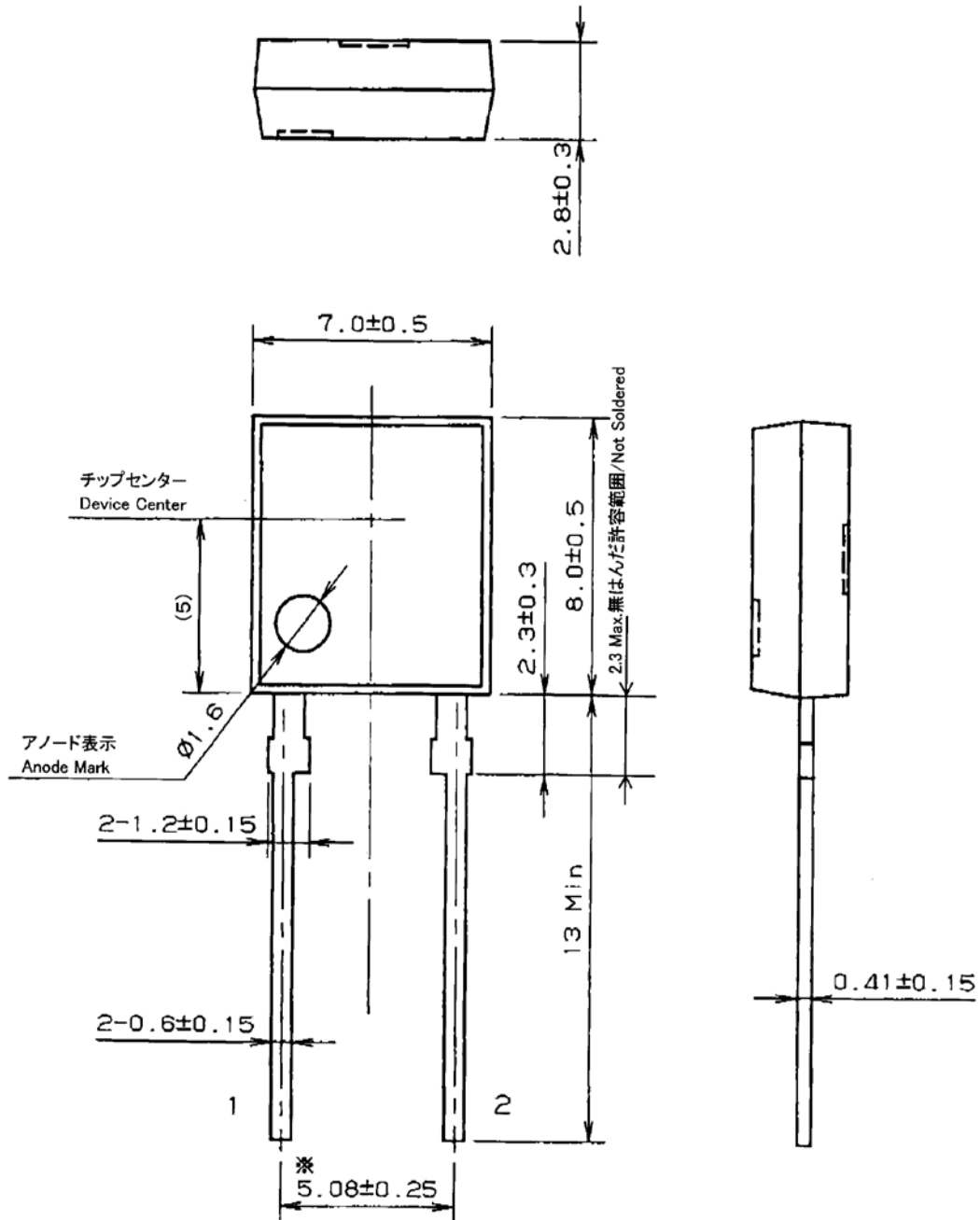


Note) The part number in the parenthesis shows conventional part number.



■ Package (Unit: mm)

LPTFSN2S0002



(注 1)(Note1) ※リード根元寸法とする。／※Indicates root dimensions of lead.
 (注 2) マークは、目視又は顕微鏡に於いて解読できる事。
 (Note2) What a mark sees an attention and can decode in a microscope.

- Pin name
- 1: Anode
- 2: Cathode

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