Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

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Tel: +86-755-8981 8866 Fax: +86-755-8427 6832
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Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

PNZ323 (PN323)

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: λ_{PD} = 900 nm (typ.)
- Wide detection area, wide half-power angle: θ = 70° (typ.)
- Adoption of visible light cutoff resin

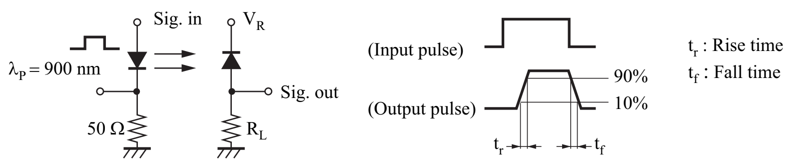
■ Absolute Maximum Ratings T_a = 25°C

Parameter	Symbol	Rating	Unit
Reverse voltage	V_R	30	V
Power dissipation	P_D	100	mW
Operating ambient temperature	T_{opr}	–30 to +85	°C
Storage temperature	T_{stg}	–40 to +100	°C

■ Electrical-Optical Characteristics T_a = 25°C±3°C

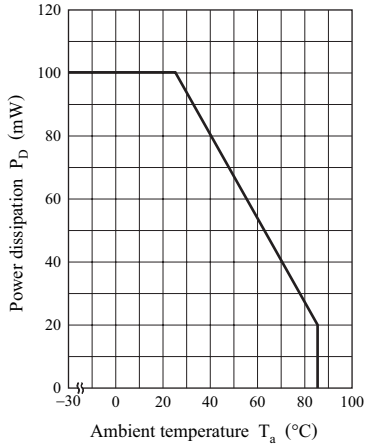
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Sensitivity to infrared radiation *1	S_{IR}	V_R = 5 V, H = 0.1 mW/cm^2	4.5	6.0		μA
Photocurrent *2	I_L	V_R = 10 V, L = 1 000 lx		55		μA
Drain current	I_D	V_R = 10 V		5	50	nA
Terminal capacitance	C_t	V_R = 0 V, f = 1 MHz		70		pF
Peak sensitivity wavelength	λ_{PD}	V_R = 10 V		900		nm
Half-power angle	θ	The angle when the sensitivity to infrared radiation is halved		70		°
Rise time *3	t_r	V_R = 10 V, R_L = 1 kΩ		50		ns
Fall time *3	t_f			50		ns
Rise time *3	t_r	V_R = 10 V, R_L = 100 kΩ		5		μs
Fall time *3	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: Infrared emitters (λ = 940 nm)
*2: Source: Tungsten lamp (color temperature 2 856K)
*3: Switching time measurement circuit

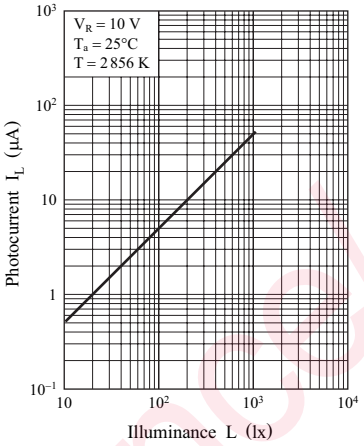


Note) The part number in the parenthesis shows conventional part number.

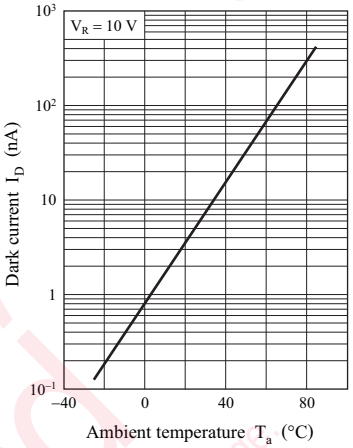
P_D — T_a



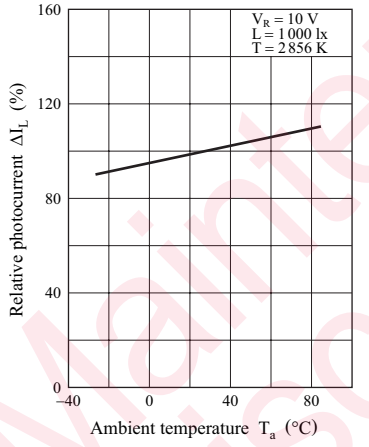
I_L — L



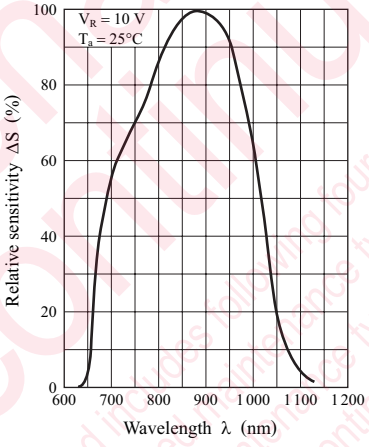
I_D — T_a



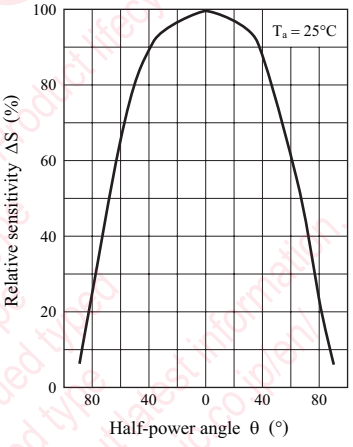
ΔI_L — T_a



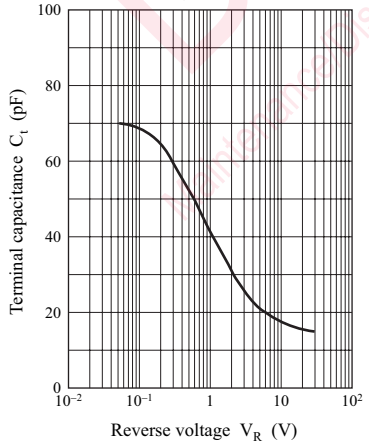
ΔS — λ



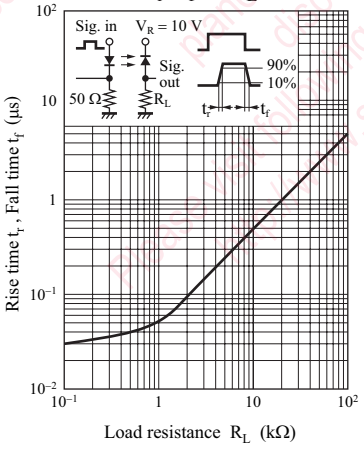
ΔS — θ



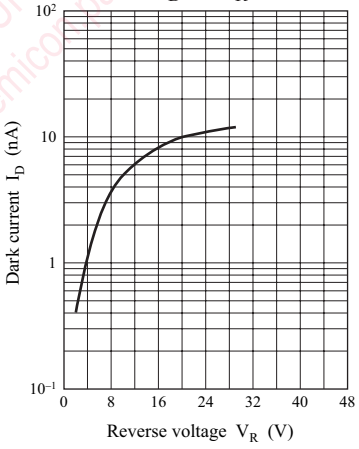
C_t — V_R



t_r , t_f — R_L

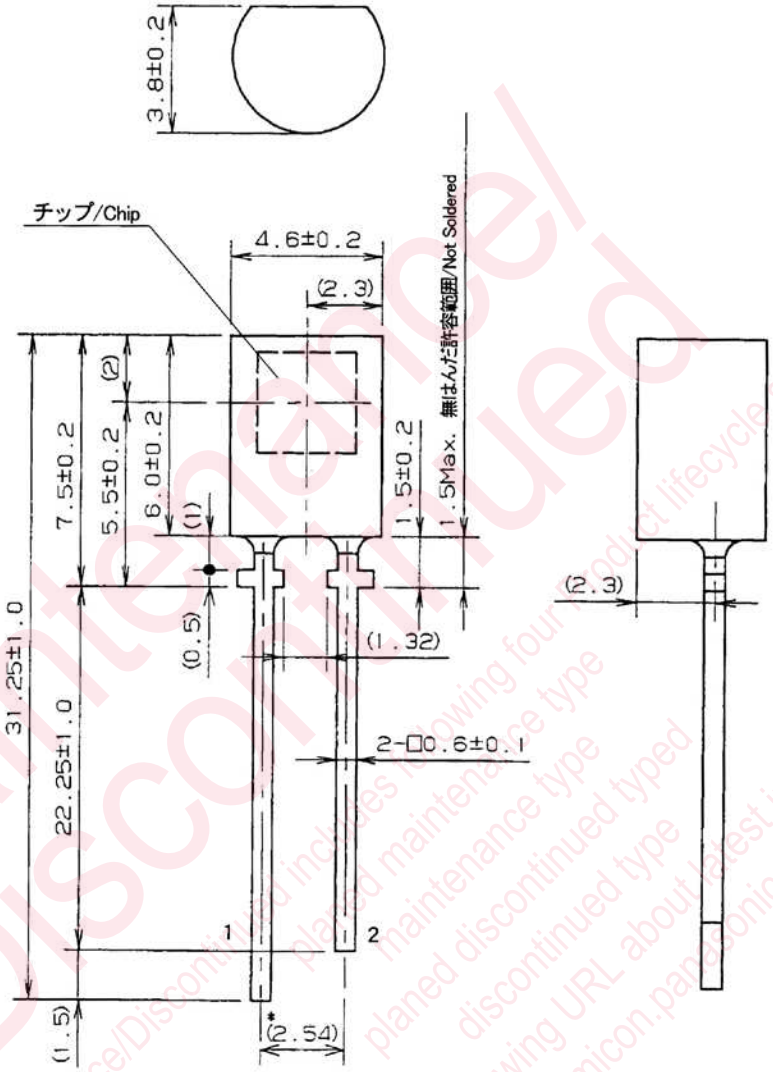


I_D — V_R



■ Package (Unit: mm)

LPXFSN2S0001



- Pin name
  1: Anode
  2: Cathode

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