

# PNZ300 (PN300), PNZ300F (PN300F)

Silicon planar type

For optical control systems

■ Features

- Fast response which is well suited to high speed modulated light detection
- Wide spectral sensitivity
- Low dark current and low noise
- Good photo current linearity and wide dynamic sensitivity
- Narrow directivity (PNZ300)
- Wide directivity (PNZ300F)

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

Parameter	Symbol	Rating	Unit
Reverse voltage	$V_R$	50	V
Power dissipation	$P_D$	100	mW
Operating ambient temperature	$T_{opr}$	-25 to +85	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-30 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	$I_D$	$V_R = 10\text{ V}$		0.1	10	nA
Photocurrent *1	PNZ300	$V_R = 10\text{ V}, L = 1000\text{ lx}$	30	55		$\mu\text{A}$
	PNZ300F		5	7		
Peak emission wavelength	$\lambda_p$	$V_R = 10\text{ V}$		800		nm
Rise time *2	$t_r$	$V_R = 20\text{ V}, R_L = 50\ \Omega$		1		ns
Fall time *2	$t_f$			1		ns
Terminal capacitance	$C_t$	$V_R = 10\text{ V}, f = 1\text{ MHz}$		7		pF
Half-power angle	PNZ300	$\theta$	The angle from which photocurrent becomes 50%		10	$^\circ$
	PNZ300F		40			

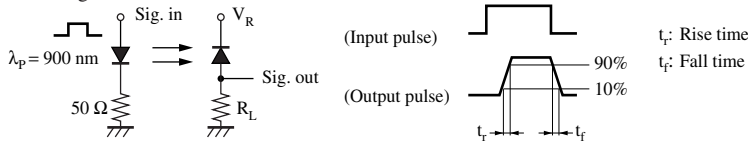
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7031 measuring methods for diodes.

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

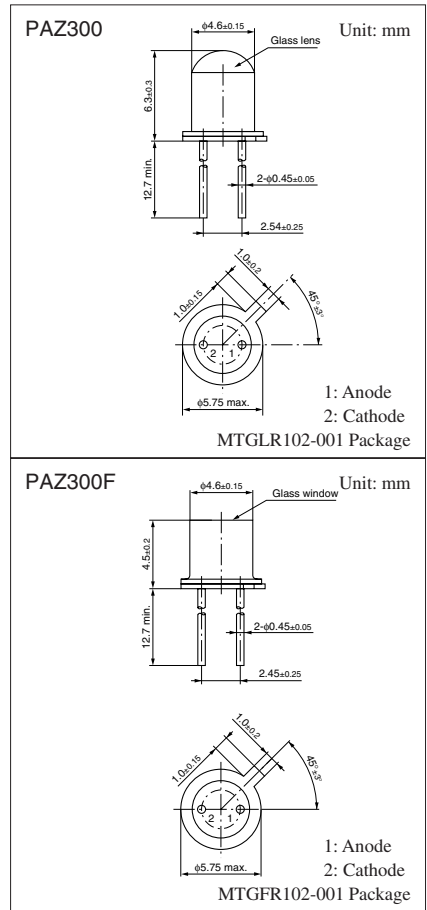
3. This device is designed be disregarded radiation.

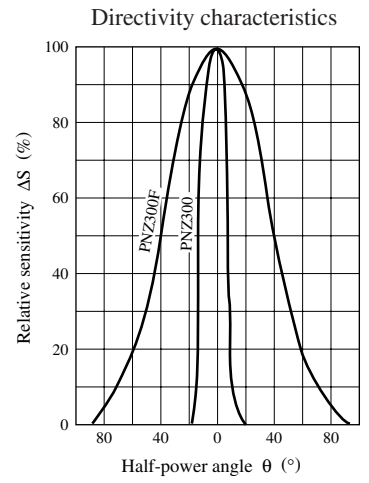
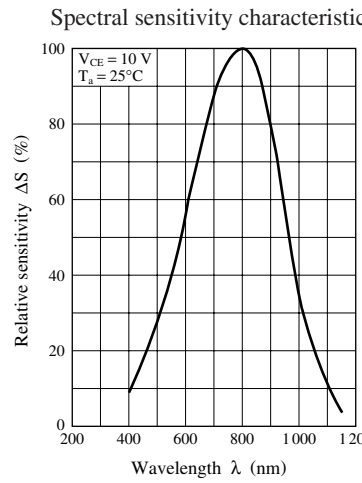
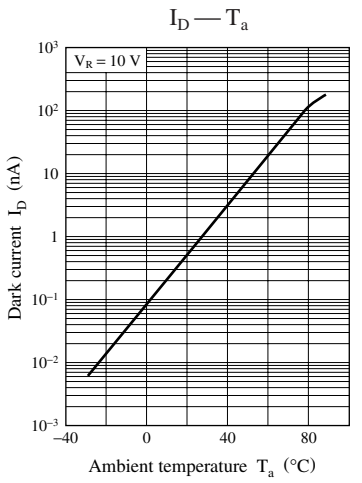
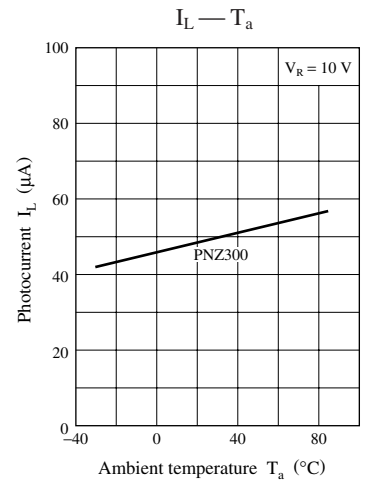
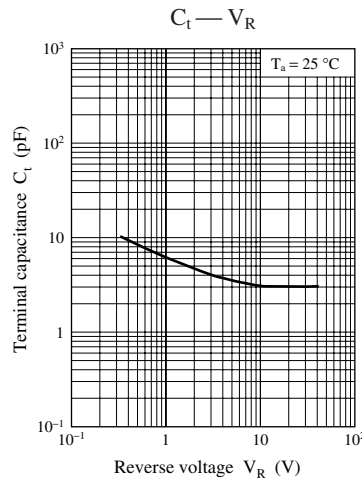
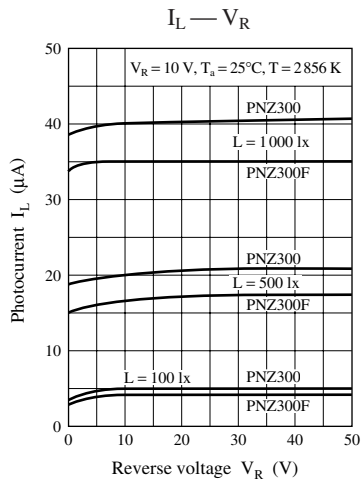
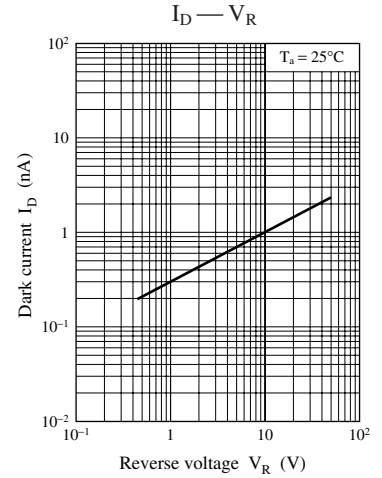
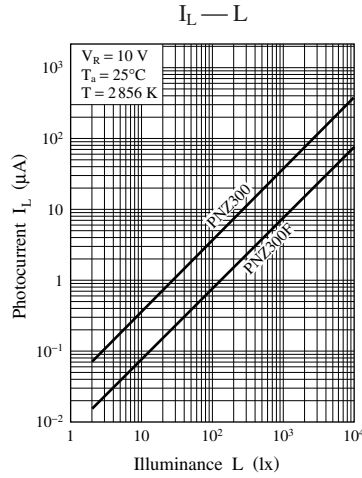
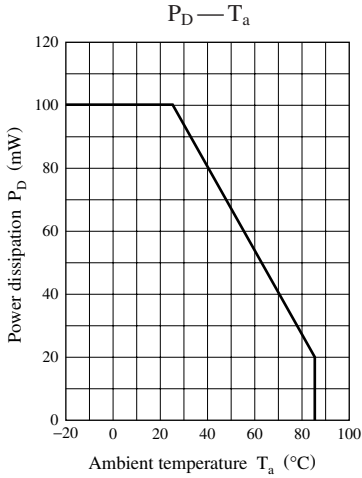
4. \*1: Source: Tungsten (color temperature 2856 K)

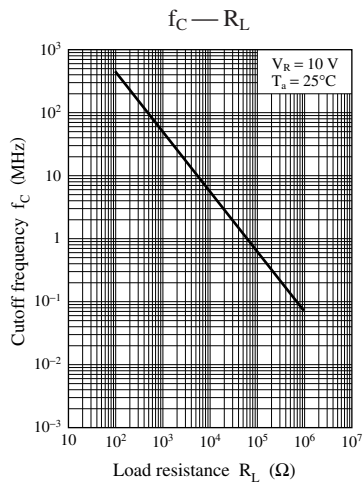
\*2: Switching time measurement circuit



Note) The part numbers in the parenthesis show conventional part number.







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