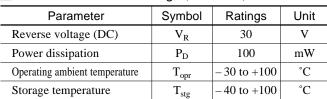
# PNZ303 (PN303) PIN Photodiode

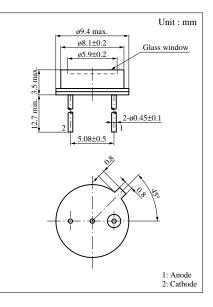
# For optical control systems

#### Features

- Fast response which is well suited to high speed modulated light detection :  $t_r$ ,  $t_f = 50$  ns (typ.)
- High photodetection sensitivity and wide dynamic sensitivity
- Peak sensitivity wave length is 900 nm and wide spectral sensitivity
- Wide photodetection area and wide directional angle
- Highly reliable TO-5 standard type package



#### Absolute Maximum Ratings ( $Ta = 25^{\circ}C$ )

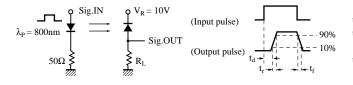


#### Electro-Optical Characteristics ( $Ta = 25^{\circ}C$ )

Parameter	Symbol	Conditions	min	typ	max	Unit
Dark current	ID	$V_R = 10V$		5	50	nA
Photo current	IL	$V_R = 10V, L = 1000 lx^{*1}$	50	70		μA
Peak sensitivity wavelength	$\lambda_{\rm P}$	$V_R = 10V$		900		nm
Response time	$t_{\rm r}, t_{\rm f}^{*2}$	$V_R = 10V, R_L = 1k\Omega$		50		ns
Response time	$t_{\rm r}, t_{\rm f}^{*2}$	$V_R = 10V, R_L = 100k\Omega$		5		μs
Capacitance between pins	Ct	$V_R = 0V$ , $f = 1MHz$		70		pF
Acceptance half angle	θ	Measured from the optical axis to the half power point		55		deg.

 $^{*1}$  Measurements were made using a tungsten lamp (color temperature T = 2856K) as a light source.

\*2 Switching time measurement circuit

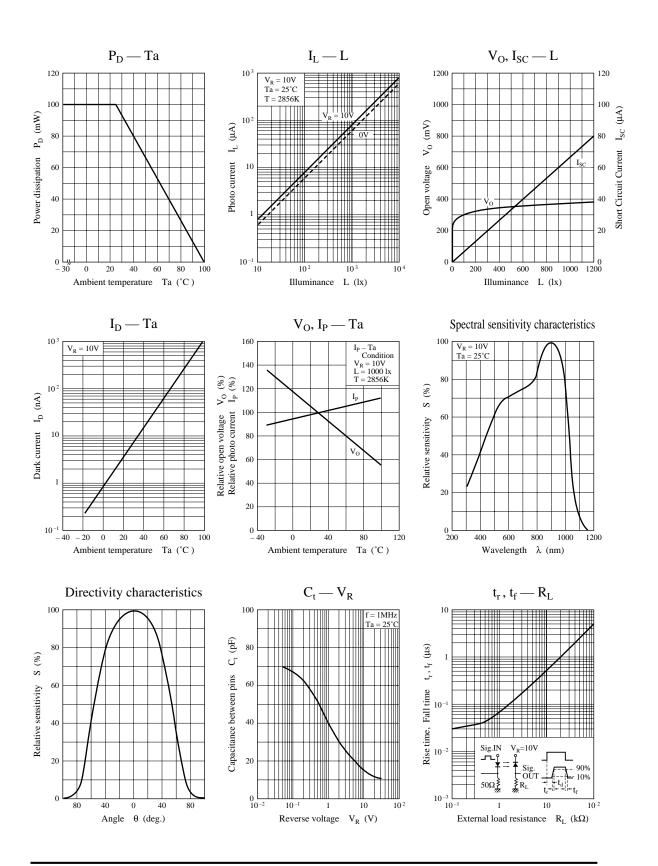


t<sub>d</sub>: Delay time

- $t_r$ : Rise time (Time required for the collector photo current to increase from 10% to 90% of its final value)
- $t_{\rm f}\colon$  Fall time (Time required for the collector photo current to decrease from 90% to 10% of its initial value)

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





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