

PNZ334 (PN334)

PIN Photodiode

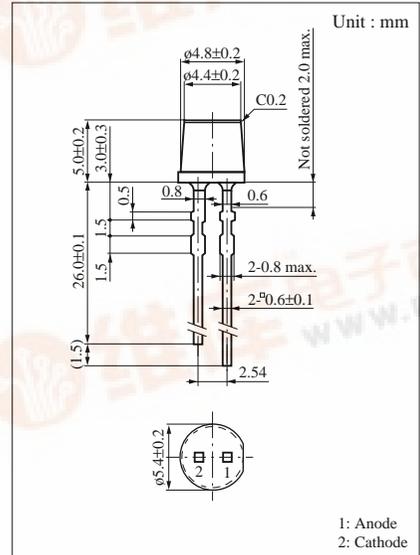
For optical fiber communication systems

Features

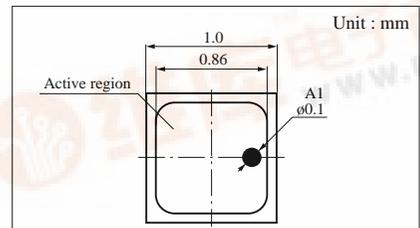
- Plastic type package (ø 5)
- High coupling capability suitable for plastic fiber
- High quantum efficiency
- High-speed response

Absolute Maximum Ratings (Ta = 25°C)

Parameter	Symbol	Ratings	Unit
Reverse voltage (DC)	V_R	30	V
Power dissipation	P_D	100	mW
Operating ambient temperature	T_{opr}	-25 to +85	°C
Storage temperature	T_{stg}	-30 to +100	°C



Dimensions of detection area

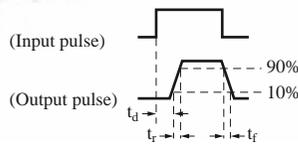
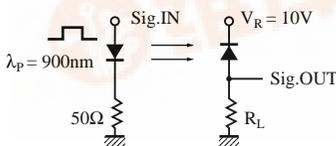


Electro-Optical Characteristics (Ta = 25°C)

Parameter	Symbol	Conditions	min	typ	max	Unit
Dark current	I_D	$V_R = 10V$		0.1	10	nA
Photo current	I_L	$V_R = 10V, L = 1000 \text{ lx}^{*1}$	5	7		μA
Peak sensitivity wavelength	λ_p	$V_R = 10V$		850		nm
Response time	t_r, t_f^{*2}	$V_R = 10V, R_L = 50\Omega$		2		ns
Capacitance between pins	C_t	$V_R = 0V, f = 1\text{MHz}$		6		pF
Acceptance half angle	θ	Measured from the optical axis to the half power point		70		deg.

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

*2 Switching time measurement circuit



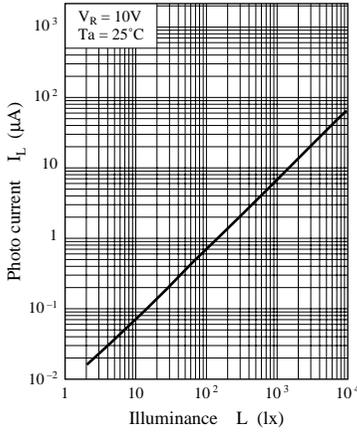
t_d : Delay time

t_r : Rise time (Time required for the collector photo current to increase from 10% to 90% of its final value)

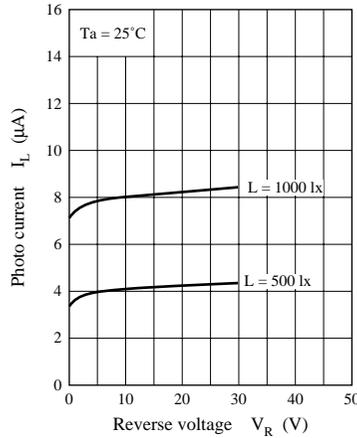
t_f : Fall time (Time required for the collector photo current to decrease from 90% to 10% of its initial value)



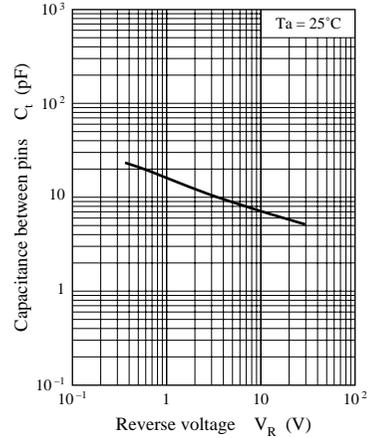
$I_L - L$



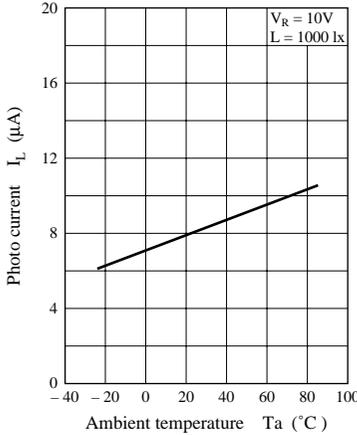
$I_L - V_R$



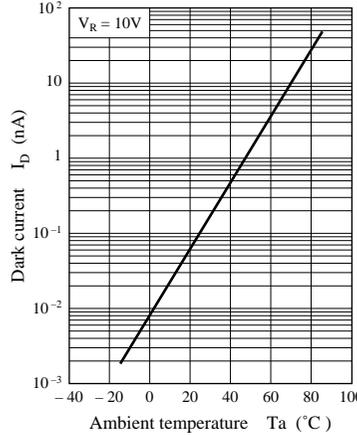
$C_t - V_R$



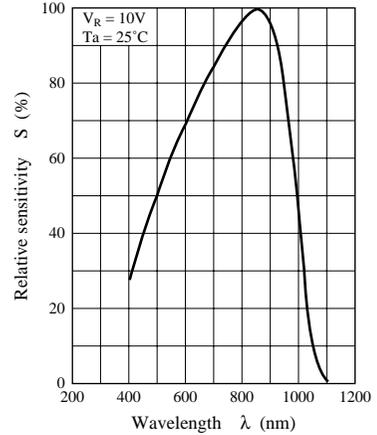
$I_L - T_a$



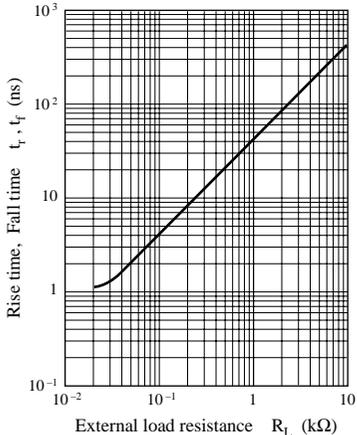
$I_D - T_a$



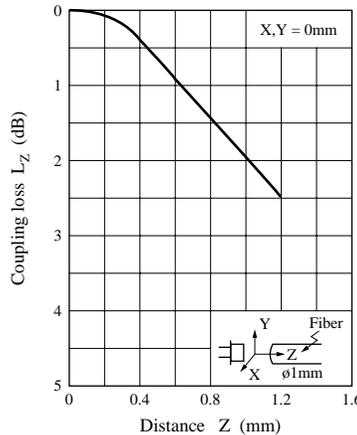
Spectral sensitivity characteristics



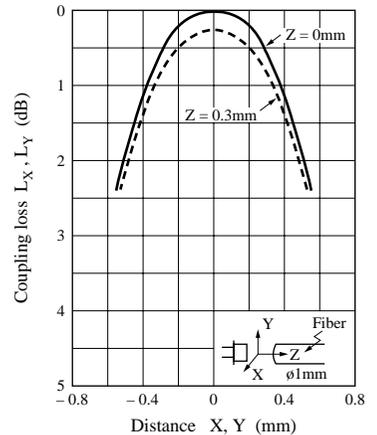
$t_r, t_f - R_L$



Coupling loss characteristics



Coupling loss characteristics



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