

PN332F

PIN Photodiode

For optical fiber communication systems

Features

- Metal package with shield pin
- High coupling capability suitable for glass fiber (GI50/125)
- 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 +100	°C
Storage temperature	T_{stg}	-30 to +100	°C

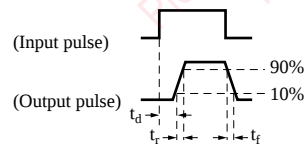
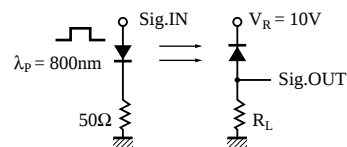
Electro-Optical Characteristics (Ta = 25°C)

Parameter	Symbol	Conditions	min	typ	max	Unit
Dark current	I_D	$V_R = 10V$		0.1	1	nA
Photo current	I_L	$V_R = 10V, L = 1000 \text{ lx}^{*1}$		1		μA
Peak sensitivity wavelength	λ_p	$V_R = 10V$		800		nm
Response time	t_r, t_f^{*2}	$V_R = 10V, R_L = 50\Omega$			1	ns
Capacitance between pins	C_t	$V_R = 10V, f = 1\text{MHz}$		2		pF
Acceptance half angle	θ	Measured from the optical axis to the half power point		40		deg.
Quantum efficiency	η	$V_R = 10V, \lambda = 850\text{nm}$	60	75		%
Photo sensitivity	S	$V_R = 10V, \lambda = 800\text{nm}$		0.6		A/W

Note) The glass strength of this product cannot withstand loads of 0.5 kg or greater. This fact needs to be taken into consideration if optical fibers are to be mounted on the product.

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

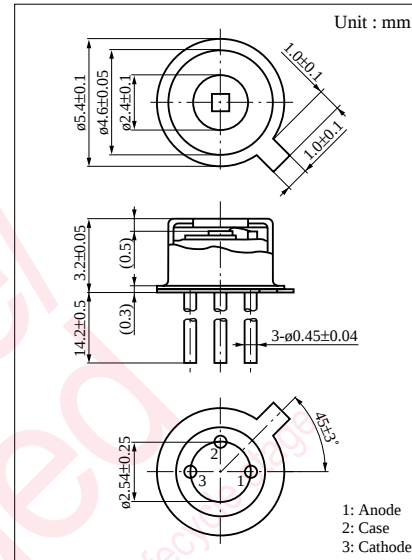
*2 Switching time measurement circuit



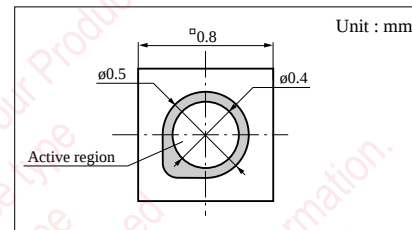
t_d : Delay time

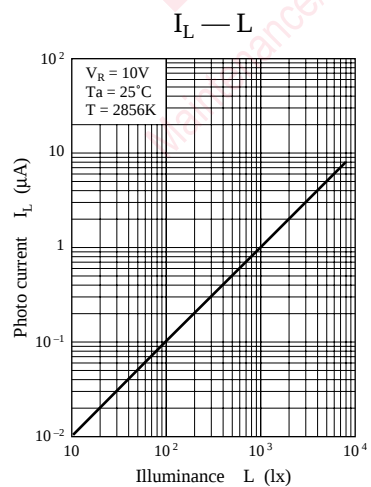
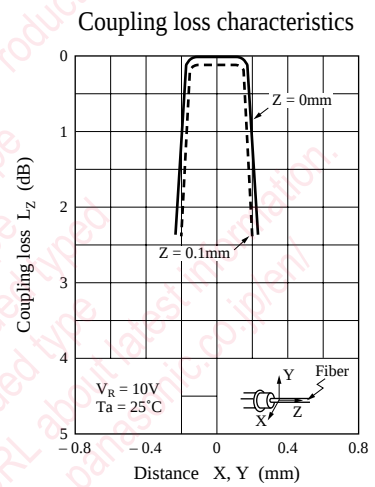
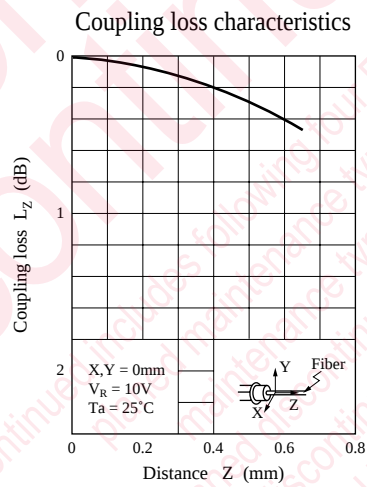
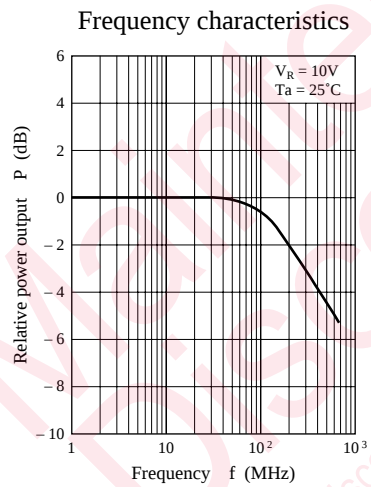
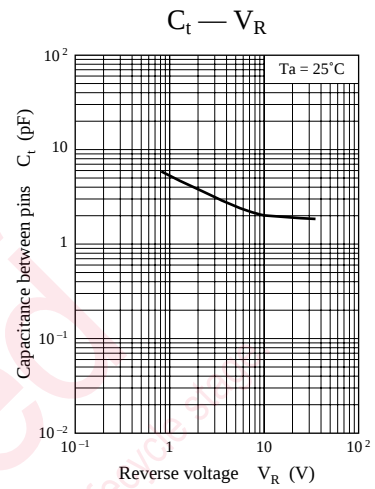
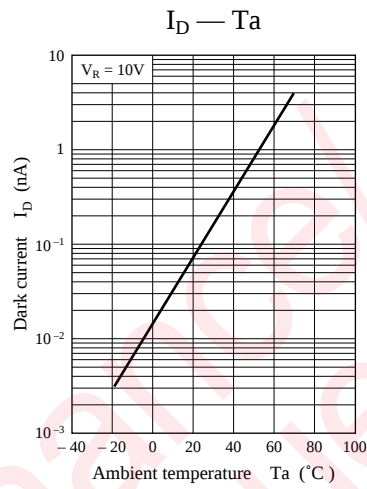
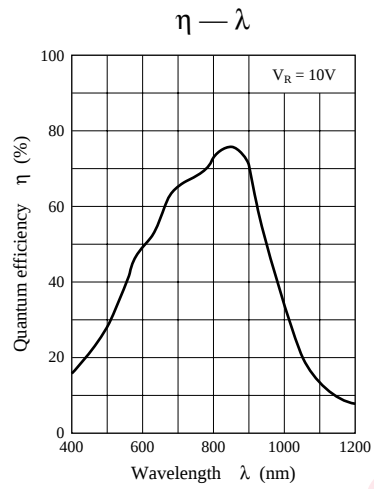
t_r : Rise time (Time required for the collector photo current to increase from 10% to 90% of its final value)

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



Dimensions of detection area





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