
Ordering Information

MF432	TO-46 Package
MF432 ST	ST Housing
MF432 SC	SC Housing
MF432 SMA	SMA Housing
MF432 FC	FC Housing
MF432 PT	Pig-Tail including 1 Meter of 10/125mm fibre and SC connector

-40°C to +85°C

Note: The rated Responsivity applies to all options.

Features

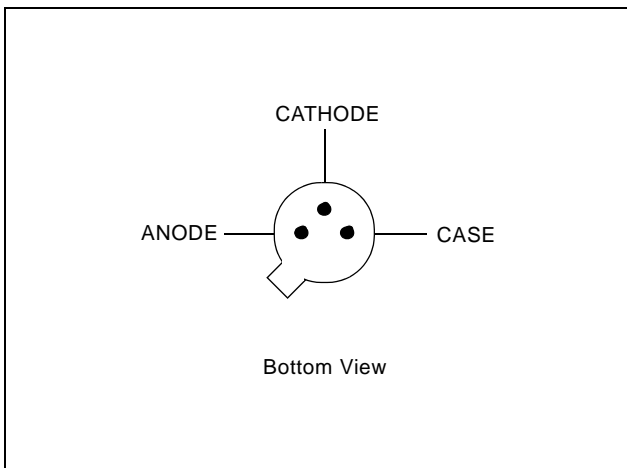
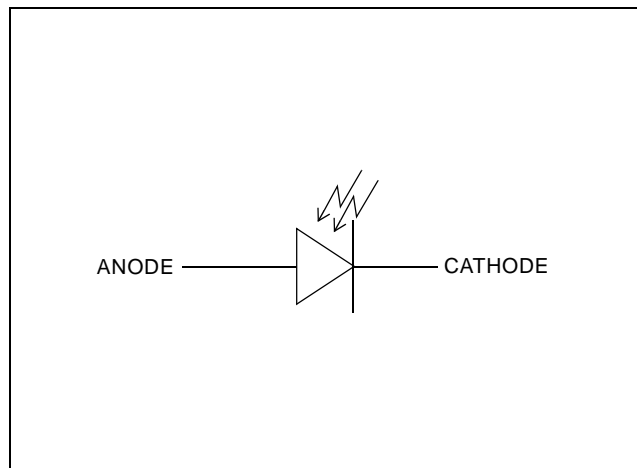
- 1300-1550 nm PIN Photodiode
- 2.5 GHz Bandwidth
- Designed for Single-mode and Multi-mode Fiber
- Tested to Bellcore TA-NWT-000983

Applications

- ATM-SDH/Sonet 155, 622 and 2488 Mbps
- FDDI
- ESCON
- General Purpose

Description

Tested to Bellcore TA-NWT-000983, this very high speed and low capacitance InGaAs PIN Photodiode is ideal for datacom, telecom and general purpose applications. Its double-lens optical system is designed for single-mode fiber as well as for multimode fiber with core diameter up to 62.5 μm and when used in the Pigtail-3A package, the optical return loss is very high.


Figure 1 - Pin Diagram

Figure 2 - Functional Schematic

Optical and Electrical Characteristics - (Case Temperature -40 to +85°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Responsivity (Figures 3 and 4) (Table 1)	R	0.7 0.8	0.8 1.0		A/W	$\lambda = 1300 \text{ nm}$ $\lambda = 1550 \text{ nm}$
Bandwidth	f_c	2.5			GHz	$R_L = 50\Omega$
Capacitance (Figure 4)	C		0.8	1.2	pF	$f = 1 \text{ MHz}$
Dark Current	I_d			3 80	nA	$T_{\text{Case}} = 25^\circ\text{C}$ $T_{\text{Case}} = 85^\circ\text{C}$

Note: Operating Conditions: Fiber: Single-mode 10/125 μm to multimode 62.5/125 μm . $V_R = 5 \text{ V}$

Absolute Maximum Ratings

Parameter	Symbol	Limit
Storage Temperature	T_{stg}	-55 to +125°C
Operating Temperature	T_{op}	-40 to +85°C
Reverse Voltage	V_R	20 V
Soldering Temperature (2 mm from the case for 10 sec.)	T_{slid}	260°C
ESD Resistance	V_{ESD}	+/-100 V

Thermal Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit
Thermal Resistance - Dark Current	dI_d/dT_j		5	100	%/°C

Typical Responsivity

Core Diameter/Cladding Diameter Numerical Aperture			
	10/125 μm 0.11	50/125 μm 0.20	62.5/125 μm 0.275
1300	0.8 A/W	0.8 A/W	0.8 A/W
1500	1.0 A/W	1.0 A/W	1.0 A/W



Figure 3 - z - Axial Displacement of Fiber

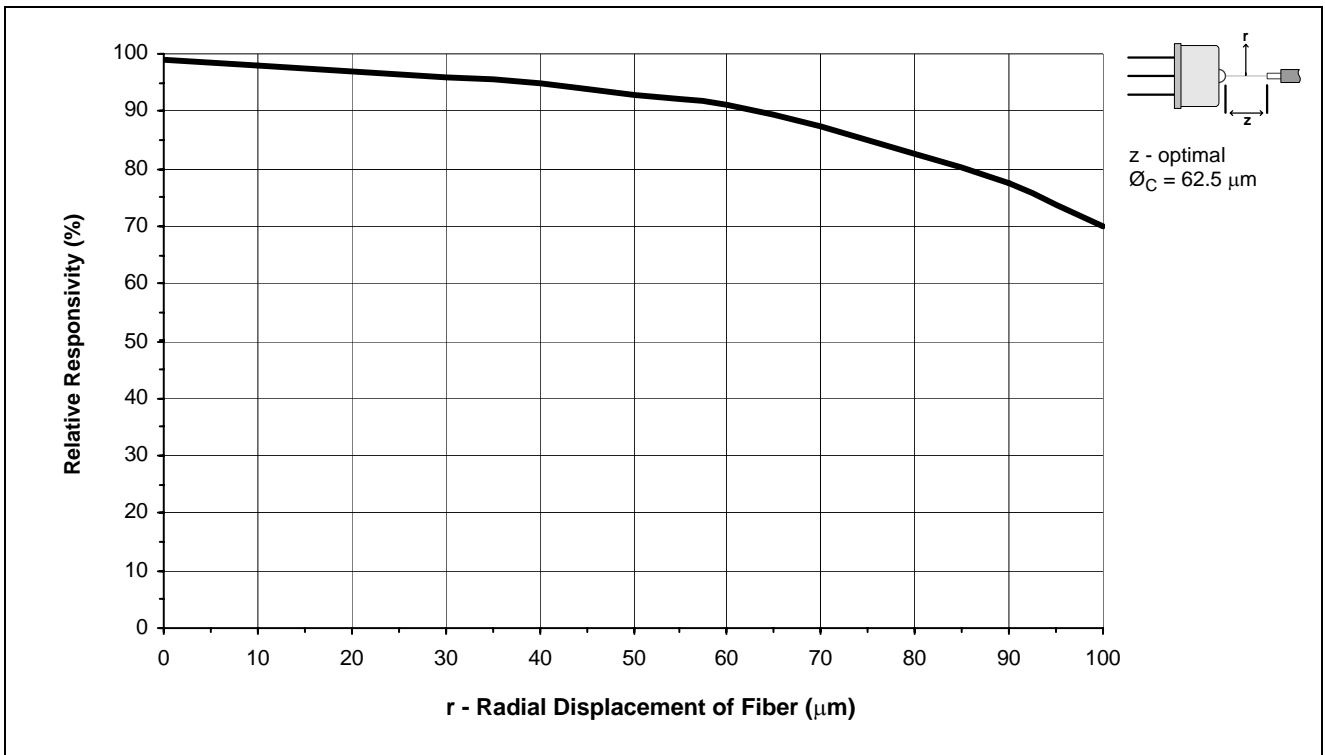


Figure 4 - r - Radial Displacement of Fiber

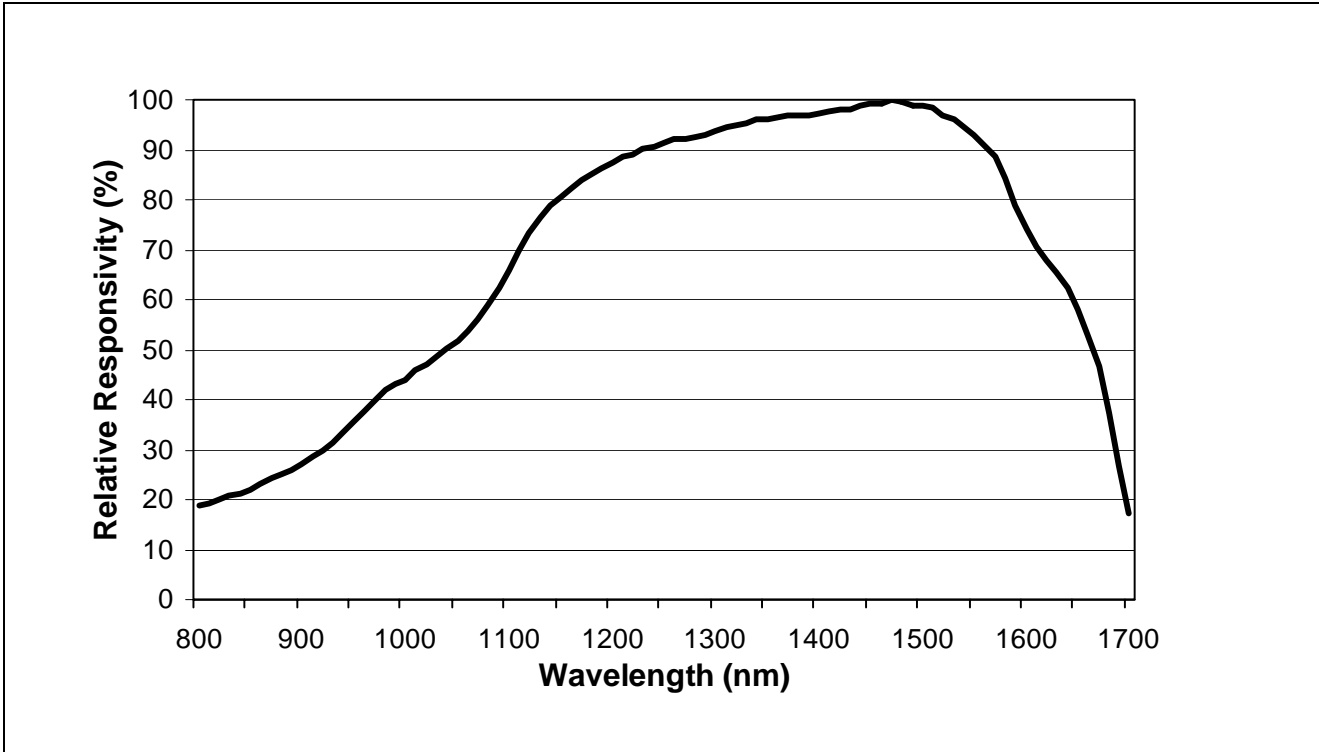


Figure 5 - Relative Responsivity vs. Wavelength

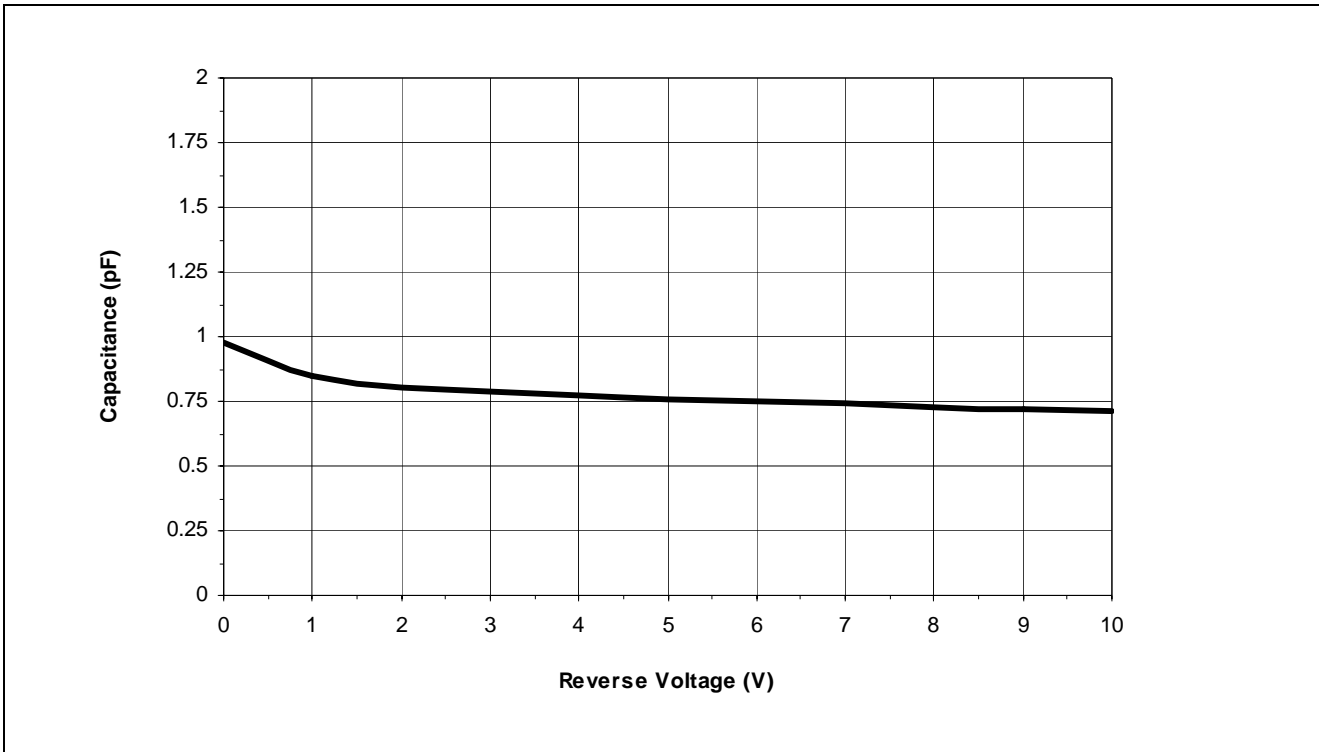
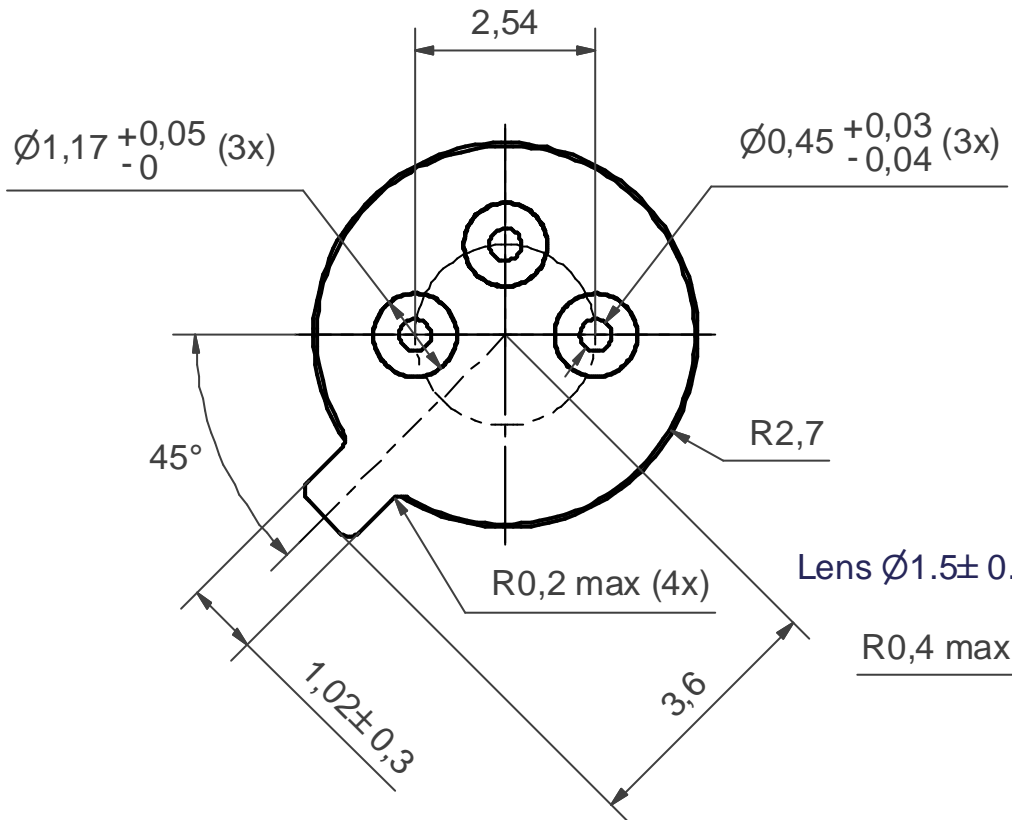
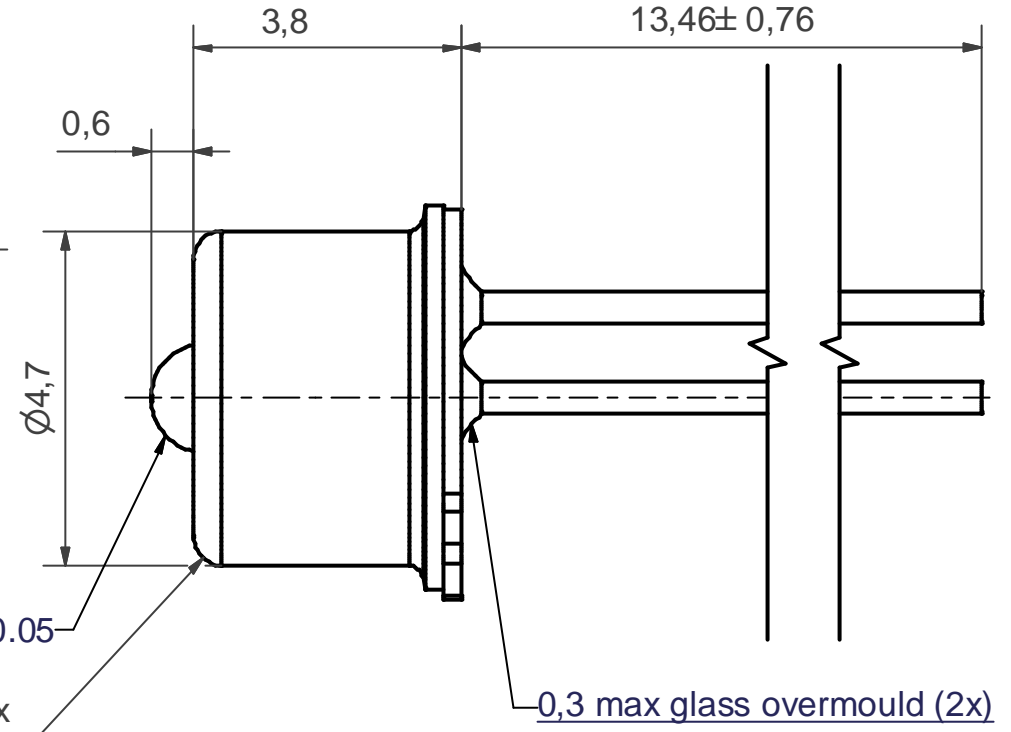


Figure 6 - Capacitance vs. Reverse Voltage

BOTTOM VIEW (10 : 1)



SIDE VIEW



NOTES:-

1. All dimensions in mm.
2. General tol. ISO-2768-mK.
3. Coating: Case: Ni 1,5-2,5 μm .
Header: Ni 2-3 μm / Au min 1,32 μm .

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Package code **TB**

Previous package codes

Drawing type
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Title **JS004076**



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