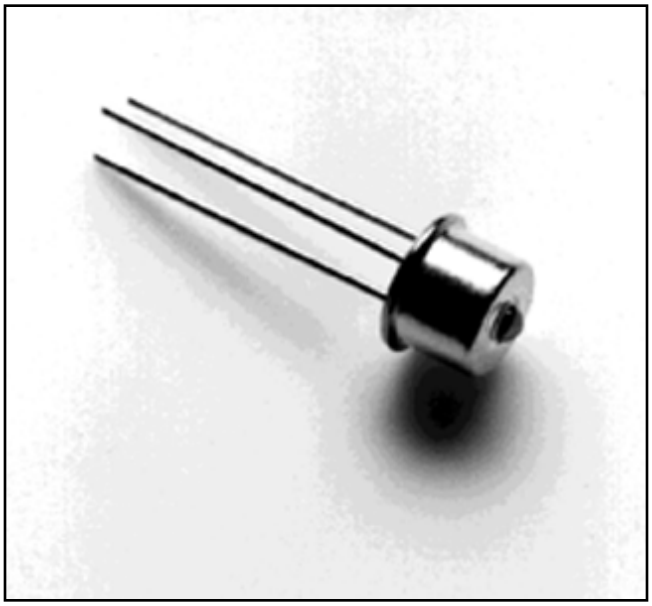
MF432

High Performance PIN



TO-46 Package with Lens

DS5459 ISSUE 1 May 2001

Ordering Information

MF432	12634.11 TO-46 Package
MF432 ST	13325.11 ST Housing
MF432 SC	13326.11 SC Housing
MF432 SMA	12822.11 SMA Housing
MF432 FC	12821.11 FC Housing
MF432 PT	13327.11 Pig-Tail including 1 Meter of 10/125mm fibre and SC connector

Note: The rated Responsivity applies to all options.

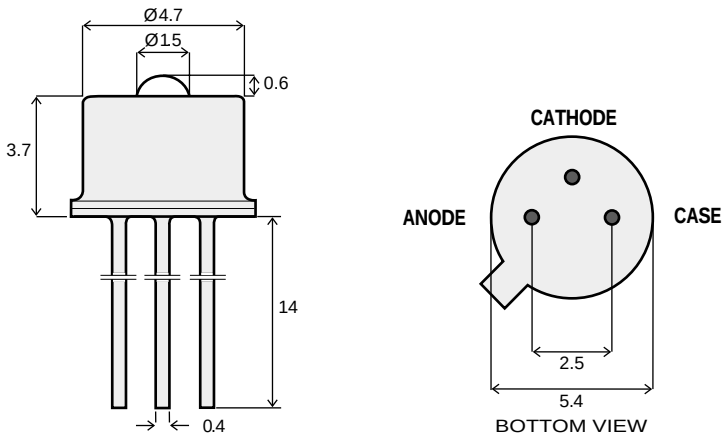
Description

Tested to Bellocore 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 62.5μm and when used in the Pigtal-3A package, the optical return loss is very high.

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition	
Responsivity (Fig. 1 & 2) (Table 1)	R	0.7 0.8	0.8 1.0		A/W	λ=1300nm λ=1550nm	Fiber: 62.5/ 125μm Graded Index NA=0.275
Bandwidth	f_c	2.5			GHz	R_L= 50Ohm	
Capacitance (Fig. 4)	C		0.8	1.2	pF	f=1MHz	
Dark Current	I_d			3 80	nA	T_{Case}=25˚C T_{Case}=85˚C	

Operating Conditions: Fiber: Single-mode 10/125μm to multimode 62.5/125μm



The diode chip is isolated from the case

All dimensions in mm

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	20V
Soldering Temperature (2mm from the case for 10sec)	T_{sld}	260˚C

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 Numberical 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

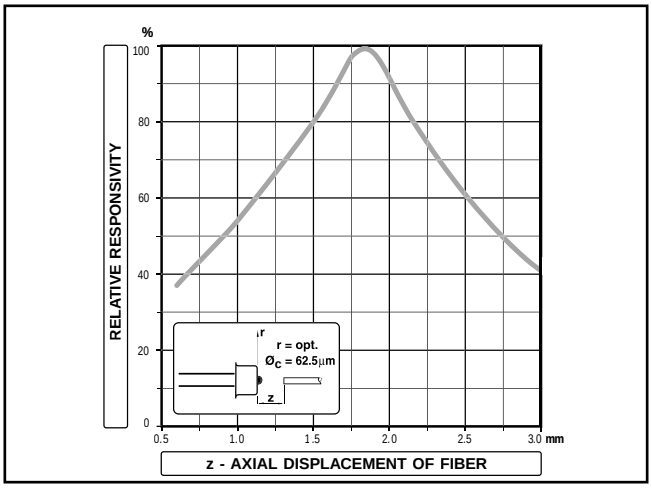


Figure 1

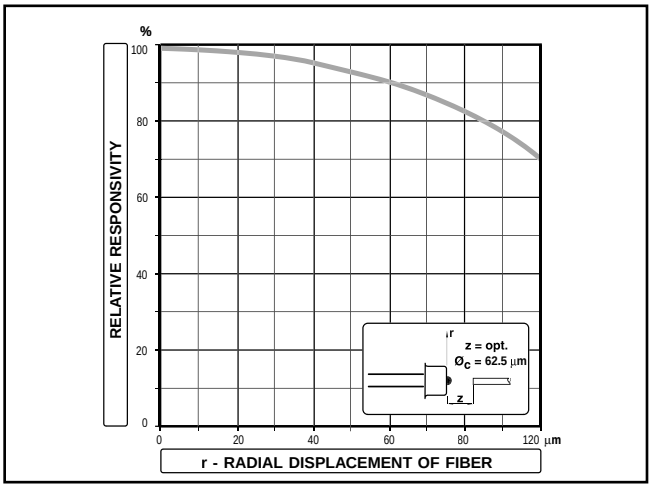


Figure 2

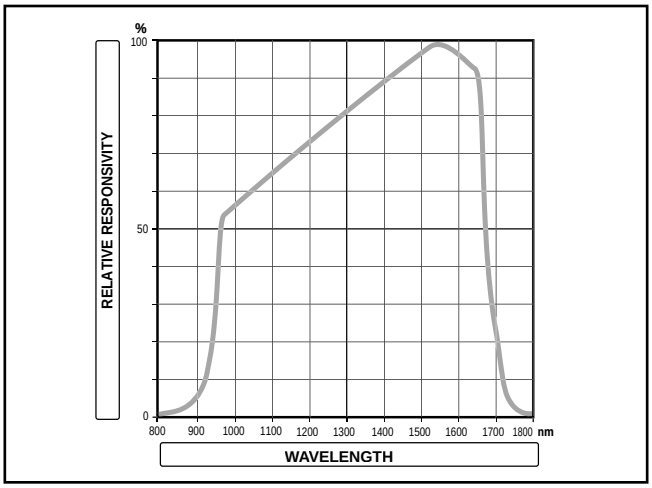


Figure 3

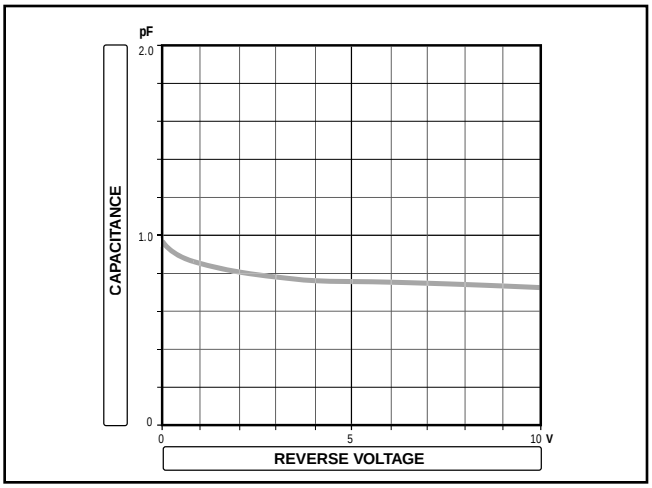


Figure 4

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