

**TO-46 Package with Lens**

DS5459

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### 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.

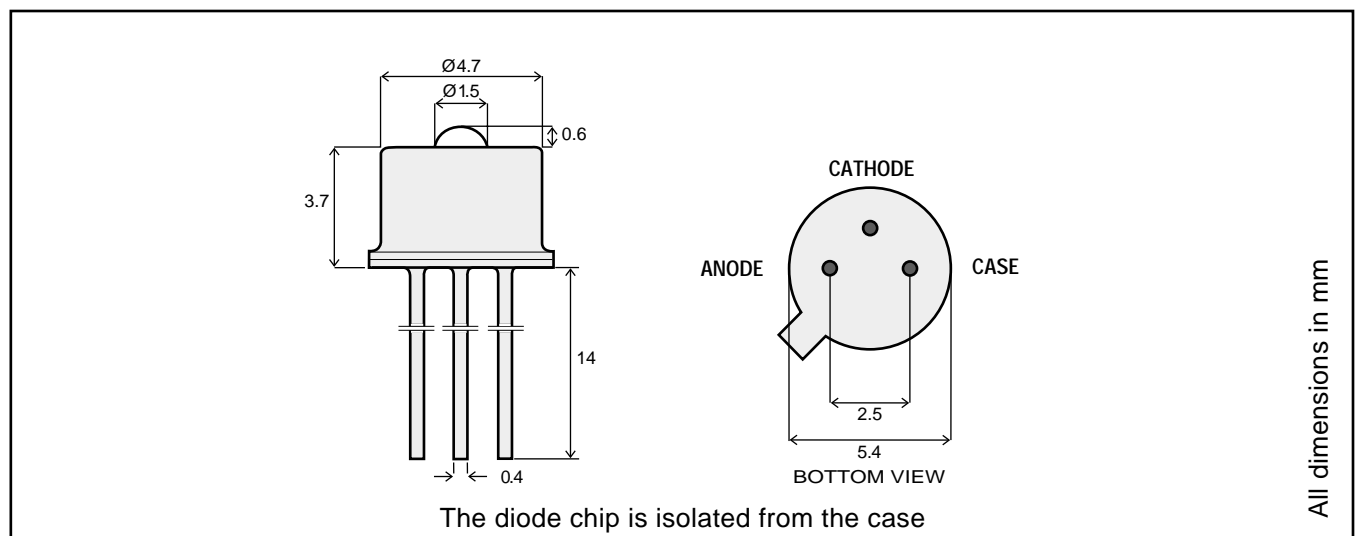
### Description

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 62.5 $\mu$ m and when used in the Pigtail-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	$\lambda=1300\text{nm}$ $\lambda=1550\text{nm}$	Fiber: 62.5/ 125 $\mu$ m 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	$T_{Case}=25^\circ\text{C}$ $T_{Case}=85^\circ\text{C}$	

**Operating Conditions: Fiber: Single-mode 10/125 $\mu$ m to multimode 62.5/125 $\mu$ m**



## 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	$d_d/dT_j$		5	100	%/°C

## Typical Responsivity

Core Diameter/Cladding Diameter Numerical Aperture			
	10/125 $\mu\text{m}$ 0.11	50/125 $\mu\text{m}$ 0.20	62.5/125 $\mu\text{m}$ 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

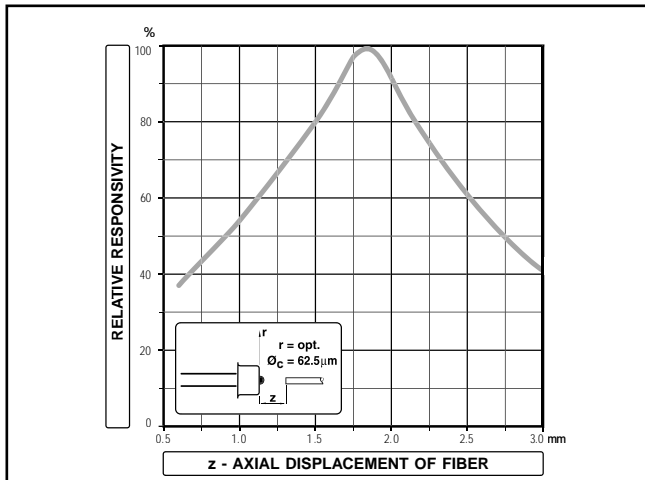


Figure 1

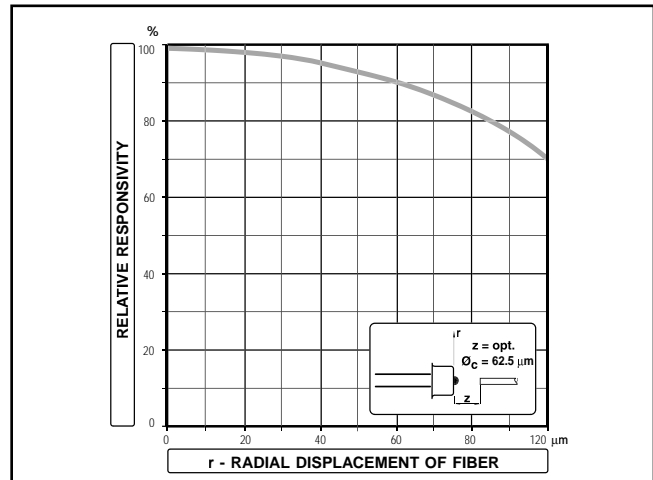


Figure 2

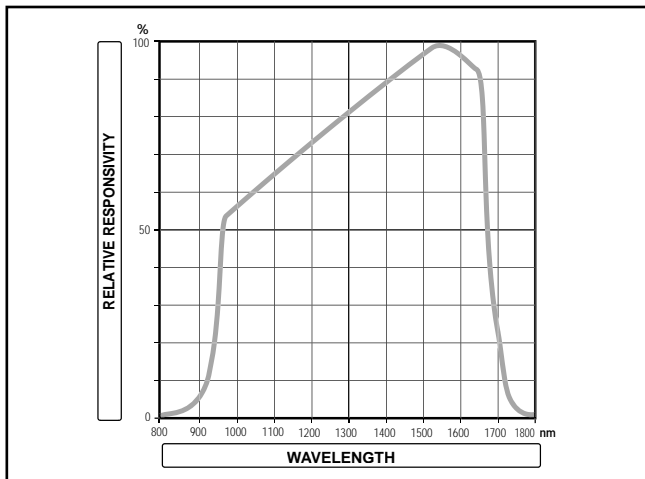


Figure 3

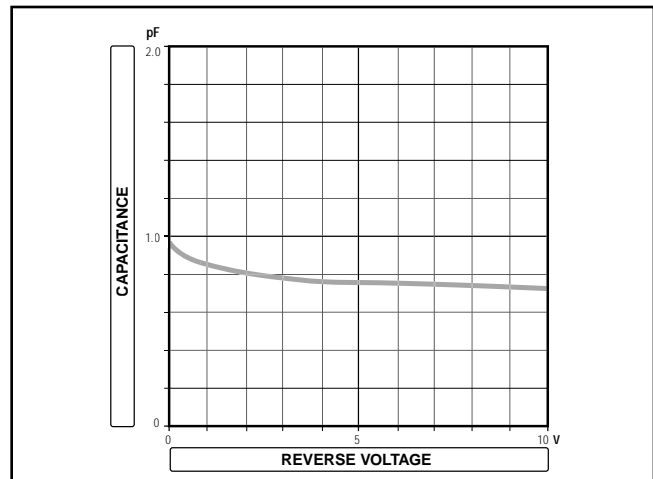


Figure 4



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