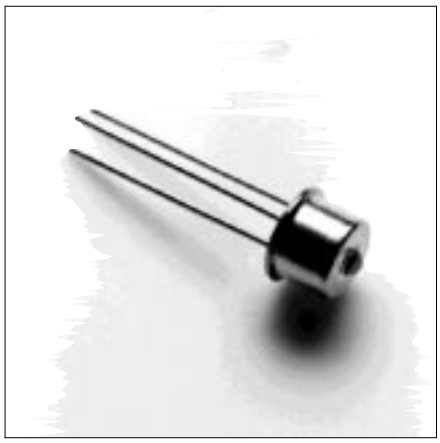
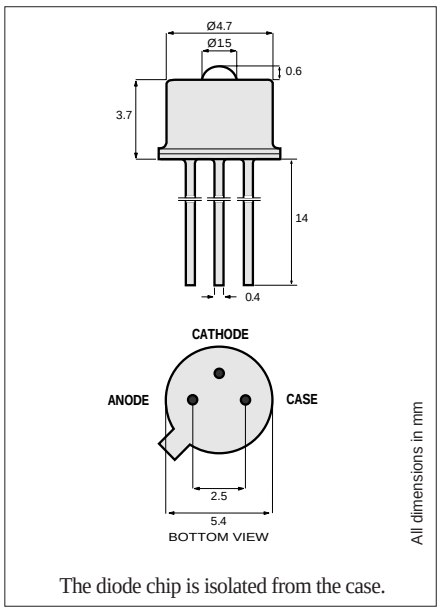
1300nm / 1550nm 1A358 High-Performance PIN

Datacom, Telecom, General Purpose

The very high speed and low capacitance of this InGaAs PIN Photodiode makes it 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 Pigtail-3A package, the optical return loss is very high.





The diode chip is isolated from the case.

TO-46 Package With Lens

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

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Responsivity (Fig.1&2) (Table1)	R	0.75 0.85	0.83 1.0		A/W	λ=1300 nm λ=1550 nm
Bandwidth	f_c	2.5			GHz	R_L=50Ω
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: V_R=5V. Fiber: Single-mode to multimode 62.5/125µm.

Absolute Maximum Ratings

PARAMETER	SYMBOL	LIMIT
Storage Temperature	T_{stg}	-55 to +125°C
Operating Temperature	T_{op}	-55 to +125°C
Reverse Voltage	V_R	20V
Soldering Temperature (2mm from the case for 10 sec)	T_{sld}	260°C

Thermal Characteristics

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT
Temperature Coefficient - Dark Current	dI_d/dT_j		5		%/°C

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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	0.83 A/W	0.83 A/W	0.83 A/W
1550	1.0 A/W	1.0 A/W	1.0 A/W

Table 1

FIGURE 1

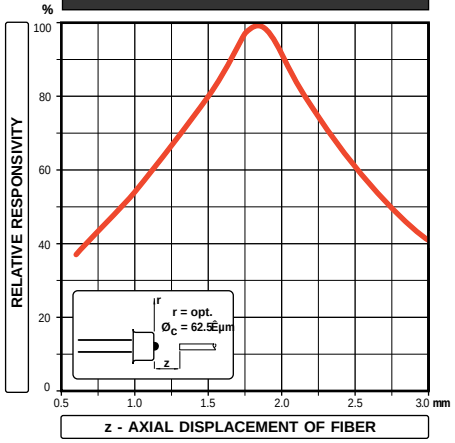

FIGURE 2

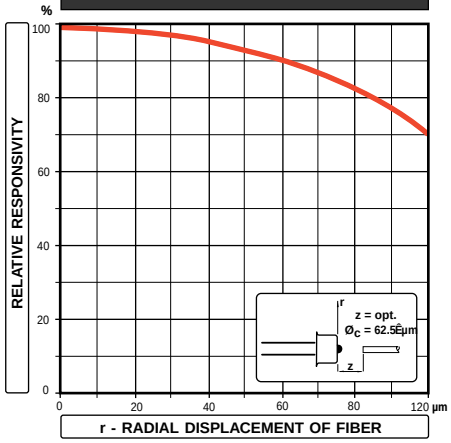

FIGURE 3

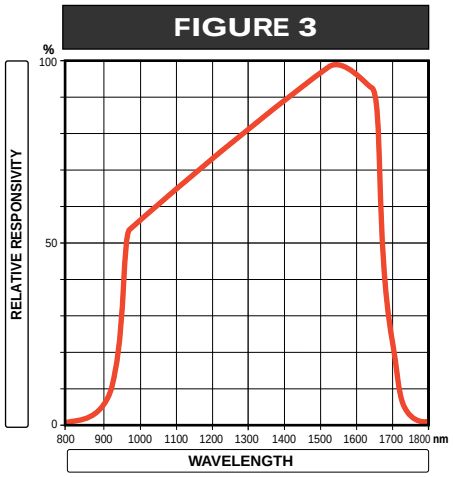

FIGURE 4