



SERIES NUMBER

FD500

Large Area InGaAs PIN Photodiodes
diameter of active area=500 μm

DESCRIPTION

General purpose InGaAs PIN photodiodes useful for a wide range of applications including infrared instrumentation and moderate speed communication systems. The photosensitive area is 500 microns in diameter.

ABSOLUTE MAXIMUM RATINGS (T=25°C)

PARAMETER	RATING	UNITS
Storage Temperature	-40 to +100	°C
Operating Temperature	-40 to +85	°C
Forward Current	25	mA
Reverse Current	5	mA
Reverse Voltage	20	V

OPTICAL AND ELECTRICAL CHARACTERISTICS (T=25°C)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Responsivity	R	$\lambda = 1300 \text{ nm}$	0.80	0.90	-	A/W
		$\lambda = 1550 \text{ nm}$	0.85	0.95	-	
Dark Current	I_d	$V_R = 5V$	-	8	15	nA
Rise/Fall Time	t_r/t_f	$V_R = 5V$	-	1	3	ns
Capacitance	C	$V_R = 5V$	-	15	25	pF

PACKAGE OPTIONS

PART NUMBER	PACKAGE DESCRIPTION
FD500W	TO-18 with AR-coated flat window cap
FD500-OP15AR	TO-46 with dome lens cap (1550 nm AR coating)
FD500S2	type S2 alumina ceramic submount
FD500S3	type S3 alumina ceramic submount

Large Area InGaAs PIN Photodiodes

TYPICAL CHARACTERISTICS

Fig. 1 Spectral Response (R vs. λ)

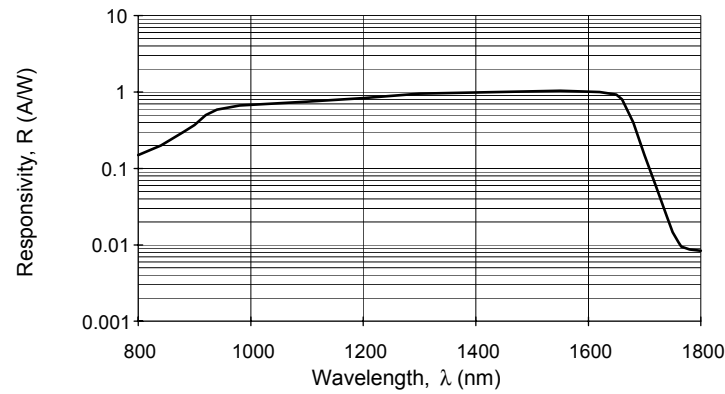


Fig. 2 Dark Current vs. Reverse Voltage

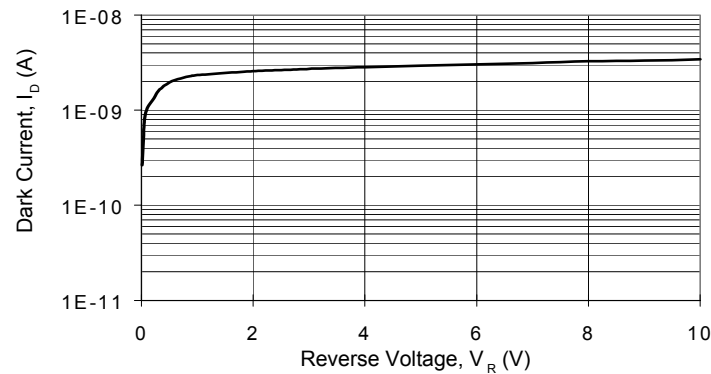


Fig. 3 Capacitance vs. Reverse Voltage

