

**AFONICS****RX-0005**

- InGaAs PIN Diode
- High bandwidth

Performance Highlights

- Responsivity typically 0.8A/W at 1300nm
- Maximum dark current of 5nA
- Bandwidth of 1.5GHz

LIMITING VALUES	SYMBOL	VALUE	UNITS
Continuous reverse voltage	V_R	30	V
Forward current	I_F	5	mA
Reverse current	I_R	5	mA
Operating temperature	T_{amb}	-40 to +85	°C
Storage temperature	T_{stg}	-40 to +85	°C
Soldering temperature 2mm from case for 10s	T_{sld}	250	°C

OPTICAL/ELECTRICAL CHARACTERISTICS	SYMBOL	MIN	TYP	MAX	UNITS	TEST CONDITION
Responsivity ⁽¹⁾	R	0.7			A/W	$\lambda = 1300\text{nm}$, $V_R = 5\text{V}$
Rise time	t_r			0.5	ns	$V_R = 5\text{V}$
Fall time	t_f			0.5	ns	$V_R = 5\text{V}$
Operating voltage	V_R			20	V	
Capacitance	C_T			0.9	pF	$V_R = 5\text{V}$, $f = 1\text{MHz}$
Dark current	I_D		0.5	5.0	nA	$V_R = 5\text{V}$

All values apply at a temperature of 25°C

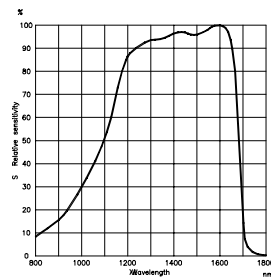
(1): Applies when using a 50/125µm fibre



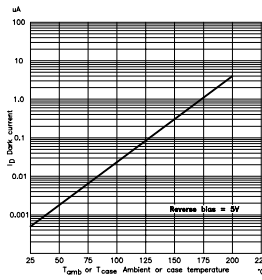
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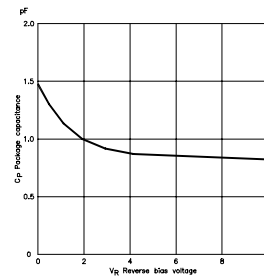
GRAPHS SHOWING TYPICAL CHARACTERISTICS



Relative sensitivity
vs wavelength



Dark current
vs ambient or case temperature

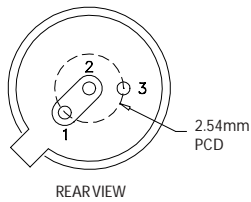


Package capacitance vs
reverse bias voltage

PINOUT DETAILS

- 1 = Anode
- 2 = Cathode
- 3 = Case

Pin length > 14mm



INTERNAL CIRCUIT



NOTES:

- 1) The device is very susceptible to damage by electrostatic discharge.