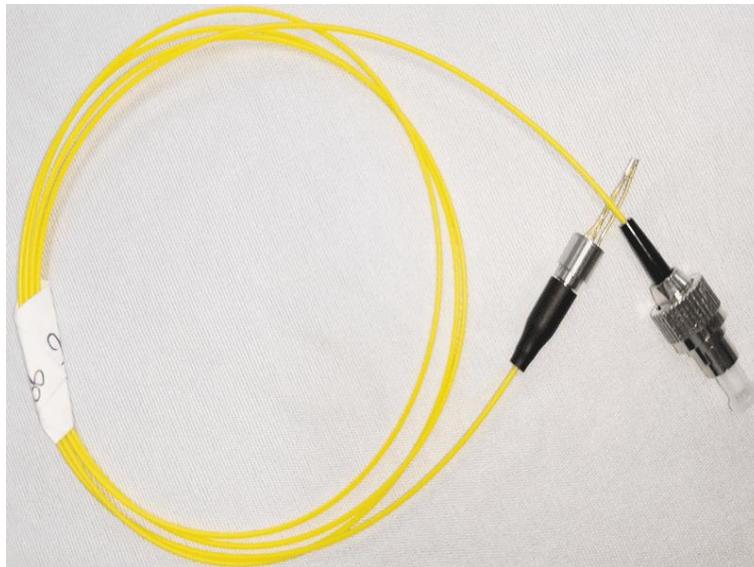


900-1700nm InGaAs Geiger Mode Avalanche Photodiode Uncooled



● Product Description

InGaAs avalanche photodiode (APD) is a dedicated device for short-wave near-infrared single photon detection. It can meet the technical requirements of quantum communication, weak light detection and other fields for high-efficiency and low-noise single photon detection, and realize single photon detection of 0.9 ~ 1.7 μ m wavelength.



● Product features

Spectral response range 0.9~1.7 μ m、 High detection efficiency, low dark count rate、 3 pin TO46

● Part Number

MP-GMD-B-I-9N

● Application area

Weak light detection、 Quantum secure communication、 Biomedical

● Core parameters

Wavelength	Responsivity
0.9-1.7 μ m	0.85A/W@1550nm

● General Parameters

Linear mode parameters

Parameter	Symbol	Unit	Test conditions	Min.	Typical	Max.
Reverse breakdown voltage	V_{BR}	V	22°C \pm 3°C , $I_D=10\mu$ A	60	80	90
Responsivity	R_e	A/W	22°C \pm 3°C, λ =1550nm , M =1	0.8	0.85	
Dark current	I_D	nA	22°C \pm 3°C, M =10		0.1	0.3
Capacitance	C	pF	22°C \pm 3°C , M =10, f=1MHz			0.25

Parameter	Symbol	Unit	Test conditions	Min.	Typical	Max.
Breakdown voltage temperature coefficient	η	V/K	-40°C ~80°C, $I_D = 10\mu A$			0.15

Geiger mode parameters

Parameter	Unit	Test conditions	Min.	Typical	Max.
Single photon detection efficiency PDE	%	-45°C, $\lambda = 1550\text{nm}$, 0.1ph/pulse, Poisson distribution single photon source	20	-	
Dark count rate DCR	kHz	-45°C, 1ns gate width, 2MHz gated repetition rate, 1MHz optical repetition rate, PDE=20%	-	-	20*
After pulse probability APP		-45°C, 1ns gate width, 2MHz gated repetition rate, 1MHz optical repetition rate, PDE=20%	-	-	1×10^{-3}
Time jitter T_j	ps	-45°C, 1ns gate width, 2MHz gated repetition rate, PDE=20%	-	-	100

* Different grades and specifications are available