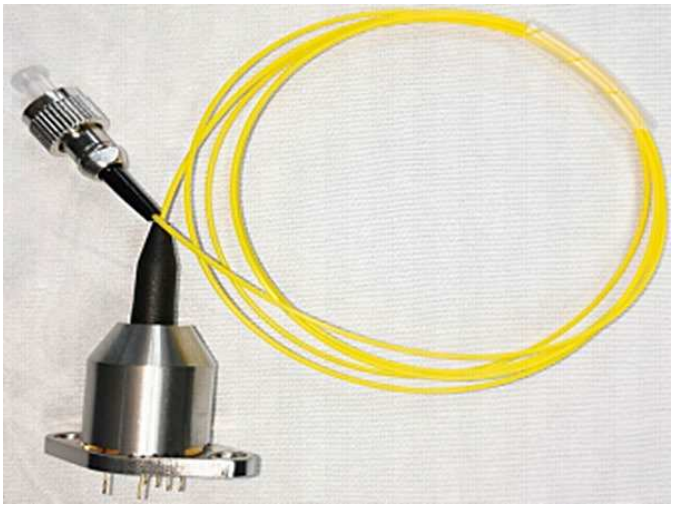
InGaAs Geiger mode avalanche photodiode (Built-in TEC cooling type)



Description:

InGaAs avalanche photodiode (APD) is a special device for short-wave near-infrared single-photon detection, which can meet the technical requirements of high efficiency and low noise single-photon detection in quantum communication, weak light detection and other fields, and achieve 0.9-1.7 μm wavelength single photon detection.

Features:

- Spectral response range 0.9-1.7 μ m
- High detection efficiency and low dark counting rate
- 6 pin TO8

Optional:

- Weak light detection
- Quantum secure communication
- Biomedical

Linear mode parameters:

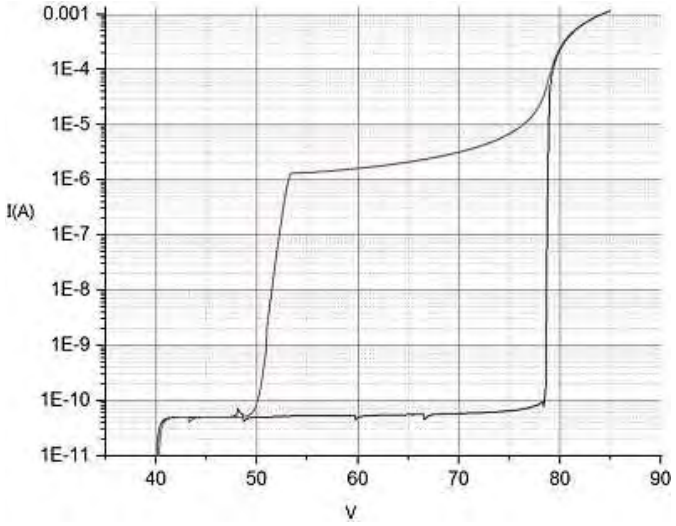
Model				IGA-APD-GM104-TEC		
parameter	symbol	units	conditions	min	typ	max
Reverse breakdown voltage	BR	V	22°C±3°C, ID =10μA	60	80	90
Responsivity	Re	A/W	22°C±3°C, λ =1550nm, M =1	0.8	0.85	
Dark current	ID	nA	22°C±3°C, M =10		0.1	0.3
Capacitance	C	pF	22°C±3°C, M =10, f=1MHz			0.25
Temperature	η	V/K	-40°C~80°C, ID =10μA			0.15

Coefficient of breakdown voltage Geiger mode parameters:

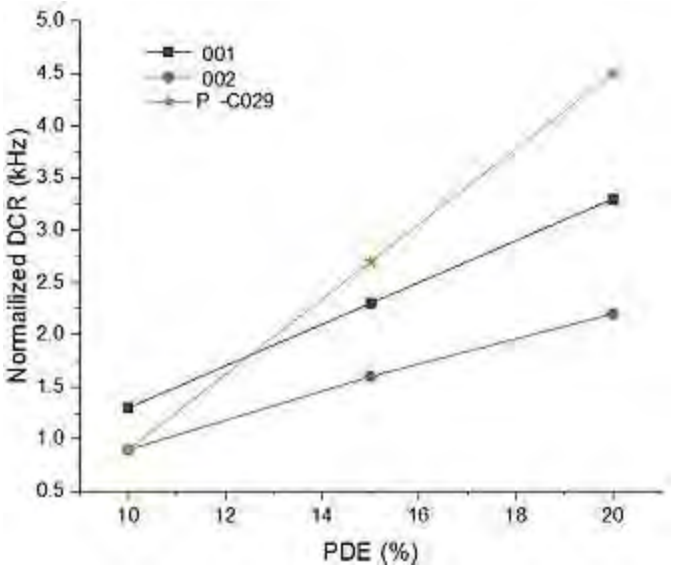
parameter	units	conditions	min	typ	max
PDE	%	-45°C, λ =1550nm, 0.1ph/pulse,poisson distribution single photon source	20	-	
DCR	kHz	-45°C, 1ns gate width, 2MHz gated PRF, 1MHz optical PRF, PDE=20%	-	-	20*
APP		-45°C, 1ns gate width, 2MHz gated PRF, 1MHz optical PRF, PDE=20%	-	-	1×10^{-3}
Tj	ps	-45°C, 1ns gate width, 2MHz gated PRF, PDE=20%	-	-	100

* Provide products of different grades and specifications.

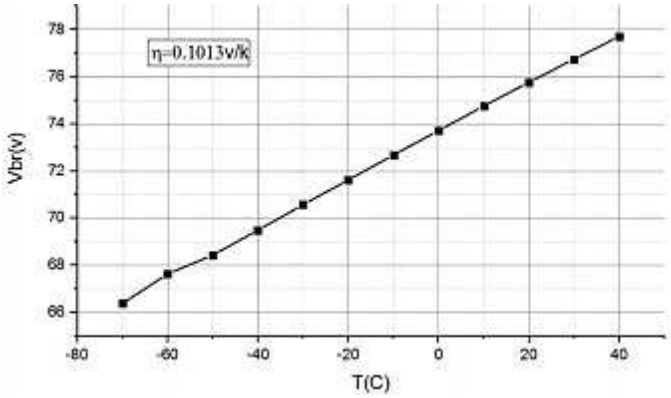
Room temperature IV curve:



DCR-PDE(-45°C, fg=2MHz):



Temperature coefficient:



Capacitance and Voltage:

