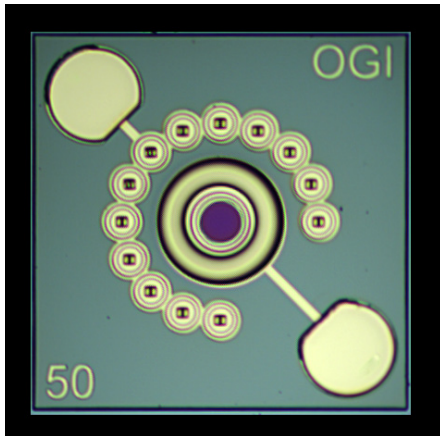


OG-AP-050-12 APD

Product Brief

Our Photodiodes, Your Circuits



Features:

- High damage threshold
- Fast Recovery
- Wide dynamic range
- Low noise
- Low capacitance
- High reliability
- Also available in back-entry version

Applications:

- Laser range finding
- Remote Sensing
- Machine vision
- Defense and Security
- Free-space optical communication

Overview:

Our APDs offer a wide dynamic range with high damage threshold and fast recovery from high power optical pulses. These APDs are perfect for laser range finding applications that require high tolerance to large optical returns, while still able to detect low power signal levels. They are also suitable for free-space optical communication systems. These APDs come in various aperture sizes ranging from 30 microns to 350 microns. The back-entry version for lower capacitance and lensed version for enhanced sensitivity are available per request.

Operating Characteristics: Temperature = 25°C

Parameter	Min	Typical	Max	Units
Wavelength Range	1000	-	1630	nm
Responsivity @ M = 1	0.85	0.90	1.0	A/W
Dark Current @ M=10	-	1	10	nA
Operating voltage, Vr @ M=10		55	70	volts
Breakdown Voltage (Id = 10 µA)	40	65	80	volts
Active Diameter	48	50	52	µm
Capacitance @ M=10	0.22	0.25	0.3	pF
Temperature coeff. of Vbr	0.05	0.06	0.07	V/°C
Bandwidth @ M = 10	2.5	3	3.5	GHz
Bandwidth @ M = 20	1.5	2.5	3	GHz
Excess Noise Factor, F @ M=10	-	3.2	3.7	
Excess Noise Factor, F @ M=20	-	5.5	6.0	
Noise Equivalent Power, NEP @ M=10	-	-	0.03	pW/Hz ^{1/2}

Absolute Maximum Conditions

Parameter	Min	Max	Units
Operating Temp Range	-40	70	°C
Storage Temp Range	-40	85	°C
Max Reverse Current	-	1	mA
Max Forward Current	0	10	mA
Optical Input (10 nsec pulse)		>200	kW/cm ²
Optical Input (average)	-	0	dBm

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Optogration reserves the right to change product specifications without notice.