



## Geon-20 Datasheet

Geon-20 is a single photon counting module capable of detecting single photons over the wavelength range of 400 to 1100nm.

Geon-20 uses a thermoelectrically cooled avalanche photodiode with integrated temperature stabilization, with photon detection efficiency of 60% @ 780nm wavelength.

Geon-20 is equipped with an improved circuit to offer a pulse height correction module to ensure high count rate with increased optical load on the active region.

Qubitrium offers custom design options in terms of dark count, peak photon detection efficiency and afterpulsing probability to accommodate your needs.



### Key Features

- Peak photon detection efficiency at 780 nm: 60% typical
- TTL Output
- Temperature stabilized
- Self-contained APD module with integrated electronics

### Applications

- Quantum communication
- Single molecule detection
- High throughput single photon experiments
- LIDAR
- Photon correlation spectroscopy
- Astronomical observation
- Optical range finding
- Adaptive optics
- Ultra-sensitive fluorescence



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Specifications	Minimum	Typical	Maximum	Units
Wavelength Range	400		1100	nm
Active Area		500		um
Peak Photon Detection Efficiency		60 @ 780nm		%
Output Pulse Width	18	20	22	ns
Output Pulse Amplitude	3	3.2	3.5	V
Deadtime		30		ns
Maximum Count Rate		10		MCounts/s
Supply Voltage	5.8	6	6.8	V
Supply Current		700		mA
Peak Power Consumption		13.8		W
Storage Temperature	-30		70	C
Startup Time			60	s
Timing Jitter		300		ps
Dark Count		2	3	kCounts/s



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