Single Quantum Eos
SNSPD Closed-Cycle System

SINGLE QUANTUM
Excellence in photon detection

High detection efficiency. Unrivalled time resolution.

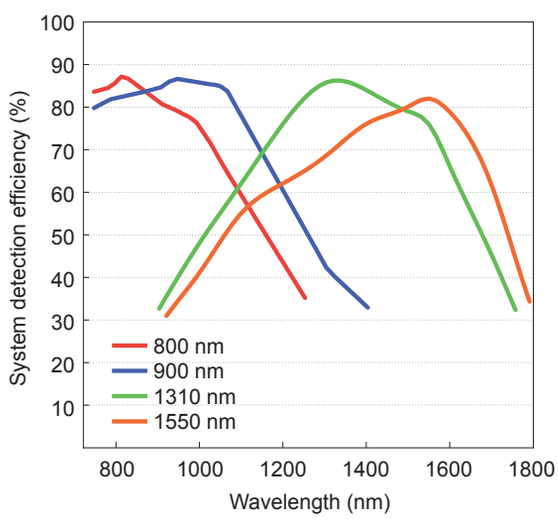
Single Quantum develops the fastest and most sensitive light sensors on the market, based on the breakthrough technology of superconducting nanowire single photon detector (SNSPD). With 50 systems installed worldwide, Single Quantum Eos is recognized for its reliability, high performance, and long lifetime.

Features

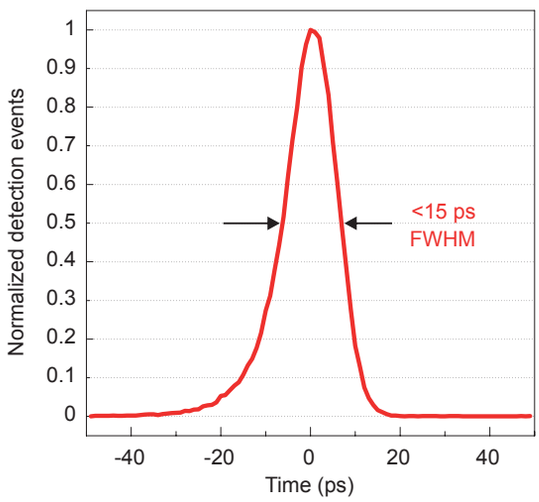
- High detection efficiency
- Low timing jitter (high time resolution)
- Short dead time
- High photon detection rate
- Low dark count rate
- Broad bandwidth
- No afterpulsing
- No helium consumption
- Continuous operation >10,000 hours
- A turn-key system

A complete solution comprising closed-cycle cryostat, helium compressor, electronic driver, and software.

Typical system detection efficiency



Low timing jitter



Specifications

Optimization wavelength	800 nm	900 nm	1310 nm	1550 nm
System detection efficiency	≥ 85%	≥ 85%	≥ 85%	≥ 80%
Dark count rate	≤ 10 Hz	≤ 10 Hz	≤ 50 Hz	≤ 300 Hz
Standard timing jitter	≤ 40 ps	≤ 40 ps	≤ 40 ps	≤ 50 ps
Optional low timing jitter	≤ 15 ps	≤ 15 ps	≤ 20 ps	≤ 25 ps
Dead time [1]	≤ 10 ns	≤ 10 ns	≤ 10 ns	≤ 10 ns
Maximum count rate [2]	≥ 50 MHz	≥ 50 MHz	≥ 20 MHz	≥ 10 MHz
Output pulse height	≥ 500 mV	≥ 500 mV	≥ 200 mV	≥ 200 mV
Number of channels	1-24			

[1] Minimum time separation between two detection events

[2] Maximum continous detection rate

Please contact us for dipstick system and customized solutions.

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