



Interleaved SNSPDs solutions

Photon Number Resolving

Photon Number Resolving (PNR) detectors have the ability to distinguish the number of arriving photons. Single Quantum offers an interleaved multipixel array within the **Excellence line**, able to detect up to 4 photons at the same time maintaining a great System Detection Efficiency.

Specifications	800 & 900 nm	1064 nm	1310 & 1550 nm
System Detection Efficiency	> 90%	> 90%	> 90 %
Timing Jitter	< 15 ps	< 15 ps	< 20 ps
Ultra-high Count Rate	> 500 MHz	> 500 MHz	> 500 MHz
Dark Count Rate	< 1 Hz	< 10 Hz	< 100 Hz

Ultra-fast SNSPDs

Interleaved detectors can also be optimized for very high speed applications, allowing parallel readout: each pixel can reach full efficiency recovery after only 4 ns at 1550 nm, enabling also fast on-off gating at unprecedented ns time-scales. Moreover, providing a wide dynamic range, interleaved detectors proved to be ideal for imaging applications.

Our Ultra-fast SNSPDs can be found within our **Imaging** and **TeleQKD** lines.

Specifications	High-dynamic range 1000 - 1600 nm	Ultrabroadband < 800 - 1800 nm	1310 & 1550 nm
System Detection System	> 35%	> 35%	> 75%
Timing Jitter	< 30 ps	< 30 ps	< 25 ps
Ultra-high Count Rate	> 400 MHz	> 100 MHz	> 500 MHz
Dark Count Rate	< 100 Hz	100 - 1000 Hz	< 10 Hz

If you are interested in different specifications, please visit www.singlequantum.com/solutions/excellence