

**NEW
in 2014!**



The first worldwide VIS-NIR single photon counter

> Features <

- Very large-band [400 nm to 1,700 nm]
- High Quantum Efficiency
- Very low Dark Count Rate
- Self-contained, compact and easy-to-use
- Adjustable PDE, dead-time and gate width
- Remote control USB 2.0 interface
- LabVIEW and C++ DLL libraries

The SPD_A_VISNIR is the first worldwide large-band [400 to 1700 nm] high-performance Single Photon Counting module designed for the most demanding low-level-of-light applications.

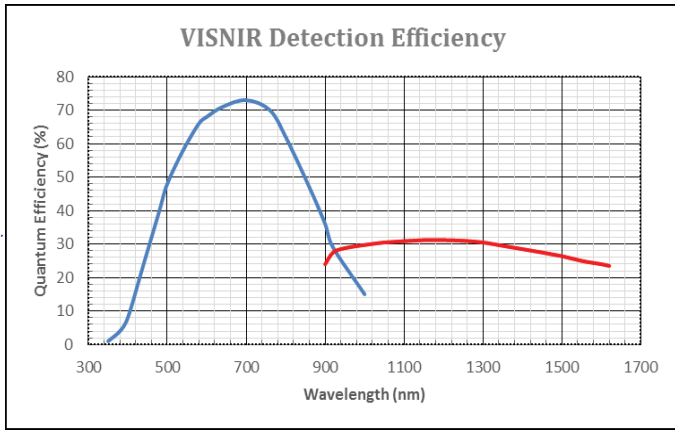
Engineered with “high performance, and ease-of-use” innovative mindset, the SPD_A_VISNIR fully integrated the two world’s most advanced InGaAs and Silicon Geiger-mode Single Photon Avalanche Photodiode (Geiger-SPAD) technologies, integrated cooling systems, the latest fast data processing and the most intuitive and practical user interfaces.

Thanks to its outstanding low-noise and high photon detection efficiency, the self-contained SPD_A modules enable worldwide scientists and engineers to measure very-low-light-level down to the single photon level. By achieving extremely low light level analytical measurements, it allows our worldwide customers to focus on their own challenges, and remain at the cutting edge of their field.

The SPD_A series were designed to meet the needs of a large variety of applications. In order to meet each application, the SPD_A can be qualified or customized based on the customers’ technical requirements. At each delivery, a precise test report is provided.

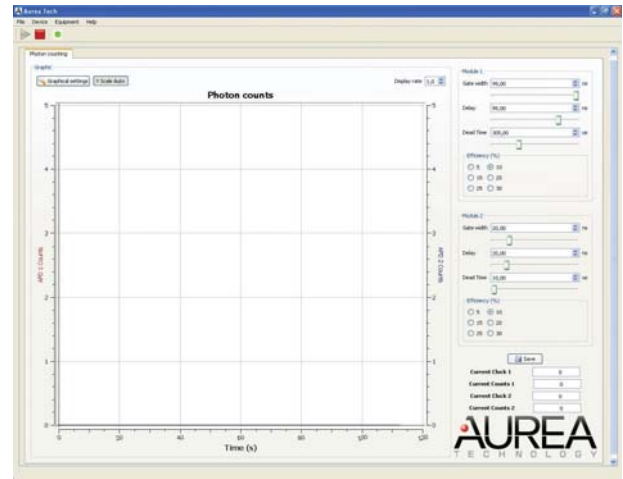
Fully integrated Time-to-Digital Conversion is also available in option.

PHOTON COUNTING	VISIBLE Channel 1	NIR Channel 2
Spectral range	400 nm to 1060 nm (Silicon SPAD)	900 nm to 1700 nm (InGaAs SPAD)
Optical Fiber type	SMF (9 μm) or MMF (50 μm, 62 μm or 100 μm)	SMF (9 μm) or MMF (50 μm)
Photon Detection Efficiency	up to 65% @ 650 nm up to 75% @ 700 nm up to 45% @ 830 nm	Adjustable up to 30% @ 1300 nm Adjustable up to 25% @ 1550 nm
Dark Count Rate (select the grade when ordering)	grade E < 500 cps grade D < 250 cps grade C < 100 cps grade B < 50 cps grade A < 25 cps	standard A grade < 5,000 cps champion AC grade < 1,000 cps
Timing resolution	< 350 ps @ 820 nm (< 250 ps in option)	< 200 ps @ 1550 nm
Dead time range	33 ns fixed	adjustable from 500 ns to 1 ms [100 ns]
Afterpulsing probability	< 0.5 % @ 1 MHz	< 5% @ 1 MHz
Trigger input signal	Continuous mode	Gated mode
Max. Count rate	40 Mcps	
Max. Trigger rate		variable up to 20 MHz
Effective gate width		adjustable from 1 ns to 100 ns [0.5 ns steps]
Trigger delay		adjustable from 0 ns to 128 ns [0.5 ns steps]
DETECTION output signal		
Detection OUT	TTL signal [12 ns]	



Photon Detection Efficiency versus wavelength

User Interfaces



A very well-designed and easy to use Graphical User Interface is provided.

Connectors

CTL_USB	Mini USB 2.0 type B
Opt IN	FC/PC optical connector
Detection OUT	SMA female type
Trigger (Clock IN & OUT)	SMA female type

Electrical, Mechanical and Environmental

Power supply	110 – 230 VAC
Power consumption	< 20 Watts @ 5 VDC
Dimension (LxWxH)	330 x 285 x 86 mm ³
Weight	5 kg
Operating temperature	+ 10°C to + 30°C
Storage temperature	- 40°C to + 70°C

TCSPC versions and available options

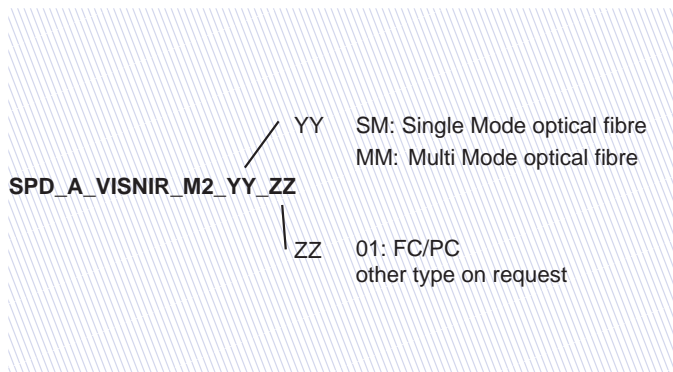
The LynXea serie is also available with fully integrated TDC for TCSPC applications. Its Graphical User Interface directly provides fluorescence decay curve, time correlation...

Other available Single Photon Counting modules



AUREA Technology provides a large portfolio of high-performance Photon Counting and TCSPC solutions from 400 nm to 1700 nm.

Ordering Information



Contact Information

For more information contact us at info@areatechnology.com

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