PHOTONIS | INDUSTRY | SCIENCE | MEDICAL

Solutions for High-Speed Photonic Timing

Sub-nano second speeds support a variety of applications.

PHOTONIS manufactures a broad range of high-speed photonic devices which offer sub-nano second timing and support a wide range of spectral response ranges to provide the ideal timing solution no matter what the application may be.

PHOTONIS' fast timing photonic devices can be used in LIDAR, Astronomy, Fluorescence Imaging, Communications, and a variety of high-speed photographic applications, including non-destructive testing. Most of our products can be additionally customized with a variety of photocathodes or other options to ensure your timing, spatial resolution, and sensitivity are optimized for your specific application.

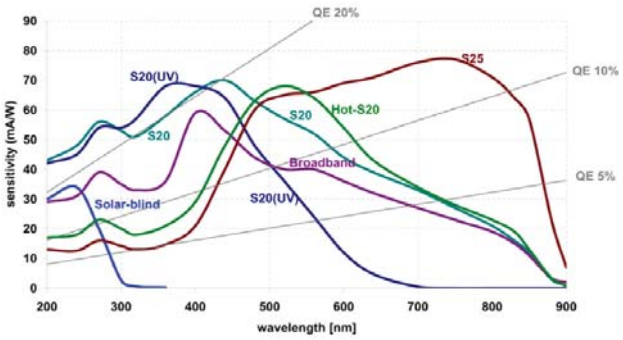
PHOTONIS

PHOTONIS has a long-standing reputation as being one of the industry leaders in photonic innovation. Our products are widely deployed in military, industrial, medical and scientific applications across the globe. Today, PHOTONIS offers the widest range of high-speed, fast timing photonic devices, ensuring that one of them will be ideal for your specific application. All PHOTONIS fast timing photonic devices have sub-nano second speeds, and many can be ordered with specific cathodes to ensure the spectral response matches your application.

Image Intensifier Tubes

Image Intensifier Tubes are highly sensitive imaging light amplifiers providing gains of over 1 million. PHOTONIS Image Intensifier Tubes can be configured to provide sub-nano second shutter speed, making it possible to examine fast-moving objects without the use of destructive X-Rays or film. Their fast gating capability is ideal for imaging LIDAR and other laser based applications.

PHOTONIS Image Intensifier Tubes can also be used in low light level applications including photon counting, making them ideal for medical diagnostics involving fluorescence imaging or luminescence measurements. User selectable options include choice of phosphor coating, spectral response and output window type. Accessories available include power supplies, gating units and attachment of CCD/CMOS image sensors, all designed to simplify the use of your Image Intensifier.



Imaging Photon Counters

Imaging Photon Counters incorporate a cross-strip anode, providing a unique combination of high spatial resolution and fast timing that is not available in any other product. The 50pS timing resolution is superior to resistive anodes and is several orders of magnitude faster than EMCCDs or intensified cameras. In addition, each photon is individually time-stamped enabling event analysis never before available. The spatial resolution of <15µm rms over the 18mm active area is equivalent to over 1 million pixels.

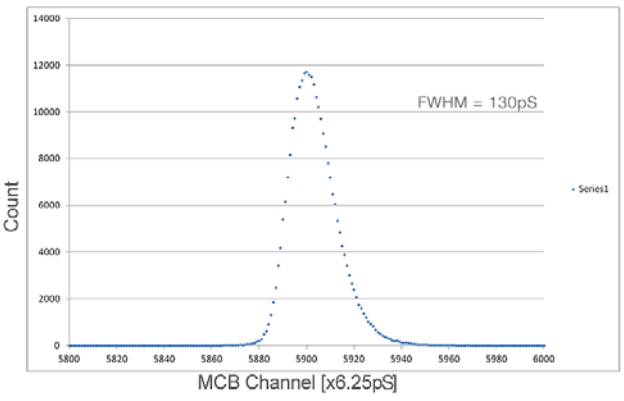
The Imaging Photon Counter is ideal for time-resolved fluorescence imaging, LIDAR mapping, Astronomy or any photon counting application requiring both high temporal and spatial resolution. It is available with either an S25 or a Blue enhanced S20 photocathode, however custom devices can be made with any of the standard PHOTONIS Image Intensifier photocathodes.

MCP-PMTs

The MCP-PMT Photon Detector brings together two fast photonic timing detection technologies into a single sensor. An 18mm MCP and a photocathode are used in combination with a single anode. The unit also offers magnetic resistance to ~3 Tesla, with jitter ~ 130pS FWHM.

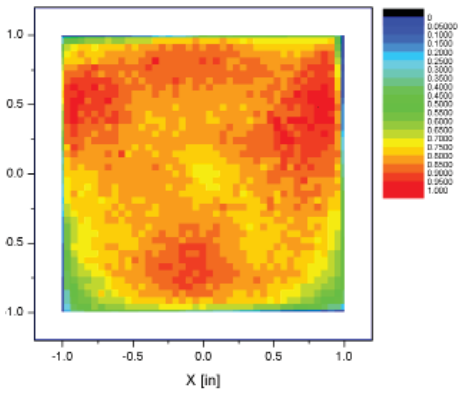
The MCP-PMT Photon Detector is ideal for high-speed and single photon detection, fluorescence, nuclear physics and other high-energy applications.

The MCP-PMT is available in two versions - one with a single MCP and another with two MCPs configured in a chevron for enhanced sensitivity. It comes with a built-in bleeder chain and can be equipped with either an S20 or S25 photocathode.



High-Speed Photonic Timing Products

PLANACON

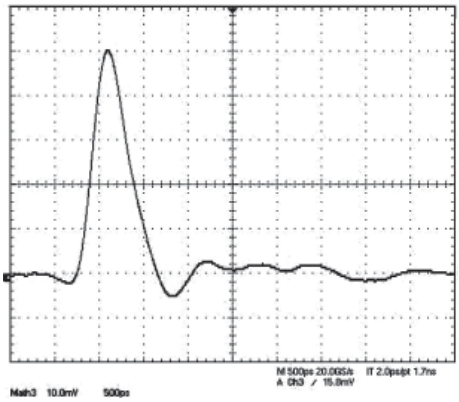


PLANACON Photon Detectors feature a very low profile, uniquely square shape, making them the detector of choice when large images are required, as multiple units can be tiled together to form a larger image plane. PLANACON Photon Detectors feature a large 53mm active area which provides excellent uniformity and are high immunity to magnetic field interference.

The PLANACON Photon Detector is ideal for applications such as medical imaging, Cherenkov ring imaging, and other high energy physics research. It provides a fast rise time of 0.6nS a pulse width of 1.8nS, and has achieved transit time spreads of 5pS for multi-photon events.

The PLANACON family of Photon Detectors are available with two different anode configurations: 8x8 or 32x32.

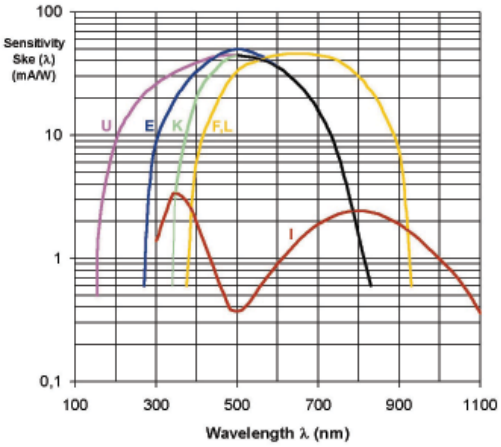
Optical Receiver Module



The Optical Receiver Module from PHOTONIS is equipped with a large, 12mm signal receiver that is optimized for signals in the green to UV spectral range. It features an integrated power supply and can sustain communication signals at very high data rates - up to 2 GHz. Optimized for speed, the Optical Receiver Module features a 220pS rise time, with a 410pS FWHM response time.

The Optical Receiver Module is ideal for optical communications, LIDAR and unmanned or remote optical systems. This product is a 2010 PRISM Award Winner for Photonic Innovation in the Information and Communications category.

Streak Tubes



Curve U: Standard multi-alkali on sapphire window
Curve K: Standard multi-alkali on fiber optic window
Curve L: ERMA on fiber optic window
Curve I: S1 on glass window
Curve F: ERMA on glass window.

PHOTONIS manufactures Streak Tubes that are unparalleled for their performance and reliability and offer a wide range of spatial and temporal resolutions to suit most applications. Streak Tubes can be operated in streak, framing or synchroscan modes when used in the visible spectrum, and in streak mode only when operating in the X-Ray spectrum. A Bilamellar Tube version is also available for the X-Ray spectrum.

PHOTONIS Streak Tubes are ideal for variety of high-speed imaging applications, including fluorescence, LIDAR, ballistics, biology, femtochemistry, and plasma physics.

Streak Tubes offer spatial resolution up to 50 lp/mm, temporal resolutions in the sub-pS range in streak mode, and exposure times of >10 nS in framing mode. A wide variety of cathodes can be ordered with PHOTONIS Streak Tubes, including S1. Screen diameters and read out equipment can also be specified at the time of order.

PHOTONIS

For more information, please visit www.photonis.com

PHOTONIS France S.A.S
Visit address
Avenue Roger Roncier
19100 Brive La Gaillarde
France

Mail address
B.P. 520
19106 Brive Cedex
France

T +33 (0)555 86 37 00
F +33 (0)555 86 37 74

Email: sales@photonis.com

PHOTONIS Netherlands B.V.
Visit address
Dwazziewegen 2
9301 ZR Roden
The Netherlands

Mail address
P.O. Box 60
9300 AB Roden
The Netherlands

T +31 (0)50 501 8808
F +31 (0)50 501 1456

Email: sales@nl.photonis.com

PHOTONIS USA Inc.
Visit address
Sturbridge Business Park
Sturbridge, MA 01566
United States of America

Mail address
P.O. Box 1159
Sturbridge, MA 01566
United States of America

T +1 800 648 1800 (US & Can)
T +1 508 347 4000 (Intl calls)
F +1 508 347 3849

Email: sales@usa.photonis.com

PHOTONIS USA Pennsylvania Inc.
1000 New Holland Avenue
Lancaster, PA 17601 - 5688
United States of America

T +1 800 366 2875
T +1 717 295 6888 (US calls)
T +1 717 295 2704 (Intl calls)
F +1 717 295 6096

Email: info@photonisusa.com

EP107JAN12