

Tech Pulse









PHOTONICS MEDIA

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Sensors & Detectors Tech Pulse is a special edition newsletter from Photonics Media and Hamamatsu Corporation covering key developments in sensors and detectors technology.



HAMAMATSU

Webinar

Silicon Photomultiplier: Theory and Practice

Wed, Jan 11, 2017 1:00 PM - 2:00 PM EST

The silicon photomultiplier (SiPM), also known as Multi-Pixel Photon Counter (MPPC), is becoming a popular choice of a photodetector in applications where even single photons must be detected. The ability of a SiPM to detect single photons is due to its very high $(10^6 - 10^7)$ internal gain. The goals of this webinar are for you to: 1) develop a strong theoretical understanding of how a SiPM functions; 2) become familiar with its key optoelectronic characteristics; and 3) understand the pros and cons of SiPMs. The webinar will also discuss realistic applications which use SiPMs.

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PROMOTED Hamamatsu Corporation

Silicon Photomultipliers (SiPM)

Thanks to its high internal gain, the silicon photomultiplier (SiPM) is an option, along with photomultiplier tubes, for detecting ultra-low light. Hamamatsu offers SiPM under the name Multi-Pixel Photon Counter. These devices

feature high photon detection efficiency, low noise, high speed response, and excellent time resolution.

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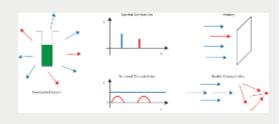
Light is a versatile tool for investigating physical and chemical processes in nature. Any specific system being analyzed may, through the light it emits or reflects, communicate information about itself. Electrical signal is an effective medium for processing, transporting and storing information. The photodetector's role is to convert information propagating in the form of light into an electrical signal with a minimal loss of information quality.

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Detectors: Guideposts on the Road to Selection

Any number of medical, industrial and analytical applications requires the detection of light. Chemiluminescence, bioluminescence, fluorescence and atomic absorption are just a few, and all require a detector to convert the light into an electrical signal. There are four basic technologies that accomplish this task: photomultiplier tubes (PMTs), silicon photomultipliers (SiPMs), avalanche photodiodes (APDs), and silicon photodiodes.

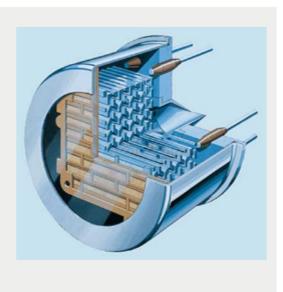
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Large selection available Single-channel detectors

Arrays Modules Customized devices

