Wednesday, March 10, 2021

PHOTONICS spectra

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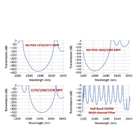
Monthly newsletter from the editors of Photonics Spectra, with features, popular topics, new products, and what's coming in the next issue. Manage your Photonics Media membership at Photonics.com/subscribe.

Embedded Vision Is Streamlined for Application on a Massive Scale



Compact, efficient, and highly application specific, embedded vision technology increasingly offers performance and price points that would have been impossible to achieve only a few years ago. The steady advancement in capabilities has been driven by improvements in all component technologies, including sensors, optics, and processors. But the most revolutionary advancements have unfolded in the last category — processors — helping to multiply many of embedded vision's more recent innovations.

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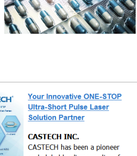
Multiband Optical Filters Are Telecom Networks' Multitaskers



Recent advancements in multiband and multifunction optical filters have expanded the benefits to telecom components. Such filters not only supported the development of dual- and multibandpass filters for use in the backbone WDM architectures associated with wireless networks, they also enabled hybrid gain-flattening filters that couple gain-flattening functionality with laser pump blocking. These component advancements leverage the power of multiband filters to improve performance and save module build costs.

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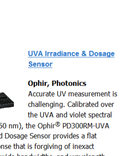
Spectroscopy Becomes a Potent Part of Pharmaceutical Production



Innovative treatments and vaccines to combat the virus are in huge demand, and the need for technical support for the testing of raw materials and final products is unprecedented. As a result, crucial analytical tools such as optical spectroscopy are well positioned to gain new ground.

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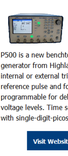
.: Featured Products



Resolution from 3.2 MP to 45 MP

Teledyne DALSA, Machine Vision OEM Components

Designed for industrial imaging applications, the new Genie™ Nano SCigE series offers unprecedented speed with versions from 20, 30, and 45 MP. This new camera series takes advantage of leading industrial image sensors from Sony® and On-Semi® with the new XGS sensors replacing obsolete CCD sensors.

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Your Innovative ONE-STOP Ultra-Short Pulse Laser Solution Partner

CASTECH INC.

CASTECH has been a pioneer and global leading supplier of crystals, precision optics, and laser components since 1990. With 30 years of experience and unique technologies, CASTECH now is a proven expert on ONE-STOP Ultra-Short Pulse laser solutions.

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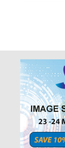

Automated Glass Components Processing

NYFORS Teknologi AB

The NYFORS SMARTSPLICER is a CO2 laser glass-processing system designed for the production of high-power and sensitive photonic components. It offers contamination free end-capping, splicing, tapering, bundling, and many other glass-shaping processes. NYFORS provides automated high-precision solutions for fiber...

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UVA Irradiance & Dosage Sensor

Ophir, Photonics

Accurate UV measurement is challenging. Calibrated over the UVA and violet spectral range (350-450 nm), the Ophir® PD300RM-UVA Irradiance and Dosage Sensor provides a flat spectral response that is forgiving of inexact wavelengths, wide bandwidths, and wavelength shifts (e.g. due to heating).

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P500 Benchtop Digital Delay and Pulse Generator

Highland Technology Inc.

P500 is a new benchtop digital delay and pulse generator from Highland Technology. From an internal or external trigger, it generates a time reference pulse and four pulse outputs programmable for delay, width, and high/low voltage levels. Time set resolution is 1 picosecond with single-digit-picosecond jitter.

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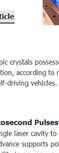

Infrared Laser Beam Profiler

MKS/Newport

The LBP2-HR-IR3 Laser Beam Profiler is a powerful software driven camera with comprehensive beam diagnostic measurement features. It features the new Model SP920s-1550, a 1/1.8 inch format 1624 x 1224 pixel CCD camera with phosphor coating for the wavelength range between 1440 and 1605 nm.

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Norland Optical Splice - Easy To Use!

Norland Products Inc.

The Norland UVC Optical Splice is the first really easy to use, high performance connection for optical fibers. This splice incorporates a precision TRW glass alignment guide and a proadctive glass sleeve in a unique one piece design that minimizes handling of bare fiber.

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Multi-Axis Systems for Laser Materials Processing

BUSCH Microsystems Consult GmbH

Achieve the best performance and highest accuracy for your machining requirements with the Multi-Axis System from Busch. This turnkey solution is designed for laser processing of semiconductor and biomedical applications. Due to the modular design, Busch can customize the system to match your needs.

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.: In Case You Missed It

Observing Nonlinear Ionization Dynamics of Hot Dense Plasma

A team of researchers from the University of Jena has observed the successful formation and interaction of highly ionized krypton plasma, using femtosecond coherent ultraviolet light and a novel four-dimensional model. The research may ultimately deliver insight into the physical formation of the universe.

Read Article

Ambient Light Alters Refraction in 2D Material

A two-dimensional array of tantalum disulfide containing microscopic crystals possesses distinct optical characteristics that can be controlled in ambient conditions and under general illumination, according to researchers at Rice University. The technology could prove useful in 3D displays, virtual reality, and self-driving vehicles.

Read Article

Single-cavity Laser Emits High-Power, Dual-Comb Femtosecond Pulses

Researchers at ETH Zurich have developed a method that uses a single laser cavity to create two high-powered optical frequency combs, emitting high-power femtosecond pulses. The advance supports potential future developments that move toward designing more compact dual combs that offer flexibility in power, wavelength, bandwidth, and pulse repetition rates.

Read Article

.: Upcoming Webinars

Characterization of Light Emitters and Detectors from the Visible to the Terahertz Spectral Range

Tue, Mar 30, 2021 1:00 PM - 2:00 PM EDT

In this webinar with Sergey V. Shilov, Ph.D., senior application scientist at Bruker Optics, Yuzhe Xiao, Ph.D., research associate at the University of Wisconsin-Madison, and Mikhail Kats, Jack St. Clair Kilby Associate Professor in Electrical and Computer Engineering at the University of Wisconsin-Madison, attendees will receive an overview of experimental hardware and different approaches for detector testing and emission studies in multiple spectral ranges. Presented by Bruker Optics.

Register Now

Photonics Entrepreneurship Series: Selling New Technology, Challenges & Best Practices

Thu, Apr 8, 2021 1:00 PM - 2:00 PM EDT

This webinar with Bruce Forman of QED Technologies will take attendees through the most common challenges associated with photonics industry start-ups. Forman will explain the concept of "effective entrepreneurship" and offer techniques for optimizing business practices toward finding and working with new customers for selling photonics technologies.

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Features

High Energy Lasers, Micro-Optics and Micro-Fabrication, Thermal Imaging, and more.

Photonics Media is currently seeking technical feature articles on a variety of topics for publication in our magazine *Photonics Spectra*. Please submit an informal 100-word abstract to Daniel McCarthy, Senior Editor, at Daniel.McCarthy@Photonics.com, or use our online submission form www.photonics.com/submitfeature.aspx.

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