

PHOTONICS spectra



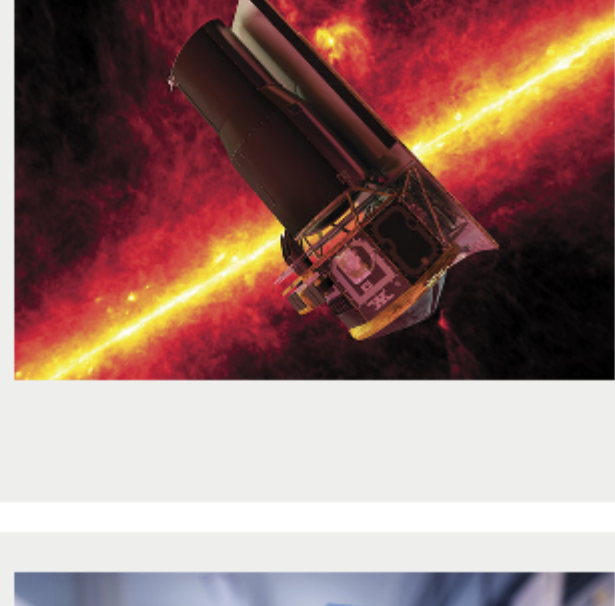
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SEE THE NIKON DIFFERENCE
High Performance OEM Microscope Components

From IR to THz, Space Telescopes Get Detector Array Upgrades

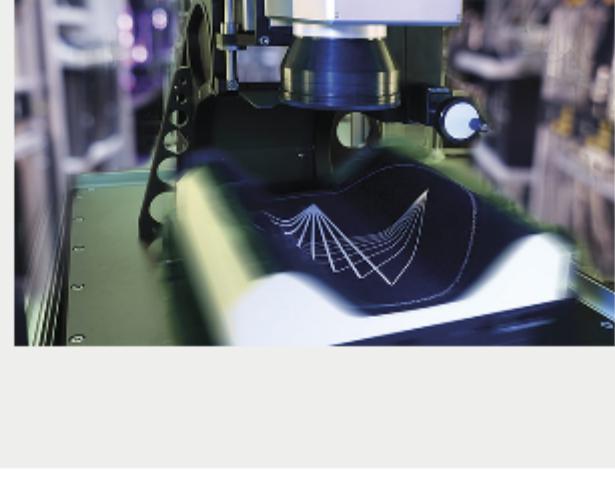
Before it is decommissioned in January 2020, Spitzer will use its operational IR detector arrays to continue identifying objects for the James Webb Space Telescope to further investigate. Led by NASA and its European and Canadian space agency partners, this scientific successor to both the Spitzer Space Telescope and the Hubble Space Telescope is currently scheduled to launch in March 2021.



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Motion Control Solutions for High-Precision, Large-Field Laser Micromachining

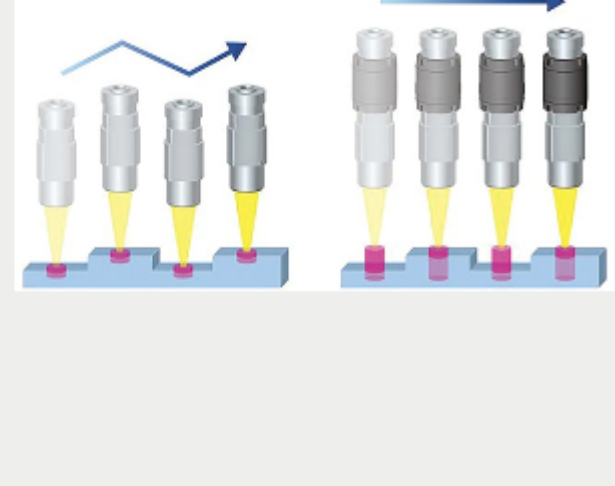
High-precision, high-throughput laser micromachining typically requires galvo scan heads with a short focal length, which in turn produces a small image field, or field of view (FOV). However, a growing number of high-tech manufacturing areas, such as OLED display fabrication, require the processing of workpieces larger than can fit into these reduced image fields, while simultaneously requiring a high level of accuracy and throughput.



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High-Speed 3D Inspection with Liquid Lenses

The ability to control the focal length of a lens at ultrahigh speeds in the focal range required by an application is tremendously valuable. Many scientific, industrial, and commercial applications demand fast modulation and control over the focus of the lens to enable high-speed illumination and measurements. For example, in noncontact inspection systems, the traditional approach requires mechanically moving the lens assembly to measure the sample along its height. However, this is often one of the bottlenecks that affect the speed of measurement and the overall inspection throughput.



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Featured Products

IQ Lab™ Stray Light & Temp Testing
Optikos Corporation
Optikos IQ Lab™ Services offer a comprehensive range of lens and camera testing in one location. Stray light measurements include both Veiling Glare Index (VGI) and Glare Spread Function (GSF), and there are new options for lens testing over temperature. With the prevalence of imaging systems in technology today,...

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OEM Microscope Components
Nikon Instruments Inc.
Nikon provides a large range of microscopy components to satisfy diverse optical requirements. These components can be incorporated into imaging systems to fulfill unique experimental requirements. Nikon is staffed with a dedicated team to service large volume and OEM requests.

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New CMOS Sensor Family, Targeted at 3D Laser Triangulation Applications
Teledyne e2v (UK) Ltd.
Teledyne e2v announces its Flash CMOS image sensor family, specifically tailored for 3D laser profiling/displacement applications and high speed, high resolution inspection. The new Flash sensors feature a 6 μm CMOS global shutter pixel which effectively combines high resolution and fast frame rate.

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M-Wave 339 IR Interferometer
M3 Measurement Solutions Inc.
The M-Wave 339 is a state-of-the-art Infrared Interferometer operating at 3.39 micrometers. It is the ideal instrument for testing mid-wave infrared imaging components/systems and optical material homogeneity.

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IR Filters for Thermal Imaging and Gas Detection
Spectrogon US
Spectrogon manufactures infrared filters and windows with high transmission, high rejection outside the passband, and introducing low cosmetic defects — while maintaining excellent coating uniformity — for thermal imaging applications such as cryogenically cooled IR detectors and for uncooled microbolometers.

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Highest Performing Notch Filter
Chroma Technology Corp.
Chroma Technology introduces the TopNotch™ line of narrow band, notch rejection filters. Offering best-in-class performance with transmission from 350-1600 nm and rejection FWHM of 3% of center wavelength. With a blocking range of at least 6 nm >OD6, TopNotch™ filters provide blocking for a wider range of laser diodes.

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NEW Laser Window ACR-2100
Kentek Corp.
What are the key features of your product/service? Finally, 2100 nm protection in a large 24 x 36-inch polymer window. Why is it news worthy or innovative? Historically when users needed a laser protective window beyond 1400 nm and below 2700 nm they would be limited to mineral glass which is commonly sold in 6-inch square sheets,...

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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 proactive glass sleeve in a unique one piece design that minimizes handling of bare fiber.

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In Case You Missed It

Structured Light Could Be Route to Higher Information Capacity per Photon

Researchers from the University of Witwatersrand (Wits) have reported on progress made in the use of structured light in quantum protocols to create a larger encoding alphabet. The researchers said that since patterns of light can be distinguished from each other, they can be used as a form of alphabet. "Light comes in a variety of patterns that can be made unique — like our faces," professor Andrew Forbes said. "There are, in principle at least, an infinite set of patterns, so an infinite alphabet is available."



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Optical Quantum Processor Is Scalable

A prototype of a large-scale quantum processor made of laser light has been created by a team from Australia, Japan, and the U.S. The processor has built-in scalability that allows the number of quantum components to scale to extreme numbers.

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Researchers Determine Quantum Light Source in 2D Material

Scientists at the Vienna University of Technology have uncovered the source of a special type of quantum light created at certain points in the 2D material tungsten diselenide (WSe2) when it is supplied with energy. They found that this special-nature light, which exhibits an antibunching effect, results from the interaction between single atomic defects in the material and mechanical strain. Computer simulations showed how electrons were driven to specific places in the WSe2, where they were captured by a defect, lost energy, and emitted a photon.

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Webinars

Frequency-Domain Fluorescence Lifetime Imaging System Improvements and Applications

Wed, Nov 20, 2019 10:00 AM - 11:00 AM EST
Since its introduction in 2014, the FD-FLIM pco.flim camera system has been applied to many different areas, from FRET to endogenous fluorescence, from oxygen to pH measurement, from large technical applications to light-sheet microscopy. In this webinar presented by Pico, Gerhard Holst will demonstrate and discuss improvements in the use and applicability of the pco.flim camera. New results including investigation of microplastics on lab filters, pH measurements, oxygen measurements in a marine environment, assistance for neurosurgery, and rapid FD-FLIM measurements will be shown to demonstrate the flexibility of the pco.flim camera system.



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Features
Holography, Free Space Communication, Ultrahigh-Power Lasers, and more.

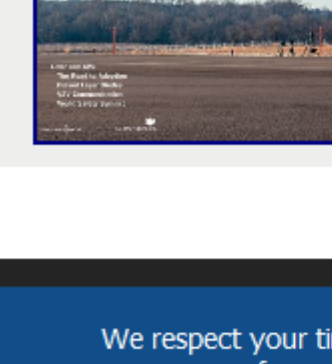
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