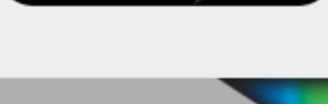


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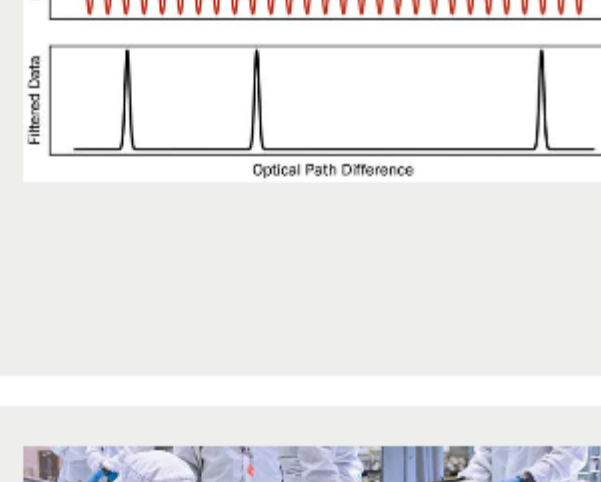
STABILIZING THE LINE OF SIGHT

By Peter J. Kennedy and Rhonda L. Kennedy
A methodology and an example for executing a successful end-to-end line-of-sight pointing design.

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White Light Interferometry for Highly Accurate Thickness Measurements

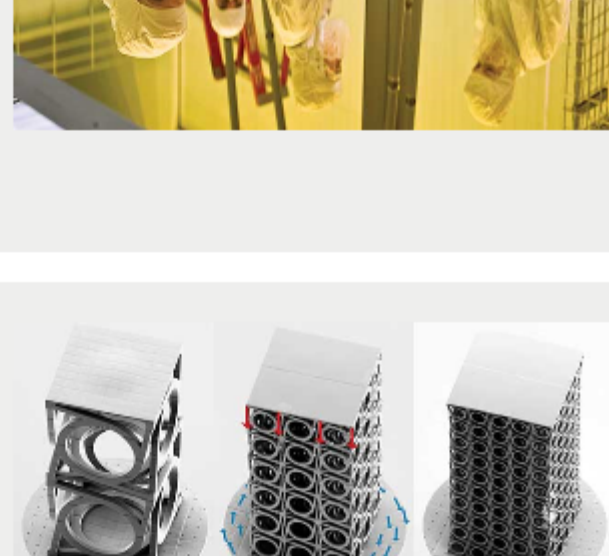
White light interferometry is a common system of measurement with a long history and a variety of applications, which currently include surface profiling¹, medical imaging, and — as in the past — thickness measurement. Also known as coherence scanning interferometry, vertical scanning interferometry, and OCT, these systems, regardless of their names, are characterized by the same components: a broadband light source, reflection from one or more surfaces being measured, illumination and light collection optics, and an interferometer or spectrum analyzer.



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Manufacturing High-Performance Mirrors

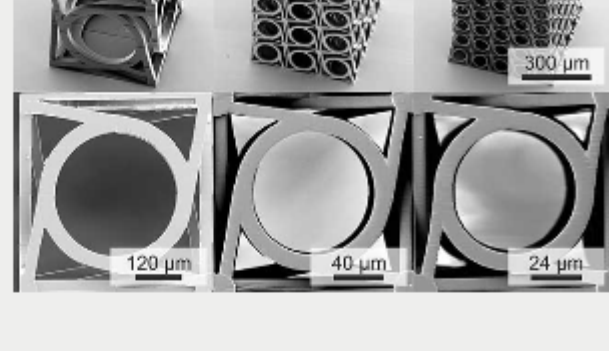
When it comes to long-range, multispectral optical systems, large mirrors play an integral role; there are thousands of optical units containing large mirrors around the globe. With minimum diameters starting at 200 mm, the largest mirrors range from 8.2 m in diameter (single mirrors) to over 10 m (segmented). They take many shapes — spherical, aspheric, parabolic, or freeform — and are used for a wide spectrum of light, including visible, UV, and IR.



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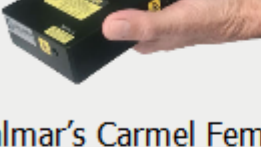
With Lasers, 3D Printing on a Miniature Scale

Copies of buildings and the Statue of Liberty that are only microns tall — these are examples of what's been done with three-dimensional nanolithography, known as 3D nanoprinting. Also possible today is the manufacturing of optical, photonic, microfluidic, and other components on the nanoscale. Compared to mask lithography and large-scale manufacturing methods, 3D nanoprinted components offer solutions that can be less expensive, better performing, quicker to create, and more compact.



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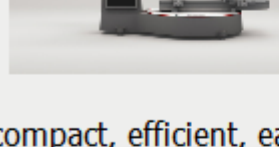


1W/780nm/90fs, Palm-Sized Laser

Calmar Laser
Rethink Your Ultrafast Laser Needs

Calmar's Carmel Femtosecond Fiber Laser is Small, Powerful, Affordable Tired of re-aligning your Ti:sapphire laser? Having problems with your water chiller? Need to replace the diodes in your green pump laser? Concerned about the air-conditioning vent over your beam steering mirrors?

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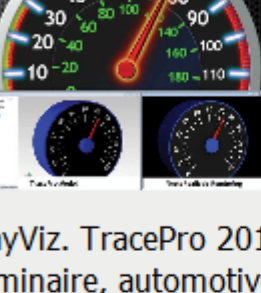


LensCheck™ Quality Control System

Optikos Corporation

Optikos is pleased to offer this compact, efficient, easy-to-use quality control tool. The LensCheck™ instrument is a cost-effective solution to your production and prototype lens qualification needs, and provides portable and precise measurements for VIS/NIR, SWIR and LWIR applications.

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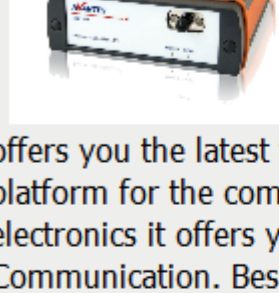


Illumination Design Software

Lambda Research Corp.

Lambda Research Corporation announces the latest releases of its easy-to-use optical/illumination software programs, TracePro and RayViz. TracePro 2018 features new utilities to expedite luminaire, automotive, and streetlamp design. RayViz adds ray tracing and visualization to SOLIDWORKS.

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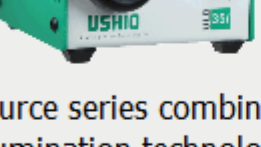


AvaSpec-ULS4096CL-EVO (CMOS)

Avantes BV

The AvaSpec-ULS4096CL-EVO offers you the latest technology ensuring a spectrometer platform for the coming years. With our latest AS-7010 electronics it offers you a versatile device including USB3.0 Communication. Besides the high speed communication options, the EVO also offers a fast microprocessor and 50x more memory.

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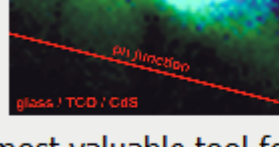


MIDORI™ ULB-35i Fiber Optic LED Light Source

Ushio America Inc.

The Midori™ ULB-35i LED light source series combines state-of-the-art, solid-state illumination technology with Ushio's distinctive optical design to create a compact and lightweight fiber optic lightbox with very high output efficacy that is ideal for industrial applications where space is a premium.

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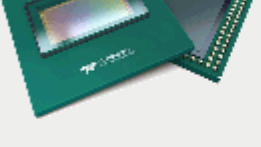


Combined Spectrometer / Microscope

PicoQuant GmbH

Time-resolved fluorescence spectroscopy is a spectroscopist's most valuable tool for the investigation of excited state dynamics in molecules, complexes, or semi-conductors. With its newly released fiber coupling sample holder, the modular, time-resolved and steady state spectrometer FluoTime 300 from PicoQuant can be combined with a microscope...

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Snappy 2M CMOS Image Sensor for High-speed Scanning

Teledyne e2v (UK) Ltd.

Teledyne e2v, announces Snappy 2 megapixel, a new CMOS image sensor designed for barcode reading and other 2D scanning applications. The sensor uniquely combines full HD resolution, a 2.8µm low-noise global shutter and advanced features for fast and economic decoding, all within a small optical format.

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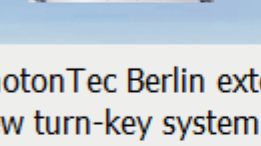


SL Microcontroller Laser

Oseola Inc.

Oseola is proud to introduce the new Microcontroller Option for our Streamline laser! This option allows for digital interfacing with the Streamline laser using RS-232 or RS-485 communication. The MC monitors and reports key parameters as well as allowing users to set operational conditions of the laser.

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Turn-key Fiber-coupled Diode Laser System

PhotonTec Berlin GmbH

PhotonTec Berlin extends its diode laser portfolio with a new turn-key system. It integrates fiber-coupled diode laser module, power supply and cooling in one 19" rack, enabling both local and remote control of the power, operating mode and pulse parameters.

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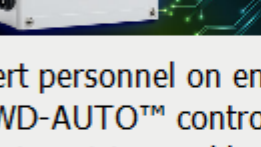


ET-3600 - 22 GHz Photodetector

Electro-Optics Technology Inc.

EOT's 22 GHz Photodetector - the ET-3600, is your choice for ultrafast pulse resolution and frequency response measurement. With a 22 GHz minimum bandwidth (25 GHz typical), the ET-3600 provides an easy-to-use, fast solution for 900-1650 nm applications.

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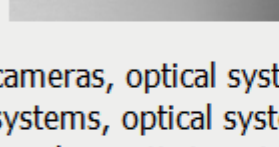


Laser Area Warning Device

Kentek Corporation

Kentek's laser AREA WARNING DEVICE is a low-cost option for automatically controlling signage to alert personnel on entry to a controlled laser area. The AWD-AUTO™ controls one or more 12VDC powered devices, triggered by the ampere draw of the laser.

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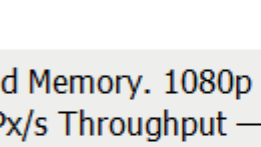


Customized Optical Systems

FISBA AG

FISBA's experience in customized optical systems encompasses vision systems, assemblies for low light cameras, optical systems for microscopes, illumination systems, optical systems for lasers, athermalized, apochromatic imaging systems, and more.

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Introducing The New i-SPEED 508

iX Cameras Inc.

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Xenon Corporation

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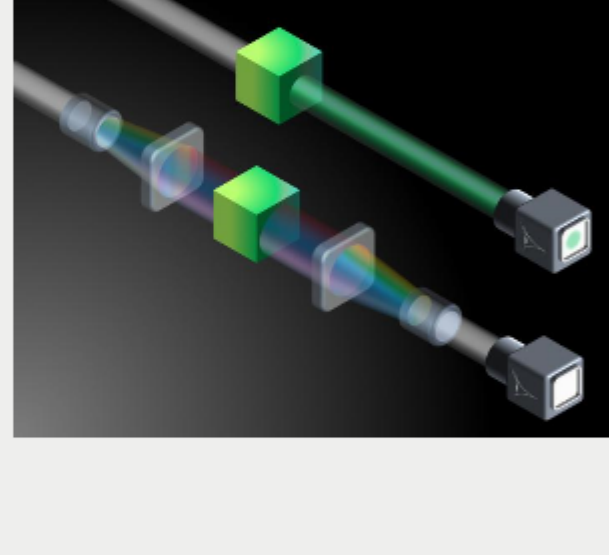
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In Case You Missed It

Cloaking Approach Manipulates Light as It Passes Through a Target

A novel approach to invisibility cloaking, the frequency of light waves is manipulated as the light passes through a target object. Called a spectral invisibility cloak, the new device can completely hide objects under broadband illumination, allowing full-field broadband invisibility.



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Minimizing Stray Light in Everyday Optical Systems

Stray light affects virtually every fabricated optomechanical system and can be controlled best when considered early.

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Plasmonic Antennas Could Deliver Ultrafast Pulses for THz Electronics

In an experiment that combined the advantages of femtosecond nanophotonics with on-chip communications, researchers generated ultrashort electric pulses on a chip using metal structures (i.e., antennas) only a few nanometers in size, then ran the signals a few millimeters above the surface.

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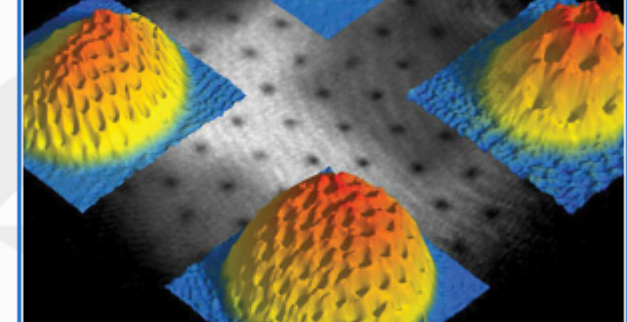
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Imaging Applications in Quantum Research

Wed, Sep 26, 2018 1:00 PM - 2:00 PM EDT This webinar, presented by Princeton Instruments, will begin with an overview of quantum technology, including a brief history of its origin and development. The discussion will also include emerging practical applications for quantum technology. The webinar's main focus will be on quantum applications that incorporate imaging detectors such as single photon source development, trapped ion computing, and control of qubits. The webinar will also cover unique detector requirements for quantum research, the latest developments in photonic detectors, and basic concepts of single photon detection, quantum efficiency, and detector noise. Image courtesy of Dr. Wolfgang Ketterle, MIT.



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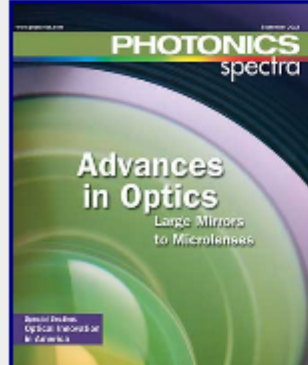
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The Imaging Issue

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 Managing Editor Mike Wheeler at michael.wheeler@photonics.com or use our online submission form www.photonics.com/submitfeature.aspx.

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