the business of photonics

optics.org

product focus

Photonics West is the premier photonics and laser event. With more than 1,250 companies, this exhibition continues to be the flagship event to find the latest products, tools, and applications for your research or business needs.

SPIE. PHOTONICS WEST

The Moscone Center, Moscone North and South
San Francisco, California, United States

16 - 18 February 2015

Welcome to the optics.org Product Focus which we have published specifically for Photonics West 2016 in partnership with SPIE and the Photonics West Show Daily.

Here you will find an effective at-a-glance guide to some of the latest products available on the market with booth numbers if available making it easy for you to check out the products for yourself.

All this information and more can be found on the optics.org website. Simply go to **www.optics.org** for all the latest product and application news.

Alternatively, why not sign up to our **free weekly newsletter (www.optics.org/newsletter)** and get the information delivered direct.

TRIOPTICS

Visit us at Booth #1133

TriAngle electronic autocollimators

TriAngle electronic autocollimators measure angular displacements of optical or mechanical parts with highest accuracy.

The versatile and modular design allows them to be fitted with a wide selection of objective tubes, different sensors, reticles and light sources.

With objective tubes of different focal lengths and apertures, the optimum measurement solution regarding angle resolution and measurement range is easily found.

The TriAngle software provides many features to simplify the daily use in the laboratory or in the production environment.

Contact Details
TRIOPTICS GmbH
Hafenstraße 35-39
22880 Wedel
Germany
www.trioptics.com

Voltage Multipliers Inc.

Visit us at Booth #4324

Optocouplers Just Got Better!

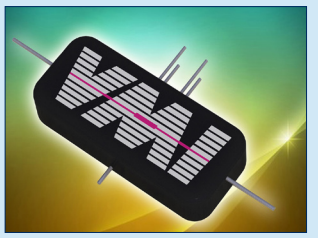
The OC100/150 line of high voltage optocouplers feature high gain, long-term gain stability, and high isolation voltage.

The optocouplers operate at 10kV or 15kV maximum reverse voltage, and generate small levels of leakage current that can be used as a control signal in feedback circuitry.

Optocouplers are useful in preventing ground loops, especially in noisy environments where instruments are used.

Other applications include high voltage switches, or as a high voltage op amp.

VMI is ISO9001:2008 registered.



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Iridian Spectral Technologies

Visit us at Booth #505

Leader in Optical Filter Solutions

Iridian Spectral Technologies, offers optical filters and coatings solutions addressing a wide range of applications from the UV (300 nm) to LWIR (10 µm) including spectroscopy, bio-medical/medical devices, endoscopy, medical imaging, sensing, telecommunication and 3D entertainment.

Iridian now offers filters tailored for clinical chemistry analyzers and point of care devices and instruments.

Our band pass, excitation, emission, dichroic, and edge filters offer exceptionally high transmission/reflection, low ripple, steep edges, and deep blocking outside pass bands all with the highest standards for durability and reliability.

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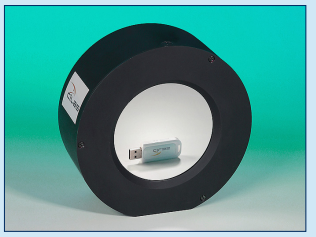
CILAS

CILAS new adaptive optics loop

With the Monomorph deformable mirrors, CILAS will provide a full adaptive-optics loop for high power lasers and astronomy applications. Moreover, CILAS will achieve soon developments concerning larger apertures (>150 mm) and high LIDT dielectric coatings optimized for future large-scale laser installations. Besides, the rise of the correction bandwidth (up to 2 kHz sampling frequency) means they can ideally be used for astronomy telescopes and give an affordable solution.

Read more: http://www.cilas.com/brochure-optique-adaptative.pdf



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Christopher Pinzone Joins Thorlabs

Christopher Pinzone joined Thorlabs Quantum Electronics (TQE) in Jessup, MD in October 2015 as Director of Epitaxy. One of the pioneers of commercial MOCVD epitaxial wafer growth, Chris' achievements include growing the first room temperature CW laser directly on silicon, bringing CATV analog DFB lasers to market, and developing a new, patented technique for direct wafer bonding of InGaAs to silicon. Pinzone co-founded Ahura Scientific in 2002, a venture-capital-backed startup that developed and produced the world's first handheld Raman and FT-IR spectrometers for rugged field service, culminating in a sale to Thermo Fisher Scientific in 2010.

"We are excited to have Chris' expertise on board," said Peter Heim, Chief Technology Officer at TQE. "He has deep roots in the global epitaxy community that go back to his time at Bell Labs. His leadership will be key to our efforts to provide epitaxial services to both industry and academia."

eagleyard Photonics GmbH

Visit us at Booth #932

SENSE THE POWER

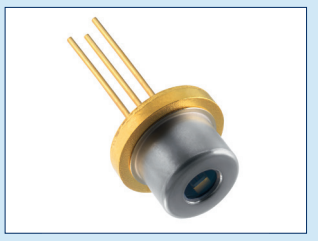
Brightness - beyond engineering.

20 Watt Peak Power @ 808nm eagleyard's new 808nm broad area semiconductor laserdiode delivers 20 Watt peak power under pulsed operation from a single emitter.

- 10 µs pulse width @ 25kHz Repetition Rate. Top -40°C to +80°C
- Upon request also available with fast axis collimation (FAC)

Its high pulse energy and fast rise time makes this laser diode ideally suited for high resolution sensing applications in extreme harsh environments.

Detailed information can be found under http://www.eagleyard.com/products/multimode-laser-diodes/



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ID Quantique SA

Visit us at BiOS Booth #8701
Visit us at Photonics West Booth #714

900-1700nm photon counter with the best dark count rate: <200Hz at 20% quantum efficiency.

NEW: <100ps timing resolution!

The ID230 series is a major breakthrough for single photon detection in free-running mode (asynchronous detection) at telecom wavelength. The avalanche photodiode working in Geiger mode is cooled down to -100°C. A timing resolution below 100ps can be reached at 25% quantum efficiency.

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TOPTICA Photonics AG

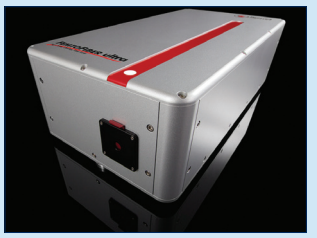
Visit us at Booth #1023

New femtosecond fiber laser FemtoFiber ultra NIR

TOPTICA's new femtosecond fiber laser FemtoFiber ultra NIR delivers below-150 fs pulses with a central wavelength of 780 nm and 80 MHZ repetition rate.

Although the laser delivers a powerful output of more than 500 mW, it is still a compact turnkey system without the need for watercooling.

Therefore the FemtoFiber ultra NIR is an excellent laser for applications in biophotonics and microscopy, as well as semiconductor inspection and surface analysis.



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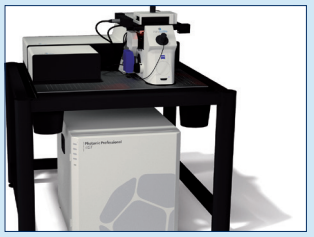
Nanoscribe GmbH

Visit us at Booth #431

Photonic Professional GT

Photonic Professional GT is the world's highest resolution 3D printer for nano- and microfabrication. It provides additive manufacturing and maskless lithography in one device.

The two-photon polymerization driven turnkey systems set new standards in a multitude of applications like photonics, micro-optics, micro-fluidics, MEMS, and life sciences. Prism Award Winner 2014 ("Advanced Manufacturing") and WTN Award Winner 2015 ("Materials").



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greenTEG AG

Visit us at Booth #4356

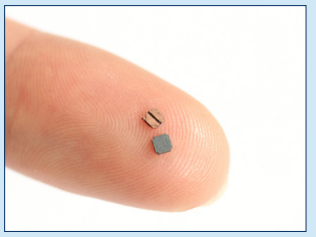
gRAY B0.5-SC

The gRAY B0.5-SC measures up to 500 mW on a surface of only 2×2 mm2. gRAY B0.5-SC detectors have no angle dependence (± 30°) and measure in a spectral range from 190 nm to 15 µm.

The detector is available as bare die component or mounted on a PCB for easy OEM system integration. With its small dimensions, the detector is especially suited for measurements inside the laser source.

At higher volumes, the B0.5-SC is among the most cost effective detectors.

Further information www.gray.greenTEG.com



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Are you among the people that still can distinguish between advanced technology and magic? Let yourself be surprised how the laws of nature can be used for magic tricks and illusions!

Prof. Habakuk Tibatong (aka Prof. Dr. René Beigang) will give you a very unusual lecture about space, time, and light you will never forget!

Interested in our advanced technology?
Visit us at booths 1039 and 2726!

HÜBNER GmbH & Co. KG
Terahertz Technology & Photonics
www.hubner-photonics.com
www.hubner-terahertz.com

Cobolt

HÜBNER

Varioptic

Visit us at Booth #5546

AutoFocus Liquid Lenses and Modules

Varioptic Liquid Lenses enable Variable Focus and Variable Astigmatism. The main features of these lenses are:

- No moving parts: unlimited number of cycles
- Low power consumption
- Unique resistance to vibration and shocks
- No sensitivity to orientation
- Fast
- Wide dynamic range
- Extremely compact format.

Varioptic lenses are today widely used in applications such as Barcode reading, Machine Vision, Medical imaging, Defense applications, instrumentation, consumer, etc.

Come and see our Product Demos on booth 5546, North Hall!

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sales.varioptic@parrot.com
Tel: +33 (0) 4 37 65 35 31

Diamond SA

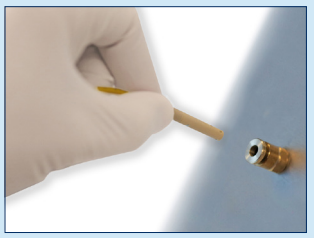
Visit us at Booth #4568

DiaLink Fiber Optic interconnect for rotating medical applications

Optical fibers provide compact and flexible conduits, for light or data transmission, utilized in diagnostic and interventional medical applications. Fiber has become widely employed in imaging, laser delivery systems, illumination, sensors and equipment interconnects.

The **DiaLink** is designed to address these specific requirements. It combines push-pull technology *(for easy handling)* and protected end-faces *(reducing the need for cleaning)*. Moreover, the symmetrical small circular diameter design enables integration, within high speed rotary joints, where a well-balanced connector is needed *(to avoid vibration forces)*.

The **DiaLink** is compatible with EtO-sterilization processes and can be delivered meeting ISO class 7 packaging specifications. It is available in PC and APC versions *(for SM, MM standard and large core fibers)*, and can be easily identified, thanks to colored fiber or cable boots.



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Ibsen Photonics

Visit us at BiOS Booth #8922
Visit us at Photonics West Booth #1043

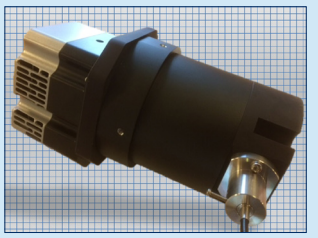
EAGLE Raman-S

We introduce the EAGLE Raman-S spectrometer which offers high sensitivity and resolution in a compact form factor.

Due to the low f-number, tall input slit and high resolution, the EAGLE Raman-S is ideal for integration into high performance Raman spectroscopy instruments.

The spectrometer is very flexible and can be used with many different laser wavelengths and detector systems. For instance, with a 785 nm laser 200 – 3650 cm-1 can be covered with a resolution of 5 cm-1.

URL: http://ibsen.com/products/oem-spectrometers/eagle-spectrometers/eagle-raman-s/



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ALPhANOV

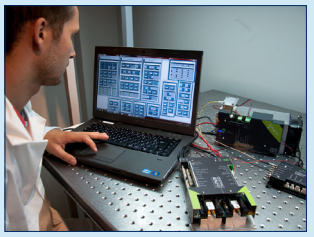
Visit us at Booth #1223-J

MULTIBOARD, a set of electronic cards dedicated to fiber lasers

ALPhANOV has been developing the 'MultiBoard' solution, a set of electronic cards dedicated to control various fiber lasers architectures.

Thanks to its modularity, the 'MultiBoard' series gives fiber lasers the ability to reach a wide range of features: CW or pulsed, Q –switched or mode-locked operation, multistage MOPA, pulse-on-demand… ALPhANOV offers fast integration of these cards in compact and powerful OEM modules with many combinations.

It allows laser designers and R&D teams to save time during the design and prototyping as well as to achieve original specifications in a cost-efficient way.



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CMOSIS

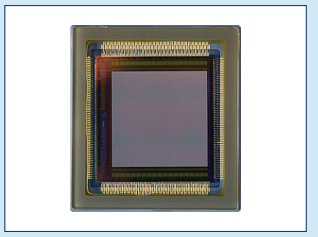
Visit us at Booth #4241

CSI2100 Image Sensor

CMOSIS introduces the CSI2000, featuring a 1440 x 1440 pixel array with 12 x 12 um2 black and white global shutter pixels, running over 500 fps at 10 bits/pixel over 36 LVDS channels supporting row windowing and X/Y mirroring.

With its full well capacity of 2 Me-/pixel the sensor is optimized to detect small signal variations in bright images captured at high-speed.

This enables medical, scientific and industrial applications like FFOCT and welding inspection.



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Tel: +32 3 260 17 30

Spectrum Scientific Inc.

Visit us at Booth #2719

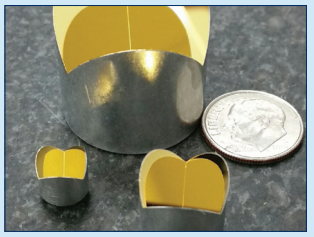
Spectrum Scientific Inc. (SSI) introduces our family of HCR's Hollow Cube Retroreflectors

SSI's metal replicated retroreflectors are made from a single piece of aluminum and can have mounting features machined into the part. We offer standard and custom sizes with a Return Beam Accuracy (RBA) as low as 2 arc seconds.

Sizes range from 10 mm to 65 mm in diameter. HCR's are coated with aluminum for the VIS region or gold providing high reflectance from the NIR through 10 microns.

Applications include FT-IR, laser tracking, environmental and scientific. SSI is an ISO 9001:2008 certified manufacturing company and has been in business since 2004.

Contact us with your retroreflector or other gratings and replicated mirror requirements.



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Arden Photonics Ltd

Visit us at Booth #5543

VFI-2000 End-face inspection for large diameter fibers

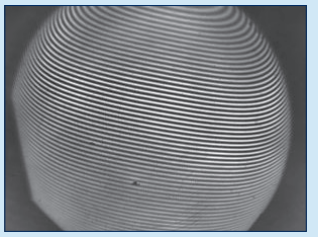
The VFI-2000 is an interferometric system designed for checking the quality and flatness of large diameter fibers and rods, from 400-2000µm diameter.

The 5Mpixel camera in the VFI-2000 helps to show every detail and gives ample digital zoom capability up to a diameter of 2000µm.

The two modes of operation - inspect and fringe - allows users to check both the flatness and end quality of a cleaved or polished fiber.

The VFI comes with an efficient software package containing controls to switch between fringe and inspect mode built in. It also allows users to grab and save images for later use with just one insertion.

Please see the VFI-2000 at Photonics West 2016 – Arden Photonics booth #5543.



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Diverse Optics Inc.

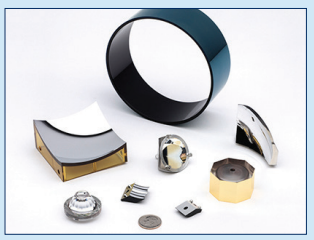
Visit us at Booth #315

Precision Injection Molding and Single Point Diamond Turning of Custom Polymer Optics

Diverse Optics specialize in precision injection molding and single point diamond turning of custom polymer optics. Reduce cost, trim weight, improve performance, and simplify your product design by implementing precision polymer optics!

We do it all; prototyping to series production of free-forms, spheres, micro-optics, aspheres, domes, convex/concave, plano/convex, bi-convex, diffractives, Fresnels, prisms, light-pipes, lens arrays, collimators, combiners, toroids, CPC's, TIR's, parabolics, off-axis, ellipticals, and more.

Whether its thousands of molded optics or a few diamond turned prototypes, we'll show you how polymer optics are perfected!



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Wuhan National Laboratory for Optoelectronics

Visit us at Booth #8841

The only one national laboratory in Optoelectronics

invites applicants to strengthen its research and application in five key areas:

- Optoelectronic Devices and Intergration
- Laser and TeraHertz Technology
- Biomedical Photonics
- Photonics for Energy
- Information Storage and Optical Display

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武汉光电国家实验室(筹)
WUHAN NATIONAL LABORATORY FOR OPTOELECTRONICS

Thorlabs Releases Tunable Ti:Sapphire Laser

Thorlabs' Laser Division is excited to debut the Tiberius Femtosecond Tunable Ti:Sapphire Laser. Designed for multiphoton imaging and in collaboration with Thorlabs' life science application specialists, the Tiberius leverages the company's 25+ years of experience in precision manufacturing, our multi-disciplinary team of design engineers, and the substantial infrastructure of a vertically integrated company.

With a wide tuning range of 720 - 1020 nm, an industry-leading tuning speed of up to 200 nm in less than 100 ms, and full ThorImageLS™ integration, the Tiberius enables seamless and synchronized control for two-photon imaging experiments, photostimulation / uncaging, and live high-speed image acquisitions.

LightPath Technologies

Visit us at Booth #722

Fundamentals of Molded Optics

Wednesday 17 February 2016

8:30 AM - 12:30 PM

This course provides attendees with an overview of the numerous optical molding technologies with an emphasis on the fundamentals of the more dominant fields of injection molded plastic optics and precision glass molding.

A review of glass molding, plastic molding and hybrid molding processes will be included. Some of the course topics include description of the manufacturing processes, tool design features, materials properties, and design methods unique to molded optical elements.

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