

Welcome to the optics.org Product Focus which we have published specifically for Photonics West 2014 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.

ID Quantique SA

Visit us at Booth #817

ID120 series consists of compact and affordable single-photon detector modules

ID Quantique's ID120 series consists of compact and affordable single-photon detector modules, based on reliable silicon avalanche photodiodes that are sensitive in the visible spectral range. Key advantages of the ID120 modules are high quantum efficiency up to 80% at 800nm (60% at 650nm), a 500 microns large active area and adjustable settings like temperature, excess bias voltage and deadtime. Thus, the customer has a complete control on dark count rate, quantum efficiency and afterpulsing rate, through an USB connection (*Labview*).



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www.idquantique.com info@idquantique.com Tel: +41 22 301 83 71 Fax: +41 22 301 83 79

Diverse Optics Inc.

Visit us at Booth #125

Custom Precision Polymer Optics

When you're looking for precision polymer optics to reduce cost, trim weight, simplify design, and improve performance, come to Diverse Optics. We specialize in diamond turning (SPDT) and precision injection molding of custom polymer optics.

Prototype to series production of spheres, aspheres, domes, convex/concave, plano/convex, bi-convex, free-forms, diffractives, Fresnels, prisms, light-pipes, cylinders, lens arrays, collimators, combiners, toroids, CPC's, TIR's, micro-optics, mirrors, parabolics, off-axis, ellipticals, cylinders, and more! Whether it's diamond turned prototypes or thousands of molded optics, we'll show you how polymer optics are perfected.



Contact Details: Diverse Optics Inc., 10310 Regis Court, Rancho Cucamonga, CA 91730
www.diverseoptics.com info@diverseoptics.com Tel: +1 (909) 593-9330 Fax: +1 (909) 596-1452

Logitech Limited

Visit us at Booth #5319

Akribis-air: The Intelligent Sample Preparation System

Logitech is proud to launch Akribis-air. A highly automated lapping and polishing system, designed for the processing of materials used within photonics based applications.

Akribis-air delivers key benefits such as:

- The highest degree of geometric precision, flatness and parallelism.
- Exceptional quality, accuracy and reliability of samples.
- Real time data feedback.
- Faster removal rates and higher throughput.
- More efficient use of consumable products.
- Minimal set-up and clean-up time.
- Increased user safety.



Contact Details: Logitech Limited, Erskine Ferry Road, Old Kilpatrick, Glasgow G60 5EU Scotland
www.logitech.uk.com enquiries@logitech.uk.com Tel: +44 (0) 1389 875444

Navitar

Visit us at Booth #502

New Bi-Telecentric Lenses by Navitar

The MagniStar® bi-telecentric lens line includes six high-resolution, low distortion C-mount lenses with built-in adjustable iris; designed specifically for measurement and inspection applications that require extreme precision.

Magnifications include 0.128X, 0.528X, 0.05X, 0.243X, 1X and 2X. The lenses offer high telecentricity, excellent MTF performance, no parallax error and less than 0.1% image distortion.
www.navitar.com/product/magnistar-bi-telecentric.aspx
 Stop by Booth #502 for more information.



Contact Details: Navitar, Inc., 200 Commerce Drive, Rochester, New York 14623 USA
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ALTECHNA

Visit us at Booth #4319

ULTRAFAST LASER MIRRORS

Ultrafast mirrors are designed for femtosecond applications to provide an optimized performance at certain wavelength and angle of incidence (AOI). This is achieved by careful selection of coating stacks to combine high reflectivity and low GDD value. Such coatings are used for external beam manipulation applications where pulse broadening effect is undesirable. Ultrafast mirrors are intended for Ti:Sapphire, Yb:KGW, Yb:KYW or other lasers working in femtosecond regime.

Characteristics:

- High reflectivity: R>99.8% @ designed wavelengths
- High damage threshold
- Ultra-low group velocity dispersion

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CMOSIS

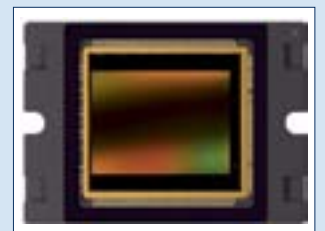
Visit us at Booth #109

12-Megapixel/300 fps CMOS image sensor CMV12000

CMOSIS, the leading European supplier of advanced CMOS image sensors, is demonstrating its 12-Megapixel/300 fps CMOS image sensor CMV12000, which is now available in sample quantities. High volume production will ramp up from June 2014 onwards.

The CMV12000 excels current market solutions with a combination of excellent global shuttering with a stunning 300 fps at full resolution serving a broad range of applications like broadcasting, intelligent traffic solutions, machine vision and motion capture. At Photonics West 2014, CMOSIS exhibits at the Moscone Center, Booth 109.

Contact Details: CMOSIS, Coveliersstraat 15, Antwerp, Belgium
www.cmosis.com info@cmosis.com Tel: +32 3 260 17 30



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optics.org

CILAS

Visit us at Booth #1223 -A

Deformable Mirrors for the largest telescopes in the world

CILAS has developed Deformable Mirrors for the largest telescopes in the world, and continually improved the Adaptive Optics technology to serve Astronomy, High Power Lasers and Space applications.

"Monomorph" mirrors allow the correction of the optical aberrations induced in a high power laser chain, while avoiding both "print through" effect and energy distribution modulations.

Standard Monomorph Mirrors are available for diameters from 30 to 85 mm and are supplied with their Electronic Driver. Larger diameters, as well as specific electrode patterns, are available upon request.



Contact Details: CILAS, 8 avenue Buffon, BP6319, 45063 Orléans Cedex 2 - France
www.cilas.com optics@cilas.com Tel: +33 (0)2 38 64 15 55

ALPhANOV

Visit us at Booth #1223 -G

ALPhANOV's Cool & Control Modules drive laser diodes to new heights

With the new Cool & Control (CC) diode driver modules from ALPhANOV, single-mode and multimode diodes can now be reliably and securely driven with compact devices.

The single-mode CC Module (CC-S) drives and cools external standard butterfly laser diodes.

Its nsec pulses are generated internally or on-demand from a TTL signal.

The multimode CC Module (CC-M) drives and cools external single or multiple elements laser diodes up to 80W.



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www.alphanov.com ludovic.lescieux@aphanov.com Tel: +33 (0)5 24 54 52 00

Ibsen Photonics

Visit us at Booth #743

Pulse Compression Gratings 120 mm long

As femtosecond laser systems advance to ever-increasing energy levels, demands to the energy/power handling capabilities of pulse compression gratings increase.

Ibsen manufactures 100% fused silica, transmission, Pulse Compression Gratings that offer unbeatable energy/power handling capacity, combined with high-efficiency, low wavefront distortion performance. Now, production advances allow Ibsen to supply pulse compression gratings up to 120 mm in length.

Come visit us at booth #743 to tell us about your requirements.



Contact Details: Ibsen Photonics, Ryttermarken 15-21, DK-3520 Farum, Denmark
www.ibsenphotonics.com inquiry@ibsen.dk Tel: +45 44 34 70 00 Fax: +45 44 34 70 01

Adloptica GmbH

Visit us at Booth #6028

Focal- π Shaper 9_532q for square flattop laser spots

New Focal- π Shaper 9_532q transforms round Gaussian 532 nm laser radiation to square shaped flat-top focused spot of several microns or tens of microns size with nearly 100% efficiency. Versions for near-IR, visible, UV spectrum and CO2 lasers are available as well.

Increased quality and productivity of material processing, compactness, easy adjustability and simplicity of integration in already existing equipment, capability to work with scanning heads and F-theta lenses make the **Focal- π Shaper** an indispensable tool in various micromachining applications.



Contact Details: Adloptica GmbH, Rudower Chaussee 29, 12489 Berlin, Germany
www.adloptica.com; www.pishaper.com info@adloptica.com Tel: +49 (30) 56 59 08 880

DILAS Diodenlaser GmbH

Visit us at Booth #4737

Blue Fiber-Coupled, Multi-Single Emitter Module

DILAS displays its blue multi-single emitter based, fiber-coupled module, nominated as a finalist for the 2014 Prism Awards for Photonics Innovation. This module is capable of delivering high output power and brightness in the 450nm spectral range and, due to its scalable approach, allows for powers from 10W to 100W, with 10W and 25W currently released as a product. The product can be used for displacing arc lamps in display applications like cinema or large venue projectors by lasers and extends the current capabilities of blue light therapy and photodynamic therapy (PDT). **Product Page Link:** <http://www.dilas.com/pages/products.php?category=9&series=66>



Contact Details: DILAS Diodenlaser GmbH, Galileo-Galilei-Straße 10, 55129 Mainz-Hechtsheim, Germany
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MÖLLER-WEDEL OPTICAL GmbH

Visit us at Booth #233

GONIOMAT A series

The GONIOMAT A is a high accurate fully automatic goniometer with electronic image evaluation that is essential for measurement and testing of angles of optical components, such as prisms, polygons and wedges. Furthermore it can be used for measuring of angle gauges.

Advantages of the GONIOMAT A series: • High accuracy, even when measuring micro-prisms • Short measurement times • Elimination of the subjective error by electronic image evaluation • Logging of measurement results

Two levels of accuracy: • GONIOMAT A class: 0.7 arcsec • GONIOMAT A HR class: 0.4 arcsec

Contact Details: MOELLER-WEDEL OPTICAL GmbH, Rosengarten 10, 22880 Wedel, Germany
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Ibsen Photonics

Visit us at Booth #743

FREEDOM UV-NIR 190 - 1100 nm

This new spectrometer for integrators of analytical instruments offers high efficiency across the complete 190 – 1100 nm range, ultra-compact size (50 x 50 x 15 mm), robust and athermal performance, and flexibility in choice of detector and electronics.

It is ideal for process control in out-of-the-lab environments as well as handheld and portable instruments. The high broadband efficiency is obtained with a new innovative transmission grating from Ibsen.

Contrary to typical blazed gratings, this new grating provides nearly constant diffraction efficiency over the 190 – 1100 nm range for both polarizations.

Contact Details: Ibsen Photonics, Ryttermarken 15-21, DK-3520 Farum, Denmark
www.ibsenphotonics.com inquiry@ibsen.dk Tel: +45 44 34 70 00 Fax: +45 44 34 70 01



MÖLLER-WEDEL OPTICAL GmbH

Visit us at Booth #233

Interferometer VI

The Interferometer VI direct family is mainly intended for use in optical workshops. It is specifically designed for the following measurement tasks:

- Measurement of flatness/sphericity of optical surfaces
- Radius measurement
- Measurement of wavefront deformation

The main features are:

- Fizeau-type interferometer, modular design
- Usable in vertical, horizontal or under oblique directions
- Use of high resolution USB-based digital camera
- Connection to computer via USB 2.0 port
- Upgradeable with phase shifting unit and evaluation software
- Easy service and handling
- Cost effective alternative to conventional interferometers

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PI (Physik Instrumente) LP

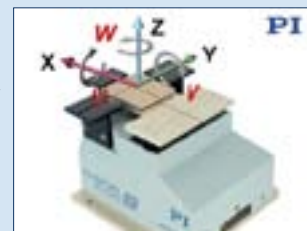
Visit us at Booth #4801/4901

Fiber Optic Alignment Engines: 3 & 6 Axis

PI provides leading edge photonics alignment engines. For rapid XYZ alignment, the compact F-131 CyberAligner system is the gold standard when it comes to speed and versatility. It combines a piezo scanner (100 μ m, 1nm resolution, millisecond response) for quick device characterization and precise tracking with motorized long-range positioning stages.

Hexapod-based, 6-axis alignment engines are available for complex fiber-optic components. The H-206, for example, is a unique, parallel-kinematics system including a specialized controller running a variety of user-selectable alignment routines. Get the whitepaper at www.pi-usa.us/products/Photonics_Alignment_Solutions.

Contact Details: PI (Physik Instrumente) LP USA: 16 Albert St, Auburn, MA
www.pi-usa.us info@pi-usa.us Tel: +1 508 832 3456 Fax: +1 508 832 0506



DRS Technologies, Inc.

Visit us at Booth #2417

ADVANCED THERMAL IMAGERS FROM DRS TECHNOLOGIES

DRS Technologies provides high-performance thermal camera modules and detectors with flexible configurations to meet a broad range of application requirements.

Leveraging decades of infrared detector development, DRS' Tamarisk® (LWIR) and Zafiro® (MWIR) lines of advanced thermal imagers provide the ideal balance of size, weight, power and performance.

Contact Details: DRS Technologies, Inc., Commercial Infrared Systems, 100 N. Babcock St., Melbourne, FL 32935
www.drsinfrared.com sales@drs-rsta.com Tel: +1 (855) 230 2372



Diamond SA

Visit us at Booth #4240

DiaLink F.O. Connector for OCT applications

DIAMOND's revolutionary Fiber Optic DiaLink connector is a small coupling device based on a 1.25mm ferrule. Thanks to its very small diameter and a balanced design, this connector is an ideal solution for applications requiring high speed rotation, (e.g. medical OCT) or any other application where footprint is critical. The push-pull design allows easy mating and demating while both fiber end-faces remain protected to minimize damage and to protect against contamination.

The DiaLink is also an excellent alternative to fusion and mechanical splices. The DiaLink is available for all MM and SM fibers, and for cables up to 2.1mm OD. (Customized solutions upon request.)

Contact Details: Diamond SA, Via dei Patrizi 5, CH-6616 Losone, Switzerland
www.diamond-fo.com Tel: +41 91 785 45 45 Fax: +41 91 785 40 00



Pixeltech

Visit us at Booth #1723

NEW Spectral Sensors | 8-band Spectroscopy

PixelSensor multispectral sensors use exclusive on-chip filtering to pack up to eight wavelength-selective photodiodes into a compact array < 1 cm² for simpler and smaller optical devices. One PixelSensor replaces several components, delivering more signal and shrinking multispectral instruments from portable spectroscopy to fluorescence detection. PixelSensor VIS splits the visible spectrum into eight discrete color bands. Customized OEM versions are available with user-defined spectral bands. PixelSensor's unique wafer-level optical filters suppress background light and enhance passband transmission. Find out how PixelSensor can support your application. Destination URL: <http://www.pixelteq.com/product/pixelsensor/>

Contact Details: www.pixelteq.com info@pixelteq.com Tel: +1 727 545 0741



Iridian Spectral Technologies

Visit us at Booth #5504

Global leader in custom optical filter and coating solutions

Iridian is the global leader in custom optical filter and coating solutions addressing needs in markets including telecom (*GFF, dual-band, dispersion compensation filters*), bio-analytical (*Raman spectroscopy, fluorescence microscopy, flow cytometry filters*), consumer optics (*3D glasses and projector wheels, surface enhancement display coatings*), space and satellite (*multi-spectral, multi-band, multi-zone filters*), among others. Our durable optical coatings address needs from the UV to LWIR. Iridian partners with our customers from design and prototypes through to high-volume production providing filters optimized to meet both technical and commercial requirements.



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www.iridian.ca inquiries@iridian.ca Tel: +1 (613) 741 4513 Fax: +1 (613) 741 9986

Voltage Multipliers Inc.

Visit us at Booth #5406

Optocouplers Just Got Better!

The OC100/150 series of high voltage optocouplers feature high gain, long-term gain stability, and high isolation voltage. The optocouplers will run at their maximum Vrwm of 10kV and 15kV or lower. Optocouplers are useful in preventing ground loops, especially in noisy environments where instruments are used. Because the output leakage current is linear over the operating range, they can be used as part of a control circuit or feedback loop. Other applications include high voltage switches, or as a high voltage op amp.



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www.voltagemultipliers.com kspano@voltagemultipliers.com Tel: +1 (559) 651 1402

Varioptic

Visit us at Booth #5419

Caspian C-39N0-16

The Caspian C-39N0-16 is an electronically focus controllable C-Mount lens, based on Varioptic's breakthrough liquid lens technology, which incorporates all necessary electronic components to drive the liquid lens.

It just needs a DC power supply, and focus can be controlled through either an RS232, I2C, Analog or SPI input. With a 16 mm effective focal length, and 2/3" sensor compatibility, it is specifically designed for machine vision applications, enabling fast focusing from 10 cm to infinity with no moving parts.



Contact Details: Varioptic - a BU of Parrot SA, 24B rue Jean Baldassini, 69007 Lyon, France
www.varioptic.com sales.varioptic@parrot.com Tel: +33 (0) 4 37 65 35 31

Xenics Infrared Solutions

Visit us at Booth #424

Bobcat-640: Smallest GigE Vision/CameraLink SWIR Camera with Low Noise

The advanced Bobcat-640 meets high sensitivity in the SWIR range for specialized research & development and high temperature process control. You get excellent image quality with on-board image processing and Thermo Electric (TE) stabilization for low dark current and optimized noise performance. We offer full flexibility in terms of Xenics SDK, multiple interfaces, Power over Ethernet and variable integration times.

- 640 x 512 image resolution
- VisNIR option
- Small 20 µm pixel pitch
- 100 Hz frame rate or higher in windowing mode
- Operating temperature range from -400C up to 700C



Contact Details: Xenics nv, Ambachtenlaan 44, BE-3001 Leuven, Belgium
www.xenics.com sales@xenics.com Tel: +32 16 38 99 00

Telops Inc.

Visit us at Booth #5602

TS-IR: A Rugged and Versatile Scientific Infrared Camera

The TS-IR is a versatile high performance thermal infrared camera. Its outstanding temperature accuracy and sensitivity enables it to distinguish temperature variations as subtle as 0.02°C.

This advanced infrared camera features:

- Rugged IP67 sealed enclosure
- Multispectral capabilities
- High speed internal memory

An optional thermography package including Wi-Fi data transfer, internal storage and more, enhances its ease of use.



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www.telops.com contact@telops.com Tel: + 1 (418) 864 7808 Fax: +1 (418) 864 7843

To announce your new product or to ensure your existing products get the visibility they deserve and are put in front of the industry's key decision makers, make sure you are in the next issue of optics.org product focus.

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PI

Piezo? Servo? Stepper?

ZERO-COMPROMISE MOTION CONTROL



Mini motor stage, closed loop, 0.5nm resolution



6-axis vacuum stage, 10⁻⁹ Torr



Low profile rotary stage, >720°/sec, piezo motor



Linear stage up to 1m travel



High-speed nanofocus <1nm resolution

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