

PHOTONICS SHOWCASE



May 2017

Bi-monthly product-focused newsletter with highlights from the latest issue of Photonics Showcase. Use the Request Info links below to ask for more information about these products, or visit Photonics.com/rssc.

Featured Products

Ferroelectric Liquid Crystal Optics

From: **Meadowlark Optics Inc.**

Does your application require fast optical response time? Ask about our NEW FLC Shutters and Rotators:

- Response Time: ≤ 100 μ sec
- Retardances: $\lambda/4$ and $\lambda/2$
- Clear Aperture: up to 40 mm
- Wavelength: 405 to 850 nm (custom ranges up to 2 μ m)

- High-Speed Binary Operation
- High-Purity Linearly Polarized Output
- Maximum Extinction Ratio
- Solid-State — No Vibration
- Optional FLC Controller Available

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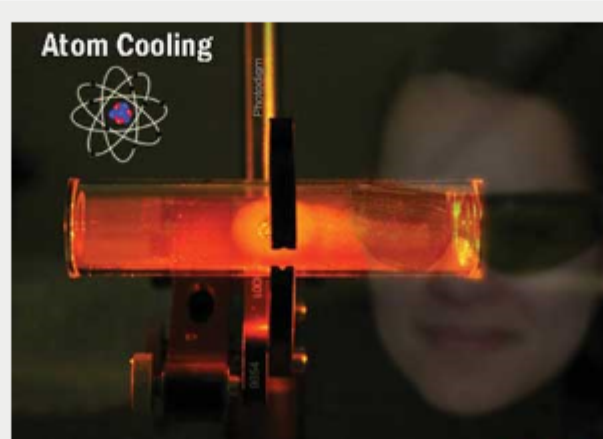


High-Speed Shutters and Rotators

Spectroscopy-Certified™ Laser Diode

From: **Photodigm Inc.**

Photodigm is the world's leading producer of DBR laser diodes resonant with atomic and molecular transitions in the near-IR spectral band. Spectroscopy-Certified laser diodes are fabricated, tested and packaged for critical applications. Their narrow linewidth and high stability enable high-resolution spectroscopy and precision metrology.



Atom Cooling

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16-Position Filter Wheel

From: **Applied Scientific Instrumentation Inc.**

ASI's FW-1000 16-position filter wheel utilizes a closed-loop DC servomotor to provide high speed and low vibration operation (less than 3×10^{-4} kg-m²/s maximum vibration torque impulse). It employs a high-resolution rotary encoder for positional feedback and utilizes nonvolatile flash memory to store programmable filter sequences and delays. It is great for use in many fluorescence microscopy applications.



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HD 1080p Thermal Imager

From: **Sierra-Olympic Technologies Inc. (SOTI)**

The new Viento HD is the first longwave-infrared (LWIR) camera with true high-definition (HD) imaging. The Viento HD thermal imager is a fully functional camera system based on a unique $1920 \times 1200 \times 12$ - μ m uncooled sensor. Housed in a rugged IP67 enclosure, the Viento HD includes a 24 mm F1.1 athermalized custom-designed optic and comes with a 1-year warranty.



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3 MPix Spatial Light Modulator

From: **Forth Dimension Displays Ltd.**

A Reflective LCOS with binary modulation of phase or amplitude with 2048×1536 pixels of 8 μ m pixel pitch. Optimized for 430 to 750 nm, it allows a max. 4.5 kHz refresh rate from a Non-video IF board storing max. 1024 bit planes created by an easy-to-use GUI. Application examples: Structured Light for 3D Optical Metrology, Microscopy & Coded Aperture Imaging.



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OE-1250 GEN II MS-Stage

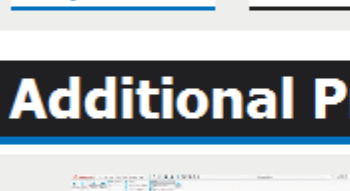
From: **Applied Scientific Instrumentation Inc.**

ASI has designed the OE-1250 GEN II Stage specifically to be configurable for manufacturers and easily integrated into their systems. The OE-1250 Stage has custom mounting options, a flat top designed with multiple configurations, higher load capacity, precise motion and high repeatability. The OE-1250 provides controlled linear motion alignment, orthogonal movement and lower driving friction.



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Additional Products

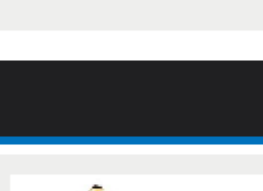


Phoptopia Optical Design Software

LTI Optics LLC

The Phoptopia optical design software includes large libraries of measured material BSDF data and detailed LED models, including their full geometry & spectral properties. Phoptopia includes its own CAD system or can be used to analyze and design optics fully inside of SOLIDWORKS.

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Versatile High-Res Spectrograph

Princeton Instruments

New, SpectraPro® HRS-300 spectrographs deliver outstanding spectral resolution and versatility — enhanced by Princeton Instruments' ResXtreme™ spectral deconvolution technology, which can improve spectral resolution, peak intensities and consistency up to 60 percent.

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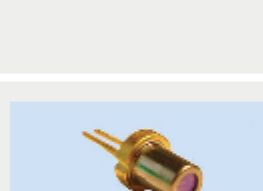


Fused Silica F-Theta Lenses

JENOPTIK Optical Systems GmbH, Optical Systems

Jenoptik extends its F-Theta lens portfolio by introducing new versions of their industry-proven standard products. The F-Theta JENar™ SilverIn™ 170-355-140 lens has a maximum telecentric angle of just 4.9 degrees and a highly homogeneous spot size distribution across the 100 x 100-mm work area.

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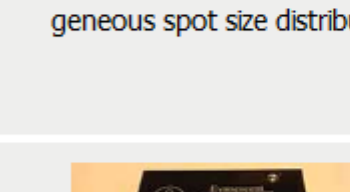


SemiNex LIDAR Products

SemiNex Corp.

SemiNex delivers up to 25 W of pulse power in ruggedly designed TO9 and TO56 packages. Standard eye-safe wavelengths include 1310, 1350, 1550, 1625 and 1650 nm. Standard aperture sizes are 4, 5, 50, 95, 180 and 350 μ m with optional collimating optics to < 5 mrad.

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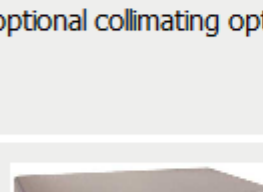


PC-Controlled Variable Coupler

Evanescent Optics Inc.

The Model 905(P)-M is a variable-ratio fiber coupler; the ratio can be remotely controlled with a PC through a USB port. Available in SM, non-PM and PM versions, it operates over wavelengths from 590 nm to 2 μ m. Standard coupling range is from 0 to 99%; other ranges are available.

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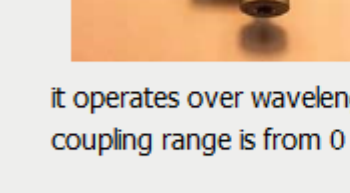


New Laser Wavelength Meter

Bristol Instruments Inc.

Bristol Instruments' popular 871 system measures laser wavelength at a sustained rate of 1 kHz, the fastest available. Now it also measures wavelength to an accuracy as high as ± 0.0001 nm. Automatic calibration with built-in wavelength standard ensures the reliable accuracy needed for the most meaningful experimental results.

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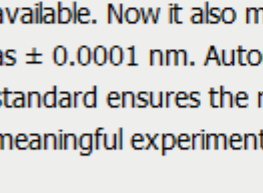


Motorized Scanning Stage

National Aperture Inc.

National Aperture's NEW MM-5M large-aperture servo motor-driven scanning stage is ideal for precision laser machining, semiconductor applications, microscopy and much more. Attributes are large thru aperture, 25 mm of linear travel, and X, XY or XYZ configurations. NAI offers several single and multi-axis controllers/drivers.

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Hybrid Honeycomb™ Breadboard

TMC

TMC's Hybrid Honeycomb is a new type of optical breadboard that combines a bonded aluminum plate with the structural damping of a honeycomb breadboard. Ideal for optical sub-assemblies in photonics tools and applications including lab automation, drug discovery, lasers, surface metrology and semiconductor inspection.

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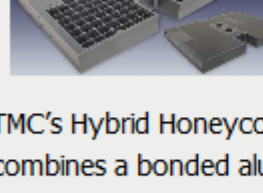


Phase-Locked Loop Optical Chopper

Terahertz Technologies Inc.

The C-995 Phase-Locked Loop Optical Chopper provides crystal controlled chopping rates of 4 Hz to 5 KHz using only one blade. The use of direct digital synthesis permits the rate to be set to a precision of 0.001 Hz and provides quartz crystal stability. Frequency settings may be made via front panel controls and its bi-directional RS-232 port.

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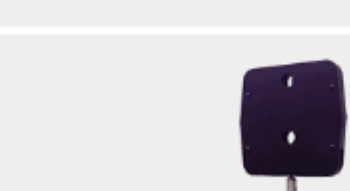


Asphere and Freeform Metrology

Mahr Federal Inc.

The MarForm MFU 200 is the ideal measurement tool for contact and noncontact 3D measurement of optical surfaces. Fully automated alignment of lens, export of differential profile for closed loop manufacturing, interferometric point sensor for noncontact scanning of optics, and tactile probe for measurement of unfinished optics or nonoptical surfaces. Measures a wide range of optics including aspheric, diffractive and freeform lenses.

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FRED Optimum Optical Engineering Software

Photon Engineering LLC

FRED Optimum Optical Engineering Software is capable of simulating the propagation of light through any opto-mechanical system by ray tracing. Whether the design is imported from CAD, a lens design program or constructed from within the software itself, FRED provides engineers with the essential tool for virtual prototyping of optical systems.

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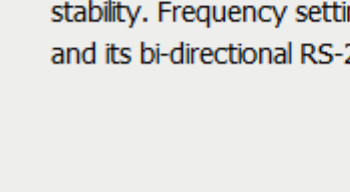


Mini-Hexapod Platform (MHP)

Picard Industries

Our MHP-11 system offers a compact method of six-axis motion control with micron resolution. This rigid and precise platform is perfect for positioning optical components. With its dedicated Drive electronics and Windows-based 6D user interface with the U.S. Patent & Trademark Office, the control of the platform's motions is greatly simplified.

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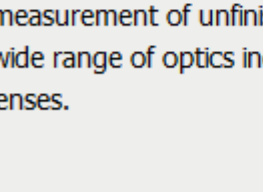


Clear Poly Protection for Nd:YAG

Kentek Corporation

Kentek's new XVT™ Extraordinary Visible Transmission Technology Filter (#5161) delivers protection levels of OD 7+ at 1064 nm with a glass-like VLT of 60 percent, using revolutionary narrow notch absorbers in ultralight polycarbonate lenses. Choose from our many frame styles to create perfection in both fit and safety.

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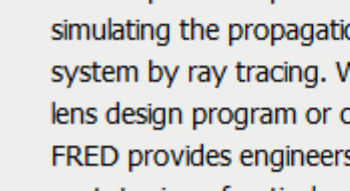


Sapphire Wave Plates

Meller Optics, Inc.

Meller Optics sapphire wave plates for Er:YAG and holmium lasers extend polarization into the infrared and provide superior damage resistance and quartz and mica. They are available from 0.3 to 4.7 μ m and, for Er:YAG and holmium lasers, at 2.94 and 2.10 μ m, respectively.

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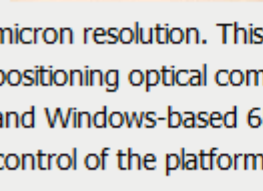


CITE - A 12-Lecture Course in Technology Commercialization

Photonics Media

This 12-lecture digital course is for anyone involved in technology development and the business development opportunities based on technology. CITE provides a roadmap and methodology for moving advanced technology into successful commercial products and provides a view of current and future hot areas for investor funding.

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Piezo Nanopositioning Stage

Aerotech Inc.

Aerotech's QFocus® QF-50 piezo nanopositioning stage enables microscope objective and optics positioning at a large travel (400 μ m CL, 450 μ m OL) without sacrificing speed or nanometer-level performance. The QF-50 is designed to accommodate newer optical instruments and next-generation laser micromachining applications.

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