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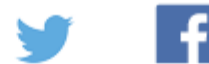
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# PHOTONICS spectra

PHOTONICS MEDIA

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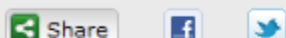
October 2014

### Bandwidth Demands Drive Fiber Optics Advances

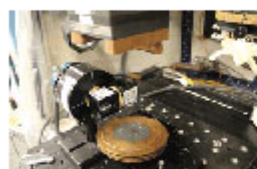


Fiber optics connects the world, carrying calls and data. With bandwidth demand growing, manufacturers are working to up transmission rates, cut costs and otherwise improve product performance. However, achieving these goals may require changing long- and short-haul fiber, while at the same time overcoming manufacturing-related challenges.

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### Additive Manufacturing: The Laser Source Is Critical



Using 3-D printing to make components to specification requires fine control of laser beam power, spot size and focal point.

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### Applications Expand for Photon Counting



The prospects of photon-counting imaging are as diverse as they are promising. From space-debris monitoring, to telecommunication satellites and shuttle missions, to the advent of powerful surgical tools to treat cancer, its applications are numerous and expanding.

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### Keeping Optical Tables Steady

A scanning laser Doppler vibrometer experiment shows the effects of active vibration damping.

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### Micro Thermal Camera Opens Applications to Consumers



Thermal imaging is hardly new, but most of us don't carry thermal imagers in our pockets. Not yet. But it could happen soon, thanks to a new thermal infrared camera so tiny, low-power and inexpensive that it can fit in a cellphone or other mobile device.

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### Products from this Issue



#### Laser Diode Driver

**IXYS Colorado**  
The PIM-Mini from IXYS in an air-cooled pulsed current source designed to drive laser diodes, bars and arrays.

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#### Polarizing Beamsplitters

**Precision Glass & Optics**  
New polarizing beamsplitter cubes from Precision Glass & Optics split up the s and p polarization of light with an extinction ratio of Tp/Ts 200:1 and higher.

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#### Sapphire Wafer Carriers

**Meller Optics, Inc.**  
Sapphire wafer carriers from Meller Optics Inc. are more durable than quartz and are impervious to polishing abrasives and solvents.

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#### Positioning System

**PI (Physik Instrumente) L.P.,**  
Piezo Nano Positioning  
A new hexapod system from Physik Instrumente is a 6-axis positioning system with a 1000-lb load capacity.

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### Industry Events

**Photonex 2014** - October 15-16, 2014 · Ricoh Arena, Coventry, England

The UK's showcase event dedicated to photonics and light technologies now incorporates Vision UK and highlights for 2014 include industrial vision, machine vision, scientific and hyperspectral imaging.

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