


sponsor



Alluxa

YOUR OPTICAL COATING PARTNER

[➤ MORE INFO](#)

PHOTONICS

spectra

PHOTONICS MEDIA

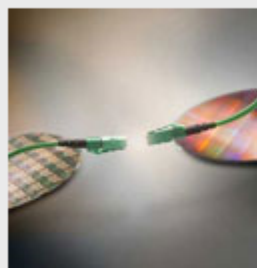
THE PULSE OF THE INDUSTRY



Volume 48 · Issue 2 · HIGHLIGHTS

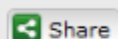
February 2014

Better Lasers, Better Computing



Arguably, the greatest need for better communications lies in data centers, the conglomeration of computers and storage that make the online world go. Networking giant Cisco predicted in October 2013 that global data center traffic would triple between 2012 and 2017, reaching 7.7 billion terabytes annually.

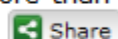
[Read Article >>](#)



Quantum Communications Finds Many Paths to Commercialization

Quantum communications has already been proved possible over short distances. Via fiber optics, quantum key distribution (QKD) has been demonstrated over 250 km; for free-space transmission, the longest demonstrated distance has been more than 144 km.

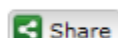
[Read Article >>](#)



Trends in Microscopy: A Big Market, Focused on the Very Small

The microscopy market is growing – set to exceed \$5 billion by 2018 – even as microscopic targets get smaller and smaller. The microscopy market is trending upward – and the technology is continually allowing researchers to see things on a smaller and smaller scale, which is especially useful for brain studies.

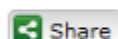
[Read Article >>](#)



How Fibers Really Work

The basics of fiber optics are seemingly quite simple. Guidance of light in a fiber core can be explained with the physics of total internal reflection, and – at least for step-index fibers – a few simple formulas well describe some essential relations. A closer look shows that some widespread beliefs are not correct. This article presents several examples and shows what really happens in fibers.

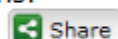
[Read Article >>](#)



Covert IR Optical Taggants Enhance Identification

Covert infrared taggants are embedded markers that can emit coded optical signals outside of the visual spectrum. Their main purpose is to track and identify. They can find multiple uses in commercial, homeland security and military applications.

[Read Article >>](#)



Real-Time 3-D Replays Bring Fans Closer to Action

Figuring out which team came up with the football during a postfumble player pileup has gotten a whole lot easier – at least, it has for Dallas Cowboys home games. At AT&T Stadium in Arlington, Texas, referees and fans alike can review the action from any angle with complete 3-D freedom, thanks to the freeD (free-dimensional video) sports replay system from Replay Technologies.

[Read Article >>](#)



More News & Analysis

[Tech Pulse](#)
[Light Speed](#)
[GreenLight](#)

[Editorial Comment](#)
[Lighter Side](#)

Products from this Issue



Multi-Channel Current Source

Vektrex Electronic Systems, Inc.

Vektrex's SpikeSafe400 Series multi-channel current sources provide reliable and highly accurate current driving capability with a compliance voltage up to 400V.

[More info >>](#)



Cobolt Pulsed Lasers

Cobolt AB

The Cobolt Pulsed Lasers consist of two series: the Cobolt Thor™ Series of high performance Q-switched lasers and the Cobolt Odin™ Series of compact and tunable Mid-IR lasers.

[More info >>](#)



H-EM 2-MP Camera

AOS Technologies AG

AOS Technologies AG H-EM, the 2-MPixel camera based on GigE Vision, has been specifically designed by AOS Technologies for use in rough environments.

[More info >>](#)



HeNe Laser Power Supply

Power Technology, Inc.

Power Technology, Inc. The SL45 dual-input voltage power supply from Power Technology Inc. generates a small amount of heat and offers improved conversion efficiencies for use with HeNe lasers.

[More info >>](#)

sponsor

Test drive the *LensCheck™* system for production and prototype lens testing.



- Portable
- Precise
- VIS/NIR
- LWIR



The Optical Engineering Experts™

sponsor



FLEX PIVOT FRICTIONLESS BEARINGS

A flexure based bearing, utilizing internal flat crossed springs, capsuled in a cylindrical housing.




PHOTONICS buyers' guide

Looking for [Lasers and Laser Systems](#) products? Search the Photonics Buyers' Guide or Browse these product categories:

- [Alexandrite Lasers](#)
- [Aluminum-Free Diode Lasers](#)
- [Beamsplitters](#)
- [Laser Cutting Systems](#)
- [Laser Diode Test Equipment](#)
- [Solid-State Laser Components](#)

sponsor



The World's Finest Optical Filters

TIRF filter sets with highest available signal to noise

[LEARN MORE](#)

sponsor

NEW LZM-110 LAZERMaster™ Laser Splicing System

Splice or process fibers with 80 μm up to 2.3 mm diameter




[LEARN MORE](#)

Questions: pr@photonics.com

Unsubscribe: <http://www.photonics.com/Newsletter/EmailUnsubscribe.aspx>

[Subscribe](#) |
 [Manage Subscriptions](#) |
 [Privacy Policy](#) |
 [Terms and Conditions of Use](#)