

For Immediate Release  
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## **Press Release**

### **NP Photonics Unveils Integrated Light Source and Interrogator for Fiberoptic Sensor Systems**

NP Photonics (Tucson, AZ), a leading supplier of optical components and modules for the sensing and telecommunications markets, has unveiled a combined light source and interrogator for integration into fiberoptic-based temperature, strain and pressure sensing systems. Consisting of the company's Amplified Spontaneous Emission source (ASE) and Optical Spectrum Analyzer engine (OSA), this new combination promises to increase the sensing capacity and reduce the size and cost of fiberoptic sensor systems.

NP Photonics offers the integrated OSA/ASE mounted on a PCI card or as a self-contained unit. For integration into handheld instruments, the OSA/ASE combination is also available as an OEM module.

The integrated OSA/ASE provides significant cost savings to system designers since the OSA can be calibrated to the ASE. In addition, by integrating the light source and monitoring system into one device, NP Photonics provides significant design benefits such as integrated packaging, shared control electronics, convenient interface to intelligent data analysis, and compact size.

Particularly ideal for sensor systems based on fiber Bragg gratings (FBGs), the integrated OSA/ASE enables the development of systems containing more densely spaced FBG sensor arrays, thereby increasing the number of elements that can be monitored within fiberoptic sensor systems.

"The OSA/ASE combination provides a cost-effective way to interrogate very long and very dense FBG sensor arrays," said Dr. Arturo Chavez-Pirson, project manager at NP Photonics. "Typical FBG systems use gratings spaced about 5 nm apart because of power limitations with light sources and performance barriers with detectors. The high power and extreme accuracy of our OSA/ASE device overcomes these problems and sets a new standard for fiberoptic sensor systems."

The ASE source is exceptionally stable and delivers greater than 13 dBm of power across the spectral range of 1525nm to 1565nm. The OSA provides accurate and precise detection of return signals from the sensing array with resolution down to 1 pm. Moreover, the OSA is wavelength-calibrated and can be matched to the ASE source, compensating for spectral power characteristics particular to the source.

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The OSA is based on NP Photonics' unique CMEMs tunable filter. It can scan the entire free spectral range from 1520 nm to 1620 nm in less than 500ms to monitor changes in wavelength or power from each of the FBGs in the array.

*Founded in 1998, NP Photonics is the originator of Erbium Micro Fiber (EMF) technology and is dedicated to the design, manufacture and marketing of compact, low-cost, intelligent fiber-based products for the sensing and telecommunications industries. The company has developed a broad family of products based on its EMF and Compliant MEMS technology, including tunable filters, Optical Spectrum Analyzer Engines, fiber lasers, ASE Sources and fiber amplifiers.*

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