

NP Photonics Corporation Introduces the *Rock*, a Single-Frequency Fiber Laser Insensitive to Vibration

The *Rock* will be the basic building block for the multi-laser systems that NP started shipping in late 2006

San Jose, Calif., January 23, 2007 — NP Photonics Corporation, a world leader in the design and manufacture of narrow-linewidth fiber lasers, introduces the *Rock* at Photonics West 2007. This stable, single-frequency fiber laser is insensitive to vibration, without the need of active stabilization.

The *Rock* can be easily implemented in a variety of OEM laser systems. These multi-laser systems are currently used for field trials in the oil field and security markets. Upon successful completion of these trials, this technology will be part of multimillion-dollar installations. The *Rock* is based on a passive stabilization technique recently developed by NP Photonics for DWDM fiber-optic sensing systems that multiplex the information from a number of spectral channels. This method significantly reduces the sensitivity of the frequency noise to vibration and low frequency acoustics.

According to Philippe Brak, vice president of sales and marketing at NP Photonics, the *Rock*, now ready for production, will reduce cost and complexity of actively stabilized multi-laser systems by a factor of 50%. Brak noted that this breakthrough is important because these multi-laser systems are expected to double the productivity of oil fields and significantly increase the security of harbors. He further emphasized that NP Photonics is committed to the optical sensing industry and will continue to refine its technology to obtain the lowest phase noise and to minimize sensitivity to vibration under field conditions, while reducing cost and size.

About NP Photonics

NP Photonics uses innovative glass and fiber technology to design, produce and deliver a new class of advanced optical light sources for sensing, medical and R & D markets. The company has developed a broad family of products including narrow-linewidth fiber lasers, ASE sources, fiber amplifiers and high-power light sources.

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Technical Background, Optical Sensing and Multi-Laser Systems

Optical sensing is critically important in oil & gas, homeland security, and industrial markets where the measurement of distance, temperature, and/or pressure is required for a broad range of applications. These applications include finding and monitoring of oil fields in order to increase their productivity, opto-acoustic sensing in submarine towed arrays, monitoring and securing pipelines and power lines as well as border and perimeter protection. Common to these applications is the need for high sensitivity and resolution, with real-time monitoring over long distances.

Today's multi-laser systems are often used on ships, off-shore platforms, or airplanes, where the environment induces a large amount of vibration. To compensate for this effect, active stabilization has proven to be a useful technique that maintains the low phase noise of these lasers under typical field conditions. However, this active stabilization technique is not without trade-offs and adds significant cost to multi-laser systems. The new *Rock* technology from NP is about 100 times less sensitive to vibration than conventional designs and thus eliminates the need for active stabilization and complex anti-vibration mounts.

To be suitable for these applications, the lasers need to be insensitive to vibration and have the lowest possible phase noise. NP's recently developed technology achieves both of these objectives.