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News Release

OFS RESEARCHERS ADVANCE ALL-FIBER HIGH POWER LASERS

SOMERSET, N.J. (May 23, 2006) – Researchers at OFS Laboratories have developed mode transformation technology that enables the use of high power fiber lasers and amplifiers without many of the problems associated with free-space optics. This all-fiber solution optimizes gain fibers with independent control of input and output mode characteristics.

For high power lasers, the optimum design of the large mode area gain fiber is not compatible with standard single mode fiber. Therefore, the challenge is to develop components and assembly methods that preserve the purity of the signal mode with low signal and pump attenuation. OFS Laboratories has developed a focused fiber solution for all-fiber architecture as an alternative to free-space optics.

A typical cladding-pumped amplifier consists of a signal source multiplexed with pump light from high power, broad area diodes. In conventional free-space optics, this multiplexing is accomplished using lenses; all-fiber architecture employs a fused-fiber pump combiner.

The all-fiber LMA gain module is based on new mode transformation technology that allows efficient coupling inside of the fiber between step-index single mode fiber with a Gaussian mode shape, and large mode area fiber with a non-Gaussian mode shape. This enables the gain fiber to be optimized for peak performance independent of concerns for signal launch and output beam quality.

"As important a technology as Large Mode Area fiber is for high power lasers, the fact is that unless you have a good transition from Gaussian to non-Gaussian modes and back again, you cannot get consistent results from your gain module," says David DiGiovanni, President of OFS Laboratories, "Addition of new proprietary mode transformer technology to the LMA gain module creates a unit that maximizes efficiency of the LMA fiber and provides consistent, predictable signal output with high beam quality."

This new technology will be commercialized through OFS Specialty Photonics Division. Formal product release is anticipated in the first quarter of 2007. Limited prototypes are available for potential customers who are interested in participating in development programs. Interested customers may email highpower@ofsoptics.com to receive more information on the development of this technology.

About OFS

OFS is a world-leading designer, manufacturer and provider of optical fiber, optical fiber cable, connectivity, FTTx and specialty photonics solutions. Our marketing, sales, manufacturing and research teams provide forward-looking, innovative products and solutions in areas including Telecommunications, Medicine, Industrial Automation, Sensing, Government, Aerospace and Defense applications. We provide reliable, cost effective optical solutions to enable our customers to meet the needs of today's and tomorrow's digital and energy consumers and businesses.

OFS' corporate lineage dates back to 1876 and includes technology powerhouses such as AT&T and Lucent Technologies. Today, OFS is owned by Furukawa Electric, a multi-billion dollar global leader in optical communications.

For more information, please visit www.ofsoptics.com.

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