



January 31, 2017

Spectra-Physics Debuts Versatile Picosecond Laser with Game-Changing Cost-Performance

New IceFyre™ Laser Targets Picosecond Cold Machining for Precision Industrial Manufacturing

ANDOVER, Mass., Jan. 31, 2017 (GLOBE NEWSWIRE) -- [MKS Instruments, Inc.](#) (NASDAQ:MKSI) announces that its [Spectra-Physics](#)® business unit introduces IceFyre™, a compact, high power industrial picosecond hybrid fiber laser with industry-changing cost-performance. IceFyre delivers exceptional performance with high power and short picosecond pulses as well as unprecedented versatility for process optimization with adjustable repetition rates, TimeShift™ ps programmable pulse flexibility, and pulse-on-demand triggering. Combining power supply and laser head in a single rugged and compact package, IceFyre is easy to integrate into machine tools and systems and has proven reliability and stability. The new laser is ideal for picosecond cold micromachining in high throughput, precision manufacturing of sapphire, glass, ceramics, fine metals, plastics, and other materials and devices.

A photo accompanying this announcement is available at <http://www.globenewswire.com/NewsRoom/AttachmentNg/d6dc75f0-c8fa-4862-bced-0ab53c4f6381>

"With an unparalleled combination of picosecond performance, cost, size, and reliability, IceFyre is a game-changer in the market for picosecond industrial lasers," says Dave Allen, senior vice president and general manager for Spectra-Physics lasers. "With its highly compelling cost-performance, IceFyre enables new precision 24/7 manufacturing applications previously not technically and economically feasible."

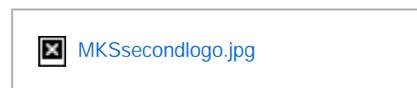
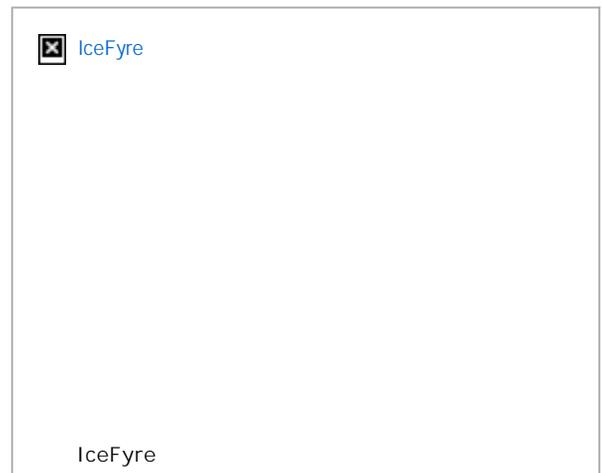
IceFyre delivers > 50 W average power and up to > 200 μJ pulse energy at 1064 nm with adjustable repetition rates from single shot up to 8 MHz. The new laser's TimeShift™ ps programmable pulse capability results in flexible burst mode operation with adjustable burst shape, pulse separation and number of pulses in burst, all with high power available for laser process optimization. IceFyre is an "It's in the Box™" laser that integrates laser head and power supply into a single lightweight and compact unit. IceFyre is ideal for applications in high throughput, precision manufacturing of displays, semiconductors, electronic components, medical devices and fine metal parts.

IceFyre leverages Spectra-Physics' technology and experience into an efficient patent-pending design, yielding high performance at unprecedented cost-performance. The laser has passed extensive environmental qualification testing to ensure high reliability. Fully automated and computer controlled, the laser has exceptional power and beam pointing stability during 24/7 operation, ensuring high precision and reproducibility for demanding applications.

Spectra-Physics' IceFyre laser will be featured at SPIE Photonics West, Moscone Center, San Francisco, California, January 31 to February 2, 2017. Please visit MKS at booth #1400 for a demonstration. For more information, please see www.spectra-physics.com/icefyre.

About MKS

[MKS Instruments, Inc.](#) (NASDAQ:MKSI) is a global provider of instruments, subsystems and process control solutions that measure, control, power, monitor and analyze critical parameters of advanced manufacturing processes to improve process performance and productivity. Our products are derived from our core competencies in pressure measurement and control, materials delivery, gas composition analysis, control and information technology, power and reactive gas generation, vacuum technology, photonics, optics, lasers and motion control. Our primary served markets are manufacturers of capital



equipment for electronic thin film, process manufacturing, environmental monitoring and life sciences, as well as government and research.

About Spectra-Physics Business Unit

Spectra-Physics delivers breakthrough laser technologies that transform the way businesses operate and people live. From the manufacturing floor to the operating room to the research laboratory, Spectra-Physics has blazed a trail of discovery and success in lasers that continues to advance every day. Spectra-Physics is singularly focused on helping customers use precision laser technologies to advance leading-edge science and propel industries forward. We do so by offering groundbreaking technologies, deep applications expertise, disruptive cost-performance, a commitment to world-class customer experience, and the highest standards for operational excellence and continuous global improvement.

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Source: MKS Instruments, Inc.

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