TRUMPF at Photonics West 2016: Innovation across the spectrum

FARMINGTON, Conn., January 20, 2016 – In booth 1600 in the South Hall at Photonics West 2016, TRUMPF will highlight its latest innovations in laser technology, demonstrating TRUMPF's theme for the show: *Innovation Across the Spectrum*. As a part of the world's leading photonics, laser and biomedical optics event, the Photonics West exhibition will take place February 16-18 at the Moscone Center in San Francisco, CA.

TruMicro

TRUMPF's innovative short-pulse lasers are ideal for precision cutting, structuring, annealing, ablation, surface treatment, and drilling. At Photonics West, TRUMPF will feature an active demonstration of the TruMicro 2020 as well as static displays of the TruMicro 5280 and TruMicro 7370 lasers to represent the company's range of <u>TruMicro</u> technology. The TruMicro 2020 is an ultra-short pulse fiber laser featuring 10 W average power at 1030 nm and a lightweight, compact design. With peak power of 0.5 MW, this picosecond laser is optimized for applications such as foil cutting, thin film removal, and corrosion-free marking.

The fast and economical <u>TruMicro 5280</u> provides an industrial grade 100 W picosecond beam at 515 nm for a variety of micro processing applications. Lasers in this product series vaporize material so precisely that no heat affected zone (HAZ) can be detected. The TruMicro Series 5000 enables high throughput processing with exquisite precision for all materials, including semiconductors, metals, glasses, and plastics. The <u>TruMicro 7370</u> high power UV nanosecond laser provides an average power of 180 W at 343 nm. The extremely stable pulse energy and pulse timing across the operating envelope make the TruMicro 7370 perfect for applications like laser lift-off and semiconductor lithography.

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A special display highlighting TRUMPF's new optical element for glass cutting, TOP Cleave, will also be exhibited at the show. This factory-ready beam delivery module creates a uniform laser exposure through the full thickness of smartphone cover glass and sapphire protective windows. Rather than cut slowly using layer by layer ablation, TOP Cleave enables the laser to modify the full thickness of transparent display panels in a single pass. Standard configurations target panels up to 700 microns thick at cutting speeds of up to one meter per second – one hundred times faster than conventional technologies.

TruDiode

TRUMPF will feature the TruDiode 4006 laser display representing the <u>TruDiode</u> product family of direct diode lasers. TruDiode lasers are available with output powers up to 6 kW for metal and plastic welding, brazing, hardening, and heat treatment. Direct diode lasers possess a high beam quality at high output power—at significantly lower operating costs compared to other laser technologies.

TruDisk

<u>TruDisk lasers</u> have proven to be an ideal solution for welding and cutting metals and other applications where lifelong stable high power and excellent beam quality are required. At Photonics West, TRUMPF will display the TruDisk Pulse 421 with TRUMPF's programmable focusing optics (PFO). The new TruDisk Pulse 421 is a pulsed, green laser for efficient welding of copper. The disk laser, in the pulsed mode, operates at mean power of 400 watts, generating laser light at 515 nanometers. Regardless of whether the surface is oxidized, ground, sandblasted, rough, or polished to a high gloss, a green laser beam is able to create uniform welding seams in copper.

TruMark

TRUMPF will showcase the <u>TruMark 1110</u>, a diode-pumped vanadate laser which is a cost-effective entry-level marking laser, in the new TruMark Station 3000, a compact marking station that offers users a high degree of flexibility in marking. The <u>TruMark Station 3000</u> is ideal for customers with small or medium batch sizes looking to integrate the marking process into their production lines – and who are looking for a simple, safe and industrially robust workstation. Its compact cube design offers a true desktop solution with no additional supply unit required when combined with the TruMark 1110 or

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TruMark 5010 marking lasers, yet it can be combined with any marking laser in the TruMark Series 1000, 3000 or 5000. To integrate it into an automatic assembly line, simply remove the transfer flaps on the side of the workstation. This flexibility enables users to utilize the TruMark Station 3000 from start-up to series production.

About TRUMPF

TRUMPF is the world market and technology leader in fabricating machinery and industrial lasers for flexible sheet metal processing. Products manufactured with the company's technology can be found in almost every sector of industry. TRUMPF Inc. is the largest subsidiary of the TRUMPF Group and is dedicated to serving the U.S., Canadian and Mexican markets. Additional company information is available at: www.us.trumpf.com

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