

Time-Bandwidth Products[®]

'Ultrafast for real-world business'

50-W Passively Mode-Locked FORTIS[™] Laser

May 2004, CLEO, Exhibition (San Francisco, CA). The Swiss company Time-Bandwidth Products, Inc. introduced the FORTIS[™] laser system, a passively mode-locked ytterbium laser producing 1 megawatt of pulse power, with subpicosecond pulsewidth, at 50 MHz repetition rate – corresponding to 50 W average power. This unprecedented performance directly from a single laser is achieved due to patent-bending combination of the award-winning 'thin-disk' laser technology with the award-winning SESAM[®] technology.

Advantages. The most attractive features for potential users of FORTIS[™] seem to be its comparative simplicity, because it has no amplifiers, and its reliability. Other laser systems available in the market, generating high-power ultrashort pulses, include an oscillator and, as a rule, one amplifier – usually a regenerative amplifier or a CPA (chirped-pulse amplifier). Such systems require precise alignment of the two laser cascades and the use of special electronics that brings with it a certain amount of complexity. In addition, achieving 50 W of average power is still impossible for these systems.

Applications. What applications are best-served by FORTIS[™]? Most likely this is novel, high-end micromachining and material processing applications, including UV generation at 344 nm and 258 nm, plus a host of applications requiring high peak powers and high average powers, such as 'RGB' generation for laser displays, or pumping of high-performance optical parametric oscillators or amplifiers.

Time-Bandwidth Products, Inc., Zürich, Switzerland. The company was founded at the end of 1994. The company specialises in the development of diode-pumped solid-state lasers generating ultrashort pulses using the SESAM[®] patented technology. Time-Bandwidth Products[®] delivers its products to laboratories, companies and product lines around the world. Our products range from pulsewidths of picoseconds to femtoseconds, from pulse energies of nanojoules to millijoules, and wavelengths from the infrared to the ultraviolet. To know more about our Company, technology, and production, please visit our web-site www.tbwp.com or contact us via e-mail info@tbwp.com (EN, DE, RUS).

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P r o d u c t s 

OEM & Customized
Pico- & Femtosecond Lasers

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