



Press Release

TRUMPF unveils new micro-processing lasers

The TruMicro family tree branches out to new lasers based on different technology platforms // new slab tech enables high-energy, ultrashort pulses // wavelengths available for varying needs

Ditzingen/Munich, Germany, April 28, 2022. The high-tech company TRUMPF unveiled the next generation and new lines of its TruMicro ultrashort pulse lasers (USP) at the leading global laser trade show, LASER – World of Photonics in Munich, Germany. The two TruMicro 6000 and TruMicro 2000 product families feature new technology platforms to boost power and enhance versatility.

Ultrashort pulsed lasers see frequent use in electronics manufacturing, where they serve to produce printed circuit boards, displays and the like. “With the two new generations of our TruMicro lasers, we are expanding our micro-processing product portfolio and offering solutions suited to satisfy the market’s ever more challenging demands,” says Steffen Rübling, the product manager responsible for TRUMPF’s TruMicro lasers. “With the benefit of powerful infrared lasers, we are able to convert both the TruMicro 2000 and the TruMicro 6000 to green and ultraviolet wavelengths while maintaining the high beam quality. This enables us to offer the USP laser best suited to the customer’s use case. With 100 watts, the next-generation TruMicro 2000 is the most powerful industrial ultrashort pulse fiber laser. The TruMicro 6000 offers up to 200 watts at pulses in the femtosecond range for even higher performance,” says Rübling.

TruMicro 6000 featuring new slab technology

Based on slab technology, the next-generation TruMicro 6000 can be deployed in various industries for use cases ranging from cutting to drilling. The active medium, a crystal that amplifies laser light, looks like a tile or slab, hence the name. The laser light travels through the slab, zigzagging between its two end faces. The slab’s advantage is that this active medium is very conducive to cooling, which enables high pulse energies at high repetition rates. With pulse energies of several millijoules, this is an excellent tool for modifying glass up to six millimeters thick and for drilling.



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The ultrashort pulses reduce thermal stress on highly sensitive materials. High peak pulse power levels enable excellent quality paired with maximum productivity.

TruMicro 2000 – an extremely versatile tool

The next-generation TruMicro 2000 earns high marks in its category with an average power output of up to 100 watts. All that power accelerates the machining process. The fiber-based TruMicro 2000's parameters such as pulse duration, repetition rate and pulse energy can be variably adjusted within milliseconds to suit a wide range of use cases. Individual pulses' energy and duration remain remarkably stable. These pulses can serve many purposes, for example, to cut highly sensitive medical products such as stents, to machine surfaces and to mark a wide variety of materials ranging from glass and plastics to corrosion-resistant metals. The new TruMicro 2000's compact, lightweight design is one selling point. Another is that the new lasers may be used with an LLK-U, a fiber optic cable for ultrashort pulse lasers based on hollow-core fibers. This type of cable makes it so much easier to apply ultrashort pulses in industrial use cases. The hollow-core fiber enables laser light to take a stable, simple path from the beam source to the optics and then straight to the part without having to be redirected by a complex free-beam guide or several deflection mirrors.

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TruMicro 2000

The next-generation TruMicro 2000 earns highest marks in its category with an average power output of up to 100 watts.

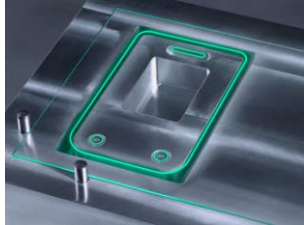


TruMicro 6000

The next-generation TruMicro 6000 is based on slab technology.



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Cutting glass with the TruMicro

TruMicro ultrashort pulsed lasers see frequent use in electronics manufacturing, where they serve to produce printed circuit boards, displays and cover glass.



About TRUMPF

TRUMPF is a high-tech company offering manufacturing solutions in the fields of machine tools and laser technology. The Company drives digital connectivity in the manufacturing through consulting, platform products and software. TRUMPF is a technology and market leader in highly versatile machine tools for sheet metal processing and in the field of industrial lasers.

In 2020/21, the company employed some 14,800 people and generated sales of about 3.5 billion euros. With over 80 subsidiaries, the TRUMPF Group is represented in nearly every European country as well as in North America, South America and Asia. The company has production facilities in Germany, France, the United Kingdom, Italy, Austria, Switzerland, Poland, the Czech Republic, the United States, Mexico and China.

Find out more about TRUMPF at www.trumpf.com

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