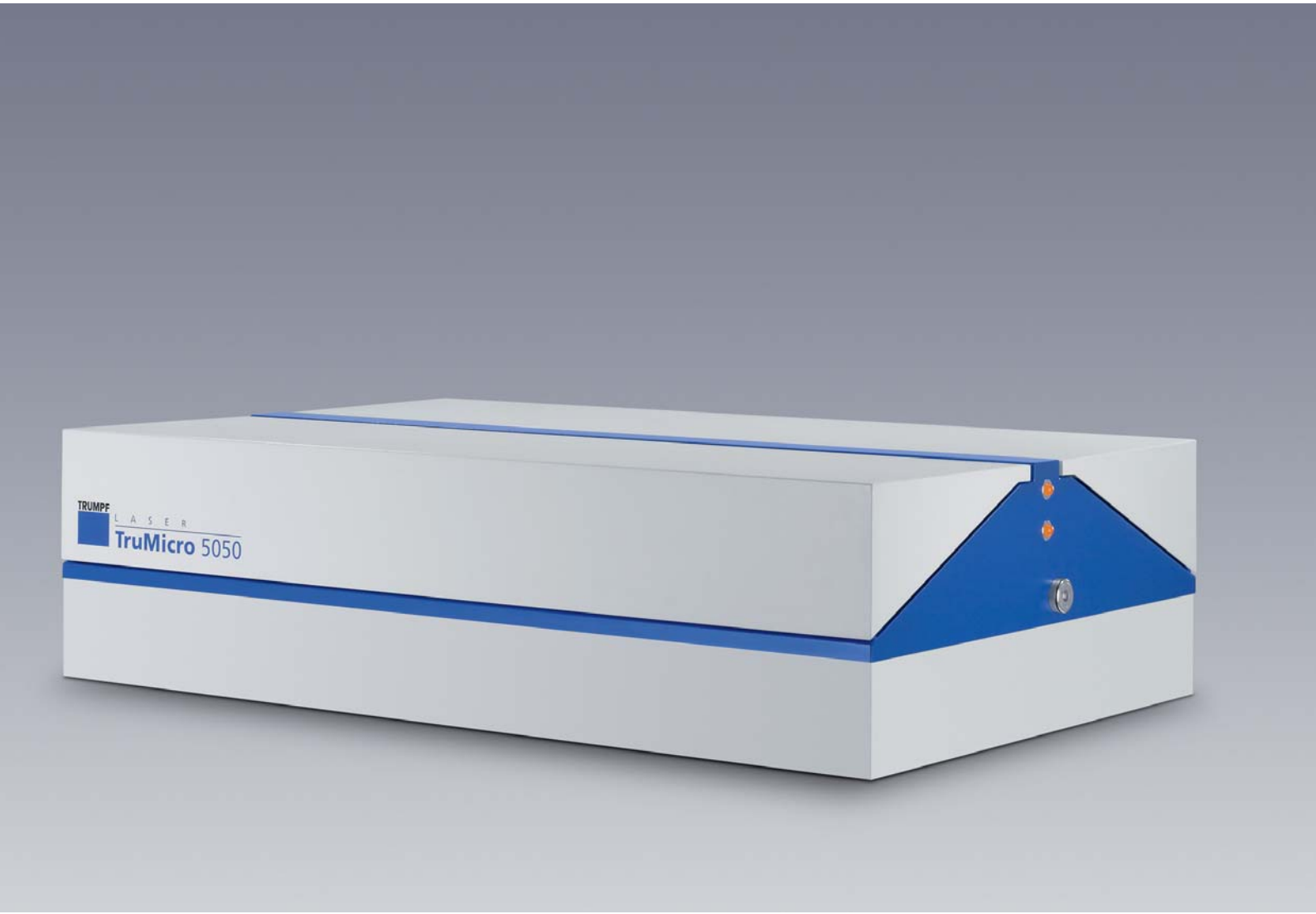
TRUMPF Laser



TruMicro Series 5000

Micro Processing with the Highest Quality

TRUMPF

TruMicro Series 5000 – Productive without Heat Affect

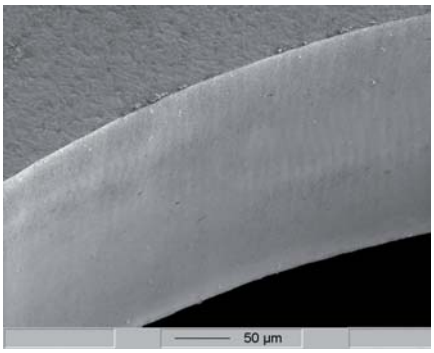
The lasers in the TruMicro Series 5000 are picosecond lasers with powers of up to 50 W and pulse energies up to 250 µJ. The extremely short pulse durations of less than 10 ps vaporize almost any material so quickly that no heat-affected zone is detectable. These lasers enable micro processing with an optimal combination of quality, productivity and profitability.

The decisive advantage of picosecond lasers from TRUMPF is the easy scalability to power levels of 50 W and more, with pulse energies of up to 250 µJ. Penetration into these performance classes has only been made possible by disk laser technology. It is superior to other technologies in terms of peak power and pulse energy while simultaneously retaining excellent beam quality.

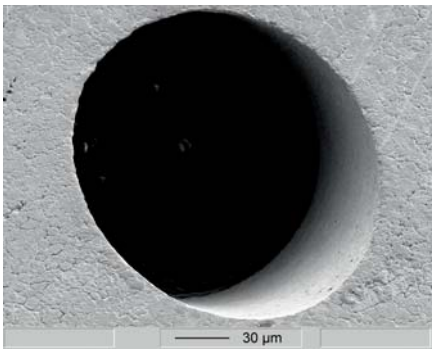
The high average power of 50 W results in high throughput during production. Additionally, the total costs of ownership of the disk lasers in the TruMicro Series 5000 are unbeatably low.

High peak powers of up to 40 MW enable efficient frequency conversion in the visible and ultraviolet spectral range. Semiconductor materials, dielectrics and plastics can therefore be processed with outstanding quality and high throughput.

The touchscreen makes operation of the TruMicro lasers very simple. The user interface is clearly structured and self-explanatory. All the conventional interfaces are available for communication with external controls. TRUMPF service and Telepresence are naturally included.



Cutting edge of a silicon wafer without chipping and without a detectable heat-affected zone



Drill-hole in stainless steel. The smooth wall and the sharp edges can only be achieved with the picosecond laser on this scale.

Technical data

Laser device		TruMicro 5050	TruMicro 5250	TruMicro 5350
Average power	[W]	50	25	> 15
Wavelength	[nm]	1030	515	343
Pulse duration	[ps]	< 10	< 10	< 10
Max. pulse energy	[µJ]	250	125	> 75
Pulse frequency*	[kHz]	200	200	200
Beam quality		M^2 < 1.3	M^2 < 1.3	M^2 < 1.3
Polarisation		linear > 1:500	linear > 1:500	linear > 1:500

*) Higher pulse frequencies (> 500 kHz) on request.

Subject to technical changes.

TRUMPF

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Id No. 1498835-20-04-08-St