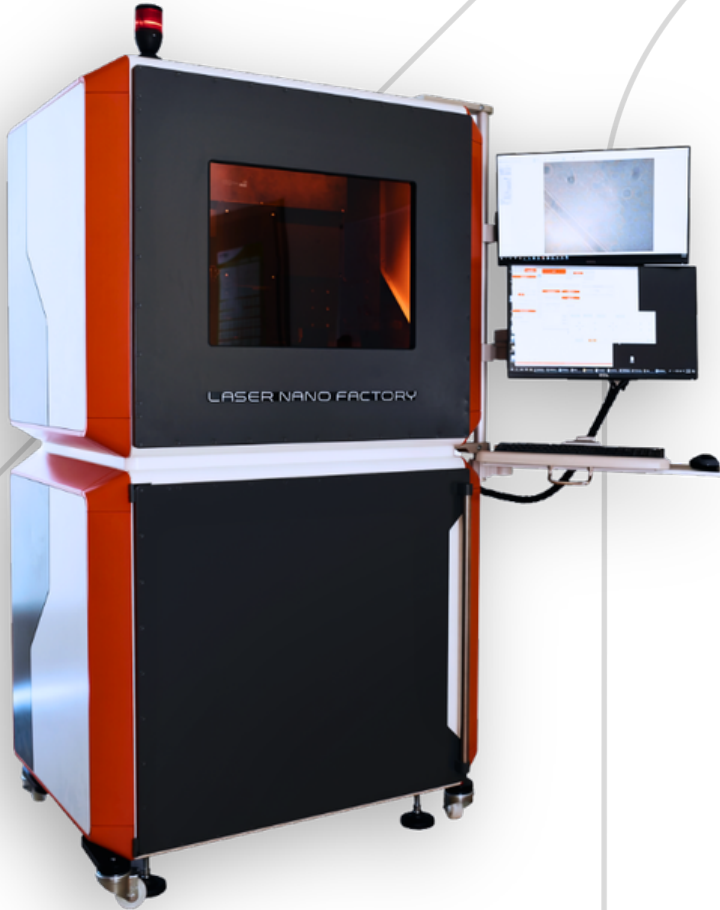


Laser Nanofactory

R&D machine



KEY FEATURES

Diverse Applications

Tailored for diverse femtosecond laser applications

All-in-1 Processing

Additive and subtractive processing in 1 setup

Multi-Technological

additive & subtractive in 1 set-up

Smart Auto-Alignment

Automatic surface detection, self-aligning optics, and high sensitivity process monitoring

Intuitive Software

User-friendly software for design and manufacturing

ABOUT LASER NANOFACTORY

A high precision, hybrid 3D microfabrication machine capable of multiple micro-processing processes, including Selective Laser (Induced) Etching (SLE) and Multiphoton Polymerization (MPP), using a femtosecond laser for ultra-accurate and versatile fabrication of complex prototypes and products:

Nanometer size features

feature size down to 200 nm

True 3D structures

fabricated without assembly

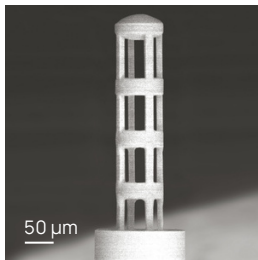
Ultra-smooth surfaces

roughness down to < 20 nm

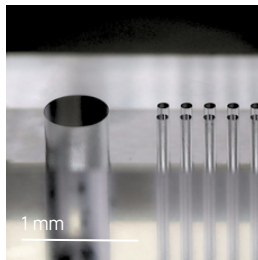
Hybrid fabrication

of glass, polymers & other materials

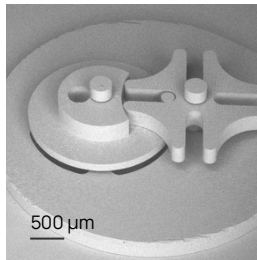
PRODUCTION SAMPLES



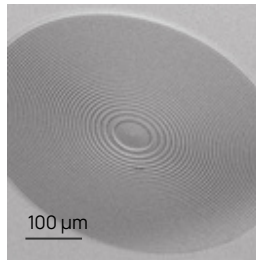
Lens on fiber tip



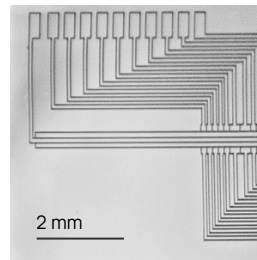
Fiber alignment array



Micromechanics



Micro-optics



Ion trap substrate

PROCESS SPECIFICATIONS

	SLE (3D) - Selective Laser Induced Etching	MPP (3D) - Multiphoton Polymerization	Ablation (2D)
Materials	Fused silica, Borosilicate glasses, ULE	SZ2080, Ormocers	Most solid materials
Smallest feature size	> 1 µm	200 nm	> 1 µm
Surface roughness	200 nm	< 20 nm	200 nm
Max. object height	20 mm	0,5 mm	Material-dependant
Aspect ratio	1:200	1:50	1:10
Min. hole diameter	5 µm	-	-

TECHNICAL SPECIFICATIONS

Femtosecond laser source	Wavelength	1030 ± 10 nm, 515 ± 10 nm
	Max. average power	10 W 1030 nm, 5W @ 515 nm
	Repetition rate	Single-shot - 1MHz
	Pulse duration	250 fs - 10 ps
	BiBurst mode	Tunable GHz and MHz bursts
Positioning stages (XYZ)	Travel (XYZ)*	160 mm × 160 mm × 60 mm*
	Accuracy (XYZ)	± 0.3 µm
	Maximum speed (XY no load)	350 mm/s
Galvano scanners	Accuracy	50 µrad
	Repeatability	0.4 µrad RMS

*For larger working area configurations, please contact our sales team

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R&D machine

STANDARD PACKAGE

- 12 months standard warranty
- Free software upgrades throughout the warranty period
- 24h support response time during working hours
- Follow up online consultations / trainings (10h)

OPTIONAL

- Warranty period extension
- Complete solution with etching kit
- Additional operator or process training