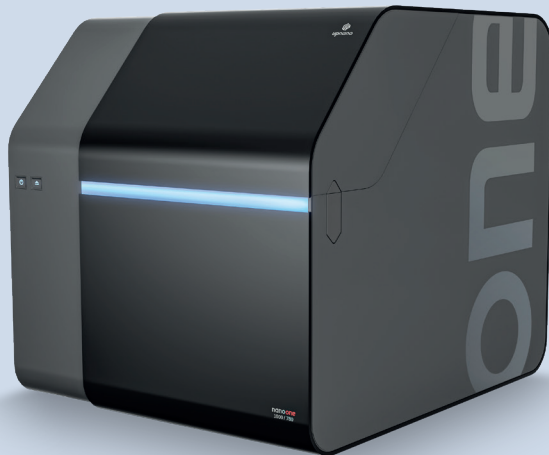


# nano One

The highest performance 2-photon  
polymerization 3D printing systems  
with a resolution below 100 nm



# Platform technology for any application



System type	Desktop multiphoton laser lithography system
Printing process	Layer-by-layer 2-photon polymerization
Light source	Femtosecond fiber laser
Scanner	Galvanometer scanner
Stage	Long range piezo stage
Maximum travel range	Up to 120 x 100 x 49 mm
Stage address grid	10 nm
System dimensions	Benchtop system 58.5 x 71.0 x 65.0 cm
Total weight	124 kg

# Key features

- Throughput >450 mm<sup>3</sup>/h
- Compact benchtop system
- Dip-in-free print process
- Integrated vibration isolation
- >40 mm build height
- Built-in ISO6 cleanroom
- Intuitive user software



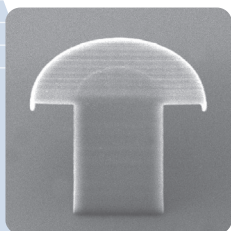
Average power	250 mW	1,000 mW	1,000 mW	400 mW
Pulse length	90 fs	90 fs	90 fs	90 fs
Bio unit	Optional	Optional	Included	Optional
Included objectives*	40x NA 1.4 20x NA 0.7 10x NA 0.4	40x NA 1.4 20x NA 0.7 10x NA 0.4 5x NA 0.25	40x NA 1.4 20x NA 0.7 10x NA 0.4 10x NA 0.3 5x NA 0.25	40x NA 1.4 20x NA 0.7 10x NA 0.4

\* Further objectives can be added

# nanoOne

The NanoOne printing systems are based on multiphoton lithography and combine the precision of 2-photon polymerization with an unmatched throughput of more than 450 mm<sup>3</sup> per hour.

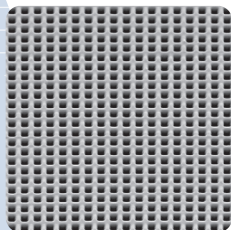
The NanoOne allows users to create feature sizes from submicrometer to millimeter range at high speed and precision.



## Surface elements

Periodic microelements and structures that influence the adhesive, optical, electronic, and sensory properties.

1  $\mu\text{m}$



## Filter systems

Filter structures with consistent pore size as low as 1  $\mu\text{m}$  and versatile shape.

10  $\mu\text{m}$



Learn more

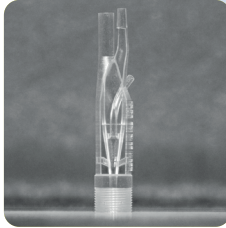


## Castle on a pencil tip

Our well-known project demonstrates in an artful way how minuscule and precise 2-photon printed components can be.

### **Nozzles**

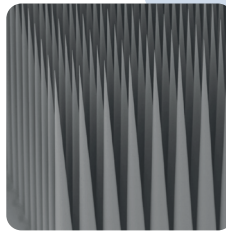
Integrated microfluidic components with connectors and internal complex structural elements.



100  $\mu\text{m}$

### **Microneedles**

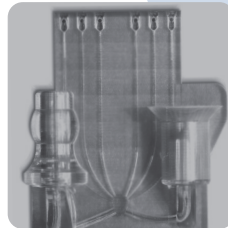
High-resolution needles with a tip size  $< 1 \mu\text{m}$  and unprecedented aspect ratios.



1 mm

### **Microfluidics**

Manufacturing entire chips with high-precision channel systems and large-volume connectors using optically transparent resins.



10 mm

### **Polymer MEMS**

Intricate, free-moving components with mechanical properties, printable in a single process with no assembly required.



A new era in  
high-resolution  
3D printing





Download brochure



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