

World's finest 3D printing.

Nanoscribe's Photonic Professional GT2 offers the world's highest resolution 3D printing for rapid and ultra-precise microfabrication. The printer combines precision and 3D design freedom of Two-Photon Polymerization (2PP) with a reliable 3D printing workflow for fabricating nano, micro, and mesoscale structures.

Our 3D printer is bundled with various 3D Microfabrication Solution Sets tailored to the scale you wish to print on. These sets comprise objectives, software recipes and 2PP optimized resins. User-friendly software tools ease the printing workflow from CAD-model import to printed product for a wide range of applications. Small, medium and large features can thus be fabricated, achieving features sizes well below the micrometer scale up to 100 mm³ print volumes.



KEY FEATURES

- ▶ High-speed 3D Microfabrication using galvo technology
- ▶ 3D design freedom with sub-micrometer feature sizes
- ▶ Straightforward 3D printing workflow from CAD-model import to printed product
- ▶ 3D Microfabrication Solutions Sets tailored to a variety of scales and applications
- ▶ Broad range of print materials and substrates

DESIGNED FOR RESEARCH AND RAPID PROTOTYPING IN

- ▶ Microfluidics
- ▶ Micromechanics
- ▶ Biomedical engineering
- ▶ Micro-electro-mechanical systems
- ▶ Mechanical metamaterials
- ▶ Microoptics
- ▶ Photonic metamaterials and plasmonics
- ▶ Further nanostructures

Technical Specifications

Printing technology	Layer-by-layer Two-Photon Polymerization
Minimum XY feature size	160 nm typical; 200 nm specified*
Finest XY resolution	400 nm typical; 500 nm specified*
Finest vertical resolution	1,000 nm typical; 1,500 nm specified*
Layer Distance	0.3–5.0 μm^*
Maximum object height	8 mm
Build volume	100 × 100 × 8 mm ³
Minimum surface roughness R _a	≤ 20 nm*
Scan speed	≤ 100 mm/s*

System properties

Laser source	NIR femtosecond laser
Laser safety	Class 1 in accordance with IEC 60825-1
Scan field diameter	≤ 1,000 μm^*
Printing area	100 × 100 mm ²
Substrate types	Many popular formats including square and circular silica or glass, standard silicon wafers, or custom sizes up to 5" × 5"
Autofocus system	Automatic resin–substrate interface detection

Software

NanoWrite	Graphical user interface for system operation and fully automatic print-job execution
DeScribe	Print-job editor including data-import wizard, interactive 3D preview, print simulation, application-specific recipes, option to save user-specific parameters
Data input	STL for 3D import, DXF and BMP, PNG and TIFF image formats for 2D import

Dimensions

Printer dimensions (w/o working desk; L × W × H)	110 × 110 × 130 cm ³
Total weight (w/o working desk)	370 kg

Site requirements

Operating temperature	22 °C (± 4 K); fluctuation ± 1 K
Relative humidity	≤ 60%
Room lighting	emission spectrum > 500 nm
Clearance	Minimal distance to wall 30 cm; machine height of 180 cm with open lid
Power supply	100–240 VAC, single phase, 50/60 Hz, max. 5 A
Vibration level	Below VC-B in accordance with VDI2038-2
Compressed air supply for optics table	4–6 bar
Altitude	≤ 2,000 m above sea level

*Values may vary depending on the objective and photoresin in use.

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Reserve now.

We would be pleased to send you a tailor-made offer.

If you have any further questions, please contact our sales team at sales@nanoscribe.com.

