



PHOTONIC PROFESSIONAL GT

The Photonic Professional *GT* is the world's highest resolution 3D printer. Based on two-photon polymerization (2PP), it allows for additive manufacturing and maskless lithography with the same device. Submicrometer resolution printing with feature sizes down to 200 nm and optical quality surface finishes are characteristic key features. Two powerful writing modes move the laser focus with respect to the photoresist: A piezo-mode for arbitrary 3D trajectories and a galvo-mode for ultra-fast structuring in a layer-by-layer process. With these unique features, the versatile system covers the broad demands encountered in nano-, micro- and mesoscale fabrication.

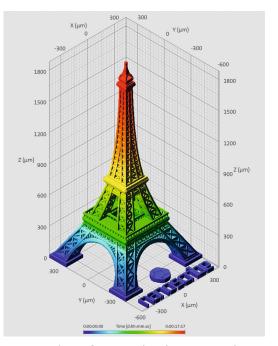
SYSTEM & COMPONENTS

The details of the turnkey system, its comprising components and available options are listed below and highlighted in the image.

OPTIONS, ACCESSORIES & CONSUMABLES

The following options, accessories and consumables are available to tailor the performance of the systems to application- and environment-specific requirements:

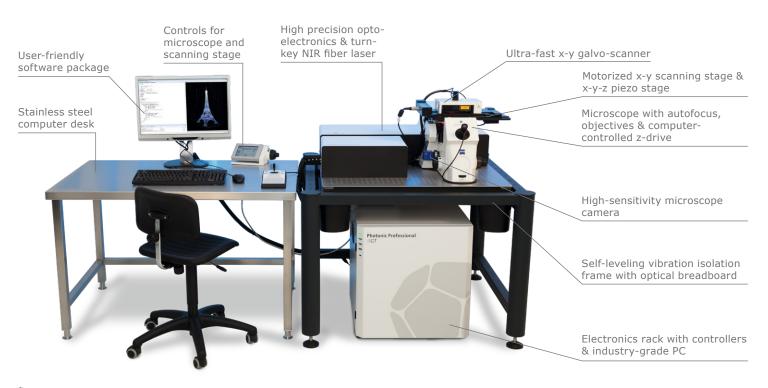
- Automatically exchangeable scanning objectives*
- Diverse substrate holders and substrates*
- Standard & cleanroom configuration*
- 2PP-optimized photopolymer resins from our IP product lineup



Screenshot of print job editor DeScribe

STARTER KIT

All systems are delivered with a starter kit consisting of a supporting rack for the convenient placement of sample holders, beakers with a substrate holder for wetchemical development, and a selection of Nanoscribe's IP photopolymer resins.



Photonic Professional GT

Printing performance' Printing performance is ize minimum 3D lateral feature size 200 nm (spec.); 100 nm (typ.) finest 2D lateral resolution 1,500 nm (spec.); 1,000 nm (typ.) beam scanning speed'' 100 mm/s (typ.) piezo scanning speed'' 100 mm/s (typ.) accessible print area by motorized stage 100 x 100 mm² x-yz piezo range 300 x 300 x 300 x 300 x 301 x-yz piezo range 300 x 300 x 300 x 300 x 301 x-yz piezo range 300 x 300 x 300 x 300 x 301 maximum object height fine 300 µm 0 dependent on scanning objective*** maximum object height fine 300 µm maximum object height fore 300 µm laser source NIR femtosecond laser laser source NIR femtosecond laser laser safety class 1 as complete system according to EN 60825-1:2007 Software package print job editor including STL/DXF import and process preview Electrical properties print job editor including STL/DXF import and process preview Electrical sperame SO / 60 Hz rated vortage range AC 100 - 240 V mainsupply overvoltage category 11	Technical details	Photonic Professional <i>GT</i>
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	temperature stability	± 1° C
relative humidity 60 % (max.)	storage temperature	20° C (± 10° C)
	relative humidity	60 % (max.)
air pressure supply for vibration isolation table 4 - 6 bar	air pressure supply for vibration isolation table	4 - 6 bar
room lighting yellow light required****	room lighting	yellow light required****

Optimum achievable performance depends not only on the machine and its configuration but also on the photoresist used.

Please contact us for more specific information regarding your process.

** Effective printing time depends on more aspects than merely the piezo's or the laser beam's scanning speed; smart software and control features as well as process tailored materials make the Photonic Professional GT the fastest and most precise 3D printer on the nano-, micro-, and meso-scale; please consult us for more details.

More data available on request; please consult us for the proper choice of scanning objectives that match your application. Light tubes (e.g. OSRAM L 36 W/62 Yellow) or UV-filter tubes (e.g. ASR-LY5-UV (Metholight)) or any alternative yellow light sources

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