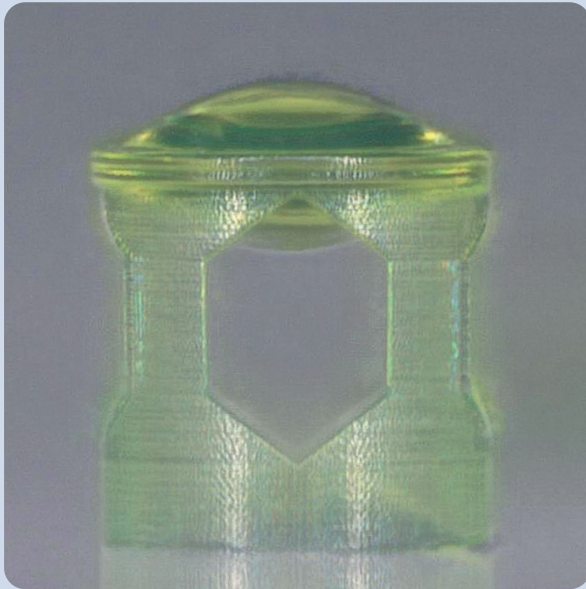


Industry leaders in
manufacturing of
optical components

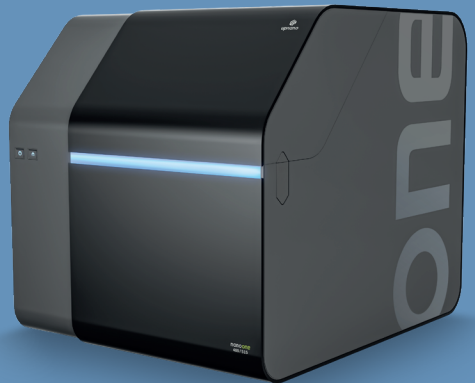


Technology leaders in high-resolution 3D printing

UpNano operates as a comprehensive system provider specializing in high-resolution 3D printing solutions. Our portfolio encompasses the entire spectrum of development, production, and manufacturing of cutting-edge printing systems and printed parts.

nano **one** green

With a green wavelength of 515 nm and a laser power of 400 mW, the NanoOne green is the newest powerful engine added to the NanoOne family. With over 30% higher precision compared to a 780 nm laser wavelength and ability to work with a broader range of standard and transparent materials, the NanoOne green supports a variety of new, exciting research and industrial applications.

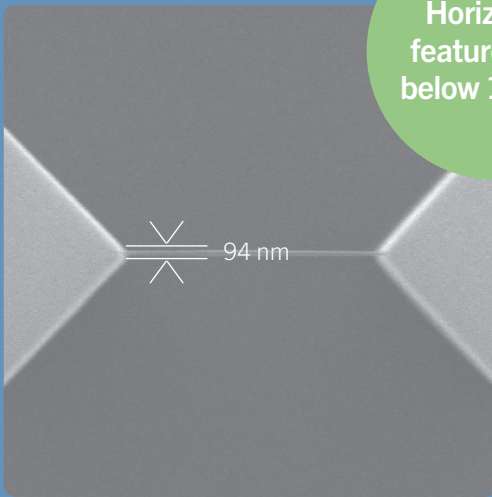


nano **one** ₂₅₀ nano **one** ₁₀₀₀

The NanoOne series also offers 780 nm wavelength red laser model options with either 250 mW or 1000 mW laser power depending on requirements.

Printing transparent materials at high resolution

The NanoOne green achieves a resolution of less than 100 nm and a maximum height of over 40 μm , making it an ideal solution for the production of optics and photonics.



Horizontal
feature sizes
below 100 nm

Sample is gold sputtered

Contact our sales team
for more information:

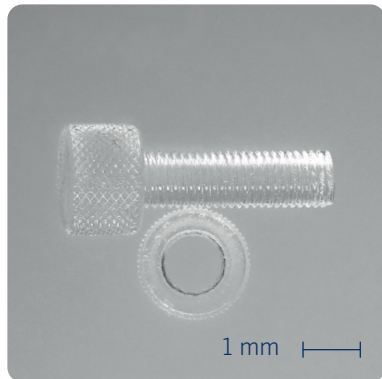
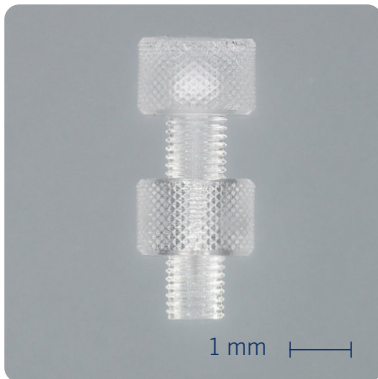
sales@upnano.com

UpQuartz

In cooperation with Glassomer, UpNano has developed a nanocomposite slurry for manufacturing fused silica (SiO_2) parts.

Parameters

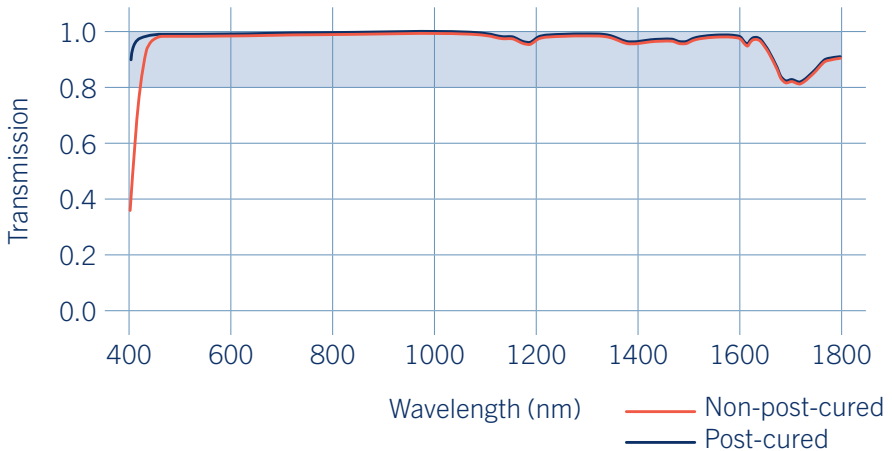
- 5x objective
- 200 mW laser power
- 400 mm/s scanning speed
- 12.5 μm layer height
- 8.0 μm line spacing
- Voxel mode
- Coarse infill



This transparent glass bolt and nut were printed in UpQuartz, resulting in a high-resolution part that is 100% silica glass after a thermal post-treatment.

UpOpto

UpOpto features high optical transparency, exhibits ultralow autofluorescence and transmission down to 350 nm. UpOpto also does not require any thermal post-treatment.

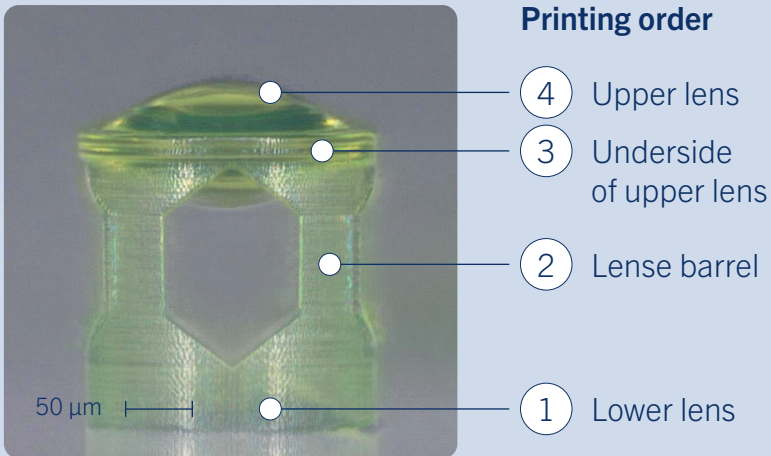


Transmission data for UpOpto photoresin before and after 2PP curing. UpOpto shows excellent light transmission behavior and even enables usage in the UV spectrum (80% transmission at 380 nm).

Printing optics using our NanoOne 3D printing platform

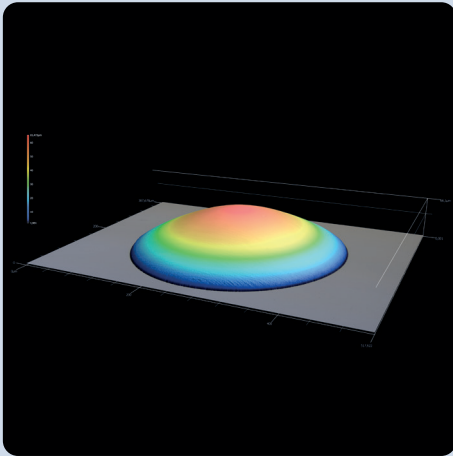
Both our UpPhoto and UpOpto materials are capable of printing high resolution optical arrays, photonic structures and microoptics with the possibility of AR coating the polymer lenses.

This stacked lens, for example, shows ultra-low surface roughness on the upper and lower lens.



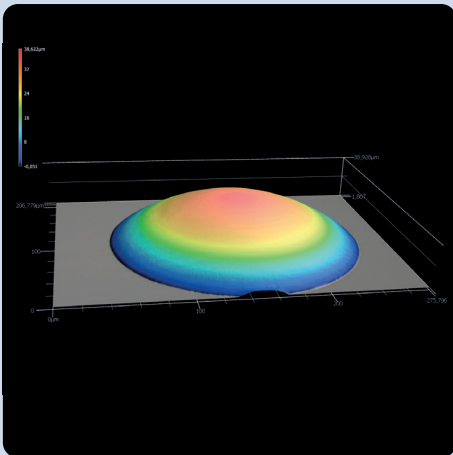
Printing time 10 min 28 s

Upper lens



Diameter: 250 μm
Sag: 50 μm
Shape deviation: $<0.75 \mu\text{m}$
Surface roughness: $Sq < 10 \text{ nm}$

Lower lens



Diameter: 200 μm
Sag: $>30 \mu\text{m}$
Shape deviation: $<0.75 \mu\text{m}$
Surface roughness: $Sq = 9 \text{ nm}$



Download brochure



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