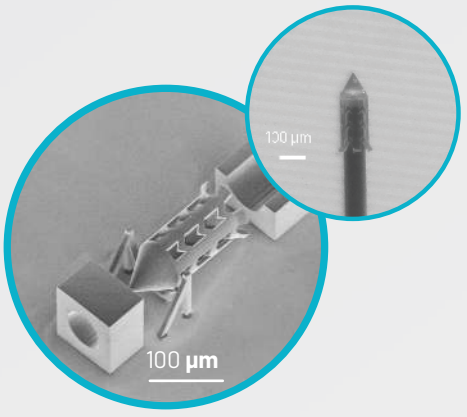
IQS NANO

USE CASES

Optical fiber tip

Optical fiber tip features a microstructured guiding element designed to facilitate precise insertion into optical systems or narrow microslots, with internal or shaped features enabling advanced functions, such as controlled light or airflow.

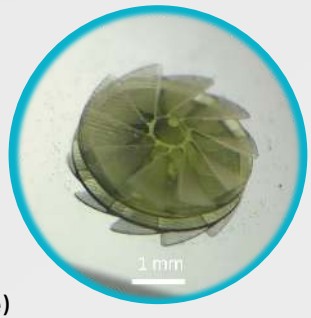
Resolution: 0.20 X 0.20 X 0.25 µm
Fiber tip dimension: 0.15 x 0.75 x 0.15 mm
Print Time: 30 min (entire tip)



Components & Micro devices

High-precision components of any scale supported by rapid prototyping and the production of intricate mechanical parts with exceptional accuracy.

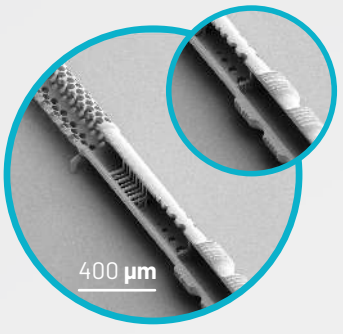
Resolution: 0.3 x 0.3 x 2.00 µm
Print Time: 3 h 18 min (entire turbine)



Micro Implants

Enables fabrication of complete 3D objects with fully defined internal structures. This example shows a printed stent designed to reduce intraocular pressure.

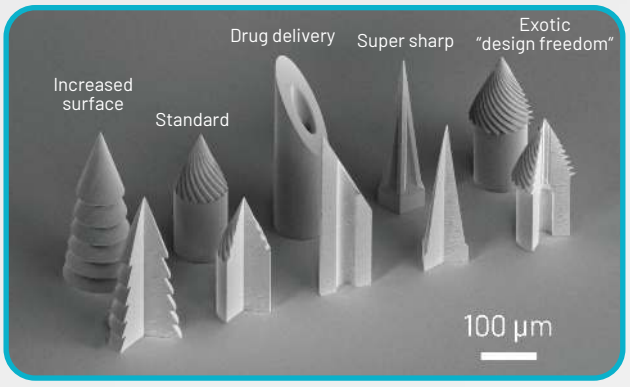
Resolution: 0.20 × 0.20 × 0.25 µm
Print Time: 1 h (per piece)



Drug Delivery Systems

Microneedles enable ultra-precise, customizable solutions for painless drug delivery, sample collection, or microsensor integration—with the ability to incorporate internal channels, reservoirs, filters, and other advanced features.

Resolution: 0.25 × 0.25 × 1.00 µm
Print Time: 41 min (entire microneedle benchmark)



Contact us

www.iqsnano.com
sales@iqsnano.com

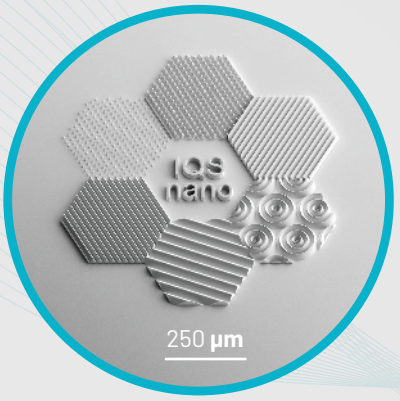
IQ NANO 3D

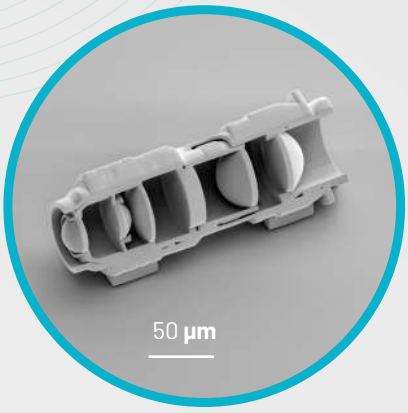
USE CASES

Flat Optics

Redefining light control via high-precision, scalable 3D designs. Flat optics enable advanced light control through scalable, high-resolution 3D microstructures.

Resolution: 0.25 × 0.25 × 0.25 µm
Print Time: 43 min (entire flat optics benchmark)





Micro-Optic and Photonic Devices

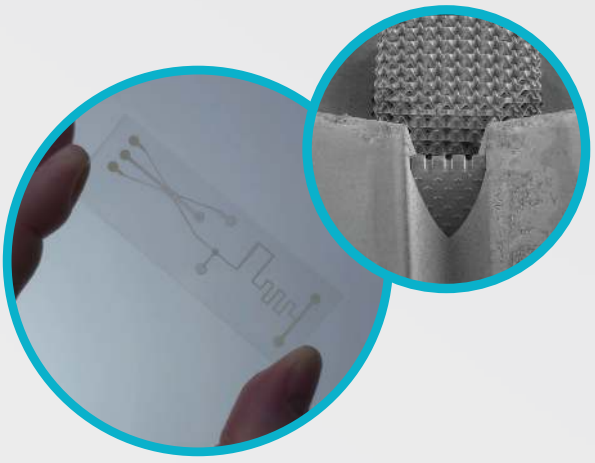
Micro optics devices enable seamless integration of optics, mechanics, and electronics for multifunctional, next-generation systems.

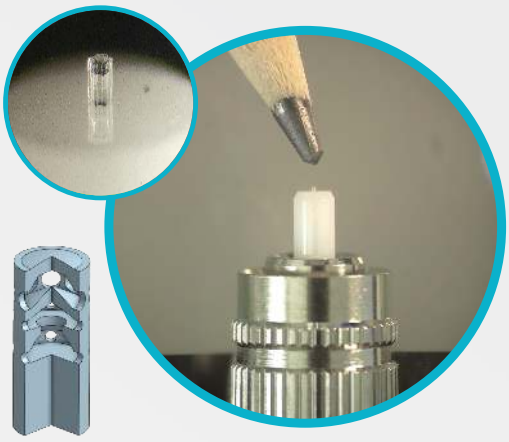
Resolution: 0.20 × 0.20 × 0.25 µm
Time: 1 h (entire objective lens)

Microfluidics

Direct 3D printing inside microfluidic chips enables precise integration of scaffolds, filters, and other functional elements—even deep within complex internal structures—or fabrication of complete chips with embedded components for advanced fluidic control.

Resolution: 0.30 × 0.30 × 2.00 µm
Print Time: 2.5 min (entire chip)





Printing on Optical Fibers

Printing structures directly onto optical fibers enables a new application area for creating functional optical tools in fields such as photonics, biomedicine, and beyond.

Resolution: 0.25 x 0.25 x 2 µm
Time: 15min (Microstructured fiber tip)

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Contact us
www.iqsnano.com
sales@iqsnano.com