



THE FREEDOM TO SHAPE
GLASS AT THE MICROSCALE

GLASS LASER MANUFACTURE



EASY TO
OPERATE

FROM
MICRO TO CM

BUDGET
FRIENDLY



MADE FOR YOU

INDUSTRIAL R&D
WATCH & JEWELRY

BIOTECH & LIFE SCIENCE
QUANTUM COMPUTING

SEMICON
PHOTONICS

OPTIMIZED TO PERFORM



- Multi-scale glass processing from μm to cm
- Automatic surface detection
- Self-aligning optical system
- Real-time process monitoring
- Effortless fabrication mode transition

3D STRUCTURES IN GLASS

MICRO-MECHANICS
MICRO-ROBOTICS

MICRO-OPTICS
MICRO-LENS ARRAYS

LAB-ON-CHIP
MICRO-FLUIDICS

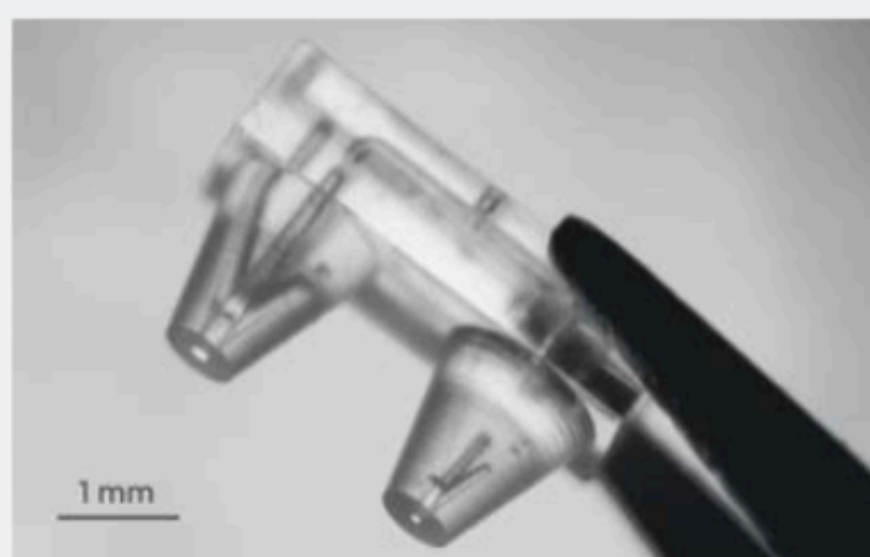
TECHNICAL SPECIFICATIONS

Femtosecond laser source	Central wavelength	1030 ± 10 nm
	Average power	10 W
	Max. pulse energy	> 100 μJ
	Repetition rate	100 kHz – 1 MHz
	Pulse duration	400 fs – 4 ps
Positioning stages (XYZ)	Travel (XYZ)	120 mm × 120 mm × 60 mm
	Accuracy	± 0.5 μm
	Bi-Directional Repeatability	± 0.15 μm
	Maximum speed (XY no load)	350 mm/s
Galvano scanners	Scan angle	± 0.35 rad
	Repeatability	0.4 μrad RMS
Process specifications	Technology	Selective laser induced etching, ablation, welding, refractive index modification
	Materials	Glass and other transparent materials
	Smallest feature size	> 1 μm
	Minimum surface roughness	< 200 nm
	Maximum object height	20 mm
	Aspect ratio	> 1:200
	Minimum micro hole diameter	5 μm

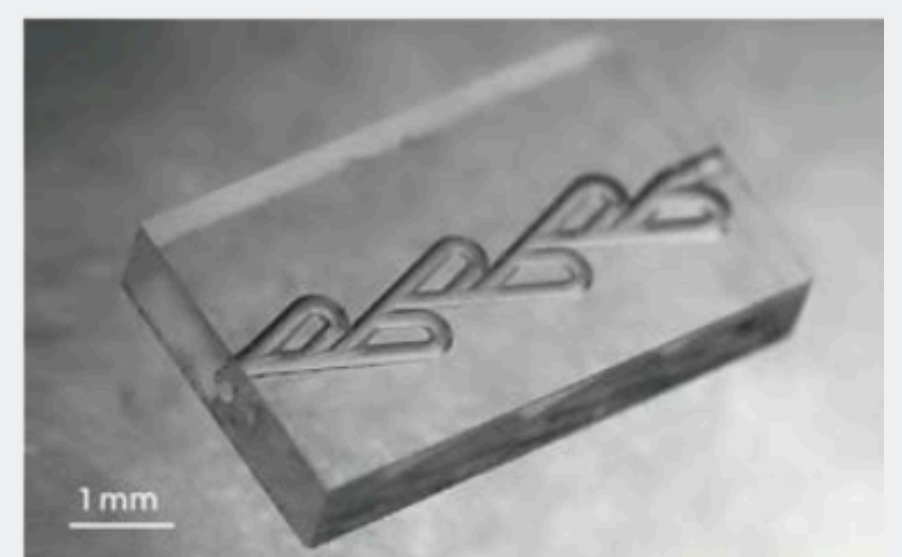
MADE WITH THE TECHNOLOGY



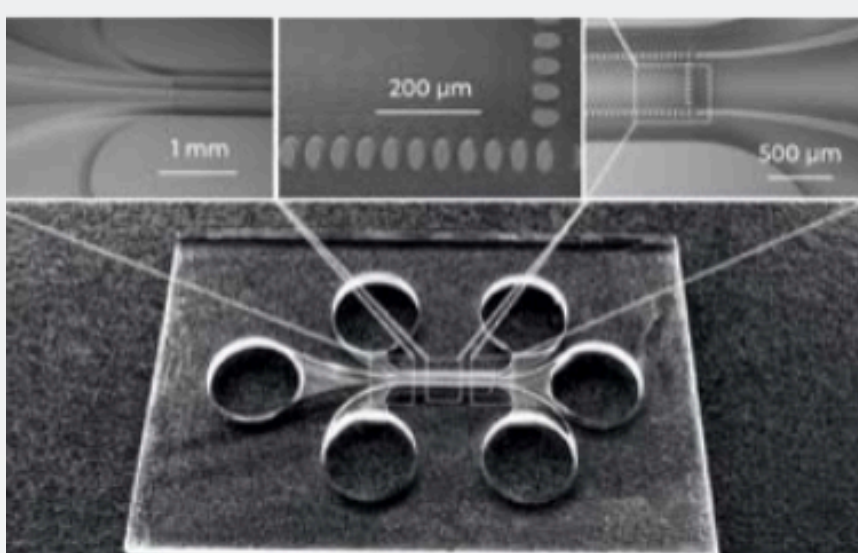
Gears system



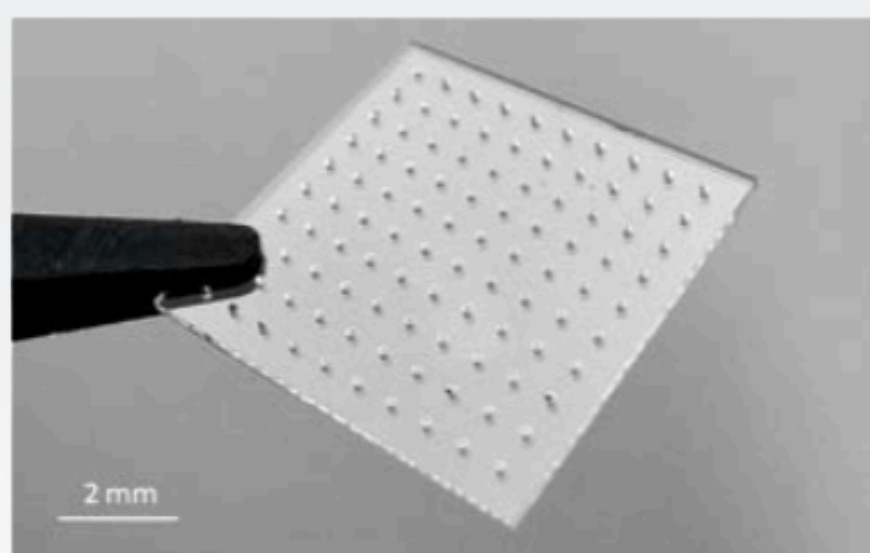
3D nozzle



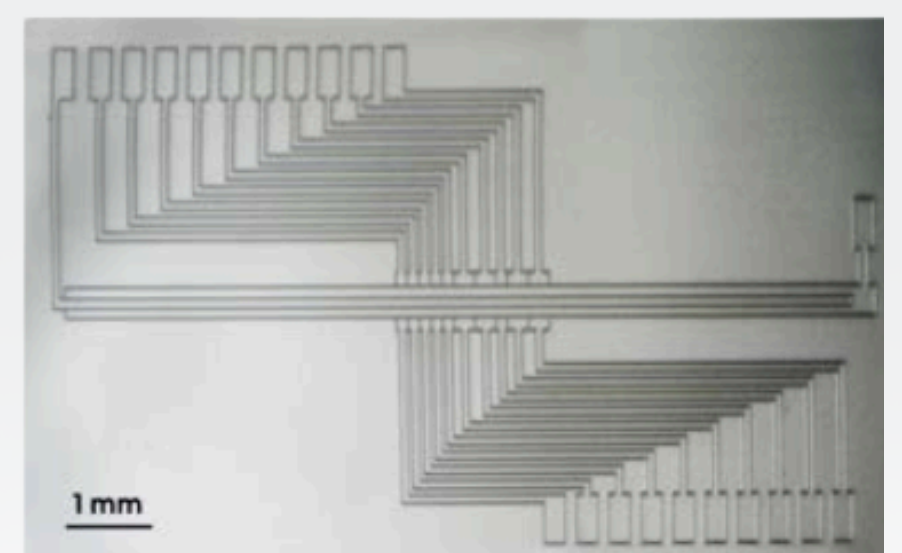
Tesla valve



Microfluidics



TGVs



Ion traps



BE ONE STEP AHEAD —
MICRO-SHAPE GLASS WITH EASE



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