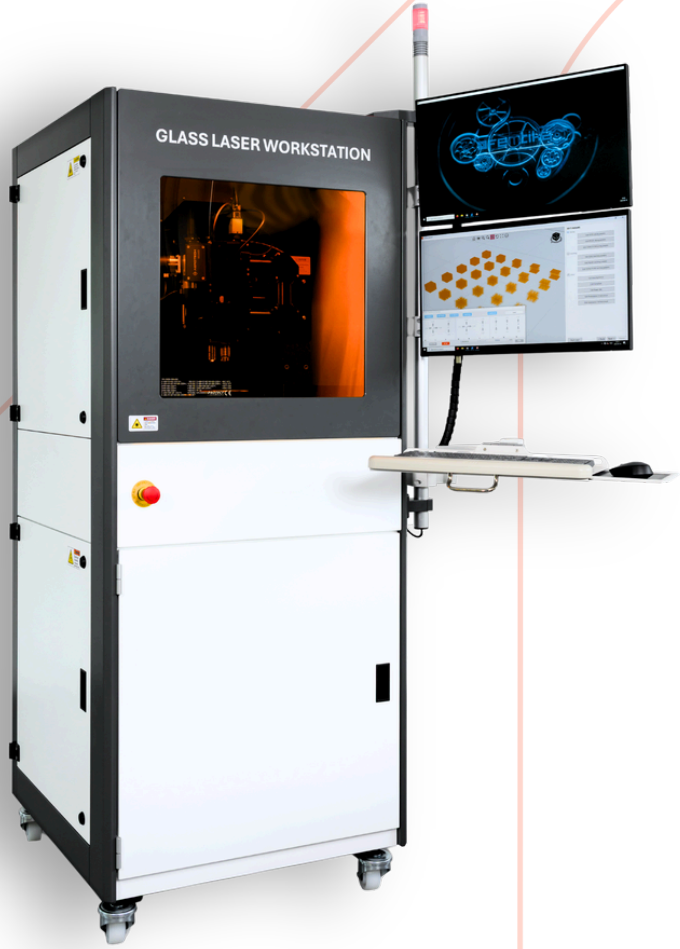
FX Glass

120 / 160 / 300



KEY FEATURES

Multi-Scale Precision
Multi-scale glass processing from cm to µm

Glass-Optimized
Tailored for glass part manufacturing

Seamless Switching
Effortless fabrication mode switching

Smart Auto-Alignment
Self-aligning optical system, automatic surface detection and real-time process monitoring

Intuitive Software
User-friendly software for design and manufacturing

ABOUT FX GLASS

High precision 3D microfabrication machine for Selective Laser (Induced) Etching of glass, using a femtosecond laser for micro-accurate and stitching-error-free fabrication of:

Free-form channels
channels down to ∅ 5 µm

True 3D structures
channels & geometries

Smooth surface
roughness down to 200 nm

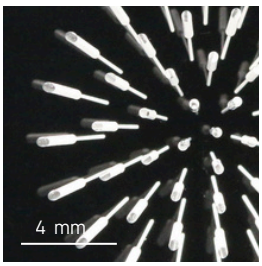
Inside the glass
fabricated without assembly

femtika.com
sales@femtika.com

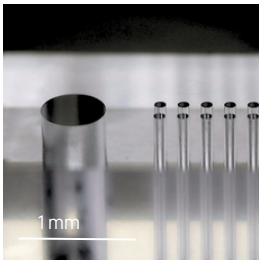
femtosecond laser machines & services

femtika

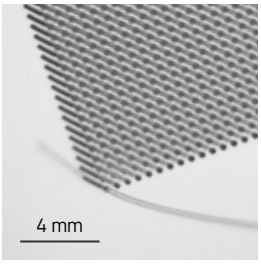
PRODUCTION SAMPLES



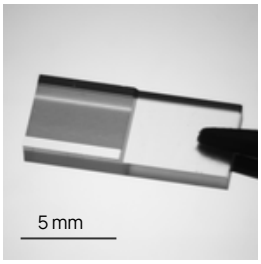
Angled holes



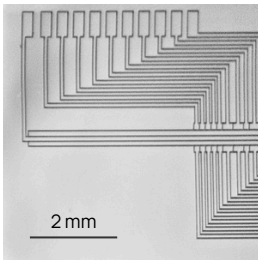
Microhole array / TGVs



Fiber alignment array



V-grooves



Ion traps

PROCESS SPECIFICATIONS

Technology	Selective laser induced etching (3D), ablation (2D), refractive index modification
Materials	Fused silica, Borosilicate glasses, ULE, Alkaline-free boro-alumino-silicate glass
Smallest feature size	> 1 µm
Surface roughness	200 nm @ max. 4 mm thickness
Max. object height	20 mm
Aspect ratio	1:200
Min. hole diameter	5 µm @ 0,2 mm thickness

TECHNICAL SPECIFICATIONS

		FX Glass 120	FX Glass 160	FX Glass 300
Femtosecond laser source	**Wavelength**	1030 ± 10 nm	1030 ± 10 nm	1030 ± 10 nm
	Max. average power	10 W	10 W	10 W
	Repetition rate	80 kHz - 1.6 MHz	Single-shot - 1MHz	Single-shot - 1MHz
	Pulse duration	400 fs - 4 ps	250 fs - 10 ps	250 fs - 10 ps
Positioning stages (XYZ)	**Travel (XYZ)***	120 mm × 120 mm × 100 mm	160 mm × 160 mm × 60 mm	300 mm × 300 mm × 60 mm
	Accuracy (XYZ)	± 0.5 µm	± 0.3 µm	± 0.75 µm
	Maximum speed (XY no load)	1000 mm/s	350 mm/s	1000 mm/s
Galvano scanners	**Accuracy**	50 µrad	50 µrad	50 µrad
	Repeatability	0.4 µrad RMS	0.4 µrad RMS	0.4 µrad RMS

*For larger working area configurations, please contact our sales team

FX Glass

120 / 160 / 300

STANDARD PACKAGE

- 12 months standard warranty
- Free software upgrades throughout the warranty period
- 24h support response time during working hours
- Follow up online consultations / trainings (10h)

OPTIONAL

- Warranty period extension
- Complete solution with etching kit
- Additional operator or process training

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