

FX Fiber

FBG writing



KEY FEATURES

FBG Software

Dedicated FBG writing software for simplified manufacturing

Auto Core Detection

Fiber Core detection using camera and autofocus

Flexible Writing Modes

Point-by-point and line-by-line writing capability

4-Core Compatible

4 core fiber compatible

Through-Coating Writing

Through-coating inscription capability

No Stripping

Cladding removal via laser ablation

Roll-to-Roll Production

Roll-to-roll production capability with immersion optics

ABOUT FX FIBER

High precision fiber processing machine for Fiber Bragg Grating (FBG) writing, built on Selective Laser (Induced) Etching (SLE) technology and powered by a femtosecond laser, delivering accurate and repeatable inscription of FBGs, with:

Multicore gratings

FBGs written in up to 4 fiber cores

Repeatable inscriptions

in germanosilicate, pure silica, and multicore fibers

Through-coating writing

no stripping needed

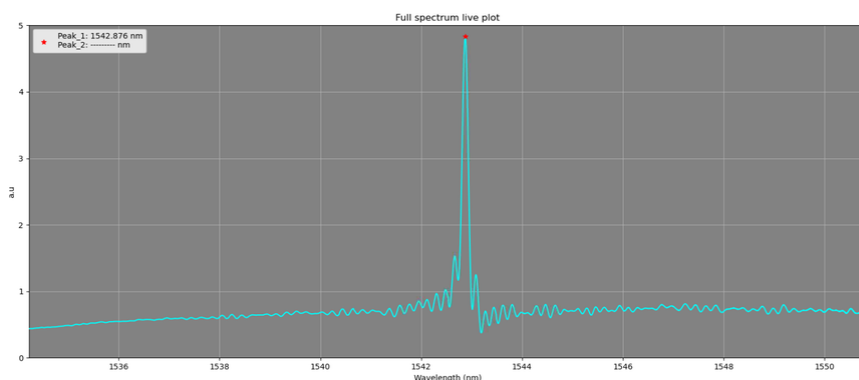
Glass processing

3D processing of transparent materials

PROCESS SPECIFICATIONS

Technology	Fiber Bragg Grating Inscription by Femtosecond Laser
Materials	Standard germanosilicate fibers, Pure silica core fibers, Multicore fibers (MCFs)
Inscription method	PbP / LbL / phase mask / scanning

MEASUREMENT RESULTS



Measurement performed using Componous interrogator

Fiber Bragg Grating (FBG) Writing

Reflecion spectrum of a fiber Bragg grating inscripted through the fiber coating using the line-by-line technique.

TECHNICAL SPECIFICATIONS

FX Fiber		
Femtosecond laser source	Wavelength	515 ± 10 nm
	Max. average power	5W @ 515 nm
	Repetition rate	Single-shot - 1MHz
	Pulse duration	250 fs - 10 ps
Positioning stages (XYZ)	Travel (XYZ)*	100 mm × 50 mm × 60 mm*
	Accuracy (XYZ)	± 0.2 µm
	Maximum speed (XY no load)	300 mm/s
Galvano scanners	Accuracy	50 µrad
	Repeatability	0.4 µrad RMS

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

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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