

microSHAPE™ FSLA

Laser System for Machining of Glass and Sapphire using FSLA™

3D-Micromac's microSHAPE™ FSLA laser system is designed for high accuracy drilling and structuring of glass or Sapphire substrates using *FSLA™ (Flow Supported Laser Ablation).

The high flexible system allows to process glass or sapphire wafers from 2"-8" as well as strengthened or unstrengthened display glasses with bore holes, micro channels as well as complex microstructures with superior quality.

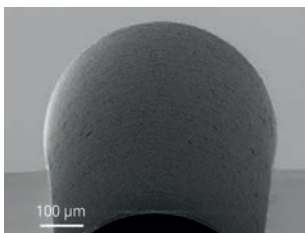
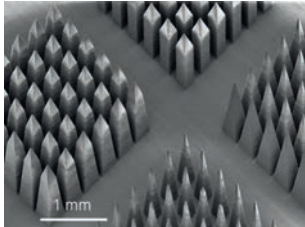
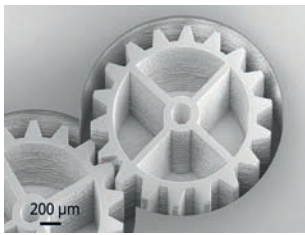
microSHAPE™ FSLA offers:

- Integration of picosecond or femtosecond laser source
- Various optical setups suitable for glass processing
- Up to 2 parallel beam paths for simultaneous processing
- Quick change of work piece clamping unit
- User-friendly, flexible, upgradeable system control

*Patent pending



microSHAPE™ FSLA - System Configuration



Configuration packages

- Hole drilling set-up
- Structuring set-up

Options

- Second beam path for simultaneous processing of two identical samples
- fs lasersource
- 1064 nm beam path instead of 532 nm
- Automatic handling

Substrate size	<ul style="list-style-type: none"> • Wafer size from 2" to 8" • Rectangular substrates up to 400 x 200 mm
Laser sources	<ul style="list-style-type: none"> • ps laser source (532 nm) in standard configuration
Beam delivery unit	<ul style="list-style-type: none"> • Beam path for 532 nm • High dynamic 2D galvo scanner
Positioning system	<ul style="list-style-type: none"> • X-Y positioning system • Optical z-axis for high drilling speed • Travel distance 400 mm x 200 mm • Positioning accuracy ± 0.002 mm • Repeatability ± 0.001 mm
Working area	<ul style="list-style-type: none"> • One working area: <ul style="list-style-type: none"> • Wafer size 2"- 8" • Rectangular glass sheets: 400 x 200 mm • Two working areas: <ul style="list-style-type: none"> • Wafer size 2"- 8" • Rectangular glass sheets: 200 x 200 mm • Customized Chucks depending on substrate size
Alignment	<ul style="list-style-type: none"> • Manual, semi-automated or fully-automated work piece alignment with XY system and optical measurement system available • Automatic Z positioning
Software microMMI™	<ul style="list-style-type: none"> • Control and supervise of all hardware components and machining parameters • Different user levels (administrator, supervisor, operator) • Data input file types: DXF, CSV, Gerber, CLI, others on request
Safety	<ul style="list-style-type: none"> • Laser class 1 housing with integrated control panel • Certified laser window or overview camera (webcam) • Active exhaust system included

Changes in accordance to technical progress are reserved.