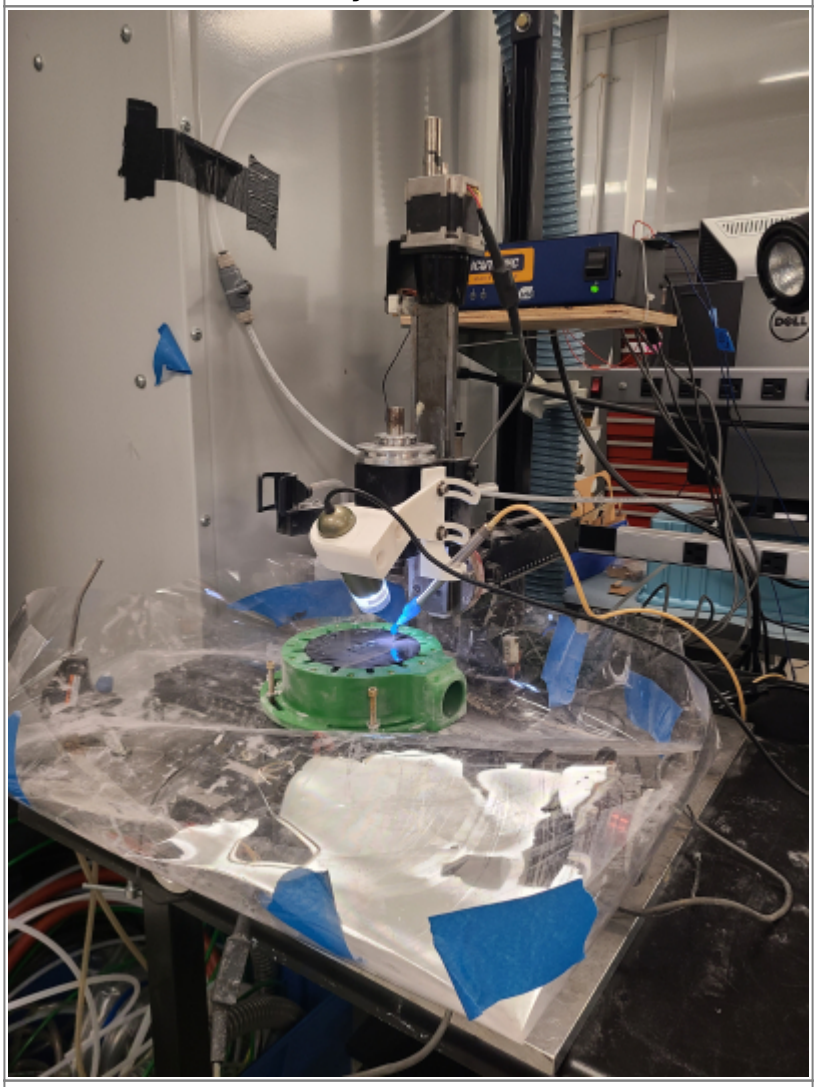
Crystalmark Etching Tool

Crystalmark

Tool Type: Etching Tool
Location: Microfluidics Lab
Description: [SOMETHING]
Manufacturer: CrystalMark

About

The CrystalMark Etcher is located in the Microfluidics Lab on the middle table by the Haas CNC in 3430. It is attached to the Sherline CNC Diamond Drill.

It uses air pressure and aluminum oxide abrasive to cut or etch patterns in materials such as glass or silicon. The kerf of the cuts are 700 microns.

Patterns and pre-programmed holes can be uploaded via .dxf files to a program called **insert program here**, and holes can also be added manually.

Safety Concerns

Inhaling large amounts of aluminum oxide can be hazardous. It is recommended to wear a mask and eye protection when using the CrystalMark.

Training Documentation

CrystalMark SOP

Detailed Specifications

- Stepper motor mounts and couplers on X-, Y- and Z-axes
- 70-2800 RPM continuously variable by electronic speed control
- Maximum CNC travel positioning speed: 22 in/min
- Max clearance (table to spindle): 8.00″ (203 mm)
- Travel axes x,y,z: 8.65″ (220 mm), 5.00″ (127 mm), 6.25″ (159 mm)
- CNC Stepper motor holding torque: 136 oz-in

Reference Documentation

https://support.formlabs.com/s/article/Design-Specs?language=en_US

flexible_resin_sds_eu.pdf

formlabs_clear-sds.pdf

durable_resin_sds_eu.pdf

workshops_3d_printer_rates_112019_1_.pdf

Guide to printing with clear resin