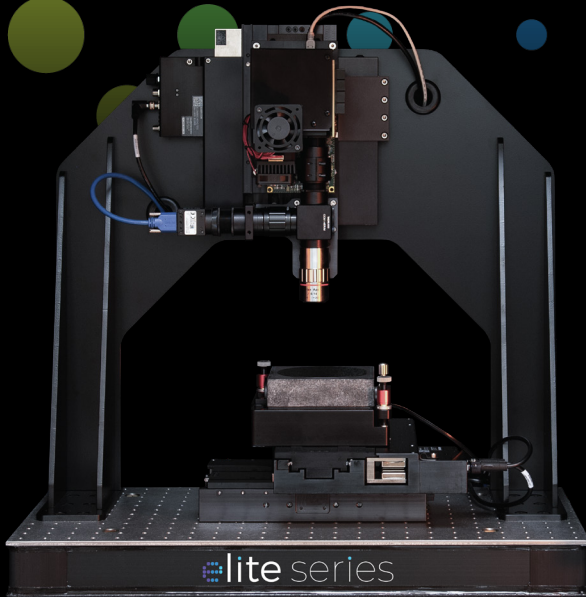


 lite series

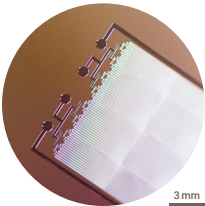
# Microfabricate On-Demand



## TERA-Fab Elite series

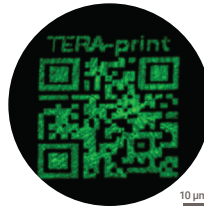
- Access a wide spectrum of chemistries with multi-wavelength illumination (365nm - 532nm)
- Pattern structures and devices on samples up to 4-inch wafer in size
- Upload custom digital masks and prototype on the fly
- Pattern high-resolution features down to  $\sim 1 \mu\text{m}$

# Enabled Applications



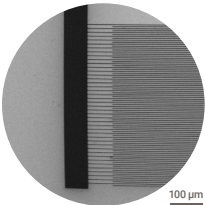
## Microfluidic Devices

Pattern with standard photoresists (e.g., SU-8) and build testable devices in hours.



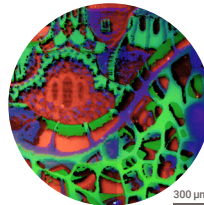
## Soft Materials

From hydrogels for tissue engineering to stimuli responsive materials for soft microrobotics.



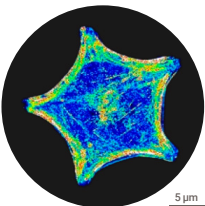
## Electronics + Biosensors

Fabricate microelectronic devices and state-of-the-art sensors for sensing applications.



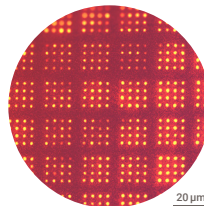
## Multiplexed Printing

Pattern unique chemistries layer-by-layer or in-registry with existing structures.



## Bioprinting

Explore the biomaterials space and develop custom inks for various applications, including cell surface studies.



## And More...

Explore a variety of different photochemistries compatible with our TERA-Fab Elite.

TERA-Fab® Elite

# A Maskless Photolithography Tool

## MOTORS / STAGES

### Linear translation stages (xy)

- Travel Range: 110 mm
- Unidirectional Accuracy: 1  $\mu\text{m}$
- Repeatability: < 0,08  $\mu\text{m}$
- Travel Speed: 0-1,200 mm/s

### Vertical translation stages (z)

- Travel Range: 60 mm
- Unidirectional Accuracy: 1  $\mu\text{m}$
- Repeatability: < 0,08  $\mu\text{m}$
- Travel Speed: 0-1,200 mm/s

## OPTICS

### DLP (2nd Generation)

- DMD chipset: 1920 px x 1080 px
- Pixel size: 5  $\mu\text{m}$  x 5  $\mu\text{m}$
- Projection Area: 9,6 mm x 5,4 mm
- Dual LED options:
  - 365 nm + 460 nm
  - 405 nm + 532 nm
- Light intensity (5x mag.):
  - > 35 mW/cm<sup>2</sup> (365 nm)
  - > 300 mW/cm<sup>2</sup> (405 nm)

## SOFTWARE + ADDITIONAL FEATURES

- Digital photomask platform allowing arbitrary surface patterning
- Auto-focusing feature allows seamless large area patterning
- Custom 4 inch Si wafer chuck and microscope slide attachment
- Vacuum sample holder