



3D Micro Fabrication Module for Microscopes

A versatile, user-friendly, 3D micro fabrication device

The device consists of a novel laser accessory for microscopes which enables the fabrication of 3D polymer, protein, metal or other biomaterials microstructures. These microscopic structures are realized as a result of a high definition photochemical process initiated at the focal point of a laser. The surface of these structures is automatically generated by the laser which is driven by 3D scan files, or CAD files (SoliWorks, AutoCad)

The 3D Micro Fabrication Kit includes :

A laser module

A sample module

3D Micro fabrication software

One day's training

A Polymer or Protein starter kit



Product Benefits

- **Higher chemical efficiency** than femtosecond lasers

- **Cost effective**

- **High definition** 3D fabrication device (<200 nm)

- **High levels of flexibility** in nano/micro fabrication

- **Compact, Easy to use and Versatile**

- **Suitable for use in all laboratory environments**

Applications :

- Microfluids
- Microoptics
- Cellular Biology
- Microelectronics
- Micromechanics
- Micro chemistry
- Biotechnology, etc.

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A versatile, user-friendly, 3D micro fabrication device

A flexible approach

The device is suitable for these and many more applications ...



Technical Details

Polymer or Protein Fabrication Kit :

- **Compact Laser Module (200x150x120 mm³)**
 - Microlaser Nd:Yag (1064 or 532 nm, up to 40kHz, 0,5 ns)
 - Optical acoustic modulator (pulse energy from nJ to µJ)
 - Laser beam optics
- **A Sample Module**
 - Piezo-electric nano-positioning capabilities (0-100 µm, resolution 2 nm)
 - Microscope slide support
- **Advanced software** dedicated to the positioning and management of 3D laser trajectories

Additional Options :

- System also usable with **femtosecond laser pulses**
- Potential to develop **other microstructures** (metal, biological structures, etc.) : please call us for more details

A scientist at work on the production of micro pumps at the Biomedical Engineering and Scientific Material Department (Central Taiwan University of Science and Technology)

