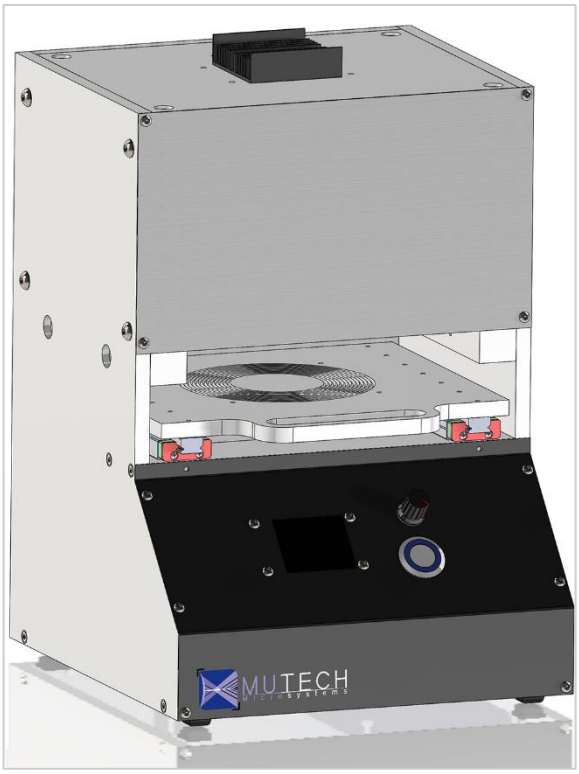
# µExposer

## FEATURES

- Long life LED based light source
- Parallel light optics
- 365nm wavelength
- Up to 4 inch wafers can be exposed
- Context-based navigation with buttons and a rotary encoder
- Very robust and easy to use
- Highly customizable for specific use scenarios




### Mutech microexposer

Mutech microsystems microexposer is a High Value UV exposing system designed for microfabrication applications.
It allows the user to perform fast lithography processes on samples and substrates.

The system consists of an UV 365nm parallel LED light source and a sliding tray where you can put your photolithography mask and sample to expose.

A variety of custom holders and customizations can be provided for your application.

### Technical specifications

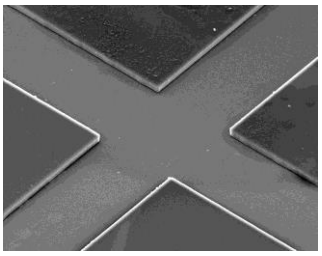
| Optics | |
|---|---|
| Wavelength | 365±5nm |
| Exposure time | 0.1 - 100 s |
| Exposure area | 100mm diameter |
| Power density | 0.2 - 20 mW/cm^2 |
| Homogeneity | < 5% |
| Light divergence | < 2° |
| **Mechanics** | |
| Size | 220x230x320 mm |
| Weight | 9kg |
| Power | 110v/220v 50w |

## The lithography process

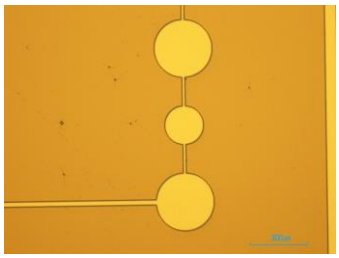
The lithography process is the basic technique for reducing the size and dimension of devices, in the "top-bottom" approach. This technique is transversal to many fields of physics, engineering and biosciences, expanding and consolidating microfabrication applications and nanotechnology. During the lithography process a pattern is transferred to a light sensitive resist, spin coated over the sample. The photoresist is then developed removing the exposed areas (for positive photoresists). Using chemical or physical etching (e.g. ion bean or acids attacks), the unprotected areas of the sample are removed and the desired pattern is finally transferred to the sample.

## Main applications

The microexposer is a robust system (all metal body structure), especially designed for easy use, low maintenance requirements and fast single layer device fabrication. Custom sample holders can be ordered for special substrates and samples, such as not flat or flexible substrates. The microexposer is ideal for scaling from lab fabrication to low volume commercial production.







## A complementary tool for our direct laser system

Our microLaser:Direct Laser Lithography System, allows the user to fabricate its own optical masks, offering an increased versatility. The microexposer system, as a complementary tool of the microlaser offers the possibility to work with 365 nm sensitive photoresists and obtain high aspect ratio structures in the lithography process. These possibilities make the microexposer and microlaser package, the ultimate low cost solution for the fast fabrication and development of single layer applications, including biomedical and microfluidics devices.

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