

UV-photolithography mask-aligner



The mask-aligner is a flexible and high-precision alignment tool used in photolithographic processes. It uses UV-light to transfer geometric features (pattern) from a photomask to a surface of a substrate (e.g. a silicon wafer) with a photoresist coating.

The system can be used with positive and negative photoresists, depending on the desired final feature.

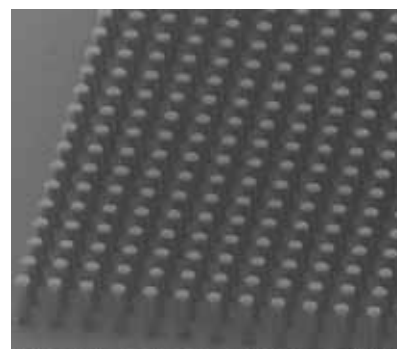
With this system it's possible to handle standard and non-standard substrates, like semiconductors compounds, glass, foils as well as distorted and drilled substrates. It's widely used for MEMS, microfluidics and optoelectronics applications.

Technical specifications

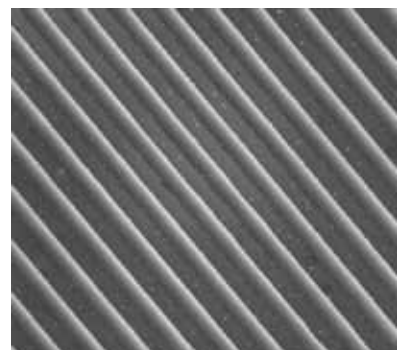
- Wavelength range: 305-450 nm
- Exposure source: Hg lamp, 350 W
- Lamp control modes:
 - Constant power
 - Constant intensity
- Exposure modes:
 - Soft Contact (variable mechanic pressure)
 - Hard Contact (variable mechanic pressure + additional nitrogen pressure) with an adjusting range between 0 and 50 mm.
- Substrate size: from 10 mm to 4" (100 mm) in diameter with thicknesses between 0.1 and 4 mm.
- Mask size: from 10 mm to 5" (125 mm) in diameter (e.g. Cr mask available at the Nanotechnology Platform)
- Minimum resolution print down to 1 μm
- Equipped with a 10x Optical microscope with diffraction reducing optics

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*10 μm diameter pylons
manufactured in 50 μm thick SU8
resist, imprinted using a Cr mask.*



*1 μm lines manufactured in 1 μm thick
AZ1512 resist.*

Manufacturer
SÜSS Microtec

Model
MJB4

NANOTECHNOLOGY
PLATFORM

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