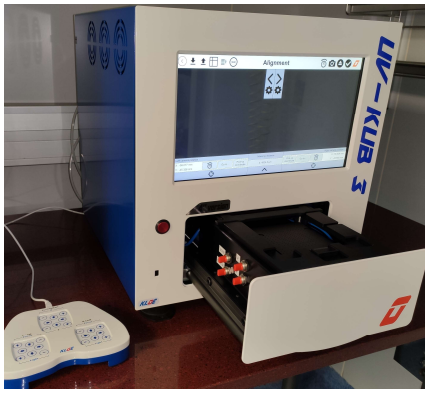
Institute for Bioengineering of Catalonia

MicroFabspace

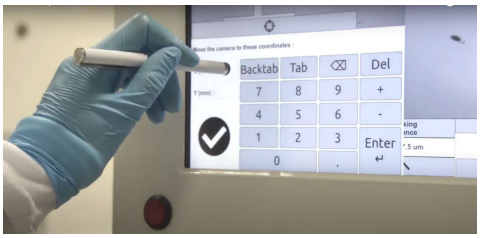
Core Facilities

Manufacturer
KLOÉ S.A.

Model
UV-KUB3



Mask aligner



UV-Photolithography for microfabrication

UV-photolithography is widely used for MEMs, microfluidics and optoelectronics applications.

The KUB3 accepts small samples, as glass covers or slides, and large ones, till 100 mm. Its cold LED source at 365nm, assures a homogeneous exposure on the whole area, compatible with most used UV- sensitive photoresists.

Technical specifications

- Cold UV source:
  - LED of 365 ± 5 nm with adjustable power to a maximum of 35 mW/cm² ± 10%
  - Divergence angle < 1.5º. Homogeneous exposure on an area of 100 mm x 100 mm
  - Temperature variation inside the exposure chamber < 1ºC
- Optical resolution using Cr mask: 1 µm
- Alignment resolution < 2 µm
- Resolution in Z movement: 0.5 µm
- Resolution in XY movement: 0.2 µm
- Rotation of the sample holder around Z axis
- Exposure modes: Pulsed and continuous
- Contact modes: Soft and hard
- Compatible with 5” Cr or acetate masks
- Anti-reflective substrate for samples till 100 mm edge size
- Substrate thickness allowed: from 250 µm to 4 mm thick, for 4” wafers and from 400 µm to 4 mm thick, for smaller samples
- 2 HR cameras with zoom for alignment, with maximum resolution of 1.5 µm
- Joypad for substrate-to-mask distance control and alignment
- Colour touchscreen of 15.6”

Material available*

- Cr masks can be fabricated at the MicroFab Space under demand (ask for a quote on microfab@ibecbarcelona.eu)
- Photoresists: AZ 5214, AZ 1512, SU8 2010, SU8 2050, SU8 3050, SU8 2100
- Adhesion promotors: TI prime, OmniCoat
- Developers: AZ 400K developer, AZ 726MIF developer, SU8 developer
- Removers: AZ 100 remover, Remover PG

*Possibility to implement new materials under demand.

Aquest equip ha estat cofinançat en un 50% pel Fons europeu de desenvolupament regional en el marc del Programa operatiu FEDER 2014-2020

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