

## UV-KUB 3 *4" version* *6" version*

The new generation of Mask Aligner

*The mask aligner UV-KUB 3 is the **first** mask alignment system equipped with a **UV-LED source**, that provide an **unrivalled collimation and homogenous exposure**, on the international market.*

This new generation mask aligner is fully operated by a **touch-screen** for exposure and is controlled with a **joypad** for alignment operations. **Entirely secure** thanks to its dust-proof hood, this equipment is the only solution on the market that democratizes precision photolithography **without requiring a cleanroom type environment**.



### Technological breakthroughs

#### High quality collimation

**Divergence angle below 2°** offers the possibility to work in masking mode on thick layers without altering the rendering of edges of the patterns.

This **high-quality collimation** allows to reach resolution down to the micrometre scale **without needing a vacuum contact mode**.

#### Resolution & alignment precision

This new generation of mask aligner enables to realize microstructures **below 1µm** over the entire 4" or 6" work surface with an **alignment precision of less than 1µm**.

#### LED technology

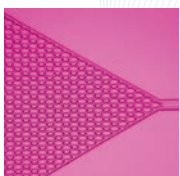
Perfectly **monochromatic** exposure light source.

A **cold UV source**, prevents undesirable thermal effects.

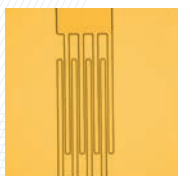
Operate in **continuous or pulse mode**.

**Long lifetime**: the uv-led light source is no longer considered as a consumable item.

### Related applications



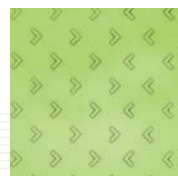
Microfluidics



Microelectronics



Photonics



Surface functionalization

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## Performances

Resolution	1µm
Alignment accuracy	1µm
Divergence angle	≤ 2°
Number of programmable cycles	100
Exposure cycles (continuous or cyclic)	From 1s to 1h
Processes	Hard (physical) or soft (proximity) contact processes
Visualization system resolution	1,5µm
θ substrate displacement resolution	5.10-4°
XYZ substrate displacement resolution	0,4µm

## UV-LED source

Wavelength	365nm +/- 5nm
Homogeneous exposure	+/- 5%
Lifetime of the LEDs	> 10 000 hours

## Working/Writing surfaces

Working surface	4" or 6" wafers
Accepted masks size	up to Ø 5" or Ø 7" respectively with 4" and 6" version
Accepted substrate size	Ø 2" - Ø 4" - Ø 6" and 50 x 50mm - 100 x 100mm
Mask/substrate measuring distance resolution	0,5µm
Heating of the wafer during the insolation	≤ 1°C
Compatible photoresist	SU8, Shipley, AZ Resist, K-CL resist (developed by Kloe)

## Other features

- Size: 475(L) x 480(W) x 515(H)mm
- Weight: 55kg / 121lbs
- Colour touchscreen: 15.6"
- Power density: 35mW/cm<sup>2</sup> +/- 10%
- Power supply: 100V/240V - 50Hz/60Hz
- Consumption: 180W
- Compatible with chrome and flexible film photomask

