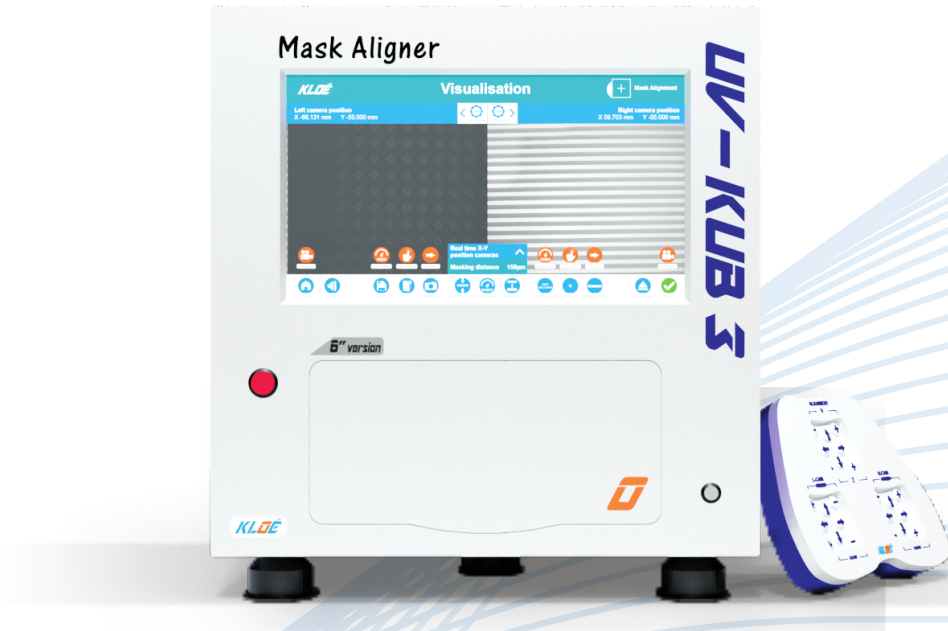


UV-LED Mask Aligner

UV-KUB 3

6" and 8" versions



**“Divergence angle below 1.6°
ensure high collimation & excellent patterning quality!”**

< $0.6\mu\text{m}$ feature size

Multilayer alignment accuracy < $1\mu\text{m}$

Up to 6" or 8" exposure are

365nm UV-LED source, +/- 5nm

10.000 hours of LEDs lifetime

Proximity, soft, hard and air pressure contact modes

Compatible with all UV photoresists

sensitive to 365nm

Benefits

Removable photomask holder

No warm-up nor cold down required

Equipment fully closed

Touch-screen & joypad

Submicron resolution without vacuum contact

KLDE

Fully operated by a **large touchscreen** & a **joypad** for exposure & alignment operations, **UV-KUB 3** features **two HD CMOS cameras** for visualization & alignment process.

High quality collimation

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

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

LED technology

Perfectly **monochromatic** exposure light source.

Cold UV source prevents undesirable thermal effects.

Operate in **continuous or flashing mode**.

Benefits of UV-LED source: low power consumption, very long lifetime.

Resolution & alignment precision

This new generation of mask aligner enables to realize microstructures **below 1µm** over the entire 6" or 8" work surface with **an alignment precision of less than 1µm**.



performances

Minimum feature size	0.5 µm
Multilayer alignment accuracy	<1µm Frontside and 1µm Backside *
Divergence half-angle	< 1.6°
Number of programmable cycles	100
Exposure cycles (continuous or cyclic)	From 1s to 1h59min
Contact modes	Proximity, Soft, Hard and Pressure Assisted (vacuum-equivalent)
Visualization system resolution	< 1 µm
θ subst. displacement resolution	5.10-4°
XYZ substage displacement resolution	0.4µm

* Backside alignment available on the 8" model, for all supported sample sizes.

exposure area

Maximum exposure area	Ø 6"	Ø 8"
Maximum substrate size	Ø 6" - 150 x 150mm ²	Ø 8" - 200 x 200mm ² *
Maximum mask size	7" x 7" *	9" x 9" *
Mask/substrate measuring distance resolution	0.5µm	
Substrate warm-up during exp.	< 1°C	
Compatible film photomask	Chrome and flexible film photomasks	
Compatible photoresists	Compatible with all UV photoresists sensitive to 365nm	

*Optional adaptaters available upon request

uv-led source

Available wavelengths	365nm +/- 5nm
Power density (RMS)	Min. 40mW/cm ² +/- 5%
Exposure homogeneity	+/- 1.8 %
LEDs lifetime	> 10.000 hours

usage features

Color touchscreen	15.6"	21.5"
Exposure modes	Continuous or Flashing	
Included functionalities	UV exposure area fully closed - CMOS cameras - Joypad Automatic prealignment - Removable photomask holder	
Cleanroom type environment	Not required, due to its dust-proof protective cover	

general specifications

Size (L x W x Ht)	475 x 480 x 515mm	800 x 700 x 700mm
Weight	55kg / 121lbs	200kg / 400lbs
Power supply	100-110V / 220-240V - 50Hz	
Power consumption	200W	
Operating temperature	From 15° to 30°C / Stability +/- 1°C	

