KGN
SMART SYSTEM

SMART KGN
A Full Range Of Lithography Devices

KGN

## The Basis for Our Success is Our Products

The company is 10 years in business and offers field proven Photo-lithography equipment and facilities. , The company's key competencies in photolithographic technology lie in the high-throughput contact, proximity and projection exposure systems in addition to capabilities of its mask aligners and our highly integrated coating platform for positive and negative photoresist.

- Contact lithography Technique (single and double side alignment)

- Proximity Lithography Technique

- Projection Lithography Technique
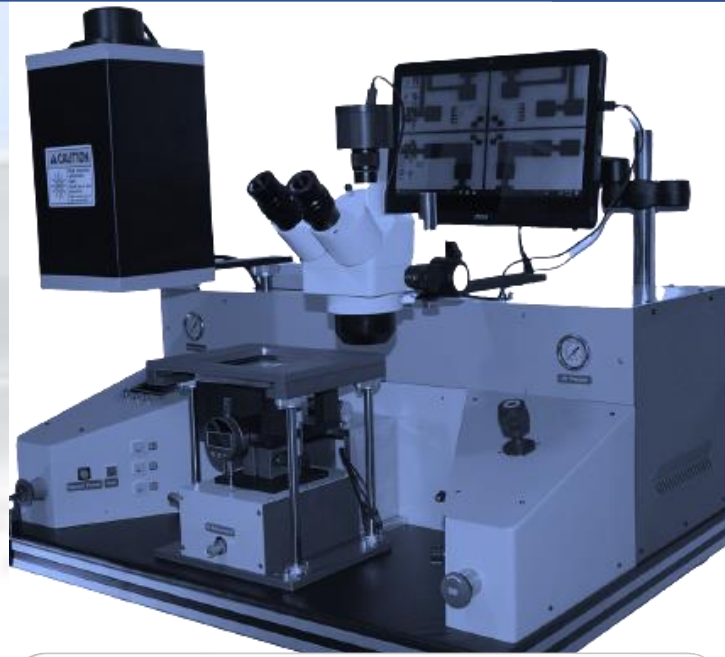
Double Side Mask Aligner
KAN-2dp And KAN-2d
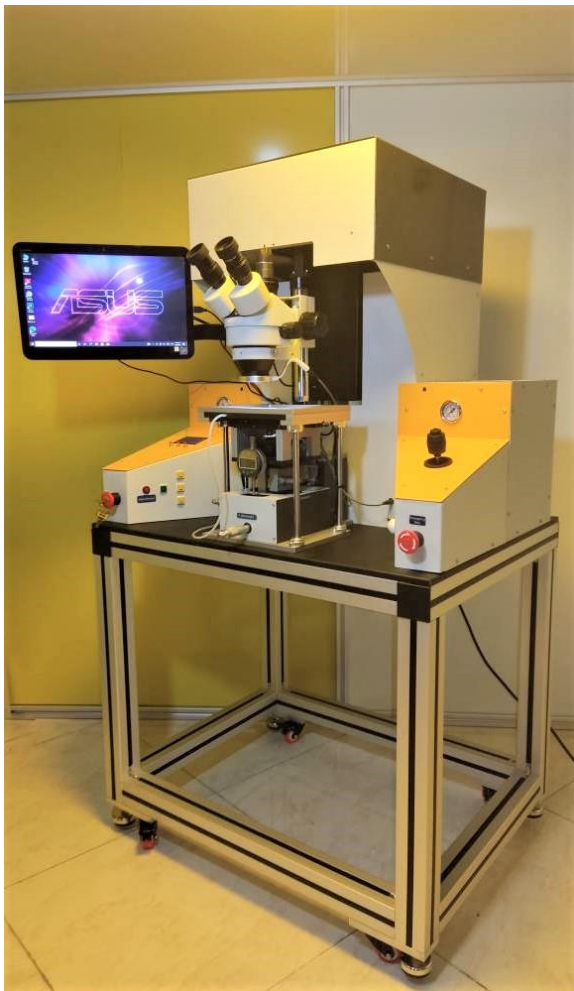
The KAN-2dp is a brand new model and represents next generation of Full-Field lithography systems. The new Double side Model KAN-2dp and KAN-2d front and backside mask aligner system offers advanced features and specifications found most often in costly automated production mask aligners. With the development of this new mask aligner KGN meets the growing challenge of a dynamic semiconductor and MEMS market. The system contains uniform lighting system with UV100 source and high resolution top and bottom side split field microscopes which lead to highly fast and highly accurate double side alignment with high resolution feature size down to 1 μm.

FS & BS model

■ Proximity control Lithography

■ Double Side Aligning(FS and BS mode)

Long LED lamp life, it can be used at least 5~10 years

Double Side Mask Aligner
KAN-2dp And KAN-2d

The Double side Models KAN-2dp and KAN-2d front and backside mask aligner system offers advanced features and specifications found most often in costly automated production mask aligners. With the development of this new mask aligner KGN meets the growing challenge of a dynamic semiconductor and MEMS market. The system contains uniform lighting system with UV100 source and high resolution top and bottom side split field microscopes which lead to highly fast and highly accurate double side alignment with high resolution feature size down to 2 µm.

FS model

- Proximity Lithography
- Double Side Aligning(FS and BS mode

FS & BS model

Long LED lamp life, it can be used at least 5~10 years

Single Side Mask Alighner KAN2

The KAN2 Alignment System is optimized for highest throughput and most accurate print gap setting. The equipment enables researches to create micro-meter patterns in different substrates in many projects which needs to align micro structure layers together. The tool supports a variety of standard lithography processes such as vacuum and contact exposure mode, It accommodates wafers and substrates up to 4 inches varying in size, shape and thickness. The system contains uniform lighting system with UV100 source which leads to highly accurate alignment with high resolution prints down to 2μm. With these features KAN2 targets applications in MEMS, Compound Semiconductor, Power Devices and Nanotechnology.

■ Contact exposure

■ exposure surface with a diameter of 5 inch

We support training and initial testing with a range
of resists and developers, and sample wafers.

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Projection Lithography Technique
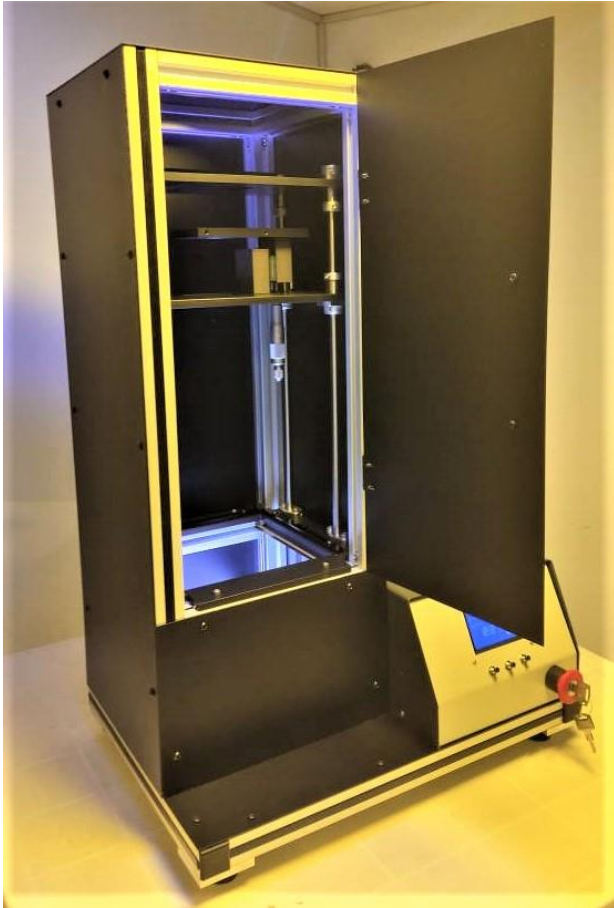
In this system the mask pattern is projected onto the substrate by means of an optical system between the mask and the substrate; enabling researchers to generate photomasks with much lower minimum feature size than printed masks. Highly accurate reduction unit used in ARL5 – ARL7offers the greatest advantage in processes requiring high resolutions and achieves resolutions down to 1 μm.

- **Capability to change the reduction number from 3 to 10**

- **Lithography accuracy up to MFS = 2um**

Direct contact lithography by placing the sample and mask between the light source Tend the lens

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Step and Repeat

Step and Repeat UV projection Lithography provides a low-cost pattern technique to wafer level scale. In this system the mask pattern is projected onto the substrate by means of an optical system between the mask and the substrate; enabling researchers to generate photomasks with much lower minimum feature size than printed masks. The image is repeated on the substate using the XY motorized table. Highly accurate reduction unit offers the greatest advantage in processes requiring high resolutions and achieves resolutions down to 1 μm.
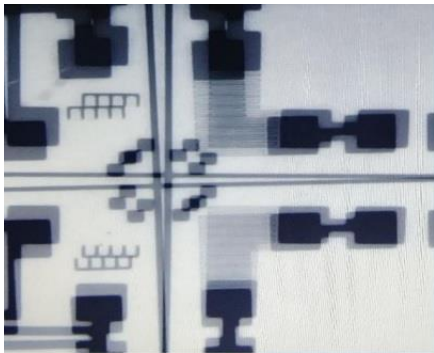
Aligning
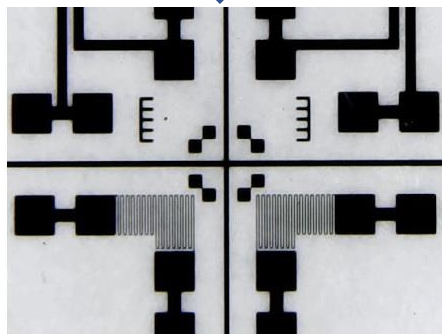
Direct contact lithography by placing the sample and mask between the light source and the lens

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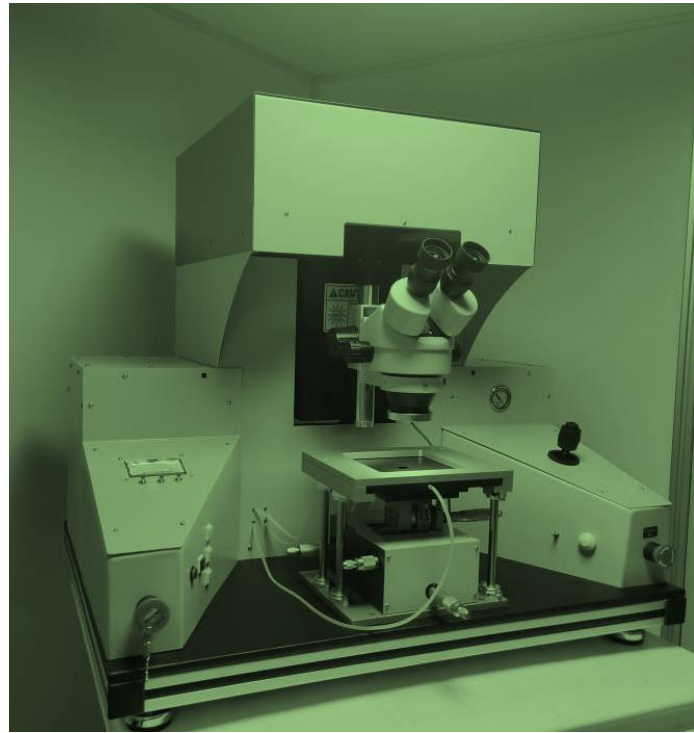
Spin Coater and hot-plate

- **No clogging of vacuum chucks**

- **Speed stability up to 1% of the set speed**

- **Adjusting the rotational speed between 500-5000 rpm**

- **Monotony of layers on standard samples up to 50 nm thickness tolerance**

- **Can be used for different polymers, including positive and negative photoresists**

Round control can be adjusted both manually and programmatically

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| Item(KAN-2d)	Specifications
Sample size	1-2-4 inch
Mask Size holders (effective mask size)	Default: 1-2-4-inch
Sample handling mechanism	Manual
lamp(Wavelength (nm) and Intensity	355-375 nm , 100W
Beam size	10cm-diameter
Minimum Feature Size (MFS)	3-4um
Alignment mode	Double Side Aligning mechanism (BS and FS mode)
Aligning resolution	10um
Structure Size: (Width, Length, Hight) (cm*cm*cm)	90*70*60
Software	SSco (KGN Smart System)-software

Mask Aligner models

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Item(KAN-2dp)	Specifications
Sample size	1-2-4 inch
Mask Size holders (effective mask size)	Default: 1-2-4-inch
Sample handling mechanism	Manual
lamp(Wavelength (nm) and Intensity	355-375 nm , 100W
Beam size	12cm-diameter
Minimum Feature Size (MFS)	2-3um
Alignment mode	Double Side Aligning mechanism (BS and FS mode)
Aligning resolution	10um
Structure Size: (Width, Length, Hight) (cm*cm*cm)	90*70*60
Software	SSco (KGN Smart System)-software

Double Side Aligner Spec.

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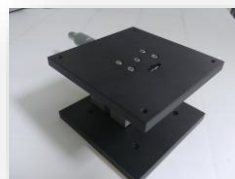
Contact Lithography (without Alignment)

The equipment enables researches to create micro-meter patterns in different substrates in many projects which needs to align micro structure layers together. The tool supports a variety of standard lithography processes such as vacuum and contact exposure mode, It accommodates wafers and substrates up to 4 inches varying in size, shape and thickness. The system contains uniform lighting system with UV100 source. This machine is used in MEMS, Compound Semiconductor, Power Devices and Nanotechnology.

Item-KDL models	Specification
Exposure surface (diameter)	12 cm
Lamp intensity	100 W
Lamp power	10mW/cm2
Minimum Feature Size (MFS)	2um
Lamp wavelength	365 nm

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