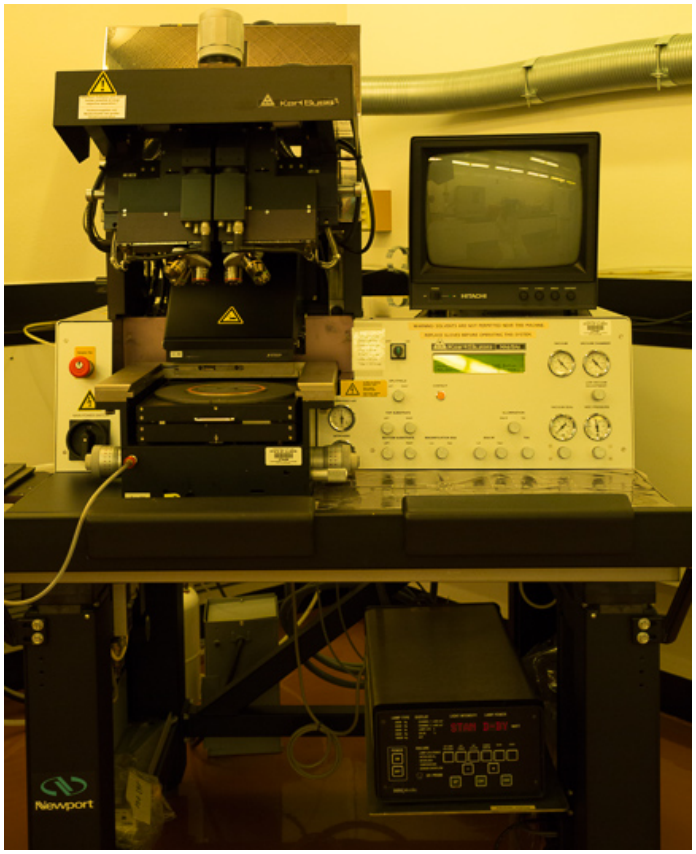
UIC Nanotechnology Core Facility
UNIVERSITY OF ILLINOIS AT CHICAGO
COLLEGE OF ENGINEERING

Karl Suss MA6 Mask Aligner



The Karl Suss MA6 is a high resolution semi-automated photolithography mask aligner designed for research and development, and small volume production. It is capable of handling irregularly shaped substrates ranging from 5 x 5 mm dies to wafers up to 150 mm. The maximum substrate thickness which can be processed is 6 mm. Resolution of 0.6 µm can be achieved under optimum conditions in vacuum mode. The splitfield microscope with capability of storage and automatic movement between reference points allow for highly accurate alignment to fiducials. Bottom-Side Alignment (BSA) allows for accurate alignment of features on the backside of the wafer to the photomask.

The tool has wide applications in semiconductor research, MEMS-development, microfluidics, and optical component production.

Technical Specifications:

- Broadband Hg lamp Channel 1 (405 nm) and Channel 2 (365 nm)
- 3, 4, 6 inch wafer chucks available
- 4, 5, 7 inch mask holders available
- Motorized top side alignment system can reach an alignment of 0.5 µm
- 5X, 10X, and 20X objectives available in microscope
- Wedge Error Compensation (WEC) ensuring parallelity between substrate and photomask
- Exposure modes: proximity, soft contact, hard contact, and vacuum