



**SUSS MA8-Gen3**  
**Mask Aligner Lithography**  
**SN 000027**  
**Vintage 2010**

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**located Nijmegen the Netherlands**

Süss MicroTec MA8 is standard UV lithography tool for exposing wafers through mask. Photoresist-coated wafer is illuminated by UV light in the range of 350–450 nm wavelength, which is produced by 1000 W Hg lamp. Such power of the UV-lamp ensures high work-flow. This tool is equipped with high performance MO Exposure Optics® to give uniform illumination over the surface of up to 6 inch wafer. Exposure can be carried out in proximity mode or in contact mode. In the first case there is defined distance between mask and wafer during exposure, while in the other case wafer and mask are brought into direct contact. Depending on the force which pushes wafer to the mask, the tool works in the so called soft contact, hard contact, or vacuum contact mode. Vacuum contact offers highest resolution of pattern transfer, but also highest mask wear. MA8 is equipped with top side optical microscopes and bottom side microscopes, so alignment is possible from both sides of the wafer.



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**Mask and Wafer/Substrate**

Wafer Size 1" – 200 mm  
Max. substrate size 200×200 mm  
Min. Pieces 5×5 mm  
Wafer Thickness max. 10 mm  
Mask Size standard 2"×2" up to 9"×9" (SEMI)

**Exposure Modes**

Contact soft, hard, vacuum  
Proximity exposure gap 1–300 mm  
Gap setting accuracy 1 µm  
Modes constant power, constant dose  
Options Flood exposure

**Exposure Optics**

Resolution 1.5 µm (vacuum); 2 µm (hard); 3 µm (soft); 3.5 µm (primity ox20 µm)  
Wavelength range UV400 350–450 nm  
Exposure source Hg lamp 1000 W  
Intensity uniformity less than 3.5 % (200 mm)

**Alignment methods**

Top Side Alignment (TSA) accuracy less than 0,5 µm (with assisted alignment & SUSS MicroTec recommended wafer targets)  
Bottom Side Alignment (BSA) accuracy less than 1 µm



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