With more than 60 years of engineering experience SUSS MicroTec is a leading supplier of process equipment for microstructuring in the semiconductor industry and related markets. Our portfolio covers a comprehensive range of products and solutions for backend lithography, wafer bonding and photomask processing, complemented by micro-optical components.

SUSS MicroTec provides cost-effective solutions with unsurpassed quality and cutting-edge technology, enabling our customers to maximize yield at high throughput thus reducing cost of ownership.

In close cooperation with research institutes and industry partners SUSS MicroTec contributes to the advancement of next-generation technologies such as 3D Integration and Nanoimprint lithography as well as key processes for WLP, MEMS and LED manufacturing. With its global infrastructure for applications and service SUSS MicroTec supports more than 8,000 installed systems worldwide.
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MEMS (MicroElectroMechanical Systems) are key components in many automotive, industrial, medical, aerospace and consumer applications. MEMS sensors are used in anything from gaming, smartphones, medical testing to satellites. The applications seem unlimited. MEMS are everywhere.

Although based on commonly used Silicon wafer processing the manufacturing of MEMS devices requires highly specialized equipment to create mechanical structures that are a fraction of the width of a human hair. Highly flexible exposure and coating systems as well as wafer bonding equipment are essential in the processing of MEMS. From the start of volume manufacturing of MEMS products, SUSS MicroTec has been supplying equipment to the MEMS industry worldwide.

LEDs (Light Emitting Diode) are based on compound semiconductors (III-V) and widely used in optoelectronic devices, consumer electronics such as tablets and mobile phones, automotive and general lighting applications.

The manufacturing of LED devices requires dedicated equipment at lowest cost of ownership for this price-sensitive market. SUSS MicroTec provides exposure, coating, developing and wafer bonding equipment that handles fragile and highly warped wafers, deals with rough surfaces and provides best throughput for high volume manufacturing.

Nanoimprint technologies are offered to manufacture specific layers for further light extraction efficiency.

3D PACKAGING

3D Integration provides performance, size and cost advantages for a very wide range of applications. The processes required for 3D Integration are still in development and characterization. The use of interposers (2.5D technologies) allows for further application of the existing semiconductor processing and supply chain and can be implemented in a shorter period of time.

SUSS MicroTec offers equipment for many of the critical steps in 2.5D and 3D processing. Lithography equipment and processes to pattern TSVs and RDL layers, laser ablation technology for TSV drilling, and laser ablation for direct structuring of metal layers are available for high volume manufacturing. The key process for both 2.5D and 3D is thinning of wafers in preparation of stacking. SUSS MicroTec’s temporary bond and debond equipment enables the mounting of a wafer on a carrier and demounting after performing backside processes.

### Products
- MaskTrack Pro
- Exposure Systems
- Coater / Developer
- Bonding Systems

### Process Steps
- **Frontend**
  - Photomask Cleaning
- **Backend**
  - UV Projection (Stepper, Scanner)
  - Proximity Exposure (Mask Aligner)
  - Laser Processing
  - Nano Imprinting
  - Coating
  - Developing

### Segments
- Photomask Equipment
- Lithography
- Wafer Bonder

### Bond Alignment
- Permanent Bonding
- Temporary Bonding
- Debonding
MASK ALIGNER (PROXIMITY EXPOSURE)

**MJB4**
- Manual system
- up to 100 mm
- + Mask Alignment
- + Exposure
- + Nanoimprinting

**MA/BA6**
- Manual system
- up to 150 mm
- + Mask Alignment
- + Exposure
- + Bond Alignment
- + Fusion Bonding
- + Nanoimprinting

**MA/BA6/8 Gen3**
- Semi-automated system
- up to 200 mm
- + Mask Alignment
- + Exposure
- + Bond Alignment
- + Fusion Bonding
- + UV Bonding
- + Micro- and Nanoimprinting
- + Selective Plasma Activation

**MA100/150e Gen2**
- Automated system
- up to 150 mm
- + Mask Alignment
- + Exposure

**MA200 Gen3**
- Automated system
- up to 200 mm
- + Mask Alignment
- + Exposure

**MA300 Gen2**
- Automated system
- up to 300 mm
- + Mask Alignment
- + Exposure

**MA 12**
- Semi-automated system
- up to 300 mm
- + Mask Alignment
- + Exposure

[www.SUSS.com](http://www.suss.com)
**BOND ALIGNMENT SYSTEMS**

**BA6/BA8**
- Manual system up to 200mm
- + Bond Alignment
- + Fusion Bonding

**BA8 Gen3**
- Semi-automated system up to 200mm
- + Bond Alignment
- + Selective Plasma Activation
- + Fusion Bonding

**PROJECTION LITHOGRAPHY SYSTEMS**

**DSC300 Gen2**
- Automated system up to 300mm
- + Alignment
- + Full-Field Scanning Projection

**DSC500**
- Automated system up to 450x500mm
- + Alignment
- + Full-Field Scanning Projection

**LASER PROCESSING SYSTEMS**

**ELP300 Gen2**
- Automated system up to 300mm (Excimer Laser)
- + Alignment
- + Ablation
- + Laser-Assisted Debonding

**SLP300**
- Automated system up to 350x350mm (Solid State Laser/DPSS)
- + Alignment
- + Ablation
- + Drilling
- + Cutting
COATING / DEVELOPING SYSTEMS

**LabSpin6 / 8**
- Manual system up to 200 mm
  - Spin Coating
  - Puddle Developing

**AS8 / 12**
- Manual system up to 300 mm
  - Spray Coating

**RCD8**
- Manual system up to 200 mm
  - Spin Coating
  - Puddle Developing

**AD12**
- Manual system up to 300 mm
  - Aqueous Processes
    - Puddle/Spray Developing
    - Wafer Cleaning

**HP8 / CP8 / VP8**
- Manual system up to 200 mm
  - Baking / Cooling
  - Vapor Priming

**SD12**
- Manual system up to 300 mm
  - Solvent Processes
    - Puddle/Spray Developing
    - Lift-off
    - Wafer Cleaning
COATING / DEVELOPING SYSTEMS

ACS200 Gen3
Automated system up to 200 mm
+ Priming
+ Spin Coating
+ Spray Coating
+ Baking
+ Aqueous / Solvent Developing

ACS300 Gen2
Automated system up to 300 mm
+ Priming
+ Spin Coating
+ Spray Coating
+ Baking
+ Aqueous / Solvent Developing
WAFER BONDING SYSTEMS

**XB8**
Semi-automated system up to 200 mm
+ High-Force Wafer Bonding

**SB6/8 Gen2**
Semi-automated system up to 200 mm
+ Wafer Bonding

**DB12T**
Semi-automated system up to 300 mm
+ Mechanical Debonding

**ELD300**
Semi-automated system up to 300 mm
+ Excimer Laser-Assisted Debonding

**XBS300**
Automated system up to 300 mm
+ Adhesive and Release Layer Coating
+ Plasma Release Layer Deposition
+ Temporary Wafer Bonding
+ Thickness and TTV Measurement

**XBC300 Gen2**
Automated system up to 300 mm (wafers or wafers on tape frame)
+ Excimer Laser-Assisted Debonding
+ Mechanical Debonding
+ Cleaning
PHOTOMASK EQUIPMENT

**HMx Square**
Manual system
3μm - 250 nm hp

- Strip/Clean
- Develop
- Etch Photomask Processing

**ASx Series**
Automated system
250 nm - 90 nm hp

- Strip/Clean
- Develop
- Etch and PEB Photomask Processing

**MaskTrack Pro**
Automated system
193i 2x/1x, EUVL and NIL

- Photomask Cleaning
- Template Cleaning
- Develop
- Bake
- EUV Photomask and Dual Pod Management