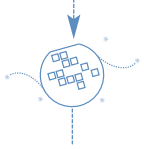
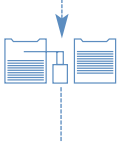
OAI Model 2000

Edge-bead/UV Flood Exposure Systems.



The Model 2000SM can significantly reduce the particle contamination that occurs as a result of routine wafer handling.



In both OAI 2000SM and 2000FL, the robot is the only significant moving part, greatly simplifying this unique system.

The OAI Model 2000 may be configured as either an edge-bead exposure tool or a flood exposure system; both configurations are based on a proven, time-tested platform.

The OAI 2000SM Edge-bead Exposure System provides a cost-effective method for edge-bead exposure using standard shadow mask technology. Mask and substrate changeover can be accomplished quickly and easily adding to the versatility as well as throughput of this high volume production tool.

The Model 2000 includes a UV lightsource, intensity controlling power supply, and robotic substrate handling subsystem. UV lightsources provide uniform intensity beams with divergence half-angles of <2.0°. Power supplies are available from 200W to 5,000W. Intensity controller sensors are linked directly to the lightsource for accurate intensity monitoring. The OAI robotic substrate handling system is microprocessor controlled and may be programmed to accommodate a wide variety of substrate sizes. The shadow mask capability enables the user to pattern the top-side of a substrate while being held in very close proximity to the mask. At a separation of 25 microns, these systems are capable of 6 micron resolution.

2000FL Flood Exposure Systems are used to augment and/or enhance the photolithography processes in both production and R&D settings. Applications include photoresist stabilization and modification, image reversal and PCM processes.

OAI Model 2000
Edge-bead and UV Flood
Exposure System

Advantages

In terms of simplicity, versatility, ease of operation and overall cost of ownership, the OAI Edge-bead and Flood Exposure Systems are by far the best solution available.

Model 2000FL Flood Exposure System:

- Throughput is independent of pattern complexity.
- Entire substrate is exposed at one time.
- Intensity-controlling power supply.

Model 2000SM Edge-bead System:

- Changing the exposure pattern is as simple as changing the shadow mask.
- Changeover (including mask alignment) requires only ten minutes.

OAI

General Specifications

UV Lightsource System

Exposure Beam Size	UP TO 300mm diameter
Beam Divergence	< 2.0º (1/2 angle)
Beam Spectrum	Near UV, Mid UV, Deep UV
Beam Uniformity	±5.0%

Shutter Controller

Control Functions	EXPOSE, TEST
Timer	0.1 to 999.9 sec. (0.1 sec. increments)

Constant Intensity Power Supplies

Near UV/Mid UV/Deep UV	
Power Regulation	Better than ±0.5%
Intensity Control	Dual channel optical feedback loop with ±2% precision and long term repeatability
Control Systems	Dual channel
System Alarm	Audible Maximum Power Warning

Substrate Handling System

Type	Robotic
Wafer Capacity	To 300mm
Substrate Transfer	Cassette-to-cassette
Handling	Vacuum arm (end effector)
Flat Orientation	±1 degree
Precision	±25 microns
Z Precision	±12.5 microns

FOUP loader available on 300mm system

Envelope for up to 200mm

Width	41"
Depth	36"
Height	Approx. 68" with 1,000W / 2,000W exposure systems

Facilities

Electrical	208/60Hz 3-phase
Vacuum	25" Hg

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