PROCESS SOLUTIONS, EQUIPMENT AND SERVICES

EcoCoat

Silane Monolayer Vapor Phase Deposition System with In-situ Plasma

Lithography
Anti-stiction films
Microarrays, Microfluidics
AR/VR adhesion layers

With its configurable large capacity chamber, the manual load EcoCoat Silane Vapor Phase Deposition System is designed to meet your process development and volume production requirements. Three independent vapor delivery lines, excellent thermal uniformity and in-situ gas plasma give the system process flexibility while maintaining excellent silane monolayer deposition uniformity for wafers, glass slides or thermoplastic surfaces.

- Surface modification to promote/prevent adhesion
- Anti-stiction films for NIL, MEMS, AR/VR
- Covalent bonding of biomolecules to glass, plastic, or silicon
- Plasma clean and activate surfaces, control hydrophobicity

ADVANCED AUTOMATION OPTIONS FOR WAFER LOAD/UNLOAD

- Two load port EFEM and large capacity chamber fits 50 200/300 mm wafers
- Coating temperature up to 250˚C
- Up to five independent vapor lines with MFC control

The flexible chemical vapor delivery system is compatible with a wide range of organosilanes. Small test bottles or large ampoules can be used allowing transition from research to high-volume manufacturing at low cost. Three independent vapor delivery lines accommodate multiple precursors or water to enable surface hydration for optimal silane-substrate bonding. Integrated plasma functionality is achieved through three independent MFC-controlled process gas inputs. Flexible chamber shelving/electrodes allow a wide variety of substrate form factors to be used from wafers (200/300 mm) to glass slides and 3D thermoplastic devices.

Contact Us: We offer process demonstrations. If you would like to submit samples, please call us. We can run your samples and provide a detailed process report.

Yield Engineering Systems, Inc.

Call: **1-510-954-6889** (worldwide) or **1-888-YES-3637** (US toll free)

www.yieldengineering.com

EcoCoat
SPECIFICATIONS

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PERFORMANCE	RF Plasma Frequency / Power	40 kHz, 100-1000 Watts
	Operation Temperature	Ambient to 205˚C
	Temperature Uniformity	± 1.5% after stabilization
	Chamber Pressure Control	100 mT - 100 T
	Chemical Usage	0.1 – 3.0 mL (typical process)
	Chemical Dispense Volume	Increments of 0.1 mL
	Number of Chemicals	Up to three
	Vent Gas Consumption	10 SCF run average
HARDWARE	Chamber Material	316L stainless steel
	Chamber Size	40.6 cm (W) x 46 cm (D) x 40.6 cm (H) (16”x 18”x 16”)
	Overall System Dimensions	116 cm (W) x 98.4 cm (D) x 112.73 cm (H) (46” x 38.75” x 44.38”) Light tower adds 30 cm
	Loading	12 removable stainless steel shelves allow flexible substrate loading and multiple plasma operating modes including active, downstream, RIE and ion-trap
	Wafer Capacity	8 cassettes 100 mm - 150 mm wafers
		2 cassettes 200 mm wafers
		1 cassette 300 mm wafers
	Slide Capacity	Up to 2,000 with custom racks
	Vapor Delivery Lines	Three, with independent process and thermal control

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