

## APPLICATIONS



### CLEAN

- Plasma cleaning
- Photoresist removal/descum
- Polyimide, organics and CuO removal
- Surface activation
- Adhesion promotion
- Plasma surface sterilization



### COAT

- Surface modification  
(adhesion/hydrophobic/hydrophilic)
- Adhesion improvement
- Anti-stiction layer
- Surface priming for micro-arrays,  
DNA sequencing and microfluidics
- Self-assembled monolayer deposition & removal
- Seed layer for metallization



### CURE

- Polyimide, BCB or PBO cure
- Wafer-to-wafer bonding anneal
- Vacuum anneal up to 400°C
- Pre-metal or pre-PVD bake and degas

Providing

LAB-TO-FAB

Solutions



IS THE ANSWER



# CLEAN SYSTEMS

## RFS Series

User-Friendly Plasma Cleaning System for Higher Yields and Repeatable Results

- Removes thick layers of photoresist or polyimide quickly (up to 6,000-7,000 Å/min)
- Applications from aggressive strip processes to gentle descum and surface modification
- Downstream process balances plasma charge and protects against damaging UV exposure
- Precise temperature control for uniform, repeatable results
- Up to four (4) process gas connections



## EcoClean™

Small Footprint Automated Plasma Strip/Descum System with Low Cost of Ownership

- Single wafer automated process with extremely small footprint (0.74m<sup>2</sup>)
- Handles wafers from 50mm to 200mm
- High strip rate: 100-100,000 Å/min (0.01 - 10 µm/min)
- High throughput of up to 65 wph with robotic handler
- Eco-friendly "green" process with low gas usage
- ICP downstream plasma prevents substrate damage
- High reliability (only three moving parts)



## G1000

Parallel Capacitive 1000W Plasma System

- Effective replacement for toxic chemicals
- Leaves no solvent residues on surfaces
- Five (5) plasma modes with single or dual plasma configuration
  - Mild anisotropic: downstream (electron free), active and RIE
  - Isotropic: active ion trap, downstream ion trap
- Any mixture of up to 3 gas inputs (O<sub>2</sub>, Ar or N<sub>2</sub> plasma)
- 13.56MHz
- Four 406mm x 406mm standard sample trays (1651.6 cm<sup>2</sup>)



# COAT SYSTEMS

## TA Series

YES-310TA and YES-58TA HMDS Vacuum Cure/Vapor Prime Systems

- Fast, uniform, cost-effective priming of wafer surfaces with hexamethyldisilane (HMDS) to improve photoresist adhesion
- Vacuum cure dehydrates wafers thoroughly for a superior bond
- HMDS layer remains stable even after weeks of exposure to atmospheric moisture
- Advanced control systems offer user-selectable temperature, process time and chamber size
- Lower chemical consumption and chemical cost



## EcoCoat®

Flexible Silane Monolayer Deposition/Prime System with Plasma

- Excellent control of process parameters yielding very stable processes with minimal chemical usage
- Scalable to volume production
- >100 chemical processes developed from organosilanes, PEG and biotin functional compounds
- 40KHZ plasma pre-clean



## UltraCoat™

Automated Silane Monolayer Deposition System

- High throughput, low CoO solution for automated processing of 50-100 wafers
- Handles both 200mm and 300mm wafers
- >100 chemical processes developed from organosilanes, PEG and biotin functional compounds
- Handles up to 5 different chemicals with precise control
- Excellent particle performance due to horizontal laminar flow



# CURE SYSTEMS

## PB Series

Manual Load Vacuum Cure Systems

- Two sizes: PB8 (up to 2 cassettes of 200mm wafers) and PB12 (up to 2 cassettes of 300mm wafers)
- Degas and moisture removal processes
- Prevents outgassing over time
- Removes traces of principal gases before packaging
- Removes trapped hydrogen and moisture with proprietary YES process
- Promotes superior adhesion



## VertaCure™ PLP

Automated Panel-Based Vacuum Cure System for Polyimide/PBO Cure, D2P Bonding and Pre-Metal Degas

- Proven vacuum cure technology
- Laminar flow for excellent particle performance
- Accommodates panel dimensions from 400 mm to 550 mm
- Two process modules, each holding twelve panels
- Active heating and cooling for rapid ramp-up and ramp-down
- Automated loading and unloading using EFEM



## VertaCure™ XP

Automated Vacuum Cure System for Polyimide/BCB/PBO/Low Temp Polymers

- Faster than atmospheric process with >60% higher throughput
- 2-3X lower cost of ownership, 1.6-2x less N<sub>2</sub> consumption and >98% uptime
- More complete cure (5X less outgassing)
- 5-zone temperature control with <1.0% uniformity
- Laminar flow for excellent particle performance
- Active heating and cooling for variable ramp-up and ramp-down
- Accommodates 50 - 100 wafers

