EVG®150

Automated Resist Processing System

Introduction

The EVG®150 is a fully-automated resist processing system providing high-throughput performance and supporting wafers up to 200 mm in diameter.

Designed as a fully modular platform, the EVG150 provides automated spin/spray/develop processes with high throughput. A new ultra-compact design with footprint < 3 m² and redesigned modules enables easy access of individual chambers as well as the robot area. To minimize downtime, single modules can be serviced while the remaining system can be kept up and running. The system features four wet processing modules and up to 20 bake/chill units. Outstanding throughput values for real-life processes can be achieved by using a high-speed, high-accuracy robot and advanced scheduler algorithms. Even though the system exhibits a very compact design, up to 12 pumps and resist bottles can be installed inside the main frame. The EVG150 guarantees highly uniform coats ranging from demanding thick resist applications down to sub-micron layers.

Wafers with high topography can be uniformly coated by EVG's proprietary OmniSpray ultrasonic atomization technology, where traditional coating encounters limitations. Up to four XY spray coat modules can be installed in the system, which allows unrivalled spray coating throughput.

Versatile combinations of multi-functional modules provide great opportunities in many fields of application like MEMS, image sensors, advanced packaging, RF, 5G, 3D sensing, photonics, automotive and power electronics manufacturing.

Technical Data	
Wafer diameter (substrate size)	up to 200 mm
Available modules	- Spin coat / OmniSpray® / develop - Bake / chill / Vapor prime
Wafer handling options	- Double EE / edge handling - Bowed / warped / thin wafer handling
Dispense options	- Various resist dispense pumps to cover a wide range of viscosities up to 52000 cP - Constant pressure dispense systems - EBR / BSR / pre-wet / liquid priming

Contact

EV Group Europe & Asia/Pacific GmbH
DI Erich Thallner Strasse 1
4782 St. Florian am Inn
Austria
+43 7712 5311 0

Contact@EVGroup.com

Features

- Wafer sizes up to 200 mm
- Four wet process modules in any combination
- Up to 20 hot/chill plates stacked inside the tool
- Two or four loadports; cassette stations in full compliance with SEMI S8 ergonomics standard
- Encapsulated chambers prevent cross-contamination
- Chemistry within base frame: Pumps and resists in shortest distance to point of use
- Sophisticated robot handling for highest throughput; placement accuracy < 50 µm
- Handling of thick or ultra-thin, fragile, bowed or small-diameter wafers
- Flexible pressure dispense system with high-precision flow meters for spin coating; bottle sizes up to 1 gal
- Complete temperature control for resist and developer lines
- OmniSpray®: conformal coating of extreme topographies; up to two nozzles per module
- Bake modules with a uniformity <± 0.4 % across the whole temperature range up to 250 °C
- Optional: solvent bakes with Double-side heating and high-temperature bakes up to 350 °C
- Extensive range of supported materials: thin and thick negative and positive resists, dielectrics, colored resists, adhesives & polyimides.
- GUI with multi-user concept
- Smart process control and data analysis feature [EVG CIMFramework]

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