PVA TePla

Planar Plasma System GIGAfab M

- Removal of thick photo resist including SU-8 layers and polymers
- Sacrificial layer removal
- Surface activation prior to wafer bonding

Plasma Systems

PVA TePla

Large Area Processing with Microwave Plasma

The **Planar Plasma System GIGAfab M** is specifically designed for product development and production in MEMS and Flat Panel Display (OLED/PLED) applications. The planar microwave plasma source and substrate cooling provide unique system characteristics like isotropic removal and high ash rates at moderate substrate temperatures, making it an ideal tool for a wide range of wafer cleaning and stripping applications.
The temperature controlled horizontal substrate platform is attached to a drawer loading door and can handle a maximum substrate size of 300 x 300 mm or multiple smaller substrates (e.g. 4 wafer 150 mm each). The chamber lid is easy to open for maintenance access (clam shell opening).

Applications

- Resist removal and descum for wafer bumping
- Removal of SU-8 epoxy resist
- Sacrificial layer removal of photoresist, polyimide, PMMA etc.
- Fast resist ashing after high-dose implant and RIE, ICP
- 300 mm wafer reclaim
- Cleaning of nano-imprint stampers
- Surface conditioning prior to ink jet printing for PLED fabrication

Technical Data

Process Chamber	Aluminum
Substrate Plate	310 mm x 310 mm (12" x 12")
Wafer Loading	Manual drawer-type front loading
Process Gas Supply	2 gas channels included, 2 optional
Vacuum Gauge	MKS Baratron capacitance manometer
Pressure Control	Down stream control valve
Plasma Generation	Planar microwave source (2.45 GHz), maximum power 2000 W
End Point Detection	Optical emission EPD, plasma verification
System Control	PC-based controller, 17" color touch screen, GUI
Operating System	QNX real time platform
Program Features	Manual or automatic operation, user password, multiple recipe storage (1-10 steps each), self test routines, warning and error messaging
Process Tracking	Real time monitoring, on-screen display of graphic plots, data logging, export of process data
Interfaces	Ethernet, USB, RS232 interface
System State Signal	Light tower R/Y/G/buzzer

Supplies

Electricity	230/400 V, 50/60 Hz, 3 phase, N, PE, 3 x 15 A installed power approx. 12 kW
Process Gas, Vent	1-2 bar (15–30 psi), 1/4" VCR female
Compressed Air	6 mm Festo QS, 4-6 bar, (60-90 psi)
Cooling Water	20°C, flow 3-9 l/min, min. pressure 4 bar
Standards	CE-certified, Semi S2/S8 compliant

Dimensions

W/H/D	850 x 2000 x 1300 mm (34" x 79" x 51")
Weight	550 kg (1210 lbs)

Options

Vacuum Pump
Pulse Power Supply
Fluorinated Chemistry Package
Hydrogen Gas Supply H_2 generator, any mixture, compliant to ATEX regulations, TÜV certified


GIGAfab M with H_2 option

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