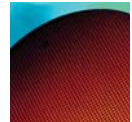




## GaSonics Aura 1000 Ashing System Single Wafer

The GaSonics Aura 1000 single-wafer photoresist asher is an automated tool designed as a flexible downstream plasma photoresist removal system for high-volume wafer fabrication. The Aura is in direct response to manufacturer's concerns for wafer sensitivity to processing damage, reliability, and low cost of ownership.



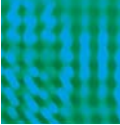
### Features

- Lowest cost of ownership asher, > 95% uptime, > 320 systems in production
- High throughput
- Very small footprint: 80cm (32") w, 80cm (32"), 170cm (28") h
- Front and backside isotropic removal
- Downstream ashing for minimized device damage
- 75mm-150mm wafer capability
- Pick and place wafer handling
- Precise downstream endpoint detection
- Up to 4 MFC's
- Pressure control, option
- Closed loop temperature control option
- SMIF compatible
- Touch screen option
- SECS II interface, multiple process step capability
- Variable lamp heating for temperature control
- Table top or floor/through the wall designs



SPEC is the licensed manufacturer of GaSonics products by Novellus





## Product Specifications

### Process

Pressure	1.75 to 2.5 Torr
Microwave	1000 watts
Gas Flow O2	4.5 SLPM
Gas Flow N2	0.45 SLPM
Lamp Time (variable)	0-18 sec.
Temperature (variable)	150-300°C (typical)
Closed loop temp control option	

## GaSonics Aura 1000 Ashing System

75-150 Millimeter

### Results

Ash Rates	2μ-5μ/min. positive photoresist >8μ/min. negative photoresist
Uniformity	<20%
Selectivity to Underlying Films	>1000:1
Throughput	Up to 90 wph
Particle Control	<0.05 p/cm <sup>2</sup> 0.3μ
Damage Control	<0.1V CV-shift for 250Å gate oxide

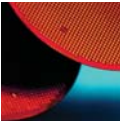


### Reliability

Availability	>95% uptime
MTBF	>100 hours

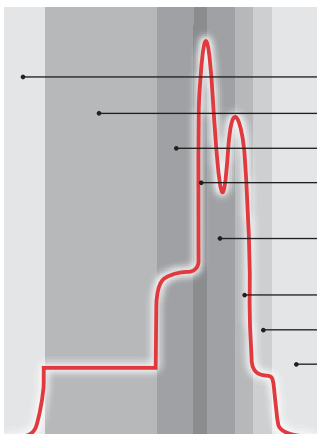
### Utilities

Vacuum (pumps)	165 cfm
Cabinet Exhaust	>250 cfm
Process Gases	2(4) MFC's
Electrical Requirements	208V, 3 phase, 60 Hz 30A
Weight	250 lbs., 112 kilograms



## Applications

- Bulk resist removal
- Descum
- High-dose implanted resist
- Non-oxidizing metal processing



### End of Process, High Dose Implanted Resist

- Process begins, low lamps are used only to break through carbonized layer.
- Low temperature ash continues, which can vary, 45-60 seconds.
- Signal increases indicating breakthrough of the carbonized layer.
- High lamps are turned on, signal increases for approximately 5-10 seconds, to increase ashing to remove the bulk resist which is not carbonized.
- High lamps turn off and signal decreases briefly, then increases as detector continues to monitor signal.
- Signal decreases, endpoint occurs.
- Overash.
- Process ends.



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