DENTON VACUUM
Enabling Innovation

INFINITY PLANETARY ION BEAM ETCH SOLUTION

TECHNICAL SPECIFICATION SHEET

This flexible, versatile PSIBE is a batch system that is designed for low-to-mid throughput applications. It features a small tool footprint and is a perfect solution for the MEMS, semiconductor, and data storage markets as well as optics, lenses, pilot production and foundry support.

BENEFITS INCLUDE:

- Low plasma damage etch
- Etch rate selectivity for multiple materials by reactive ion etch and chemically assisted etch
- Precise end point control with SIMS detector.

FEATURES	BENEFITS	
Bias substrate	Low plasma damage etch	
Reactive ion beam etch	Material etch rate selectivity	
Chemically assisted ion beam etch	Material etch rate selectivity	
Secondary ion mass spectrometer	Precise delayering and end point control	
Three substrate planets	Batch production Small footprint	
Automation software	Enhanced process control	
Short MTTR/Long MTBF	High system uptime and ease of maintenance	

SYSTEM OVERVIEW

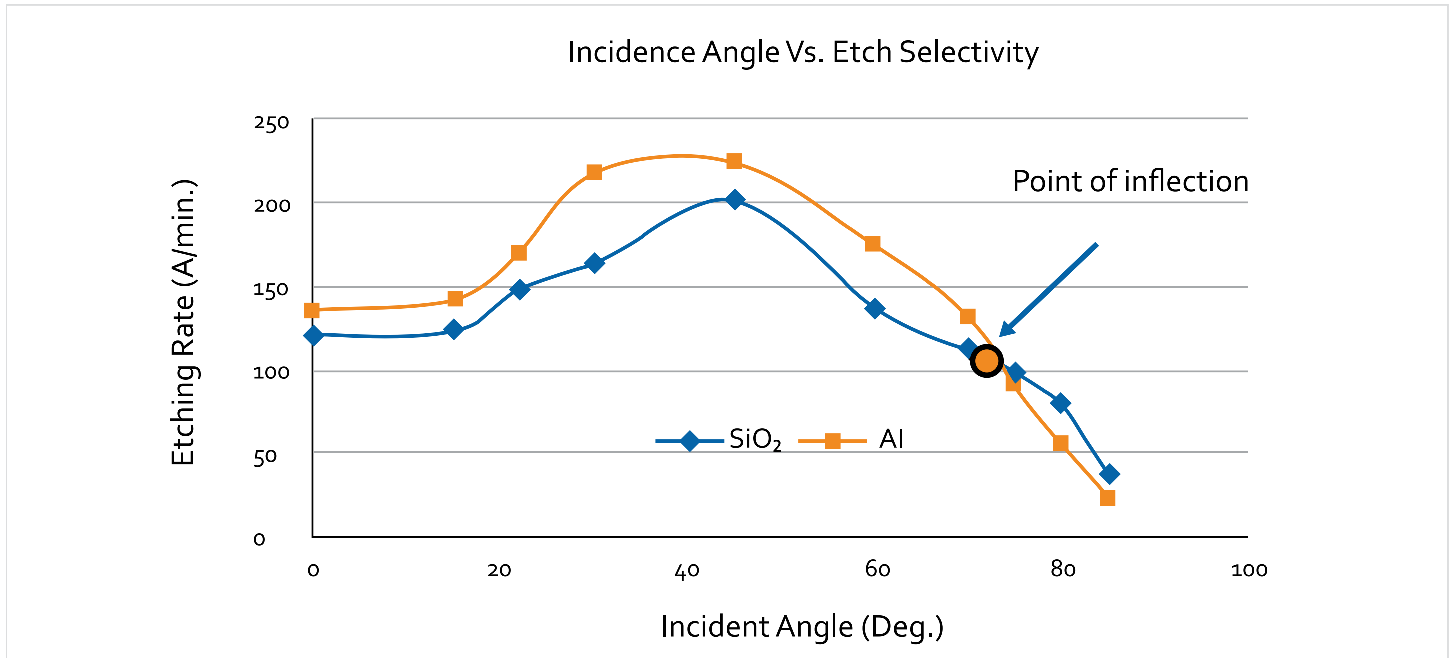
The Infinity PSIBE System features an industry-leading ion beam source, an optional integrated Secondary Ionization Mass Spectrometer (SIMS) for endpoint detection, advanced Semiconductor Layer Stop Technology (SLST) and automatic layer termination software delivering full computer control.

The Infinity PSIBE system delivers high-performance etching, critical thin film profile milling, glancing angle milling and more. It enables cost-effective manual sample transfer with a single wafer load lock. The system is class 1000 cleanroom compatible (ballroom style) and ESD compliant, and reactive or chemical assist is available for etching multiple materials. Incidence angle is also adjustable to fine tune etch selectivity.

With our collaborative partner approach, we will ensure that your Infinity PSIBE system is configured to your performance and throughput needs. You will be fully supported by our team of technical experts to achieve the best results.

APPLICATIONS:

- Semiconductor process yield improvement with endpoint control
- Compound semiconductor Au etch
- Process control and chip design assessment
- Patterned etch
- FBAR and SAW device trimming for frequency control



CONFIGURATION OPTIONS			
MODULE	SIMS	150mm or 200mm Planets	Large Area Ion Source
ETCH	Ion Beam	Reactive Ion Beam	Chemically Assisted Ion Beam
FRONT ENDS	Single Wafer Load Lock	Cassette Load Lock	Cluster Tool Front End

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