



A Vacuum Science and Technology Company

THIN FILM DEPOSITION & ETCHING SYSTEMS

For MEMS / NEMS, Solid State Lighting, Renewable Energy,
Nano Electronics , Photonics



Tools & Process Solutions for Thin Film Deposition

CVD Tools

- PECVD and ICP CVD, LPCVD
- ALD (PE & thermal)
- DLC
- HWCVD
- MOCVD

Etching Tools

- ICP
- RIE
- RIE/PE switchable
- DRIE

PVD Tools

- PLD
- Sputtering (RF/DC/Pulsed)
- Evaporation
- Ion Beam Sputtering

Cluster PECVD tool for NANO TECHNOLOGY

- Deposition of amorphous and microcrystalline silicon based doped, un-doped, and its alloy materials, Dielectrics, Metal Nitrides, Metal Oxides, Metals & Others.
- Individual process chamber connected to central transfer / isolation chamber along with entry / exit load lock.
- Substrate transfer: Magnetic / Robotic arm
- Substrate size: 100 mm to 150 mm
- Horizontal deposition
- Power source: MF/RF/ VHF/MW
- Substrate temperature up to 1000 deg C
- Residual gas analyser



and Etching

HHV thin film technology solutions, covers a range of flexible, high performance etching and thin film deposition equipment which comes with single, multi chamber cluster and multi chamber in-line configurations for precise control of processes suitable for R&D and production.

In-line PECVD system for large scale production



- In-line process, vertical configuration
- Totally automated
- 2 substrates (1100 x 1400 mm) per chamber
- 3 minutes tact time
- +/- 10% deposition uniformity
- Unique gas distribution system
- Easy maintenance and operation

In-line PECVD system for research and development



- Deposition of amorphous and microcrystalline silicon based doped, un-doped, and its alloy materials
- Individual process chamber separated with isolation chamber along with entry and exit load lock either end.
- Flexible substrate size as per requirement
- Vertical / Horizontal deposition configuration

Glove Box for Organic Electronic Applications

- Evaporation chamber with organic sources
- UV ozone cleaning
- Spin coater
- Hot Plate
- Robotic glue dispenser
- Liquid and paste dispenser
- UV curing systems



RIE/PE Tools

Single chamber PECVD systems with reactive ion etching facility



Parameters	Standard
Chamber size	290 (D)mm X 400 (L) mm
Electrode	RF (water cooled)
Substrate holder	125 mm
Ultimate Vacuum	5×10^{-6} m.bar



Chamber with reactive ion etching facility

PVD Tools



- Organic Sources
- Magnetron
- EB Gun
- Rotary Drive (Planar/Planetary)
- Quartz Crystal Monitor
- ION Gun (RF/DC)
- Substrate heater (upto 1000° C)
- Substrate Cooler
- Residual gas analyser



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