

Glow Research Reactive Ion Etcher and Plasma Clean

Reactive Ion Etcher

Added to the MTTC in 2024, the AutoGlow 200 by Glow Research is a versatile, tabletop plasma system designed for various scientific and industrial applications. It operates with a 300 Watt, 13.56 MHz RF generator and features automatic tuning for easy and consistent processing. The system can perform both plasma and reactive ion etching (RIE) processes and supports power settings ranging from 10 to 300 Watts in one-watt increments. See the AutoGlow YouTube video.

Key Features

- **Applications:** Suitable for materials science, microfluidics, MEMS, optics, microscopy, polymer science, biomedical, semiconductors, and dental applications.
- **Processes:** Capable of activation, ashing, cleaning, etching, photoresist removal, organic removal, and pre-bonding processes. Currently CF_4 and O_2 gasses are plumbed.
- **Process Control:** Features a selectable display for pressure, set power, reflected power, and actual power. Includes two flowmeters for easy gas flow adjustment and a Pirani gauge for pressure monitoring.

Technical Specifications

- **Materials Compatibility:** Etching of SiN, Si, SiO_2 , polymers, glass are possible. O_2 plasma is used to clean materials of organics, descum ashing, removal of photoresist and polymers, and manner of surface preparation.
- **Gas System:** Available process gasses include CF_4 , O_2 , and Argon
- **Chamber Design:** Made from high-grade, anodized 6061-T6 aluminum, the chamber is resistant to fluorine chemistries and easy to clean. It accommodates up to 200 mm wafers or 8" x 8" substrates.

Applications

The AutoGlow 200 is perfect for:

- **MEMS Devices:** Ideal for the fabrication of micro-electromechanical systems with complex geometries.
- **Nanotechnology Research:** Supports cutting-edge research and development in nanotechnology.
- **Photonic Devices:** Enables precise patterning for advanced photonic applications.

Support and Training

We offer comprehensive support and training to ensure you get the most out of our MTTC tools:

- **We can run it for you:** Our staff can run your samples for you and assist in process development.
- **Training:** If you will run your own samples, on-site training sessions are available to master the equipment.

Get in Touch and Schedule a Tour Today!

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Figure 1: The AutoGlow 200 RIE tool.