

ECR Ion Beam Etching System EIS-1500

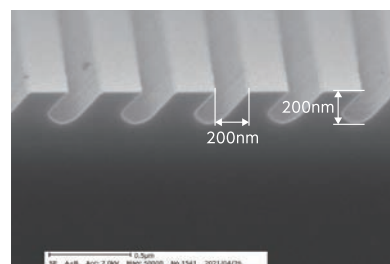
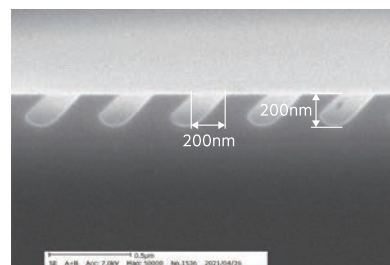
ECR Ion Beam Etching System

Anisotropic Dry Etching System Using ECR Ion Source

Nanoscale etching is possible over large areas.
Equipped with a real-time monitoring function,
automatically controlling the etching process in high vacuum.



Applications



Line pattern graded etching of SiO₂ film with line width 200nm and depth 200nm

Features

Optimal System for Nanofabrication

ECR ion source is used in an environment of low gas pressure, so it can extract a beam with good linearity. In this equipment, accelerated ions are guided into a higher vacuum sample chamber for processing. This system is optimal for nano-order etching process.

Simple Operation Automated by PC Control

Automatic control and recipe functions to reduce the operator's workload, enabling comfortable operation for the etching process.

Optimal System for Fine Etching of Resist Masks

This can also be used for fine etching process using resist as a mask. The conditions of plasma generation and beam irradiation can be adjusted to perform etching processes with minimal thermal damage to the resist and sample.

Specification

Ion Gun	ECR Type Ion Gun
Ionized Gas	Ar, N ₂ , O ₂ , CF ₄ , etc. ※Consultation required for CF-based gases.
Acceleration Voltage	300V ~ 2000V
Ion Beam Density	Ar : 0.15 ~ 0.2mA/cm ² or more (at 700V Vacci)
Beam Effective Diameter	φ108mm ※At max.
Max. Sample Size	φ6 inch Wafer
Sample Stage	One-axis Rotation and Tilt Stage (With water-cooling mechanism)
Ultimate Vacuum	3×10 ⁻⁴ Pa or less
Operating Vacuum	6×10 ⁻³ Pa ~ 3×10 ⁻² Pa
Evacuation System	Turbo Molecular Pump, Dry Pump
Recommended Installation Space	W5000×D3500×H2000(mm)

