

ECR Ion Beam Etching System EIS-200ERP

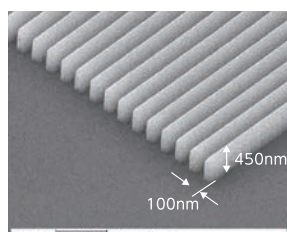
ECR Ion Beam Etching System

Ultra Fine Processing by ECR Ion Beam

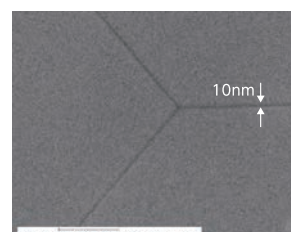
Compact and High Performance
Capable of Nanoscale Etching and Deposition (Option)



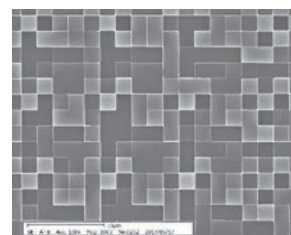
Applications



200nm pitch
line pattern, 450nm height



Y-shaped microfluidic channel
with 10nm width, 50nm depth



Hologram pattern (2μm per side)

Features

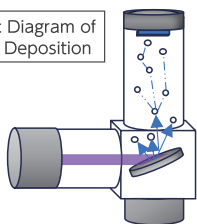
Inert/Active Gases Can Be Used

In addition to inert gases such as Ar, etc., stable plasma can be generated with active gases such as O₂, CF₄, etc.

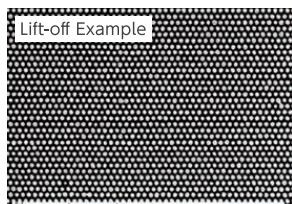
Wide Range of Expandability

The "Nano Pattern Deposition Unit (NPD)", etc., which are ideal for lifting off ultra fine patterns with a long-throw sputter, are available for customization according to the application.

Schematic Diagram of
NPD Unit Deposition



Lift-off Example



Dots with φ10nm, 20nm pitch

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	20V~ 3000V
Ion Beam Density	Ar : 1.5 mA/cm ² or more (at 2kV Vacc)
Beam Effective Diameter	φ20 mm (FWHM 35 mm) ※At max.
Max. Sample Size	φ4 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 ~ 2×10 ⁻² Pa
Evacuation System	Turbo Molecular Pump Oil Rotary Pump (Exchangeable to dry pump)
Recommended Installation Space	W2300×D2000×H1500 (mm)

