Wafer Bonding System : BC7300/BC7000

BC7300

Atomic Diffusion Bonding (ADB) Method :

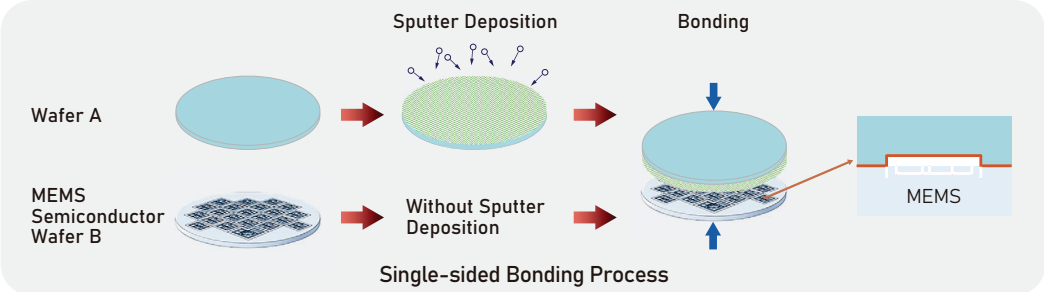
1. A sputtered film is deposited on the bonding surfaces
2. The surfaces are brought into contact in vacuum
3. The sputtered films diffuse and rearrange to bond

Features

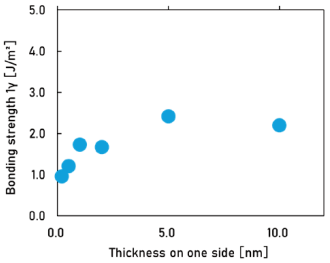
- Strong bonding without heat or force
- Compatible with various substrate materials
- Various functions can be added to the bonding interface through the sputtered film

New

- Bonding is possible with deposition on one side only



Single-sided Bonding Process



NEW Single-sided Bond Strength

Sputtering System : EC7000/EB1100 Series

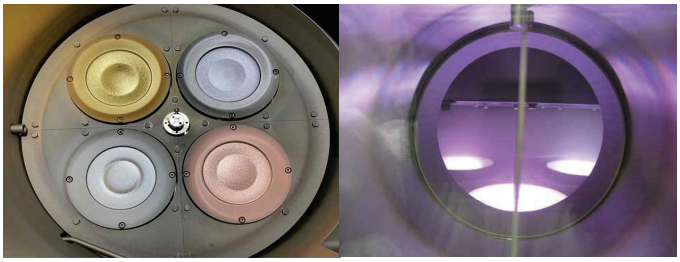
EC7000 Series (Up to two modules)

Customizable to meet your requirements
(number of cathodes, substrate temperature, etc.)

Features

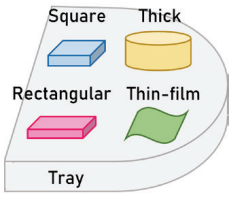
- Fully-automatic operation
  (exhaust, transfer, deposition)
- Up to four cathodes, and co-sputtering
- High-temperature substrate heating (up to 800°C)
- All types of substrates can be deposited

EB1100 (Batch Type)



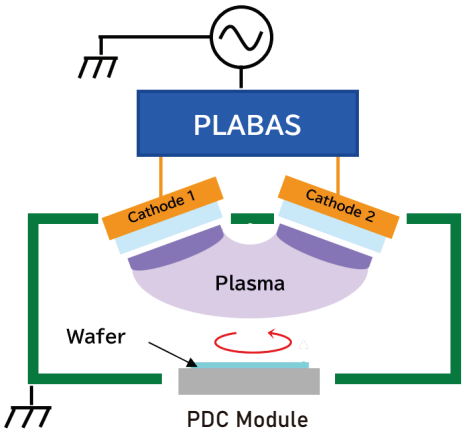
Cathodes Image | Discharge Image (Co-sputtering)

Inside the Sputtering Chamber



Substrate Setting Images

Dielectric Film Sputtering Module



PDC Module

PDC : PLABAS Dual Cathode
PLABAS : Plasma Balanced System

PDC Module :

Integrated our proprietary plasma control technology 'PLABAS' with dual cathode sputtering

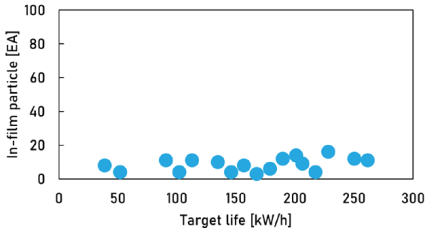
Features

- Deposition plasma remains stable throughout the target's life span
- Low level particle in dielectric deposition
- Excellent film orientation
- Low running costs through co-sputtering with cost-effective metal targets

Adastra AX Series
(HV Mass Production)

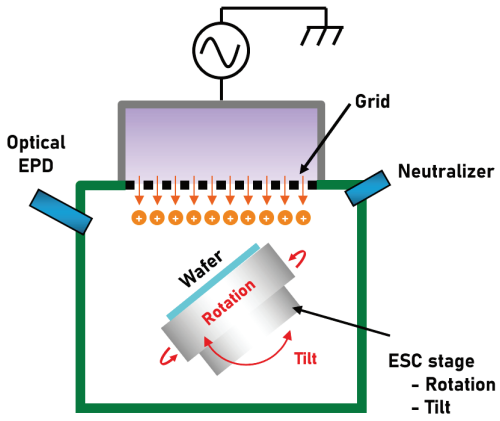
EC7430
(Mass Production)

Equipment Lineup for the PDC Module



Long-term Stability of Particle Level

Ion Beam Etching Module



IBE-NX Module

IBE-NX Module :

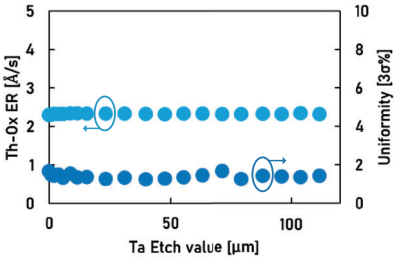
Excellent stability of etching properties
Experience in semiconductor mass production

Features

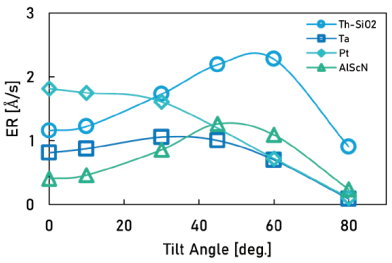
- Controllable ion incidence energy and angle
- Excellent etching uniformity with a large diameter grid
- Excellent stability of etching properties (Etching Rate, Uniformity, Particle, etc.)
- System integration with PVD module

Typical Specification of IBE Module

Substrate Size	Φ 8 inch, Φ12 inch
Etching Rate / Uniformity (Th-Ox @ Tilt 45 deg. : 300 ㎜ wafer)	2 ~ 10 Å/s ≦ 3% (3σ)
Substrate Temperature (Si wafer)	≦ 60 deg.C
Substrate Tilt	0 ~ 90°
Substrate Rotation	0 ~ 60 rpm
End Point Detection System	Optical Type



Long-term Stability of Etching Properties



Etching Rate of Various Materials