

Equipment for Backend Process

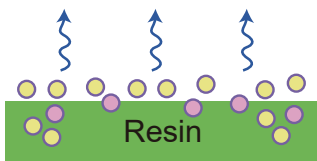
Sputtering Equipment for Advanced Packaging



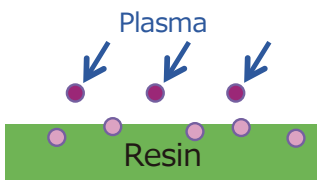
EL3400

Panel PVD system for advanced packaging applications including barrier and copper seed deposition

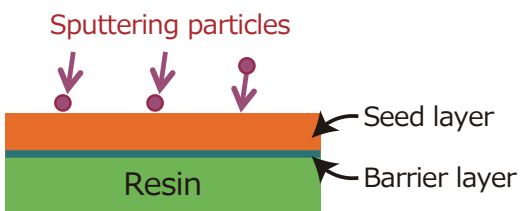
Cu seed sputter process



Low temp degas



Surface treatment

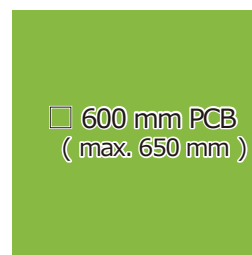


Ti/Cu metal deposition

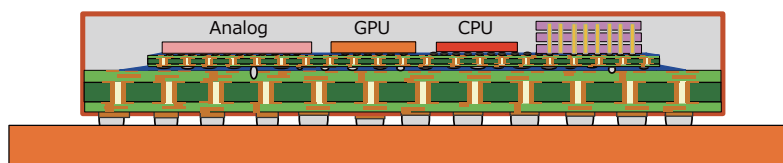
Features

- Strong adhesion on substrate
- Available to deposit films on resin or glass substrate
- Available to handle panel size substrate

Substrates for EL3400

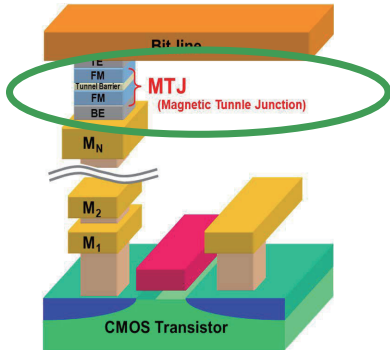


Interposer

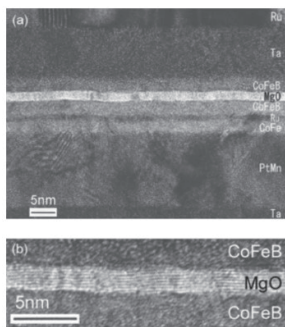


Equipment for Memory

MRAM



Basic MRAM cell structure



CoFeB/MgO/CoFeB MTJ

MTJ Stack Sputter Deposition



NC7900

- PVD cluster tool for MRAM high-volume manufacturing

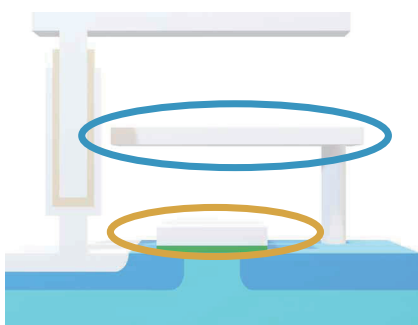
MTJ Stack Dry Etching



NC8000

- Ion Beam Etching (IBE) cluster tool for MRAM high-volume manufacturing

DRAM



DRAM Cross Section

Low Resistive Bit Line Sputter Deposition



IC7500

- PVD cluster tool for metal interconnect fabrication for DRAM

Metal Gate Sputter Deposition



FC7100

- PVD cluster tool for planar metal gate deposition for DRAM

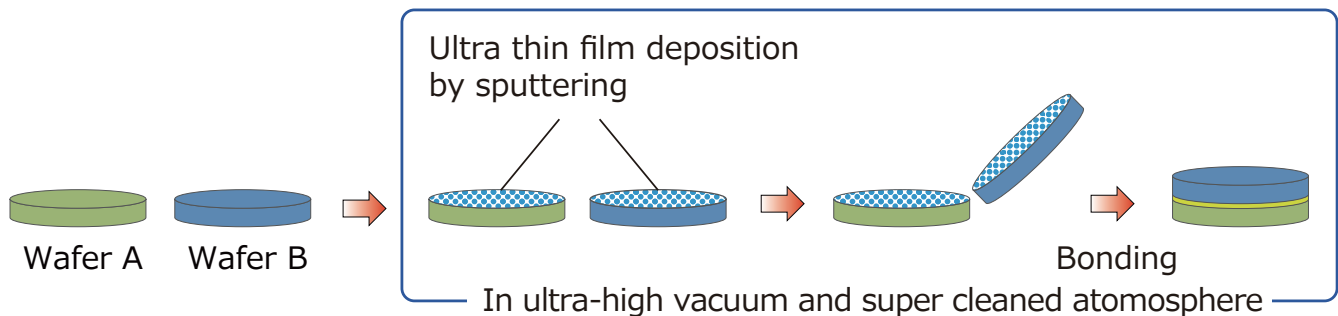
Wafer to Wafer Bonding Equipment



BC7000

- Bonding at room temperature
- No pressure during bonding
- High bonding strength
- Bonding of any similar or dissimilar materials
- High throughput
- Strong bonding by diffusion of sputtered atoms
- 4 inch or 6 inch wafer system

8 inch· 12 inch wafer system coming soon!



Atomic Diffusion Bonding Process Flow