

CVC SC-400 RF-Magnetron Sputtering System



Magnetron sputtering system is used for depositing thin metal & dielectric films. Sputtering process occurs by bombarding the surface of a sputtering target with gaseous ions under high voltage acceleration. As the ions collide with the target, atoms or occasionally entire target material molecules are ejected and thrust towards the substrate where they coalesce and grow into a film. The manner in which sputtered atoms migrate, interact and nucleate on the substrate surface is a function of many deposition process parameters; such as, substrate temperature, sputtering power, sputtering gas, and background pressure

The SC-4000 is a low-volume, batch-type unit, being capable of deposition on six 2 inches, three 3 inches or one 4 inches wafer. The basic system consists of a relay-rack control center and an equipment cabinet, which houses the vacuum chamber and the vacuum pumping system. During sputtering Argon, Nitrogen, and Oxygen gases can be used.

Available sputtering targets include Cr, Al, Ni, Cu, Mo, W, Ti, Nb, Si, Si₃N₄, SiO₂, Al₂O₃ and TiO₂. The target size is 2 inches.

Safety notes:

- **Prior permission of the lab manager must be received before depositing other materials.**
- **Do not exceed 3 KW power on metal targets, or 2 KW on non-metal targets.**
- **Always leave the machine under Hi Vacuum**