JSWAFTY

— We aim to be a one-of-a-kind manufacturer. —

Atomic Layer Deposition System

AFALD-8

ALD method is a thin film deposition method realizing superior step coverage and film-thickness controllability. Even in the structure having high aspect ratio or complex 3D configuration, it is possible to form thin films controlled at the atomic level. In addition to the conventional benefit of ALD, AFALD ensures the deposition of high-density and high-quality films by enhancing the reactivity using a plasma precisely controlled in milliseconds order. This system can accommodate max. four metal precursors and max. three reactive gases, and by combining it with a proper transfer module, all your needs from R&D to massproduction can be met.

Product Features

- Standard mounted CCP plasma source
  - Controllable in milliseconds for low-damage
  - stable deposition.
- Wide range of option selection
  - Transfer system can be selected from manual loader to cluster module type loader.
  - The number of material vaporizers and reactive gases are selectable.
- Software that is powerful and easy to operate
  - Interface enabling the intuitive operation
  - Configuration function which can be set arbitrarily
  - Standard installed abundant log functions.

  Easy maintenance by well-designed Inner-Chamber.
- Designed for lower material cost

  A unique patented vaporizer having excellent material consumption efficiency by controlling the feeding pressure is adopted.

Superior Step Coverage: By the self-limiting function of surface reaction on a wafer, AFALD ensures superior step coverage.

Excellent electrical properties: By using plasma enhancement, high break down voltage and low leak current property can be achieved even at lower temperature

Superior water vapor barrier property: In comparison with CVD, etc., a thinner film can achieve the equivalent water vapor barrier property.

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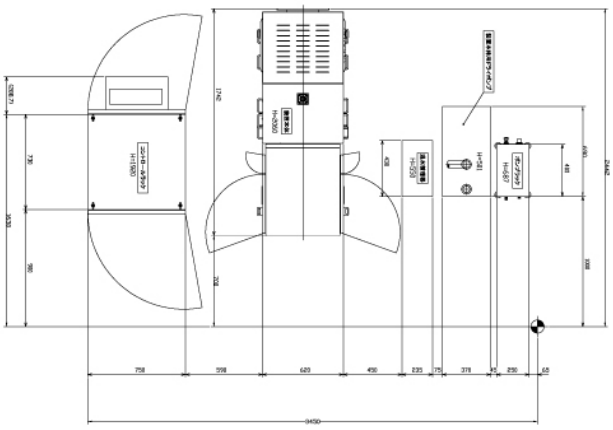
Dimensional Drawing



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Standard Specification

Item	Specification
Maximum substrate size	φ200 mm
System dimensions (W×D×H)	600 × 1700 × 2060 mm
System weight	Approx. 700kg
Reactor type	Plasma, Thermal
Plasma generation method	CCP 13.56MHz Max.1000W
Number of metal precursors	Max. 4
Number of reactive gases	Max. 3 (Mass flow controller)
Maximum substrate temperature	400℃ (Set value)
Vacuum pump	Dry Pump (Suitable for chemicals)
Hot wall	Standard feature
Piping heating	Standard feature (Individually controllable)
Pressure control	Auto Pressure Control valve (APC) (Pressure in each room can be controlled individually.)
Process gas trap	Standard feature
User interface	PC/AT (Personal computer)
Module controller	PLC

Item		Specification
Utilities	Electrical supply	3-phase 200VAC 50/60Hz 150A
	P-N2	0.3～0.6MPa 10SLM
	P-O2	0.3～0.6MPa 6SLM
	N2	0.3～0.6MPa 65SLM
	Compressed air	0.5～0.7MPa 15SLM
	Cooling water	0.1～0.3MPa 5L/min 0.5MPa 5L/min

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