



Atomic Layer Deposition System



Kurt J. Lesker®
Company

PROCESS EQUIPMENT™
DIVISION

Applications

- University, industrial and government lab R&D
- Electronics
- MEMS
- Energy Storage
- Solar encapsulation
- Nanophotonics
- Biomedical
- And more

Features

- Unique perpendicular flow design
- Multiple inlets for precursor delivery
- Open-load reactor design
- Independent substrate heater stage
- Unique heater design of source modules
- Accessible, low maintenance design
- Global service and process support
- eKlipse® control software

Options

- Multiple precursor delivery options
- Ozone
- Multi-technique tool integration via glovebox
- Expansion capability up to 13 precursors
- Chemical series pumping

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Specifications

Process Chamber		Unique perpendicular flow designed reactor Two separate chamber inlets for precursor delivery Independent substrate heater stage
Process Chamber Construction		304L Stainless Steel
Exposure Modes		Dynamic Static Variable Residence Mode™ (VRM™)
Precursors		Thirteen precursor sources available including Ozone
Precursor Delivery Module Options	Flow-through Vapor	For liquid and solid phase precursor with sufficient vapor pressure
	Pulse Gas Delivery	For liquid and solid phase precursor with insufficient/low vapor pressure
	Pulse Gas Delivery	For precise, accurate, high-speed dosing of toxic gases (e.g., WF ₆ , HCl, NH ₃ , H ₂ S, etc.)
System Heating **LeskerClad™		500°C Substrate heating 250°C Process chamber** 250°C Delivery lines** 200°C Valve heating** 200°C Precursor heating**
Typical Processes		Al ₂ O ₃ , TiO ₂ , SiO ₂ , Ta ₂ O ₅ , HfO ₂ , ZrO ₂ , HZO, ZnO, AZO, HfN, TiN, GaN, Pt, Ru
Deposition Uniformity		1σ Uniformities Thermal Al ₂ O ₃ – 1%
System Control		KJLC® eKLipse™ control software (LabView based) Independent real time controller True precision ALD valve timing providing high resolution Windows 10
Substrate Size and Type		Up to 150mm single wafer 100mm X 100mm solar Si wafers Powders and particles Porous and high aspect ratio (up to 1:2500)
Substrate Transfer		Manual Open-load Glovebox (Single or multi-tool configuration)
Process Module Dimensions (approx)		35.1" (862mm) wide X 39.5" (1002.7mm) deep X 41.85" (1063mm) high
Required Power (based on options)		208-240VAC, 50-60Hz, single phase, 3-wire
Process Pump		>14CFM chemical series recommended
Compliance Optional**		CE, FCC, CSA**, NRTL**
Warranty		12 months upon shipment
Cleanroom Compatibility		Class 100

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