CNT
Atomic Layer Deposition

Savannah™ G2 ALD System

The Savannah G2 delivers best-in-class performance with unprecedented reliability, flexibility and ease of use.

ALD Films

Veeco scientists continuously add to the list of standard ALD recipes. Contact us for your specific needs.

> **Oxides:** Al_2O_3, HfO_2, La_2O_3, Li_2O, $Li_7La_3Zr_2O_{12}$, $LiFePO_4$, SIO_2, TiO_2, ZnO, ZrO_2, Ta_2O_5, In_2O_3, SnO_2, Fe_2O_3, MnO_x, Nb_2O_5, MgO, Er_2O_3, WO_x, MoO_3, V_2O_3

> **Doped Oxides:** AZO, ATO, ITO

> **Nitrides:** Hf_3N_4, Zr_3N_4, TiN, NbN_x

> **Metals:** Ru, Pt, Ni, Fe, Co

> **Sulfides:** ZnS, SnS, Cu_2S, In_2S_3, Cu_2ZnSnS_4,PbS, CoS

> **Organics SAMS and MLD:** FOTS, FDTS, ODT, UDT

The Standard for ALD Research and Development

Sophisticated Multi Operational Controls

Intuitive, easy to use GUI interface for deposition of single and multi-component ALD films and self-assembled monolayers

Featuring

- In-Situ Ellipsometry
- In-Situ QCM
- Self Assembled Monolayers
- 2-Second CycleTimes
- Integrated Ozone
- Low Vapor Pressure
- Batch Processing
- Glove Box Integration
- And More!

Savannah G2 Technical Specifications

SYSTEM SPECIFICATIONS	
Substrate size	Savannah S100: up to 100 mm
	Savannah S200: up to 200 mm
	Savannah S300: up to 300 mm
Dimensions (w x d x h)	Savannah S100: 585 x 560 x 980 mm
	Savannah S200: 585 x 560 x 980 mm
	Savannah S300: 686 x 560 x 980mm
Cabinet	Removable steel panels and lockable precursor door
Operational Modes	Continuous Mode™ (high speed) or Exposure Mode™ (ultra-high aspect ratio)
Power	115 VAC or 220 VAC,1900 W (excluding pump) (S300 2000W)
Controls	LabVIEW™, Windows™ 7, Lenovo Laptop, USB control
Maximum Substrate Temperature	S100: RT - 400 °C
	S200: RT - 350 °C
	S300: RT - 350 °C
Deposition Uniformity (Al_2O_3)	<1% (1σ)
Cycle Time	<2 seconds per cycle with Al_2O_3 at 200 °C
Vacuum Pump	Adixen 2021 C2 - 14.6 CFM (or higher on request)
Compatibility	Clean room class 100 compatible
Compliance	CE, SEMI S2 optional
PRECURSOR DELIVERY SYSTEM	
Ports	2 lines standard, up to 6 lines available. Each line accommodates solid, liquid and gas precursors and is independently heated up to 200 °C
Valves	High speed ALD valves with 10 msec response time
Precursor Cylinders	Individually heated 50 ml stainless steel cylinders, optional larger cylinders available
Carrier/Venting Gas	N_2 mass flow controlled,100 SCCM
OPTIONS	
LVPD System	Low Vapor Pressure Delivery system
Ozone Generator	Integrated self contained ozone solution
Batch and 3D objects	Dome lid with wafer cassette or large objects
Glove box Interface	Integrated to allow direct loading from within a glove box
In-Situ Ellipsometry	For real time wafer-state metrology
In-Situ Quartz Crystal Microbalance	For rapid process diagnostic and optimization
Self Assembling Monolayers (SAMs)	For organic surface functionalization
Particle Coating	Allows for coating of particles
Plasma Enhanced	300W CCP plasma option with up to 3 gases

Find out more at
www.veeco.com
or call **781.907.8900**

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