



Four Inch ALD System
Model ALD-P-100B



Shown with Optional Load Lock

Eight Inch ALD System
Model ALD-P-200B

Model ALD-P-100B and ALD-P-200B

ALD BASE SYSTEM

NORTHSTAR – VACUUM HARDWARE

- ALD 4" and 8" Warm Wall Chamber
- Quick Hatch Top Lid
- Substrate Heater
- D8B Dual Stage Rotary Vane Pump
- Exhaust System
 - Hot Trap
 - Particulate Trap
 - Exhaust Line Heating
- Hardware, Fittings and Miscellaneous

NORTHSTAR – ALD PROCESS GAS MODULE

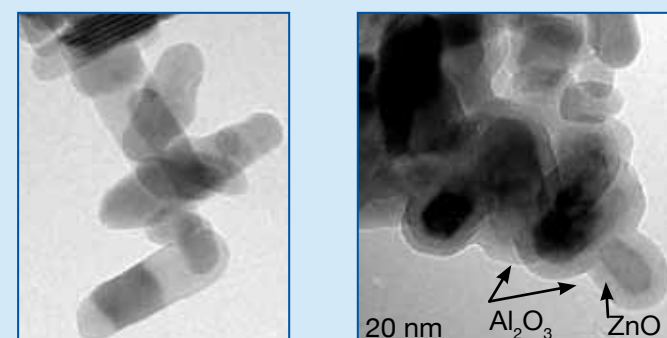
- Gas Manifold Package
 - Gas Manifold and Fittings
 - Four Three-Way ALD Valves – Bakable
 - Carrier Gas Delivery Lines
 - Mass Flow Controller (100 sccm)
 - Carrier Gas Isolation Valve
 - Gas Line Heating
 - 375 Convector Controller and Gauge
 - Hardware and Miscellaneous

NORTHSTAR – ALD CONSOLE ASSEMBLY

- ALD Cabinet and Internal Mounting Hardware
- NI Controller and Cables
- RoboALD
- Computer
- Cabling and Wiring

NORTHSTAR ALD INSTALLATION KIT

Nanocoating on Nanoparticles



Before and after Al_2O_3 coating (~4 nm)

OPTIONS

THERMAL PROCESSING UPGRADE

- Inner Chamber with Heating to 500 C
- Outer Chamber Wall Heating
- Outer Chamber Gas Supply and Vacuum Gauging

ADDITIONAL PRECURSOR POSITIONS

- Gas Manifold Extension
- Four Three-Way ALD Valves
- Carrier Gas Plumbing Extension

RADIANT LAMP HEATING

- Enables In-Situ Thermal Annealing

VACUUM GAUGE UPGRADE TO CAPACITANCE MANOMETER

PUMPING UPGRADE TO OXYGEN SERVICE

- Oxygen Service Oil Pump
- Fomblin Oil

RF PLASMA SOURCE PACKAGE

- Source
- Mass Flow Controller (2)
- Gas Isolation and Plumbing
- RF Matching Network
- RF Power Supply
- N_2 , O_2 , and H_2 Capability



AMMONIA SOURCE PACKAGE

- NH_3 Gas Line
- Gas Line Heating
- Temperature Control Package
- Mass Flow Controller and Isolation Valve
- NH_3 Ballast

OZONE GENERATOR PACKAGE

- Generator
- Ozone Destruct
- Mass Flow Controller (2)
- Ozone Ballast
- Pressure Reducing Circuit

EMPTY PRECURSOR CONTAINERS

- 50 cc Volume
- VCR Isolation Valve

PRECURSOR CONTAINER HEATING PACKAGE

- Heater
- Temperature Control Package

METROLOGY TOOLS

QUARTZ CRYSTAL FLUX MONITOR PACKAGE

RGA PACKAGE, DIFFERENTIALLY PUMPED

- 0-200 AMU RGA
- Differential Pumping Tee with Aperture
- Isolation Valve
- 70 l/s Turbo Package

ELLIPSOMETER PACKAGES AVAILABLE

LOAD LOCK PACKAGE

- Load Lock Chamber 4 to 8" Substrate
- Quick Hatch Door
- Magnetic Transfer Rod & Platen
- Gate Valve
- Dual Stage Rotary Vane Pump (3.2 cfm)
- Mini-Convector Gauge
- Vent Valve
- Hardware and Miscellaneous
- Docking Stage



7620 Executive Drive
Eden Prairie, MN 55344-3677 | USA
Phone: 952-934-2100 | Fax: 952-934-2737
Email: sales@svta.com | www.svta.com

Engines for Thin Film Innovation