

844i System

Data Sheet

844i System overview

The KDF 844i System is a large area system that meets the demanding process requirements of high-density interconnect, 300 mm semiconductor wafers, OLED and flat panel display manufacturing. KDF's second generation 844i system has increased its pallet size to meet increasing demand for higher throughput with larger substrates as well as build on improvements ranging from reduced footprint space to upgrades in both hardware and software.

Benefits

- High deposition rate with excellent uniformity over the entire deposition area
- Large deposition area with excellent run-to-run process stability
- High utilization of target materials particularly precious metals
- Industrially proven design that has been serving the market for decades

Applications

- Thin Film Battery
- Wear & Decorative Coatings
- Solar
- Medical Devices

Key features

- Thin Film Battery
- Wear & Decorative Coatings
- Solar
- Medical Devices

Options

- 5 RF, Pulsed DC, and HIPIMS power supplies
- Co-deposition capable
- RF Pre-clean station
- Integrated Insitu monitoring:
 - Plasma Emission monitoring (PEM)
 - Pallet temperature
 - Residual Gas Analyzer
 - DC/Pulsed DC pallet bias
 - Load lock heat for degas
- Water pump for additional water vapor pumping capacity
- Turbo pump for process chamber



CHAMBER ULTIMATE PRESSURE	<9.0 x 10 ⁻⁸ torr
CHAMBER LEAK RATE	25 minutes to 1 x 10 ⁻⁴ torr
PUMP DOWN FROM ATM	360 minutes to 5 x 10 ⁻⁷ torr
LOAD LOCK ULTIMATE PRESSURE	1 x 10 ⁻⁷ torr
SYSTEM CAPACITY	2" - 36; 3" - 16; 4" - 9; 5" - 5; 6" - 4; 8" - 1; 12" - 1
POWER SUPPLIES	20kW DC Included. Options: 10kW or 20kW Pulsed DC 3kW or 5kW RF HIPIMS
INTEGRATED THROTTLING SS VAT VALVE	Upstream or downstream pressure control
COMPUTER CONTROL	Real-time Windows based GUI environment
RECIPE MANAGER	SQL database
POWER	208 VAC, 3-phase, 225 Amps
WATER	8 GPM, 70 PSIG min., 10°C-24°C
COMPRESSED AIR	85-100 PSIG
PROCESS GAS	25 PSIG 99.999%
PURE GAS	Dry N ₂
NFPA79 GUIDELINES	Approved
PALLET SIZE	26.5" x 30"
OPTIONAL ROBOT	OPUS Robot designed for particulate-free, reliable cassette to cassette substrate handling
UNIFORMITY OVER PALLET AREA	- </= to 10% - </= to 5%

