

BENEQ Transform™ platform

BENEQ set to Transform™ the More-than-Moore Era

Beneq Transform™ establishes a completely new class of ALD cluster tool products in its versatility and adaptability to address a broad range of applications and market segments. Beneq Transform™ provides winning ALD solutions for the More-than-Moore market.

Beneq ALD Solutions for More-than-Moore Markets

POWER DEVICES

- GaN, Si, and SiC power devices

IMAGE SENSORS

MEMS & ACTUATORS

- Inkjet heads
- Biochips, microfluidics
- Piezo actuators
- Inertial, pressure sensors

RF FILTERS

- SAW, TC-SAW, TF-SAW
- BAW (SMR & FBAR)

PHOTONICS & MICRO-LED/OLED

RF IC'S

- GaAs, GaN, InP IC's
- MIM capacitors

VERSATILITY: Combines thermal and plasma-enhanced ALD processing modules for single wafer or batch

PRODUCTIVITY: Unique pre-heating module boosts productivity by eliminating waiting time

FAB-READY: Industry-standard horizontal single-wafer automation for wafer sizes from 3" to 8" (roadmap for 12"), SEMI S2/S8 certified, SECS/GEM ready

SERVICEABILITY: Easy access for rapid maintenance

AVAILABLE PROCESSES: Al_2O_3 , SiO_2 , HfO_2 , Ta_2O_5 , TiO_2 , TiN, AlN, SiN_x , ZnO, ZrO, down to <1 % 1σ thickness non-uniformity in batch (Al_2O_3 @300 °C, WiW, WtW, BtB)



BENEQ Transform™ and Transform™ Lite

Beneq Transform™ is a winning solution

Productivity & Performance

- Beneq Transform™ provides best productivity and performance at the lowest cost per wafer

Reliability

- Superior reactor design for reliable operation and high uptime

Serviceability

- Easy access for rapid maintenance is central to platform design

Versatility

- One platform to serve multiple applications and capacity needs
- Thermal batch and PEALD integrated on the same platform

Flexibility

- Configure to current needs, retrofit modules, size conversion 3–8"
- Roadmap being deployed for 300 mm and innovative ALD technologies

	Transform™	Transform™ Lite
MAXIMUM CONFIGURATION	3 ALD modules + pre-heater	2 ALD modules + pre-heater
TRANSFER MODULE	Brooks Mx600SS	Brooks Mx400
COOLING OPTION	Built-in	Facet-mounted
VCE LOADLOCKS	2	1
SUBSTRATE SIZE	3", 4", 6" or 8"	3", 4", 6" or 8"
MAXIMUM DIMENSIONS	3120x4070x2140 mm	3060x3340x2140 mm
INTEGRATION	SECS/GEM	SECS/GEM
THROUGHPUT EXAMPLE 50NM AL2O3 300 °C	15 wafers/hour (1PM) > 40 wafers/hour (3PM's)	15 wafers/hour (1PM) >25 wafers/hour (2PM's)

FIELD SERVICE ADVANTAGE

Beneq's service advantage includes rapid response with local personnel

