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 it’s 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

CMOS IMAGE SENSORS

- BSI CIS, Novel CIS design, & Lens module

µOLED

LED, µLED, DETECTORS & PHOTONICS

- VCSEL & Optoelectronic ICs

RF FILTERS & ICS

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

MEMS, SENSORS & ACTUATORS

- Inkjet heads
- Biochips & Microfluidics
- Piezo actuators
- Inertial & Pressure sensors

POWER DEVICES

- Trench, SJ & SiC trench MOSFET
- IGBT
- GaN HEMT & Vertical GaN

ADVANCED PACKAGING

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 75 mm to 200 mm, 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

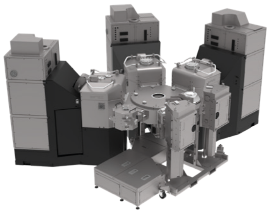
- One platform to serve multiple applications and capacity needs
- Thermal batch and PEALD integrated on the same platform

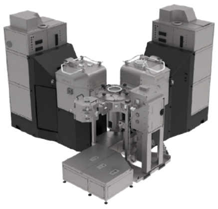
Flexibility

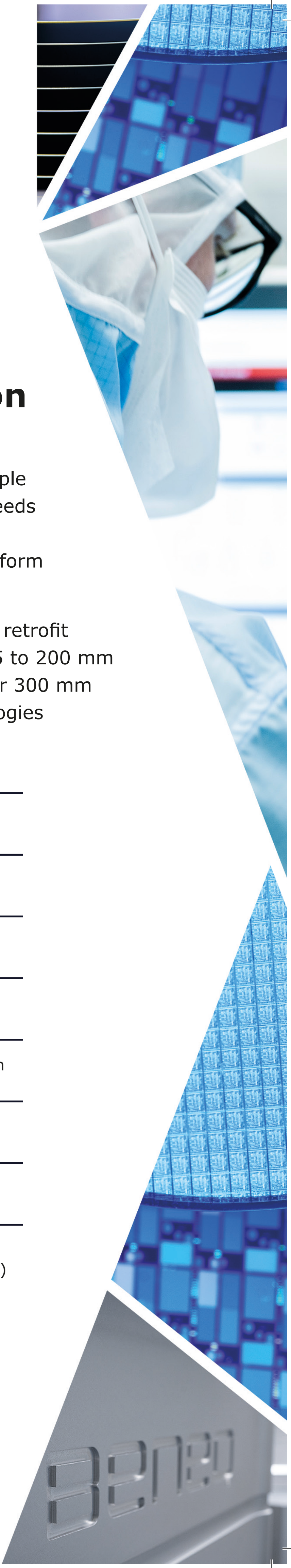
- Configure to current needs, retrofit modules, size conversion 75 to 200 mm
- Roadmap being deployed for 300 mm and innovative ALD technologies

	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	75, 100, 150 or 200 mm	75, 100, 150 or 200 mm
MAXIMUM DIMENSIONS	3120 x 4070 x 2140 mm	3060 x 3340 x 2140 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







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