

PICOSUN™ P-300BV

The PICOSUN™ P-300BV ALD system is specially designed for production of LEDs, discrete devices, and MEMS devices such as print heads, sensors, and microphones.



Technical Features

The PICOSUN™ P-300 ALD systems have become the new standard in high volume ALD manufacturing. By integrating our patented hot-wall design with fully separated inlets, we can create the highest quality ALD films with excellent yield, low particle levels, and superior electrical and optical performance. The agile design with easy and fast maintenance ensures minimum system downtime and lowest cost-of-ownership in the market. Our proprietary Picoflow™ diffusion enhancer technology enables highly conformal coatings on ultra-high aspect ratio substrates with production-proven processes.

The PICOSUN™ P-300BV ALD system represents the cutting-edge of industrial ALD. The system is designed for semi-automated handling of wafer batches. The tool is optimized for fast batch production and it can be integrated to factory automation via SECS/GEM option. Vacuum loading system with heating option enables clean processing of sensitive substrates and deposition of materials such as metal nitrides.

The PICOSUN™ P-300BV is the ALD system of choice for innovation driven industries!

Typical substrate size and type

- 200 mm wafers in batches of 25 pcs (standard pitch)
- 150 mm wafers in batches of 50 pcs (standard pitch)
- 100 mm wafers in batches of 75 pcs (standard pitch)
- Non-wafer substrates (tailored holders)
- High aspect ratio samples (up to 1:2500)

Processing temperature

- 50 – 450°C

Typical processes

- Batch processes available with cycle times down to single digit seconds*
- Al_2O_3 , SiO_2 , Ta_2O_5 , HfO_2 , ZnO , TiO_2 , ZrO_2 , AlN , TiN , and metals
- Down to <1% 1σ non-uniformity in a batch (Al_2O_3 , WIW, WTW, B2B, 49 pts, 5mm EE)**

Substrate loading

- Semi-automatic loading with vertical loaders (one or two loaders)
- Optional heating for load lock

Precursors

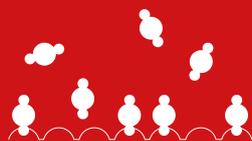
- Liquid, solid, gas, ozone
- Level sensors, cleaning and refill service
- Up to 8 sources with 4 separate inlets

Please feel free to contact us for more information or a quotation!

* < 10s cycle time

** < 1% non-uniformity

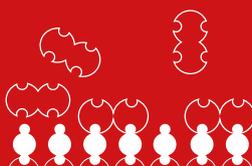
THE PRINCIPLE OF ALD



Introduction of molecules
containing element A.



Adsorption of the molecules
on the surface.



Introduction of molecules
containing element B and
reaction with element A on
the surface.



Completion of one
monolayer of compound AB.

Repeat cycle till desired film
thickness is reached.

picosun
AGILE ALD

Picosun HQ

Picosun Oy

Tietotie 3
FI-02150 Espoo, Finland
Tel. +358 50 321 1955
info@picosun.com

Picosun Oy

Masalantie 365
FI-02430 Masala, Finland
Tel. +358 50 321 1955
info@picosun.com

Picosun Branch Offices

Picosun Europe GmbH

Tel. +49 1522 449 49 11
sales@picosun.com

Picosun USA, LLC

Tel. +1 214 790 0844
Mobile +1 214 490 3951
sales@picosun.com

Picosun Asia Pte. Ltd., Singapore

Tel. +65 9756 3265
sales@picosun.com

Picosun Taiwan Co. Ltd.

Tel. +886 90 515 2985
sales@picosun.com

Picosun China Co. Ltd.

Tel. +358 40 480 3449
sales@picosun.com

Picosun Japan Co. Ltd.

Tel. +81 3 6431 9500
Mobile +81 90 5198 8131
sales@picosun.com