# PICOSUN™ R-200 STANDARD

The PICOSUN™ R-200 Standard ALD systems are suitable for R&D on dozens of applications such as IC components, MEMS devices, displays, LEDs, lasers, and 3D objects such as lenses, optics, jewelry, coins, and medical implants.

The PICOSUN™ R-200 Standard ALD system is the market leader in thermal ALD research tools. It has become the tool of choice both for companies and research institutes driven by innovation.

The agile design enables the highest quality ALD film depositions together with the ultimate flexibility of the system to fit future needs and applications. The patented hot-wall design with fully separate inlets and instrumentation enables particle-free processing adaptable on a wide range of materials on wafers, 3D objects, and all nanoscale features. Excellent uniformity even on the most challenging through-porous, ultra-high aspect ratio, and nanoparticle samples can be achieved thanks to our proprietary Picoflow™ technology. The PICOSUN™ R-200 Standard systems are equipped with highly functional and easily exchangeable precursor sources for liquid, gaseous, and solid chemicals. Integration with glove boxes, powder chambers, and various in situ analytics systems enable efficient and flexible research with good results, no matter what your research area is now, or what it might become later on.

## Technical Features

### Typical substrate size and type

- 50-200 mm single wafers
- 156 mm x 156 mm solar Si wafers
- 3D objects
- Powders and particles
- Mini-batch
- Porous, through-porous, and high aspect ratio (up to 1:2500)

### Processing temperature

- 50 – 500°C

### Typical processes

- $Al_2O_3$, $TiO_2$, $SiO_2$, $Ta_2O_5$, $HfO_2$, ZnO, $ZrO_2$, TiN, AlN, metals such as Pt or Ir

### Substrate loading

- Manual loading with a pneumatic lift
- Load lock with magnetic manipulator arm

### Precursors

- Liquid, solid, gas, ozone
- Up to 6 sources with 4 separate inlets

### Options

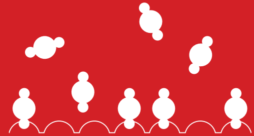
- Picoflow™ diffusion enhancer, RGA, $N_2$ generator, gas scrubber, customized designs, glove box compatibility for inert loading

**The highest quality ALD systems for demanding applications.**

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

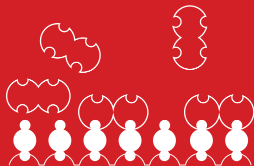
picosun AGILE ALD

## 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 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


PICOSUN™ R-200 Standard
Version 05_2017

Product card R-200 Std EDIT.indd 2 16/05/17 14:35