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PICOSUN® Sprinter demonstrates record-breaking batch film quality

ESPoo, Finland, 19th of May 2021 – Picosun Group has further optimized its PICOSUN® Sprinter ALD system processes successfully for semiconductor, display and IoT component manufacturing lines.

PICOSUN® Sprinter ALD system Al₂O₃ process results showed excellent thickness uniformity even at low 90 °C deposition temperature. At 300 °C temperature the results were at record-breaking level (<0.2% 1sigma) when measured within wafer. Furthermore, the team has continued to improve also other parts of the process performance. The production capacity has more than doubled in the last two months when the process cycle time has been reduced to 8 seconds, without any uniformity degradations. Other examples include the SiO₂ process results, which showed uniform films for backend-of-the-line compatible thermal SiO₂ ALD process at 300-390 °C. More information on these and other process improvements are available on request.



Al₂O₃ is one of the most common deposited films for applications such as moisture barrier for image sensors and displays. SiO₂ thin film is widely used in the manufacturing process of for example logic chips as spacer or multipattern applications. Sensitive substrates can require low deposition temperature or low thermal budget without compromising the film quality, which is one of the challenges the company wanted to address with PICOSUN® Sprinter.

“Picosun Group launched Sprinter, the fast batch ALD tool for 300 mm wafers, in December 2020. We wanted to bring single wafer film quality and uniformity for fast batch processing and meet the challenges in high volume ALD manufacturing. Our solution has gained strong interest in the market and we are already delivering a number of Sprinter ALD systems to customers”, says Juhana Kostamo, Vice President, Industrial Business Area of Picosun Group.

Read more about PICOSUN® Sprinter at picosun.com/product/picosun-sprinter/

Picosun provides the most advanced AGILE ALD® (Atomic Layer Deposition) thin film coating solutions for global industries. Picosun's ALD solutions enable technological leap into the future, with turn-key production processes and unmatched, pioneering expertise in the field – dating back to the invention of the technology itself. Today, PICOSUN® ALD equipment are in daily manufacturing use in numerous leading industries around the world. Picosun is based in Finland, with subsidiaries in Germany, USA, Singapore, Japan, South Korea, China mainland and Taiwan, offices in India and France, and a world-wide sales and support network. Visit www.picosun.com.

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