



NEWS ANNOUNCEMENT

FOR IMMEDIATE RELEASE

SkyWater Adds DRIE Capability to Enable TSV and High Aspect Ratio Features for Silicon Interposers, Photonics, Power and MEMS Applications

BLOOMINGTON, MN, June 2, 2020 – [SkyWater Technology](#), the innovator’s trusted foundry partner, today announced it has signed an agreement for a deep reactive-ion etching (DRIE) process tool from [SPTS Technologies](#), a KLA company and a leading supplier of advanced wafer processing solutions and deep silicon etch technology. DRIE is a highly anisotropic etch process used to create deep penetration, steep-sided holes, and trenches in wafers/substrates, typically with high aspect ratios. The new etcher will enable SkyWater with critical capabilities needed to support through-silicon vias (TSVs) and various types of cavity and trench etches critical for features in silicon interposers, photonics, power transistors and MEMS applications.

The SPTS Omega® fxP 200mm [Rapier™ plasma etch system](#) for DRIE enables use of the Bosch Process which is an industry proven technique that leverages dynamic sequencing of etch process parameters enabling control of plasma properties over time to select desired etch regimes. In addition to enabling high aspect ratio feature definition, the etch platform can be highly effective for slope and taper definitions, surface smoothing comparable to CMP processing, and extreme wafer thinning as well as ultra-small-dimension-kerf die singulation.

The Bosch process has proven to be a key enabler across a range of applications and will allow SkyWater to expand support for custom processing in growing markets including power management, acoustic and microfluidic MEMS, silicon photonics waveguides and a wide range of advanced packaging applications requiring TSVs. Moreover, this capability is a strong complement to the existing diverse processing technologies available at SkyWater and further enables advanced development for emerging architectures.

“This new etching platform enhances the core process capabilities at SkyWater that are enabling innovators who value agile development in a quality environment and rapid time to volume manufacturing. It also highlights our commitment to supporting growing critical needs of the increasingly diverse technology development community,” said Gregg Damminga, Vice President of Technology Development, SkyWater Technology.

“We are pleased to bring this important capability to SkyWater’s foundry environment and be part of their exciting technology portfolio,” said Kevin Crofton, President of SPTS Technologies and Senior Vice President at KLA Corporation.

The tool will be available for processing in Q3. For more information, please contact: swfoundry@skywatertechnology.com.

About SkyWater Technology About SkyWater Technology

SkyWater is the only U.S.-owned and U.S.-based pure play semiconductor foundry and is a DoD-accredited Trusted supplier, specializing in custom design and development services, design IP, and volume manufacturing for integrated circuits and micro devices. Through its Technology Foundry model, SkyWater’s world-class operations and unique processing capabilities enable mixed-signal CMOS, power, rad-hard and ROIC solutions. SkyWater’s Innovation Engineering Services empower development of superconducting and 3D ICs, along with carbon nanotube, photonic and MEMS devices. The company serves customers in growing markets such as aerospace & defense, automotive, biomedical, cloud & computing, consumer, industrial, and IoT. For more information, please visit: www.skywatertechnology.com/.

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