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ESI Unveils Innovative Solution for Laser Processing of Thin Silicon Wafers

New Ultrus™ laser system harnesses ultrafast, high-pulse-rate laser technology for precise, accurate grooving plus lower cost of ownership

PORTLAND, Ore.--(BUSINESS WIRE)-- Electro Scientific Industries, Inc. (NASDAQ:ESIO), an innovator in laser-based micromachining solutions, today unveiled its Ultrus™ laser processing system, designed to provide semiconductor manufacturers with new options for reducing production costs, improving quality and increasing back-end yields.

The Ultrus™ system combines ultrafast high-pulse-rate lasers and ESI's proprietary beam positioning technology to provide a high-throughput, high-accuracy grooving solution that addresses the challenges associated with processing thinner and more fragile materials. Since the Ultrus™ system allows for higher die break strength (DBS) and a smaller heat affected zone (HAZ), semiconductor manufacturers can now process newer thin wafers efficiently at the higher level of accuracy required and low-k materials—as well as current materials—without risking damage to the underlying devices.

"For semiconductor manufacturers, just keeping pace with Moore's Law requires constant innovation across their processing operations," said Michael Darwin, General Manager of the Industrial Products Division at ESI. "With the Ultrus™ system we have directly addressed specific hurdles related to using lasers efficiently for wafer grooving and scribing, giving semiconductor manufacturers the ability to more accurately remove materials at higher speeds than was previously possible."

Although laser-based platforms have become essential for cost-effective wafer processing, the adoption of more fragile materials has presented semiconductor manufacturers with processing challenges related to maintaining high throughput at high accuracy while minimizing the risk of damage to the material—and thereby decreasing yields. Using ultrafast, high-pulse-rate laser technology to precisely remove metal layers and fragile materials allows for higher die break strength and smaller heat affected zones, leading to higher yields and a lower total cost of ownership.

Availability

The Ultrus™ laser system is available now worldwide. For more information go to:
<http://www.esi.com/Products/Semiconductor/LaserScribingGrooving/Ultrus.aspx>.

About ESI

ESI's integrated solutions allow industrial designers and process engineers to control the power of laser light to transform materials in ways that differentiate their consumer electronics, wearable devices, semiconductor circuits and high-precision components for market advantage. ESI's laser-based manufacturing solutions feature the micro-machining industry's highest precision and speed, and target the lowest total cost of ownership. ESI is headquartered in Portland, Ore., with global operations from the Pacific Northwest to the Pacific Rim. More information is available at www.esi.com.

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