

Global Zeus and PulseForge Introduce Fully-Automated Photonic Debonder Ahead of SEMICON Korea 2025

First Units to be Installed by Leading Integrated Device Manufacturers in the United States as Photonic Debonding Gains Momentum

SEOUL, SOUTH KOREA, February 19, 2025 /EINPresswire.com/ -- [Global Zeus](#), in collaboration with [PulseForge](#), introduces its new Fully-Automated Photonic Debonder for advanced semiconductor manufacturing, enabling the rapid adoption of technology to help drive the growth of AI chips. This state-of-the-art system accelerates the adoption of photonic debonding technology for high volume production, offering manufacturers a high-throughput and cost-effective wafer debonding solution.



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With the demand for heterogeneous integration, 2.5D/3D packaging, and high-bandwidth memory (HBM) rapidly increasing, the need for precise, damage-free wafer debonding has never been greater. The Fully-Automated Photonic Debonder is the result of a collaboration between Global Zeus and PulseForge that leverage high-intensity, pulsed broadband light to deliver low-stress, low-ash debonding, which offer potential to optimize yields and reduce manufacturing costs.

“Our partnership with PulseForge brings together industry-leading expertise in photonic debonding and semiconductor manufacturing,” said Mr. Jong Lee, CEO of Global Zeus. “This fully-automated system is expected to represent a major step forward in enabling next-generation packaging technologies, while improving process efficiency and reducing operational costs.”

Key Features and Benefits:

- Fully Automated Operation – Ensures high throughput and process repeatability, streamlining semiconductor manufacturing.



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Mr. Jong Lee, CEO of Global Zeus

- Damage-Free Processing – Eliminates mechanical stress and reduces chemical cleaning, preserving wafer integrity and enabling thinner wafers with improved yield.
- Scalability for Heterogeneous Integration & Advanced Packaging – Supports diverse wafer sizes and temporary bonding materials.
- High Throughput & Cost Efficiency – Optimized for mass production environments, reducing cycle times and manufacturing costs.

As the semiconductor industry moves toward broader

photonic debonding adoption, the first set of tools is expected to be delivered to leading IDMs in the United States.

Representatives from Global Zeus and PulseForge will be on the floor at SEMICON KOREA 2025 from February 19th to 21st, Booth #A754 in Hall A on the 1st floor, to provide more information on the upcoming Fully-Automated Photonic Debonder. Industry leaders, partners, and customers are invited to visit and learn more about this technology and the equipment firsthand from the experts.

For more information or to schedule a demonstration, or contact Zeus and PFI.

About Global Zeus

Global ZEUS is a renowned provider of advanced semiconductor processing solutions. It has grown to be a leading supplier and trusted partner for the semiconductor, display, robotics and smart factory industries. As a global engineering company with a strong IP portfolio, advanced technology, and world class manufacturing, the core mission of Global ZEUS for more than 50 years has been to deliver solutions that help make its customers successful.

About PulseForge

PulseForge, Inc. develops and manufactures state-of-the-art flashlamp-based tools that deliver energy in a precise and targeted manner to enable innovation in industrial manufacturing. Our expertise and tools empower our customers to explore novel materials and manufacturing methodologies, driving dynamic and efficient production at an industrial scale.

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