

Aerotech Announces Light Conversion West Coast Collaboration

World-class femtosecond lasers and advanced motion control for ultra-fast, ultra-precise laser processing

PITTSBURGH, PA, October 2025 – Aerotech Inc., a global leader in precision motion control and automation, announced that it is collaborating with Light Conversion, a pioneer in femtosecond lasers and laser systems, in a new, state-of-the-art 4300 square foot R&D facility located in Sunnyvale, California. The new lab opened in February 2025. Aerotech is supplying a custom laser scanning and motion control system for use in high-precision applications in semiconductor, electronics, medical device manufacturing and other industries that benefit from laser-based micromachining.



“We are excited to be collaborating with Light Conversion at their new lab in the heart of Silicon Valley,” said Brian O’Connor, vice president of growth and strategy at Aerotech. “Light Conversion is renowned for its world-class femtosecond laser technology. Supporting them with our industry-leading precision motion control products will push the boundaries of what is possible in advanced manufacturing,” stated O’Connor.

Incorporating Light Conversion’s CARBIDE 80W femtosecond laser, the Aerotech laser processing system features an AGV-HPO high-dynamic laser scan head for high-speed acceleration and processing with minimal trajectory error. Coupled with industry-leading linear and rotary stages, this system is extremely flexible, accurate and reliable for processing round, tubular or flat parts used in microfabrication, laser cutting, laser joining, laser texturing and laser marking.

Aerotech’s advanced programming features like Infinite Field of View (IFOV) and Position Synchronized Output (PSO) improve the system’s speed and accuracy at sub-micrometer levels without sacrificing throughput or part quality. The entire precision motion system is controlled with a single Automation1 motion controller, simplifying machine setup and deployment.

The synergy of Light Conversion’s market-leading femtosecond lasers and BiBurst capabilities paired with Aerotech’s precision motion and scanner technology allows the companies to demonstrate novel processes and capabilities particularly for semiconductor and medical device applications. “We are excited by the innovations anticipated by this partnership with Aerotech,” said Lucian Hand, Light Conversion’s president for North American operations.

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Located in the heart of Silicon Valley, Light Conversion's new ~4300 square foot laboratory (400 square meter) is designed to facilitate testing and development of precision laser processing applications including cutting, drilling, marking and material modification. In addition to laser processing capabilities, the facility features microscopes and other diagnostic tools to evaluate samples. Shared office space and conference room welcome customers and partners to collaborate and work on solutions to novel challenges.

About Aerotech

Aerotech Inc. is the global industry leader in precision motion control and automation. From standard positioning technologies, control systems and optomechatronic solutions to custom-designed automation systems, our products support research and industrial organizations worldwide. Aerotech solutions enable manufacturing, testing and inspection processes on a micrometer and nanometer scale for the world's best-known technology companies in industries such as semiconductors, consumer electronics and medical devices.

About Light Conversion

LIGHT CONVERSION has worldwide recognition for its industrial-grade Yb-based CARBIDE, PHAROS, and FLINT solid-state femtosecond lasers. The CARBIDE series features a compact industrial design with both air- and water-cooled models, the latter reaching an output power of 120 W and pulse energy of 2 mJ while maintaining excellent output stability. The PHAROS series focuses on customizability, reliability, and process-tailored output parameters, providing down to 100 fs pulse duration and up to 4 mJ pulse energy. The FLINT oscillators extend the parameter range with repetition rates from 10 to 100 MHz. Together, these lasers cover a wide range of scientific, industrial, and medical applications.

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Aerotech Media Contact:

Amy McGrath

+1.412.599.6406

amcgrath@aerotech.com

Light Conversion Media Contact:

Marketing@Lightcon.com