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FOR IMMEDIATE RELEASE

Lumetrics Awarded a Small Business Innovation Research Contract from the Army Research Lab

Advanced non-destructive testing system will use machine vision and a Shack-Hartmann wavefront sensor to ensure the integrity of transparent armor to protect active-duty personnel.

Rochester, NY (September 13, 2021) — Lumetrics, a manufacturer of precision non-contact thickness measurement and non-contact optical inspection systems, today announced a Small Business Innovation Research (SBIR) contract with the Army Research Lab (ARL) to ensure the quality development of transparent armor (TA) products, such as ballistic and blast-resistant glass.

TA products protect active-duty personnel, so manufacturing quality, consistent material composition, and material longevity are critical. The goals of this SBIR program are to assess the manufacturing quality of new TA windows, predict the failure of existing TA, and extend the service life of TA.

Lumetrics' role in the project is to advance their multispectral low-coherence measurement interferometer (MS-LCI) by combining it with machine vision and a Shack-Hartmann wavefront sensor which will detect and predict material degradation and delamination. Advanced integrated solid-state multi-wavelength light sources will increase the sensitivity and robustness of the MS-LCI technology. Real-time simulations of TA materials will also shed light on root cause failure and possible remediation methods.

The highly tuned sensing technology will provide new approaches to predict TA failure, test TA manufacturing processes, and ultimately create new manufacturing methods that increase TA's longevity.

"We are fully committed to the mission-critical goals of this SBIR partnership with ARL," said John Hart, President and CEO of Lumetrics. "When it comes to protecting lives, material failure is just not an option. Our team is proud to ensure precision manufacture of the highest quality transparent armor solutions."

Federal, state, and local officials and industry leaders commend the SBIR award and provide their full support of the project:

> Senator Charles Schumer said, "This award is a win-win-win allowing Lumetrics to grow in Rochester, through a project with the Army, and to perfect their cutting-edge technology, that will ensure the transparent armor and bullet-proof glass that protects our armed forces is safe and reliable. Lumetrics and its world-class workforce is another example of Rochester's leading optics industry that continues to develop innovative breakthroughs to push the frontiers of optics technology."

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Senator Kirsten Gillibrand, chair of the Armed Services Personnel Subcommittee, stated, "Lumetrics conducts innovative research that will go towards protecting our service members. This formative partnership with the Army Research Lab will help Lumetrics develop its groundbreaking technology in assessing the quality of transparent armor and allow it to continue to be an asset to Rochester, New York, and the entire nation."

Congressman Joe Morelle voiced his support, saying, "Lumetrics is a leader in innovative, state-of-the-art technology that is transforming the way we protect the brave men and women of our armed forces. As a member of the House Armed Services Committee, I'm so pleased that this significant award will help bolster transparent armor products and better protect the U.S. Army. I congratulate Lumetrics on this recognition of the important work they do, and I look forward to their continued growth and success."

Tom Battley, executive director of New York Photonics and the Rochester Regional Photonics Cluster, sees the partnership as a natural fit. "It makes good sense that the DoD has selected Lumetrics as their metrology partner for transparent armor," he said. "I can see plenty of other opportunities for using Lumetrics' innovative technology for measuring other transparent / translucent components such as conformal and freeform windows. Congratulations to John Hart and his team!"

SBIR programs support scientific excellence and stimulate technological innovations through this highly competitive investment program. Lumetrics' two-year contract begins this month and ends in July 2023.

About Lumetrics

Lumetrics® is the leading designer and manufacturer of precision thickness metrology equipment with total solution engineering expertise dedicated to the medical, glass, ophthalmic, automotive, food packaging, and coatings industries. Lumetrics' expert engineers design custom metrology fixtures and data analysis packages for on-line or at-line thickness measurement applications. World-renown for the OptiGauge® non-contact measurement system, Lumetrics also provides wavefront analysis of intraocular lenses, contact lenses, and laser beams across industry, government, and private research centers. With scalable Lumetrics technology, labs, R&D centers, and production lines realize improved yield, reduced costs, higher quality, and meet regulatory compliance requirements. Headquartered in Rochester, NY, Lumetrics has sales and support locations across Europe, Asia, and the Americas. For more information visit www.lumetrics.com.

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