

***Robust
Electric Laser
Initiative (RELI)***

Compact, lightweight, efficient



THE VALUE OF PERFORMANCE.

NORTHROP GRUMMAN

Robust Electric Laser Initiative (RELI)

Under a DoD program called the Robust Electric Laser Initiative (RELI), Northrop Grumman is leveraging its high-energy solid-state laser successes to advance electric laser technology for the Joint Technology Office, Air Force Research Laboratory, and the U.S. Army Space and Missile Defense Command. The result will enable next-generation laser weapons applications for all services and agencies.

Improved efficiency and beam quality

RELI seeks to increase system efficiency to greater than 30 percent while generating excellent beam quality.

High efficiency, combined with a compact, lightweight fiber-based system, enables new mission capabilities and integration onto limited payload platforms. Improved beam quality equates to better focus of the laser on a target at longer range, which is beneficial for a range of military missions.

This next generation of high-energy laser technology uses fiber lasers derived from commercial fiber laser

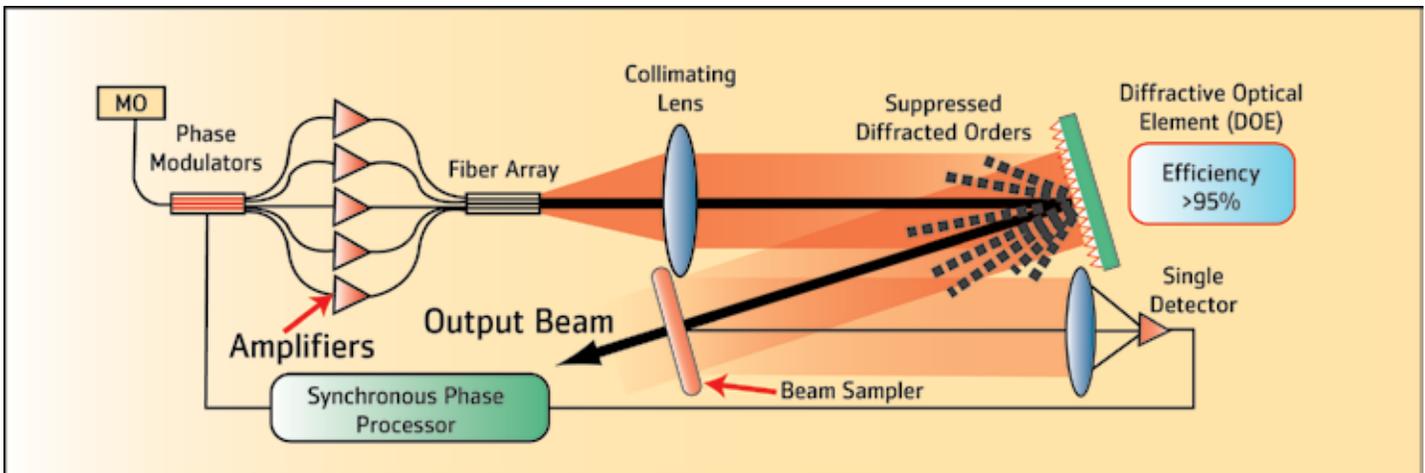
technology, which has progressed rapidly, providing enhanced military supportability and affordable lifecycle costs.

Scalable, affordable approach

Northrop Grumman has demonstrated our compact and common 25kW, 50 kW and 100 kW architecture, coherently combining commercially available, efficient fiber laser amplifier beams into a single output beam, and proven its traceability to a field-ready laser weapon system. RELI's scalable architecture is suited for scaling the power to and beyond 100kW-class weapon systems while maintaining excellent beam quality.

RELI will deliver efficiency, reliability and affordability into a fieldable system. Its advanced packaging can be tailored for various platforms across all military services and other Defense Department initiatives.

RELI joins the family of laser systems developed by Northrop Grumman that advance laser technology and efficiency to protect and strengthen our troops.



NGAS Diffractive Coherent Combining Concept



F-35



HMMWV

RELI opens the door to laser weapons on agile platforms.

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