



## **SURVIVABILITY**



### **Protection for Eyes and Cameras From Lasers**

The U.S. Army Tank Automotive Research, Development and Engineering Center's (TARDEC's) Laser Protection Research & Integration Laboratory's objective is to provide solutions for protecting eyes and day-vision cameras from laser weapons so that warfighters can maintain vision and mission capability while under laser attack.

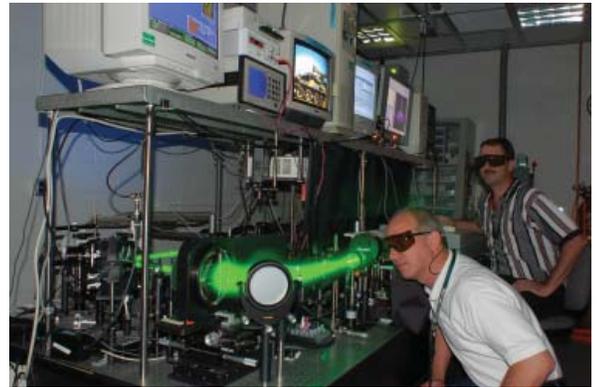
**TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.**

## Primary Focus

The Laser Protection Research & Integration Laboratory develops:

- Materials that limit the amount of light energy allowed to a sensor.
- New optical system designs that integrate advanced laser protection materials.

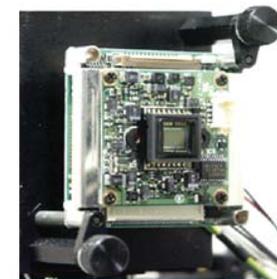
The Laser Protection Research & Integration Laboratory develops and evaluates techniques to harden combat vehicle surveillance vision optics against multiple battlefield laser hazards and threats. Engineers and scientists conduct various optical performance tests on vision devices and laser protection filters, as well as advanced research in nonlinear optical materials and novel optical design development.



## Challenges

The laboratory is located in a Class 100,000 Cleanroom. A cleanroom is an environment typically used in scientific research. It is characterized as having a low level of environmental pollutants such as dust, airborne microbes, aerosol particles and chemical vapors. Available equipment includes:

- Laser sources
- Detection devices
- Spectrometric instrumentation
- Optical test benches
- Laser beam profiling systems
- Optical microscopes
- Computer support facilities



The laboratory provides the equipment necessary to foster technology to combat current and developing laser threats and hazards in theater. The resultant technology and equipment will be indispensable to various Future Combat Systems applications.