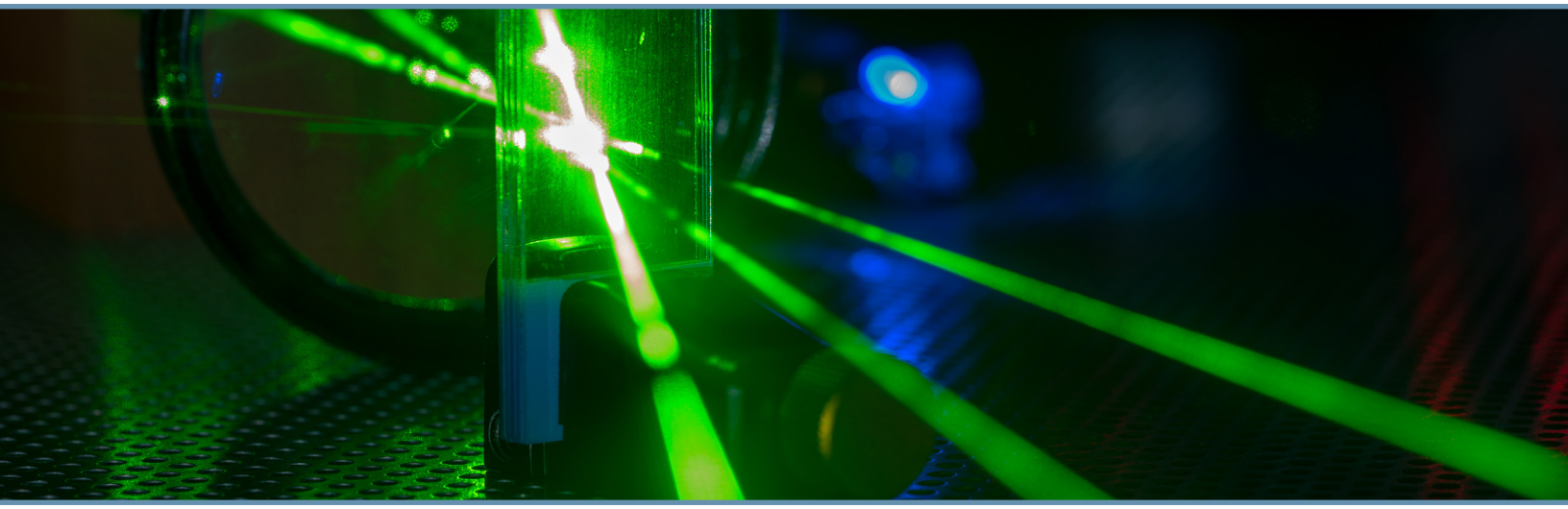
High Laser Damage Threshold Coatings
Validated by Independent Testing

Andover Corporation

Andover Corporation's coatings are engineered for consistent, reliable performance in high-power laser systems. To confirm this, an **AR-coated quartz optic** was submitted to Spica Technologies, an independent laser damage testing laboratory.

Testing demonstrated that the optic withstood a peak fluence of **85.00 J/cm²** at **1064 nm** with **10 ns** pulses, with no visible damage observed across 10 test sites.

This result highlights the durability and quality of Andover's anti-reflective coatings, making them well-suited for a range of demanding optical applications.

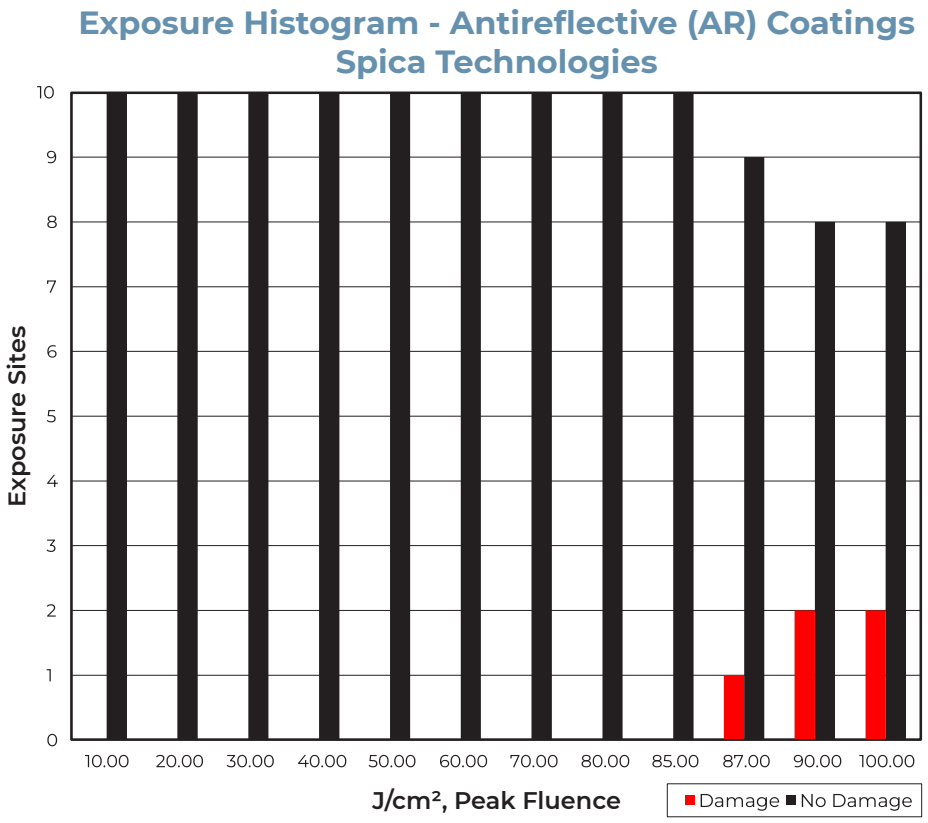


Common applications requiring high laser damage resistance:

Laser beam delivery and focusing
Components must withstand high peak power without degrading optical performance.

Optical assemblies for sensing systems
Sensitive systems require coatings that won't fail under repeated laser exposure.

Fiber optics and imaging components
Interfaces exposed to laser coupling or illumination must resist damage to ensure clarity and longevity.



LASER DAMAGE THRESHOLD SPECIFICATION SHEET AND CERTIFICATE OF COMPLIANCE

CUSTOMER ADDRESS:	Andover Corporation 4 Commercial Dr. Salem, NH 03079
TEST TYPE:	Laser Damage Threshold
TEST LOG NUMBER:	56819
SAMPLE SIZE:	~
COATING TYPE:	Antireflective (AR)
TEST WAVE-LENGTH:	1064 nm
POLARIZATION:	Linear
PULSEWIDTH (FWHM):	10 ns
SPOT DIAMETER (1/e²):	490µm
TEST METHOD:	Least Fluence Failure

P.O. NUMBER:	PD-28871
PART ID:	RD-1083
QUANTITY:	1
SUBSTRATE MATERIAL:	Quartz
TEST PREP:	N_2 gas blow
INCIDENCE ANGLE:	0°
PRF:	10 Hz
TEST BEAM PROFILE:	TEM_{00}
AXIAL MODES:	Multiple
NUMBER OF SITES:	120
EXPOSURE DURATION:	200 shots/site

DAMAGE DEFINITION: Plasma, increased He-Ne scatter. Visible damage as observed with 150x Nomarski darkfield microscope.

COMMENTS: Laser damage threshold measuread as 85.00 J/cm², peak fluence. Part irradiated at 85.00 J/cm² with no damage in 10 sites.

Spica Technologies certifies that this sample has been exposed to the conditions described above. All test and calibration data are maintained on file. All instrument calibration is traceable to NIST.

Test conducted by:

Spica Technologies Inc.
18 Clinton Dr. #3 · Hollis, NH 03049
603 882 8223 · www.spicatech.com