

CRITICAL INFRASTRUCTURE

Defending the Physical Layer.

Physical-layer electromagnetic protection engineered for grid, water, transportation, and industrial-control infrastructure — where a pulsed or directed-energy event could take a region offline, and where retrofit velocity matters as much as attenuation.

GRID • WATER • TRANSPORT • INDUSTRIAL • MUNICIPAL

In production. Manufactured in Dallas, Texas. Independently validated under ASTM D4935-10 across the 30 MHz through 1.5 GHz sweep by an accredited third-party laboratory. Configured per program, delivered to accredited-integration point.

40–100+ dB

Attenuation
Configured per site

ASTM D4935-10

Independently validated
Planar shielding standard

In Production

Dallas, Texas
U.S. supply chain

Retrofit

or new build
No plant shutdown

GT OPTICS, INC.

Corporate HQ: 1601 Elm Street, 48th Floor, Dallas, TX 75201
Manufacturing Facility: Dallas, Texas • Manufactured in USA • Independently validated under ASTM D4935-10
Brian Figueroa, Chairman • brian@gtoptics.io • 949-482-7825

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Confidential — for qualified customers and program partners





SITE-LEVEL INTEGRATION

SecureWrap® applied to control-room and SCADA enclosures — HPM/EMP resilience without plant shutdown.

MARKET & PLATFORM

One Platform. Every Critical Envelope.

Sector Reality.

The physical layer of critical infrastructure — substation control houses, water-treatment SCADA, transportation-signal cabinets, industrial-control rooms, and municipal command centers — is exposed to HPM, EMP, RF interference, and increasingly to directed-energy threats that can take a region offline. Bulk hardening carries construction cost and shutdown time that critical operators cannot absorb without service disruption.

The GT Optics Answer.

SecureWrap® delivers site-level and cabinet-level containment as a thin-film and coating system, applied to enclosures, control houses, and cabinet skins during normal maintenance windows. 40 dB to 100+ dB attenuation configured per site, at grams per square meter, without plant shutdown or heavy structural modification. Same qualified platform across grid, water, transport, and industrial-control programs.

GT OPTICS · DALLAS, TEXAS

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APPLICATIONS

Environments & Configurations.

APPLICATION	WHAT IT PROTECTS	GT OPTICS CONFIGURATION
Electrical substations	Control houses, protective-relay cabinets, and SCADA enclosures.	Film retrofit to existing control-house skins and cabinet enclosures — configured per site threat profile.
Grid transmission & distribution	Cabinet-level and enclosure-level containment across the transmission fabric.	Coating applied to cabinet skins during commissioning; retrofit during scheduled maintenance windows.
Water & wastewater treatment	SCADA control rooms, pump-station cabinets, and treatment-plant control houses.	Wall-system film or coating tuned to the site threat profile — no plant shutdown required.
Transportation signaling	Rail signaling cabinets, traffic-control cabinets, and dispatch centers.	Retrofit film application to signaling cabinets and dispatch enclosures — configured per operator profile.
Industrial control rooms	Process-control rooms, industrial NOCs, and OT command environments.	Wall-system film or coating tuned to workload and adjacency threats — no floor-plan disruption.
Municipal command	Emergency operations centers, dispatch centers, and municipal command environments.	Configured per host system band — grams per square meter, no structural load.

FIELD-DEPLOYABLE TODAY

Applied during maintenance windows across grid, water, transport, and industrial programs — no shutdown, no rebuild, no dead-weight added.

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THREAT COVERAGE

What SecureWrap® Addresses.

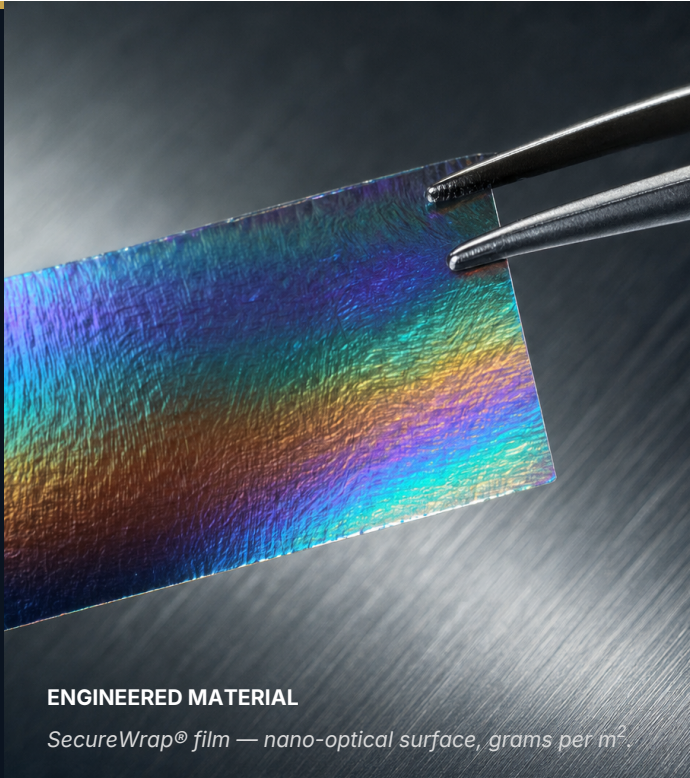
THREAT / REQUIREMENT	HOW SECUREWRAP® ADDRESSES IT
HPM and EMP events	Broadband shielding hardens critical infrastructure against pulsed and high-power microwave events.
Directed-energy threats	Engineered attenuation across optical and directed-energy bands where the site profile requires it.
RF exploitation & signal pickup	Physical-layer barrier defeats remote signal reconstruction across control-house and cabinet boundaries.
EMI and cross-cabinet coupling	Isolates protective-relay, SCADA, and control cabinets across shared enclosures and adjacent tenants.
Facility disruption during retrofit	Applied to existing surfaces — retrofit possible without demolition or weight-bearing changes.
Legacy substation & control-house exposure	Compatible with existing substrate and enclosure materials — film application does not require enclosure replacement.

INDEPENDENT VALIDATION

Validated, not promised.

Every performance figure traces to an independent third-party report on file. SecureWrap® is qualified under ASTM D4935-10, the planar-material shielding-effectiveness standard, at an accredited third-party laboratory across the 30 MHz through 1.5 GHz sweep. Attenuation is configurable from 40 dB to 100+ dB per program — engineered against the host substrate, film stack, and integration geometry. Configuration-specific qualification is performed at the integration point by the accrediting authority.

- ASTM D4935-10**
Planar-material shielding-effectiveness standard
- 30 MHz – 1.5 GHz sweep**
Independently swept frequency band by accredited lab
- 3rd-party laboratory**
Accredited reports on file per configuration



ENGINEERED MATERIAL
SecureWrap® film — nano-optical surface, grams per m².

WHY SECUREWRAP® FOR CRITICAL INFRASTRUCTURE

The Case for the Platform.

- **Site-grade attenuation from thin film.** A few grams per square meter rather than bulk shielding — 40 dB to 100+ dB attenuation configured per site, independently validated under ASTM D4935-10.
- **Retrofit or new build without shutdown.** Film during maintenance windows, coating during commissioning, factory-applied for modular units — same material platform across every program tier.
- **Full-spectrum by design.** Engineered simultaneously across RF, HPM, and directed-energy bands through a single optical stack.
- **U.S.-domiciled supply.** Manufactured at the GT Optics facility in Dallas, Texas; tested through accredited third-party laboratories.

TYPICAL BUYERS & INTEGRATION PARTNERS

Who We Work With.

- **Utility & grid operators.** Substation, transmission, and distribution program teams across investor-owned utilities and public power.
- **Water & wastewater authorities.** Municipal and regional water and wastewater treatment authorities.
- **Transportation & rail operators.** Rail signaling programs, transit authorities, and DOT critical-infrastructure teams.
- **Industrial & OT operators.** Process-control operators, industrial NOC integrators, and OT security teams.



MANUFACTURED IN DALLAS, TEXAS

Hardening the grid we live on.

READY FOR BRIEFING

Talk to GT Optics.

Full white papers, capability briefs, product one-pagers, and test reports available on request.

DIRECT CONTACT

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