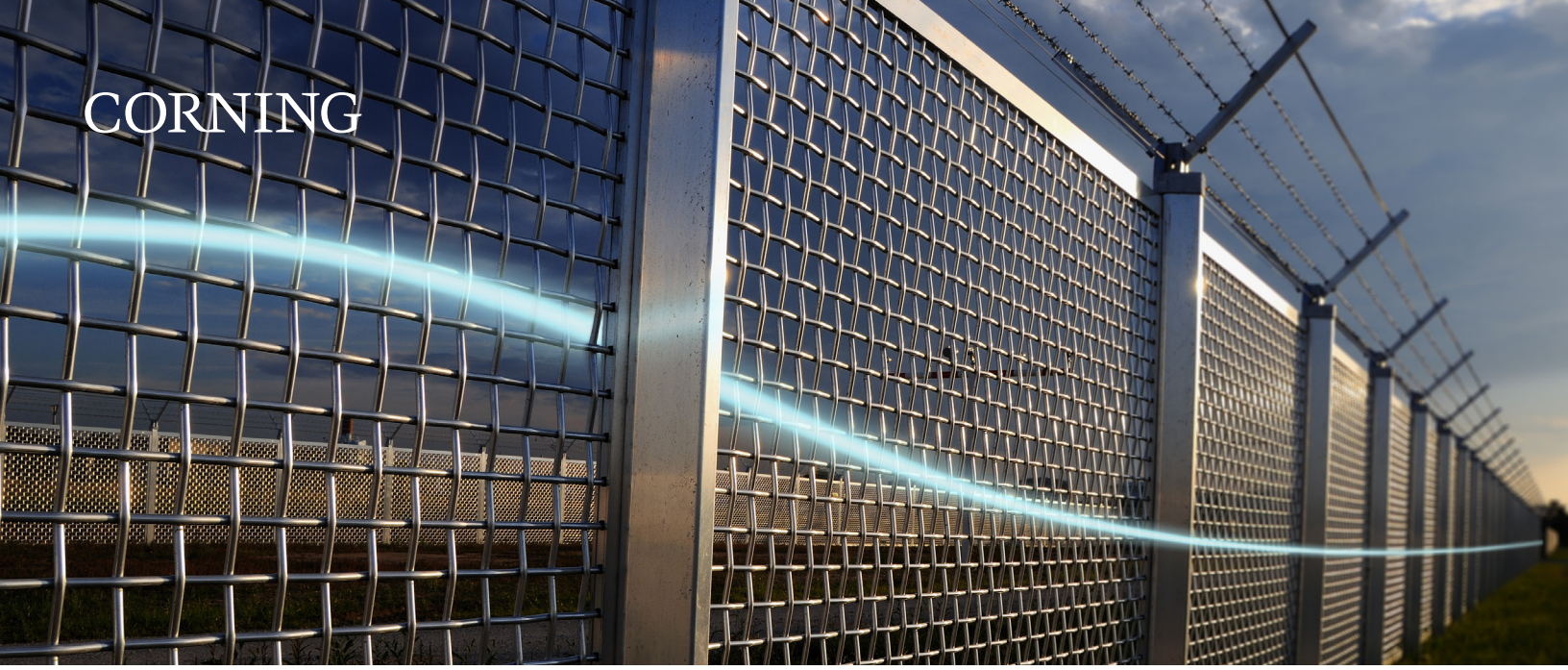


Simplify with Fiber Optic Sensing

The Breakthrough Choice for Perimeter Security

When light travels through optical fiber, some of it naturally refracts back to the source, creating “backscatter.” Distributed fiber optic sensing (DFOS) measures changes to the normal backscatter. The ability to analyze these fluctuations essentially turns a fiber cable into a vast network of intelligent sensors along its entire length. This allows continuous, high-resolution monitoring at a lower cost than conventional security solutions. From human activity to vehicle movement, unauthorized digging, and even seismic events, you’ll know it’s happening.

Different types of backscatter can be monitored to meet different goals.

- **Strain and vibration:** Detects pressure changes. Uses include perimeters, railroads, pipelines, subsea cables, tunnels, bridges, mines, foundations, areas at risk of landslides.
- **Temperature:** Detects heat changes. Uses include fire detection in tunnels, monitoring power cables, industrial ovens and reactors, oil and gas storage tanks and down-hole applications.

Streamlined, real-time protection for critical installations.

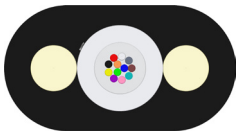
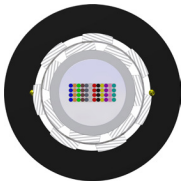
- Ideal for a wide range of challenging environments
- Continuous surveillance up to 45 kilometers or more from a single monitoring point
- No line-of-sight or remote power required, no electromagnetic interference
- Exceptional cost-effectiveness per monitoring point

Learn More

Take a deeper dive into the science behind fiber sensing, the main types, and how it can help simplify and strengthen your security operation in **this article** from Corning product expert Matthew Miller.

Fiber sensing: A critical part of your smart security network.

Corning offers a range of durable, versatile fiber optic cables for security applications. Optimized for fiber sensing, these cables continue our decades-long commitment to leveraging our optical and materials science expertise to develop industry-leading innovations that efficiently and cost-effectively solve real-world problems for our customers.

	Drop Cable	Micro Cable	Loose Tube	Ribbon Cable
				
Fiber	Single fibers	Single fibers	Single fibers	12F ribbon
Fiber Count	1-12F	12-144F	12-144F	24-48F
Fiber Density	Up to 12 fibers at 12.3 x 4.4 mm outer diameter	Up to 96 fibers in 8 mm ID duct, up to 144 fibers in 10 mm ID duct	Up to 144 fibers with 15.8 mm outer diameter	Fits up to 48 fibers in 11.85 mm outer diameter
Design	Flat drop	Micro (300 lbs)	Round (600 lbs)	Round (600 lbs)
Jacket	Non-armored	Non-armored	Non-armored and armored	Armored
Max Tensile Load	Self-supporting for pole spans (400 ft NESC heavy ice and wind, 500 ft NESC medium loading)	300 lbs	600 lbs	600 lbs
Environment	Exceptional crush resistance	Meets industry standard for waterblocking	Superior UV, fungus, and abrasion protection	Prevents water penetration, excellent tensile and anti-buckling protection
Installation	Outdoor, aerial or buried	Outdoor, air-assisted microduct, up to 150 m/min over 2,000 m	Outdoor, aerial or duct with closure, no preferential bend, no bonding or grounding required	Outdoor, aerial, duct, or direct buried, excellent mass-splicing yields
Ratings	ANSI/ICEA S-110-717, Telcordia GR-20-CORE, ITU-T G.652.D and ITU-T G.657.A1	ITU-T G.652.D/G.657.A1	Telcordia GR-20, ICEA-640, ITU-T G.652.D	ANSI/ICEA S-87-640, Telcordia GR-20, RDUP PE-90, ITU-T G.652.D

Let's Get Started

Contact us to learn more about Corning fiber sensing cables and to discuss your specific deployment needs.

Find free trainings, events, and other resources at the **Fiber Optic Sensing Association**

CORNING

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