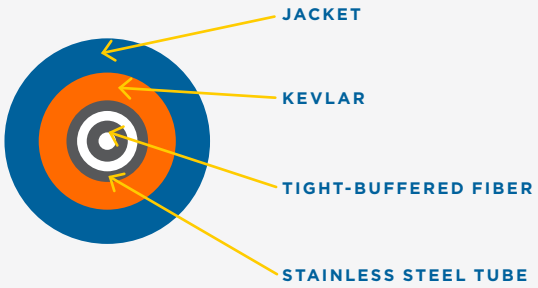
TECHNICAL DATA SHEET

VeriCure®

Curing Monitoring System

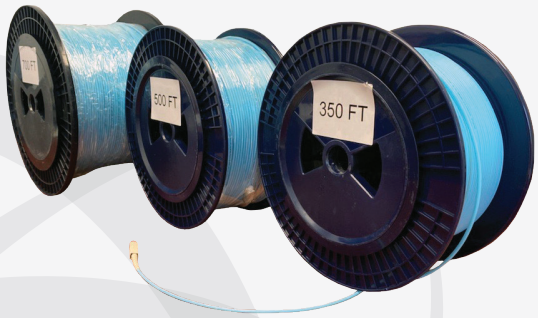


FEATURES AND BENEFITS

- **Increased bend radius good for pipes with multiple bends**
- **Armored sheathing allows for increased bend radius**
- **High crush resistance**
- **Flame retardant, meets industry standards**
- **Soft, flexible, yet extremely durable**
- **Easy to splice**
- **Performs well over long lengths**

NUMERICAL APERTURE

- **0.200 ± 0.015**



US patents: US 8,162,535 B2 and US 13,403,393

VeriCure® RoundTemp — Multimode Optical Fiber Cable

DESCRIPTION

VeriCure RoundTemp cable is a multimode, ultra-bendable optical fiber that delivers the best bend radius (macrobending) performance in the industry. Designed to withstand tight bends and challenging cabling routes, RoundTemp experiences less signal loss than conventional multimode fiber. This allows installers to use multimode optical fiber in a package that is easier to handle and install.

VeriCure RoundTemp cable is armored for maximum strength and durability without sacrificing flexibility or size. It is crush and rodent resistant without being bulky, heavy or messy. This means that it can be used in hazardous areas where more rugged cable is required.

APPLICATION

- **Sanitary sewers, force main sewers, storm sewers, potable water lines, process piping, electrical conduits, and ventilation systems**
- **Round and non-round pipe**

PACKAGING

Available in spools, broad range of lengths:

- **350 ft. (106.7m), 500 ft. (152.4m), 600 ft. (182.9m), 700 ft. (213.4m) and 800 ft. (243.8m)**

COATING GEOMETRY

- **Coating Diameter: 242 ± 5 µm**
- **Coating-Cladding Concentricity: < 12 µm**

GLASS GEOMETRY

- **Core Diameter: 50.0 ± 2.5 µm**
- **Cladding Diameter: 125.0 ± 1.0 µm**
- **Core-Clad Concentricity: ≤ 1.5 µm**
- **Cladding Non-Circularity: ≤ 1.0%**
- **Core Non-Circularity: ≤ 5%**

MACROBEND LOSS

MANDREL RADIUS (mm)	NUMBER OF TURNS	INDUCED ATTENUATION (dB) 850 nm	1300 nm
37.5	100	≤ 0.05	≤ 0.15
15	2	≤ 0.1	≤ 0.3
7.5	2	≤ 0.2	≤ 0.5

ATTENUATION

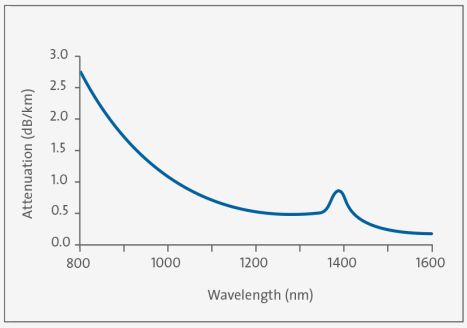
WAVELENGTH	MAXIMUM VALUE (dB/km)
850	≤ 2.3
1300	≤ 0.6

No point discontinuity greater than 0.2 dB. Attenuation at 1380 nm does not exceed the attenuation at 1300 nm by more than 3.0 dB/km.

PROOF TEST

The entire fiber length is subjected to a tensile stress ≥ 100 kpsi (0.7 GN/m2).

SPECTRAL ATTENUATION (TYPICAL FIBER)



BEND PERFORMANCE AND COMPATIBILITY

- **Industry-leading macrobending performance below 10 mm radius**
- **High-performance minEMBc certified bandwidth to support 850 nm transmission at data rates up to 100 Gb/s**
- **Higher data aggregation in the backbone, riser, and high-speed parallel interconnects (HSPIs)**
- **Superior measurement technology and manufacturing control**
- **Industry-leading CPC® coatings for superior microbend and environmental performance**

PERFORMANCE CHARACTERIZATIONS

- **Refractive Index Difference: 1%**
- **Effective Group Index of Refraction (N_{eff}): 850 nm: 1.480 | 1300 nm: 1.479**
- **N_{eff} was empirically derived to the third decimal place using a specific commercially available OTDR**
- **Fatigue Resistance Parameter (n_d): 20**
- **Coating Strip Force: Dry: 0.6 lbs (2.7N) Wet: 14 days in 73.4°F (23°C) water soak: 0.6 lbs (2.7N)**
- **Chromatic Dispersion: Zero Dispersion Wavelength (λ_0): 1295 nm ≤ λ_0 ≤ 1315 nm**
- **Zero Dispersion Slope (S_0): ≤ 0.101 ps/(nm²•km)**

CABLE PARAMETERS

CABLE DIAMETER (Φa) MM	STAINLESS STEEL TUBE DIAMETER (Φb) MM	TIGHT BUFFERED FIBER DIAMETER MM
Φ3.0±0.1	Φ1.4±0.05	Φ0.9

CABLE DIAMETER MM	CABLE WEIGHT KG/KM	TENSILE N SHORT TIME	TENSILE N LONG TIME	CRUSH N/100 MM
Φ3.0±0.1	11.0	450	200	3500

ENVIRONMENTAL

ENVIRONMENTAL TEST	TEST CONDITION	INDUCED ATTENUATION 850 NM & 1300 NM (DB/KM)
Temperature Dependence	-76°F (-60°C) to 185°F (+85°C)	≤ 0.10
Temperature Humidity Cycling	14°F (-10°C) to 185°F (+85°C) and 4% to 98% RH	≤ 0.10
Water Immersion	73.4°F ± 2°F (23°C ± 2°C)	≤ 0.20
Heat Aging	185°F ± 2°F (85°C ± 2°C)	≤ 0.20
Temperature at the Outer Sheath of Liner	Up to 302°F (150°C)	≤ 0.20

Operating Temperature Range: -60°C to + 85°C

