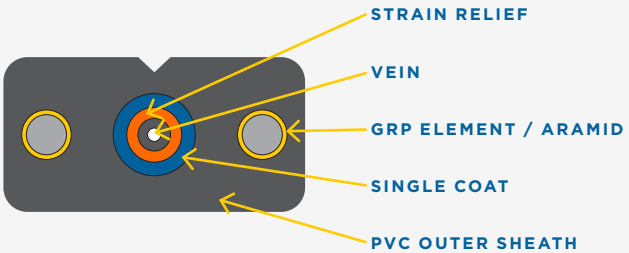
TECHNICAL DATA SHEET

VeriCure®

Curing Monitoring System



MECHANICAL PROPERTIES

- **Minimum bend radius: 30mm**
- **Maximum tensile force: 400N**
- **Weight: ca. 28kg/km**
- **Long-term crush resistance max. 400 N / dm**

VeriCure CMS sensor cable with cable roller equipment as accessory.

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

VeriCure® FlatTemp — CMS Optical Temperature Measurement Cable

DESCRIPTION

VeriCure FlatTemp optical fiber cable is our standard cable featuring a rectangular profile that contains GFK elements and aramid fibers. It is halogen-free and possesses exceptional pull force, bend radius and long-term crush properties. FlatTemp's durable PVC outer sheath is also marked with feet and meter indicators for fast and efficient insertion and measurement.

FlatTemp comes in 6,234 ft. spool lengths and is perfect for short segments or pipe runs of 1,000 ft. or more.

APPLICATIONS

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

OPTICAL PROPERTIES

- **Optical loss: Max. 1,5dB/km (1300nm)**
- **Connector (cable drum): Screw cap with integrated E2000/APC connector**

THERMAL PROPERTIES

- **Transport and storage: -13°F — 158°F (-25°C — +70°C)**
- **Installation: 23°F — 122°F (-5°C — +50°C)**
- **Operation: 25°C to + 70°C**
- **Temperature at the outer sheath of the liner: Up to 302°F (+150°C) (measurement of exothermic reactions)**

FLATTEMP CABLE PARTS DESCRIPTION

- **1 drum approx. 6,234 ft. / 1,900 m**

FIRE BEHAVIOR

- **Halogen-free**

CHEMICAL PROPERTIES

- Resistant to oil

CONNECTION CABLE TECHNICAL DATA & ACCESSORIES

- Optical plug: E2000/APC (at both sides)
- Strain relief: Screw connections from both sides
- Protection of connection: Transparent protection tube

FLATTEMP OPTICAL FIBER PROPERTIES

- FO fiber G50 / 125 µm, (according to IEC 60793-2-10 type A1a.1) with optical core diameter 50 µm +/- 2.5 µm and optical jacket, diameter 125 µm +/- 1 µm
- Primary coating in two-layer acrylate structure, diameter 245 µm +/- 10 µm

FLATTEMP OPTICAL FIBER GEOMETRIC PROPERTIES

- Core circularity deviation <5%
- Material circularity deviation <1%
- Core-clad eccentricity <1.5 µm
- Coating eccentricity <10 µm
- SCREEN test 1% elongation for 1 s (corresponds to 100 kpsi or 8.8 N)

FLATTEMP OPTICAL FIBER TRANSMISSION PROPERTIES

Damping:

- At 850 nm max. 3.0 dB / km
- At 1300 nm max. 1.0 dB / km

Bandwidth (Overfilled Launch):

- At 850 nm min. 500 MHz x km
- At 1300 nm min. 500 MHz x km
- Numerical aperture 0.200 +/- 0.015

Macrobending, Induced Damping:

- 100 turns, 37.5 mm </ = 0.05 dB (at 850 nm)
- 100 turns, 37.5 mm </ = 0.15 dB (at 1300 nm)
- 2 turns, 15 mm </ = 0.1 dB (at 850 nm)
- 2 turns, 15 mm </ = 0.3 dB (at 1300 nm)
- 2 turns, 7.5 mm </ = 0.2 dB (at 850 nm)

Group Refractive Index:

- At 850 nm 1.483
- At 1300 nm 1.478

Link Lengths:

- Gigabit Ethernet
- 1000BASE-SX (850 nm) min. 500 m
- 1000BASE-LX (1300 nm) min. 500 m

SPECTRAL ATTENUATION (TYPICAL FIBER)