



Verrillon®

VHT500 Ultra-High Temperature Single-mode Series

Verrillon VHT500 is a pure silica core single-mode design with a protective metal coating that allows it to operate at temperatures up to 500°C. Typically, these fibers are used in down-hole data logging for enhanced supercritical geothermal applications, high-temperature oil/gas downhole monitoring using acoustic, strain and temperature sensing, and downstream oil process monitoring.

Features

- Optimized for 1550 nm operation
- Pure Silica Core chemistry for improved performance in hydrogen-rich environments
- Greater than 50x bend loss improvement at 1550 nm over standard SMF
- MFD compatible with standard SMF for ease of splicing and minimal splice loss
- Metal coating protects the fiber at temperatures up to 500°C
- Patent-pending process prevents fibers from “cold bonding” to metal tubes or other metallic-coated fibers
- Available in long lengths (multi-kilometers)
- Industry-standard 125 μm clad diameter

Specifications

PART NO.	VHS-60-CM-125-1
Description	Ultra-High temperature metal-coated Single-Mode fiber with low-loss suitable for use up to 500°C. Available in multi-kilometer continuous lengths and proof-tested at 50 kpsi.
PARAMETER	
Material	
Core	Pure Silica
Cladding	F-doped Silica
Coating	Carbon / Metal
Geometry	
Core Diameter (μm)	-
Clad Diameter (μm)	125 ± 2
Clad Non-Circularity (%)	≤ 3
Core/Clad Offset (μm)	≤ 1.5
Coat Diameter (μm)	131 +5 / -2
Optical	
NA (nominal)	0.12
Attenuation @ 1550nm	≤ 5
Cutoff Wavelength (nm)	≤ 1530
Mode Field Diameter (mm)	10.0 ± 0.7
Mechanical	
Proof-test (kpsi)	≥ 50
Operating Temperature (°C)	-65 to +500
Continuous Length Available	Multi-kilometers