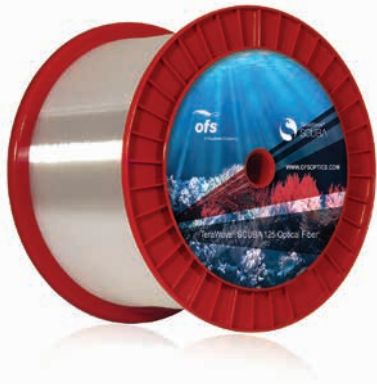


TeraWave® SCUBA 80 Ocean Optical Fiber

For Submarine Systems Transmitting at 100 Gb/s and Beyond



Applications

- Ultra-long haul networks using advanced modulation formats and coherent detection such as transoceanic networks
- Applications without repeaters, such as coastal festoons and deep-water crossings
- POP-to-landing-site connections for submarine cables

Engineered Fiber Sets

OFS has the capability to color and splice ocean fibers to meet stringent cable requirements. Fibers are selected to meet customer specifications for numbers of fibers, colors, lengths, and transmission properties. They are then assembled into sets. Final measurements guarantee customer specified performance for all fibers in the set.

Features and Benefits

- Effective area of 80 μm^2
- Supports polarization-multiplexed, coherent transport using high spectral efficiency modulation formats
- Proof tested to 200 kpsi to help ensure long-term reliability under extreme conditions
- Available with average loss of 0.158 dB/km

Overview

TeraWave® SCUBA 80 Ocean Optical Fiber is optimally designed to deliver excellent performance for coherent transport in submarine systems. TeraWave SCUBA 80 Ocean Fiber is fully compliant with the ITU G.654.A, B, and C standard for cutoff-shifted fiber and provides outstanding cable performance and design freedom for ocean networks.

Product Description

A breakthrough in ocean fiber technology, TeraWave SCUBA Fibers offers a combination of large effective area, excellent cabling performance in the C- and L-bands, and world-class attenuation. These features enable reliable coherent transmission at 100 Gb/s and beyond over trans-oceanic distances at the highest channel counts. The fiber has an effective area (80 μm^2) that is optimized for high density submarine cables and ultra-low attenuation that reduces signal loss.

The Silica Core of the TeraWave SCUBA fiber deliver significant margin beyond that needed for transmitting 100 Gb/s over trans-Atlantic distances. The additional margin can be used to upgrade to denser signal constellations for increased spectral efficiency as new transponders become commercially available.

TeraWave SCUBA Fiber is manufactured using OFS' proprietary manufacturing process, which produces ultra-low polarization mode dispersion (PMD) and exceptional resistance to mechanical stress.



A Furukawa Company

TeraWave® SCUBA 80 Ocean Optical Fiber

Product Specifications of TeraWave® SCUBA 80 Optical Fiber	
Transmission Characteristics	
Attenuation @ 1550 nm (nominal)	≤ 0.158 dB/km
Point Discontinuities @ 1550 nm	≤ 0.10 dB
Chromatic Dispersion @ 1550 nm	≤ 20 ps/(nm·km)
Mode Field Diameter @ 1550 nm (nominal)	9.9 μm
Effective Area @ 1550 nm	80 μm ² (nominal)
Fiber Polarization Mode Dispersion, max. individual fiber	≤ 0.1 ps/√km
PMD @ 1550 nm (typical)	≤ 0.02 ps/√km
Cable Cutoff Wavelength (λ_{cc})	≤ 1530 nm
Geometrical Characteristics	
Cladding Diameter	125.0 ± 0.7 μm
Coating Diameter, uncolored	240 - 250 μm
Coating to Cladding Concentricity Error	≤ 12 μm
Mechanical and Other	
Tensile Proof Test	200 kpsi (1.38 GPa)
Dynamic Fatigue Parameter (n_d)	≥ 20
Coating Strip Force (Mechanical)	1.0 - 8.9 N
Colors	24 colors available
Matching Sets	Yes

For additional information please contact your sales representative.

You can also visit our website at www.ofsoptics.com or call 1-888-fiberhelp (1-888-342-3743) USA or 1-770-798-5555 outside the USA.



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