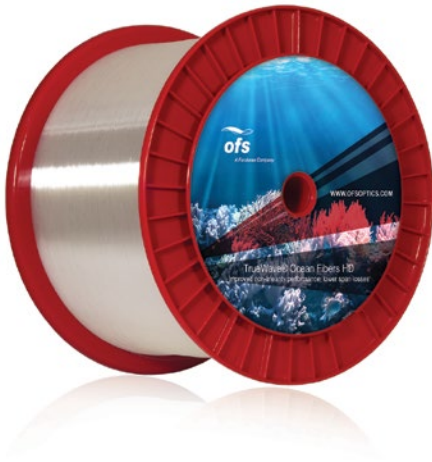




A Furukawa Company

TrueWave® Ocean Optical Fiber HD (High Dispersion)

Improved non-linearity performance, lower span losses



Features and Benefits

- High negative dispersion improves non-linearity performance
- Low loss and combination with large effective area NDSF improves system OSNR
- Efficient and cost-effective solution to many long haul DWDM ocean applications
- Proof tested to 200 kpsi to help ensure long-term reliability under extreme conditions
- D-Lux® coating helps ensure world-class environmental performance and long-term reliability
- Engineered sets provide the cable manufacturer maximum efficiency

Applications

- Submarine cables engineered specifically for long and medium haul ocean repeatered systems utilizing the RZ-DPSK modulation format in dense wave division multiplexing (DWDM) systems.

Product Description

TrueWave High Dispersion (HD) Optical Fiber is the latest in a long history of ocean fiber firsts for OFS. It is an ocean fiber specifically designed for maximum performance in undersea networks utilizing the modulation format of return-to-zero differential phase-shift keying (RZ-DPSK). Since RZ-DPSK allows for larger values of accumulated dispersion without deleterious non-linear effects, we have designed TrueWave HD Fiber with a large negative dispersion value of -14 ps/nm-km. Combining this dispersion with the large positive dispersion and large effective area of a NDSF (e.g. AllWave® Ocean or UltraWave® SLA Ocean Fibers) in a single span results in improved non-linearity performance and lower span loss.

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.

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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TrueWave® Ocean Optical Fibers

| Product Specifications | TrueWave Ocean Optical Fibers |
|---|--|
| Transmission Characteristics | |
| Attenuation @ 1550 nm (nominal) | 0.20 dB/km |
| Attenuation @ 1550 nm (max) | < 0.215 db/km |
| Dispersion Slope @1550 nm (nominal) | < 0.045 ps/nm ² -km |
| Dispersion @ 1550 nm (nominal) | - 14 ps/nm-km |
| Mode Field Diameter @ 1550 ¹ | 7.6 ± 0.6 μm |
| Effective Area (nominal) | 44 μm ² |
| Cable Cutoff Wavelength ² | < 1530 nm |
| PMD @ 1550 nm (nominal) ³ | < 0.025 ps/√km |
| Effective Group Index of Refraction | 1.471 @ 1550 nm |
| Point Discontinuities @ 1550 nm | 0.05 db max |
| ¹ Lower mode field diameters are available to accommodate specific cable design requirements | |
| ² AW Flex Ocean Fiber can be supplied with cut-off < 1530 to meet G654C requirements | |
| ³ Low Mode Coupling (LMC) measurements | |
| Geometrical Characteristics | |
| Clad Diameter | 125 ± 0.7 μm |
| Core/Clad Concentricity Error (max) | 0.5 μm |
| Clad Non-circularity (max) | 1.0 % |
| Coating Diameter, uncolored | 235 to 250 μm |
| Coating/Clad Concentricity Error (nominal) | 3 μm |
| Coating/Clad Concentricity Error (max) | 12 μm |
| Coating Diameter, colored | 254 ± 8 μm |
| Mechanical and Other | |
| Tensile Proof Test (min) | 200 kpsi (1.4 GPa) |
| Dynamic Fatigue Parameter (n _d) | > 20 |
| Static Fatigue Parameter (n _a) | > 20 |
| Coating Type | D-Lux Series Coatings |
| Coating Strip Force (Mechanical) | 1.3 N (0.3 lb-ft) min 8.9 N (2.0 lb-ft) max |
| Coating Adhesion | 6.2 N (1.4 lb-ft) min 13 N (3.0 lb-ft) max |
| Colors | Customer specified |
| Matching Sets | Customer may order sets (groups) of fiber with matching length and mix |