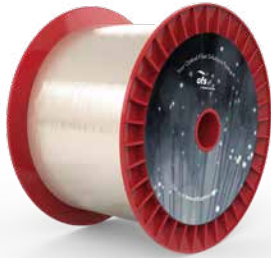




A Furukawa Company

AllWave[®] ULL Ocean Single-Mode Optical Fiber

Fiber for the Long Haul



Features and Benefits

- Ultra low loss in 1310 and 1550-1625 nm windows
- Long term attenuation and mechanical reliability
- Ultra low PMD
- Low Latency
- High performance D-Lux[®] Ultra coating
- Designed for ocean systems
- ITU-T G.652B and G.654C compliant
- Can enable higher OSNR or longer reach versus traditional ITU-T G.652.D fibers
- Supports coherent and non-coherent transmission systems
- For repeated and Unrepeated submarine systems

Product Description

AllWave ULL (Ultra Low Loss) Ocean Single-mode Optical Fiber is an ultra low loss fiber optimized for repeated and unrepeated submarine systems. The fiber has an effective area of 80 microns squared at 1550 nm and can be used across the full C- and L-Bands. The fiber has excellent cabling performance and can be used in modern Space Division Multiplexed (SDM) systems. It is compliant to ITU-T G.652.B and ITU G.654.C. AllWave ZWP Ocean Fiber is available as uncolored fiber or in engineered, colored and spliced sets.

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.

Since ocean fiber network requirements are complex, contact OFS (1-888-fiberhelp) for a more detailed review of the fiber choices available for your network.

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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Applications

AllWave® ULL Ocean Single-Mode Optical Fiber provides outstanding cable performance and design freedom for terrestrial long haul systems.

| Product Specifications | AllWave ULL Ocean SM Optical Fiber |
|--|---|
| Physical Characteristics | |
| Clad Diameter | 125.0 ± 0.7 μm |
| Clad Non-Circularity | ≤ 0.7 % |
| Core/Clad Concentricity Error (Offset) | ≤ 0.5 μm |
| Coating Diameter (Natural) | 235 - 250 μm |
| Coating-Clad Concentricity Error (Offset) | ≤ 12 μm |
| Miscellaneous | |
| Coating strip force to mechanically strip the dual coating | 1.3N ≤ peak CSF ≤ 8.9N |
| Minimum stress during proof test | 0.7 GPa |
| Dynamic tensile strength, unaged fibers, 0.5 m gauge length, 50% of samples | ≥ 3.8 GPa (550 kpsi) |
| Dynamic fatigue parameter (nd) | ≥ 20 |
| Attenuation | |
| @ 1310 nm | ≤ 0.31 dB/km |
| @ 1550 nm | ≤ 0.17 dB/km |
| @ 1625 nm | ≤ 0.20 dB/km |
| in 1285 – 1330 nm | ≤ (Attenuation at 1310 nm + 0.03 dB/km) |
| in 1525 – 1575 nm | ≤ (Attenuation at 1550 nm + 0.02 dB/km) |
| Local OTDR-discontinuity @ 1310 nm & 1550 nm | ≤ 0.05 dB |
| Macrobending - additional induced attenuation | |
| 32 mm dia. / 1 turn / @ 1550 nm | ≤ 0.1 dB |
| 50 mm dia. / 100 turns / @ 1310 nm | ≤ 0.05 dB |
| 50 mm dia. / 100 turns / @ 1550 nm | ≤ 0.05 dB |
| 60 mm dia. / 100 turns / @ 1550 nm & 1625 nm | ≤ 0.05 dB |
| Other Optical Properties | |
| Zero dispersion wavelength – (λ ₀) | 1300 nm to 1324 nm |
| Dispersion slope (S ₀) @ λ ₀ | ≤ 0.092 ps/(nm ² ·km) |
| Chromatic dispersion at 1550 nm | ≤ 18 ps/(nm·km) |
| Mode field diameter | |
| @ 1310 nm | 9.2 ± 0.5 μm |
| @ 1550 nm | 10.5 ± 0.5 μm |
| Cut-off wavelength λ _{cc} - cable | ≤ 1260 nm |
| Fiber Polarization Mode Dispersion, measured in Low Mode Coupling Condition (LMC) | Individual Value: ≤ 0.1 ps/√km |
| - complying with IEC 60794-3, Method 1, September 2001 (N=20, Q=0.015) | Link Design Value: |
| Details are described in IEC/TR 61282-3 Ed.2, October 2006. | ≤ 0.04 ps/√km |
| Environmental Properties | |
| Change in attenuation as a result of temperature variation @ 1310 nm, 1550 nm & 1625 nm (-60°C to +85°C). | ≤ 0.05 dB/km |
| Change in attenuation as a result of temperature-humidity cycling @ 1310 nm, 1550 nm & 1625 nm (-10°C to +85°C, 95% RH). | ≤ 0.05 dB/km |
| Change in attenuation as a result of water immersion @ 1310 nm, 1550 nm & 1625 nm (+23 ± 2°C, 30 days). | ≤ 0.05 dB/km |
| Change in attenuation as a result of heat aging @ 1310 nm, 1550 nm & 1625 nm (+85 ± 2°C, 30 days). | ≤ 0.05 dB/km |