

Ultra Low Attenuation Fiber

Advantage Ultra Low Attenuation single mode fiber is designed for use over the 1260 nm to 1625 nm wavelength range allowing for more useable spectrum than conventional single mode fiber

Advantage Ultra Low Attenuation single mode fiber is zero water peak fiber where attenuation at 1380 -1390 nm is actually less than at 1310 nm. It is ideal for CWDM applications

Product Specifications

Attenuation	≤ 0.33 dB/km at 1310 nm ≤ 0.31 dB/km at 1383 nm or less than attenuation at 1310 nm# ≤ 0.19 dB/km at 1550 nm ≤ 0.21 dB/km at 1625 nm
Mode field diameter	9.1 ± 0.4 μm at 1310 nm 10.3 ± 0.5 μm at 1550 nm
Cable cutoff wavelength	≤ 1260 nm
Zero dispersion wavelength	1300 nm to 1324nm
Zero dispersion slope	≤ 0.090 ps/nm ² .km
Dispersion at 1285nm -1330nm	≤ 3.5 ps/nm.km
Dispersion at 1550 nm	≤ 17.5 ps/nm.km
Dispersion at 1625 nm	≤ 22 ps/nm.km
PMD Individual Fibre*	≤ 0.1 ps/ $\sqrt{\text{km}}$
PMD LDV	≤ 0.06 psh/ $\sqrt{\text{km}}$
Cladding diameter	125 ± 0.7 μm
Core-clad concentricity error	≤ 0.5 μm
Cladding non-circularity	≤ 0.8 %
Coating non-circularity	≤ 4 %
Coating diameter	242 ± 5 μm
Coating-cladding concentricity error	≤ 12 μm

After hydrogen aging according to IEC-60793-2-50 regarding the B-652.D fiber category

* Individual Fiber values may change when cabled.

Mechanical Characteristics

Proof Test Levels	≥ 100 kpsi (0.7GN/m ²). This is equivalent to 1% strain
Coating strip force(Force to mechanically strip the dual coating)	≥ 1.3 N (0.3 lbf) and ≤ 5.0 N (1.1lbf)
Fibre curl	≥ 4 m

Macro bend loss: The maximum attenuation with bending does not exceed the specified values with the following deployment conditions

Deployment condition	Wavelength	Induced attenuation
1 turn, 16 mm (0.6 inch) radius	1550 nm	≤ 0.03 dB
100 turns, 25 mm radius	1310 nm	≤ 0.03 dB
	1550 nm	≤ 0.03 dB
100 turns, 30 mm radius	1625 nm	≤ 0.03 dB

Every stage of Manufacturing is controlled so that quality is built into every foot of fiber versus selected only for samples. Process equipment is calibrated routinely and re certified against internationally traceable standards from NPL/NIST. Compliant with EIA/TIA, CEI-IEC and ITU Standards

Our Ultra Low Attenuation single mode fiber complies with or exceeds ITU recommendation G.652.C/D and IEC 60793-2-50, B-652.D Fiber Category.

Environmental Characteristics

Temperature dependence Induced attenuation, -60°C to +85°C at 1310, 1550, 1625 nm	≤ 0.05 dB/km
Temperature humidity cycling Induced attenuation, -10°C to +85°C and 95% relative humidity at 1310, 1550, 1625 nm	≤ 0.05 dB/km
High temperature and humidity aging 85°C at 85% RH, 30 days Induced attenuation at 1310, 1550, 1625 nm due to aging	≤ 0.05 dB/km
Water immersion, 30 days Induced attenuation due to water immersion at 23±2°C at 1310, 1550, 1625 nm	≤ 0.05 dB/km
Accelerated aging (Temperature), 30days Induced attenuation due to temperature aging at 85±2°C at 1310,1550,1625 nm	≤ 0.05 dB/km

Other Performance Characteristics*

Effective group index of refraction	1.4670 at 1310 nm 1.4675 at 1550 nm 1.4680 at 1625 nm
Attenuation in the wavelength region from 1285 - 1330 nm in reference to the attenuation at 1310 nm	≤ 0.03 dB/km
Attenuation in the wavelength region from 1525 - 1575 nm in reference to the attenuation at 1550 nm	≤ 0.02 dB/km
Point discontinuities at 1310 nm & 1550 nm	≤ 0.05 dB
Dynamic fatigue parameter (Nd)	≥ 20
Shipping Length: Standard length per reel available up to 50.4 km	

*Typical values