FullBand® Ultra Low Loss Single-mode Fibre

Yangtze Optical Fibre and Cable Joint Stock Limited Company

YOFC FullBand® Ultra low loss Single-mode fibre is made by YOFC unique core technology, it offers 15% lower attenuation than typical G.652.D fibres, with a maximum attenuation of 0.17 dB/km at 1550 nm.

Applications

YOFC FullBand® Ultra low loss Single-mode fibre, with trench-assisted profile.

YOFC FullBand® Ultra low loss Single-mode fibre, with special material design, it also offers excellent hydrogen aging characteristics, which guarantees stability of fibre applications.

Norms

YOFC FullBand® Ultra low loss Single-mode fibre is based on 9.1μm MFD that same as most standard Single-mode fibre, benefit for it seamless compliant with existing network. It fully meets the demands for transmitting signal with high speed, high capacity and extended networking distances over one single fibre. YOFC FullBand® Ultra loss fibre complies with ITU-T G.652.B and G.654.C.

Advantages

Due to the process innovation and technical breakthrough, Ultra Low Loss Single-mode Fibre has the following features and advantages:

Features	Advantages
• Ultra low attenuation	• Improved OSNR for upgrading to 100Gb/s, 400Gb/s and beyond • Further enhanced distance between amplifiers or regenerators • Increase system margins, decrease the system cost
• Low bending losses	• Smaller, lighter cable design • Reduced rework time from bends in installation or maintenance

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Characteristics		Conditions	Specified values	Units
Optical Characteristics				
Attenuation		1310nm	⩽0.31	[dB/km]
		1550nm	⩽0.17	[dB/km]
		1625nm	⩽0.20	[dB/km]
Attenuation vs. Wavelength Max. α difference		1285-1330nm, in reference to 1310nm	⩽0.03	[dB/km]
		1525-1575nm, in reference to 1550nm	⩽0.02	[dB/km]
Dispersion Coefficient		1285-1340nm	-3.5 to 3.5	[ps/(nm·km)]
		1550nm	⩽18	[ps/(nm·km)]
		1625nm	⩽22	[ps/(nm·km)]
Zero Dispersion Wavelength		--	1300-1324	[nm]
Zero Dispersion Slope		--	⩽0.092	[ps/(nm²·km)]
PMD	Maximum Individual Fibre	--	⩽0.1	[ps/√km]
	Link Design Value (M=20, Q=0.01%)	--	⩽0.06	[ps/√km]
	Typical Value	--	0.04	[ps/√km]
Cable Cutoff Wavelength (λ_{cc})		--	⩽1260	[nm]
Mode Field Diameter (MFD)		1310nm	8.7-9.5	[μm]
		1550nm	9.8-10.8	[μm]
Effective Group Index of Refraction (N_{eff})		1310nm	1.463	--
		1550nm	1.464	--
Point Discontinuities		1310nm	⩽0.05	[dB]
		1550nm	⩽0.05	[dB]
Geometrical Characteristics				
Cladding Diameter		--	125.0±0.7	[μm]
Cladding Non-Circularity		--	⩽1.0	[%]
Coating Diameter		--	235-255	[μm]
Coating-Cladding Concentricity Error		--	⩽12.0	[μm]
Coating Non-Circularity		--	⩽6.0	[%]
Core-Cladding Concentricity Error		--	⩽0.6	[μm]
Curl(radius)		--	⩾4	[m]
Delivery Length[1]		--	Up to 25.2	[km/spool]
Environmental Characteristics		**1310nm, 1550nm & 1625nm**		
Temperature Dependence Induced Attenuation		-60°C to +85°C	⩽0.05	[dB/km]
Temperature-Humidity Cycling Induced Attenuation		-10°C to +85°C, 98% RH	⩽0.05	[dB/km]
Watersoak Dependence Induced Attenuation		23°C, for 30 days	⩽0.05	[dB/km]
Damp Heat Dependence Induced Attenuation		85°C and 85% RH, for 30 days	⩽0.05	[dB/km]
Dry Heat Aging		85°C, for 30 days	⩽0.05	[dB/km]
Mechanical Specifications				
Proof Test[2]		--	⩾9.0	[N]
		--	⩾1.0	[%]
		--	⩾100	[kpsi]
Macro-bend Induced Loss	100 Turns Around a Mandrel of 30 mm Radius	1625nm	⩽0.05	[dB]
	100 Turns Around a Mandrel of 25 mm Radius	1310nm and 1550nm	⩽0.05	[dB]
	1 Turn Around a Mandrel of 16 mm Radius	1550nm	⩽0.05	[dB]
Coating Strip Force		typical average force	1.5	[N]
		peak force	1.3- 8.9	[N]
Dynamic Fatigue Parameter (n_d)		--	⩾20	--

Remark: 1.Other delivery lengths are available. 2.Higher proof test level is available.