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EasyBand® Low Loss Bending Insensitive Single-mode Fibre

Yangtze Optical Fibre and Cable Joint Stock Limited Company

EasyBand® Low Loss Bending Insensitive Single-mode Fibre is suitable for optical transmission systems which operates over the entire wavelength window from 1260 nm to 1625 nm. It is an advanced product of YOFC bending insensitive fibre, which possesses all advantages of Low Loss Fibre, and also improves anti-bending properties, combines low loss and bending insensitive properties. EasyBand® Low Loss Bending Insensitive Single-mode Fibre is fully compatible with standard normal single-mode fibre, and thoroughly meets multiple demands of multi-channel, high bit-rate, long distance transmission and anti-bending properties.

Application

Due to its outstanding performance in both attenuation and bending resistance, EasyBand® Low Loss Bending Insensitive Single-mode Fibre is fully compatible with different cabling and differentiated systems in different installation environments of trunk network, metropolitan area network, access network and resident network.

Norms

EasyBand® Low Loss Bending Insensitive Single-mode Fibre meets and exceeds the ITU-T Recommendation G.652.D/G.657.A1 including the IEC 60793-2-50 type B1.3/B6.a1 Optical Fibre Specification.

Characteristics

- Possesses advanced anti-bending and low loss properties
- Achieved the operation over full optical spectrum from 1260-1625 nm, and increased the system transmission capacity
- Lower attenuation, which meets the demand of extended long distance transmission
- Good bending loss resistance at short radius bends
- Accurate geometrical parameters that insure low splicing loss and high splicing efficiency

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Characteristics		Conditions	Specified values	Units
Optical Characteristics				
Attenuation		1310nm	≤0.32	[dB/km]
		1383nm (after H_2 aging)	≤0.31	[dB/km]
		1460nm	≤0.31	[dB/km]
		1550nm	≤0.18	[dB/km]
		1625nm	≤0.20	[dB/km]
Attenuation vs. Wavelength Max. α difference		1285nm-1330nm, in reference to1310nm	≤0.03	[dB/km]
		1525nm-1575nm, in reference to1550nm	≤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 (λ_0)		–	1300-1324	[nm]
Zero Dispersion Slope (S_0)		–	≤0.092	[ps/(nm²·km)]
Typical Value		–	0.086	[ps/(nm²·km)]
PMD	Maximum Individual Fibre	–	≤0.1	[ps/$\sqrt{km}$]
	Link Design Value (M=20, Q=0.01%)	–	≤0.06	[ps/$\sqrt{km}$]
	Typical Value	–	0.04	[ps/$\sqrt{km}$]
Cable Cut-off 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	1.466	–
		1550nm	1.467	–
Point Discontinuities		1310nm	≤0.05	[dB]
		1550nm	≤0.05	[dB]
Geometrical Characteristics				
Cladding Diameter		–	125.0±0.7	[μm]
Cladding Non-Circularity		–	≤0.7	[%]
Coating Diameter		–	235-245	[μm]
Coating-Cladding Concentricity Error		–	≤12.0	[μm]
Coating Non-Circularity		–	≤6.0	[%]
Core-Cladding Concentricity Error		–	≤0.5	[μm]
Curl(radius)		–	≥4	[m]
Delivery Length		–	up to 50.4	[km/reel]
Environmental Characteristics		**(1310 nm, 1550 nm & 1625 nm)**		
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	≤0.05	[dB/km]
Mechanical Specifications				
Proof Test		–	≥9.0	[N]
		–	≥1.0	[%]
		–	≥100	[kpsi]
Macro-bend Induced Attenuation	10 Turn Around a Mandrel of 15 mm Radius	1550nm	≤0.05	[dB]
	10 Turn Around a Mandrel of 15 mm Radius	1625nm	≤0.3	[dB]
	1 Turn Around a Mandrel of 10 mm Radius	1550nm	≤0.5	[dB]
	1 Turn Around a Mandrel of 10 mm Radius	1625nm	≤1.5	[dB]
Coating Strip Force		typical average force	1.5	[N]
		peak force	1.3-8.9	[N]
Dynamic Fatigue Parameter (n_d)		–	≥20	–