

EasyBand® Ultra Bending Insensitive Single-mode Fibre

Yangtze Optical Fibre and Cable Joint Stock Limited Company

YOFC EasyBand® Ultra fibre is designed specifically for Fibre-To-The-Home (FTTH), enterprise network and any other applications where ultra low bending-loss at small bending radii is needed.

Applications

- All types of fibre patch cord with different structures
- High speed optical routes for Fibre-To-The-Home networks (FTTH)
- Cables with extreme low bending requirements
- Small-sized optical component

Norms

YOFC EasyBand® Ultra fibre's macrobending performance and optical performance are superior to those recommended in ITU-T G.657.B3. and IEC 60793-2-50 B6.b3 Down to 5 mm bending radius, EasyBand® Ultra can meet the complex installation conditions in MDU and FTTH, such as wall corner, stapling, high load tension, etc.

Characteristics

- Superior to standard ITU-T G.657.B3 fibre, bending radius down to as small as 5mm and full compatibility with all G.652.D fibres
- Low attenuation satisfying the operation demand in O-E-S-C-L band
- Low bending loss for highly demanding cable designs including ribbons
- Accurate geometrical parameters and large MFD which insure low splicing loss and high splicing efficiency
- High n_d value satisfying long service life in minimum bend radius



Characteristics		Conditions	Specified values	Units
Optical Characteristics				
Attenuation		1310nm	≤0.35	[dB/km]
		1383nm (after H ₂ aging)	≤0.35	[dB/km]
		1550nm	≤0.21	[dB/km]
		1625nm	≤0.23	[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]
Zero Dispersion Wavelength (λ_D)		--	1300-1324	[nm]
Zero Dispersion Slope (S_D)		--	≤0.092	[ps/(nm ² ·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	8.2-9.0	[μm]
		1550nm	9.1-10.1	[μm]
Effective Group Index of Refraction (N_{eff})		1310nm	1.468	--
		1550nm	1.469	--
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 25.2	[km/reel]
Environmental Characteristics				
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		--	≥9.0	[N]
		--	≥1.0	[%]
		--	≥100	[kpsi]
Macro-bend Induced Loss	1 Turn Around a Mandrel of 10 mm Radius	1550nm	≤0.03	[dB]
	1 Turn Around a Mandrel of 10 mm Radius	1625nm	≤0.1	[dB]
	1 Turn Around a Mandrel of 7.5 mm Radius	1550nm	≤0.08	[dB]
	1 Turn Around a Mandrel of 7.5 mm Radius	1625nm	≤0.25	[dB]
	1 Turns Around a Mandrel of 5 mm Radius	1550nm	≤0.15	[dB]
	1 Turns Around a Mandrel of 5 mm Radius	1625nm	≤0.45	[dB]
Coating Strip Force		typical average force	1.5	[N]
		peak force	1.3- 8.9	[N]
Dynamic Fatigue Parameter (n_f)		--	≥20	--