



EasyBand[®] Ultra Bending Insensitive Single-mode Fibre

Description

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. YOFC EasyBand[®] Ultra fibre's macrobending performance and optical performance are superior to those recommended in ITU-T G.657.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.

Application

- 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

Process

EasyBand[®] Ultra fibre inherits all merits of YOFC G.657 EasyBand[®] family. This full-spectrum single-mode fibre has all solid trench-assisted profile with large Mode Field Diameter, which can be easily spliced by commercial splicer and procedure. EasyBand[®] Ultra fibre has very high and stable dynamic fatigue value (n_d), which provides significantly improved fibre durability when used in harsh environments and at small bending radii conditions.

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 microbending 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

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Characteristics	Conditions	Specified Values	Units
Optical Characteristics			
Attenuation	1310 nm	≤0.35	[dB/km]
	1383 nm(after H ₂ -aging)	≤0.35	[dB/km]
	1550 nm	≤0.21	[dB/km]
	1625 nm	≤0.23	[dB/km]
Attenuation vs. Wavelength Max. α difference	1285 ~ 1330 nm	≤0.03	[dB/km]
	1525 ~ 1575 nm	≤0.02	[dB/km]
Zero dispersion wavelength		1300 ~ 1324	[nm]
Zero dispersion slope		≤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)	1310 nm	8.2 ~ 9.0	[μm]
	1550 nm	9.1 ~ 10.1	[μm]
Effective group index of refraction (N _{eff})	1310 nm	1.468	
	1550 nm	1.469	
Point discontinuities	1310 nm	≤0.05	[dB]
	1550 nm	≤0.05	[dB]
Geometrical Characteristics			
Cladding diameter		125.0 ± 0.7	[μm]
Cladding non-circularity		≤0.7	[%]
Coating diameter		245 ± 5	[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		2.1 to 50.4	[km/reel]
Environmental Characteristics (1310 nm, 1550 nm & 1625 nm)			
Temperature dependence			
Induced attenuation at	-60°C to +85°C	≤0.05	[dB/km]
Temperature-humidity cycling			
Induced attenuation at	-10°C to +85°C, 98% RH	≤0.05	[dB/km]
Watersoak dependence			
Induced attenuation at	23°C, for 30 days	≤0.05	[dB/km]
Damp heat dependence			
Induced attenuation at	85°C and 85% RH, for 30 days	≤0.05	[dB/km]
Dry heat aging at	85°C, for 30 days	≤0.05	[dB/km]
Mechanical Specification			
Proof test		≥9.0	[N]
		≥1.0	[%]
		≥100	[kpsi]
Macro-bend induced attenuation			
1 turns around a mandrel of 5 mm radius	1550 nm	≤0.15	[dB]
1 turns around a mandrel of 5 mm radius	1625 nm	≤0.45	[dB]
1 turn around a mandrel of 7.5 mm radius	1550 nm	≤0.08	[dB]
1 turn around a mandrel of 7.5 mm radius	1625 nm	≤0.25	[dB]
1 turn around a mandrel of 10 mm radius	1550 nm	≤0.03	[dB]
1 turn around a mandrel of 10 mm radius	1625 nm	≤0.1	[dB]
Coating strip force	typical average force	1.5	[N]
	peak force	≥1.3 ≤8.9	[N]
Dynamic stress corrosion susceptibility parameter (n _{st} , typical)		27	