



EasyBand® Plus-Mini

200µm Reduced Diameter Bending Insensitive Single-Mode Fibre

Description

YOFC's EasyBand® Plus-Mini fibre realized reduced fibre outer diameter with excellent bending performance thanks to its bending insensitive fibre design.

YOFC EasyBand® Plus-Mini fibre keeps the same glass part size as standard 250µm fibre (bare glass part diameter is still 125µm) and has the same MFD, cutoff and other optical parameters as 250µm fibre such as EasyBand® Plus (YOFC 's G.657.A2 fibre), and it inherits almost all the advantages of EasyBand® Plus standard 250µm diameter G.657.A2 fibre produced with PCVD process.

YOFC EasyBand® Plus-Mini fibre fully complies with ITU-T G.652.D and G.657.A2 specifications. It is also comprehensively optimized for use in the whole telecom wavelength window (1260 nm~1625 nm).

Application

- All types of fibre cables with different structures
- High performance optical network operating in O-E-S-C-L band
- High speed optical routes for Fibre-to-the-Home networks
- Cables with extreme low bending requirements
- Small-sized fibre cable and optical component

Process

YOFC optical fibres are manufactured using the advanced Plasma Activated Chemical Vapor Deposition (PCVD) process. Because of the inherent advantages of the process, YOFC fibres show ultra-accurate refractive index (RI) profile control, excellent geometrical performance, low attenuation, etc. High performance bending insensitivity requires a special Freon-Downdoped-Cladding design to prevent the optical field to escape. PCVD is the optimal process to realize such cladding design effectively.

Characteristics

- Reduced cable size and weight for micro cable
- More suitable for application in downsized optical fibre devices
- Reduce network deployments cost and total cost of ownership
- Compatible with standard cleaving and stripping tools
- Similar settings of the fusion splice program with that of G.652 fibre
- All bands utilization, from O to L band and ready for future systems evolutions

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Characteristics	Conditions	Specified Values	Units
Optical Specifications			
Attenuation	1310nm	≤0.35	[dB/km]
	1383nm (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	≤0.03	[dB/km]
	1525~1575nm	≤0.02	[dB/km]
	1460~1625nm	≤0.04	[dB/km]
Zero Dispersion Wavelength (λ ₀)		1300~1324	[nm]
Slope (S ₀) at λ ₀		≤0.092	[ps/nm ² · km]
Polarization Wavelength (PMD)			
Max. Individual Fibre		≤0.2	[ps √km]
Link Design Value*		≤0.1	[ps √km]
Typical Link Design Value (M=20, Q=0.01%)		0.04	[ps √km]
Cable Cut-off Wavelength (λ _{cc})		≤1260	[nm]
Mode Field Diameter (MFD)	1310nm	8.4~9.2	[μm]
	1550nm	9.3~10.3	[μm]
Effective Group Index (N _{eff})	1310nm	1.466	
	1550nm	1.467	
Point Discontinuities	1310nm	≤0.05	[dB]
	1550nm	≤0.05	[dB]
Geometrical Specifications			
Cladding diameter		125.0 ± 0.7	[μ m]
Cladding Non-circularity		≤0.7	[%]
Fibre Diameter		200 ± 10.0	[μ m]
Cladding/Coating Concentricity Error		≤10	[μ m]
Coating Non-circularity		≤6	[%]
Core/Cladding Concentricity Error		≤0.5	[μ m]
Fibre Curl (radius)		≥4	[m]
Delivery Length		2.1 to 50.4	[km]
Environmental Specifications (1310nm, 1550nm&1625nm)			
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, for30 days	≤0.05	[dB/km]
Damp heat Dependence Induced Attenuation at	85°Cand85% RH, for 30days	≤0.05	[dB/km]
Dry Heat Aging at	85°C, for 30days	≤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 15mm radius	1550	≤0.03	[dB]
10 turn around a mandrel of 15mm radius	1625	≤0.1	[dB]
1 turn around a mandrel of 10mm radius	1550	≤0.1	[dB]
1 turn around a mandrel of 10mm radius	1625	≤0.2	[dB]
1 turn around a mandrel of 7.5mm radius	1550	≤0.2	[dB]
1 turn around a mandrel of 7.5mm radius	1625	≤0.5	[dB]
Dynamic stress corrosion susceptibility parameter (n ₃ , typical)		27	