TWENTSCHE (NANJING) FIBRE OPTICS LTD
特恩驰（南京）光纤有限公司

TFO Mini™ (G.657.A1 200μm)

Based on the optimum coated layer design, TFO Mini™ LightBend optical fibre keeps the cladding diameter unchanged but with coated diameter dramatical reduction. This product still retains the same and outstanding properties as ITU-T G.657.A1 and IEC 60793-2-50 type B6.a1 fibre with traditional coated diameter 245μm. And with zero water peak, low attenuation and excellent uniformity, low chromatic dispersion and PMD, excellent macrobending loss at minimum radius 10mm, superior and stable geometrical size control level, this full spectrum fibre is applicable to transmission system operating over the entire wavelength from 1260nm to 1625nm. TFO Mini™ LightBend optical fibre supports higher density and smaller diameter cables which can improve duct utilization and save resource, widely used in the applications of FTTH, high count fibre cable, microcables. etc.

Characteristics	Conditions	Parameters	Unit
Optical properties			
Attenuation Coefficient	1310 nm	≤ 0.34	dB/km
	1285-1330 nm	≤ 0.37	dB/km
	1383 nm（after hydrogen aging）	≤ 0.31	dB/km
	1490 nm	≤ 0.23	dB/km
	1550 nm	≤ 0.20	dB/km
	1525 - 1575 nm	≤ 0.21	dB/km
	1625 nm	≤ 0.22	dB/km
Mode Field Diameter(MFD)	1310 nm	9.0 ± 0.3	μm
	1550 nm	10.2 ± 0.4	μm
Cut-Off Wavelength			
Cable Cut-Off		≤ 1260	nm
Chromatic Dispersion			
Zero Dispersion Wavelength		1300 - 1324	nm
Zero Dispersion Slope		≤ 0.090	ps/nm^2/km
Dispersion Coefficient	1285 - 1339 nm	≤ |3|	ps/nm/km
	1550 nm	≤ 17	ps/nm/km
	1625 nm	≤ 21	ps/nm/km
Polarisation Mode Dispersion			
PMD Coefficient	Uncabled fibre	≤ 0.10	ps/√km
	PMD link design value	≤ 0.06	ps/√km
Point Discontinuity	1310 nm	≤ 0.05	dB
	1550 nm	≤ 0.05	dB
Effective Group Refractive Index	1310 nm	1.4671	
	1550 nm	1.4675	
	1625 nm	1.4680	
Geometrical Properties			
Core Non-circularity		≤ 6	%
Cladding Diameter		125.0 ± 0.5	μm
Core/Cladding Concentricity Error		≤ 0.4	μm
Cladding Non-Circularity		≤ 0.6	%
Coating Diameter		190 ± 5	μm
Coating/Cladding Concentricity Error		≤ 8	μm
Mechanical properties			
Proof Test	Fibre strain	≥ 1	%
	Fibre load	≥ 9	N
	Stress	≥ 100	kpsi
Dynamic Stress Corrosion Susceptibility Factor n_d	Unaged	≥ 20	
	Aged（30 days @ 85℃, 85% R.H.）	≥ 20	
Macro Bending Sensitivity	10 turns of 15 mm radius, 1550nm	≤ 0.25	dB
	10 turns of 15 mm radius, 1625 nm	≤ 1.0	dB
	1 turns of 10 mm radius, 1550 nm	≤ 0.75	dB
	1 turns of 10 mm radius, 1625 nm	≤ 1.5	dB
Coating Strip Force	Peak value	1.3 - 8.9	N
Fibre Curl		≥ 4	m
Environmental Properties			
Accelerated Ageing（30days @ 85℃,85% R.H.）	Induced attenuation（1310 and 1550 nm）	≤ 0.05	dB/km
Dry heat aging（30days @ 85℃）	Induced attenuation（1310 and 1550 nm）	≤ 0.05	dB/km
Temperature Cycling （-60℃- +85℃）	Induced attenuation（1310 and 1550 nm）	≤ 0.05	dB/km
Water Soak（30 days @ 23℃）	Induced attenuation（1310 and 1550 nm）	≤ 0.05	dB/km

member of the TKH Group

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