

TFO WideBand LD™ (G.652.D LD)

TFO WideBand LD™ fibre is an ITU-T G.652.D compliant SSMF, but with lower attenuation, chromatic dispersion and PMD. This can provide longer transmission distance between regenerators, meanwhile its improved bend performance exceeds the requirements of the ITU-T G.657.A1 standard. The fibre has a 9.0µm MFD which is compatible to the majority of SSMF on the market today. The improved bend performance of TFO WideBand LD™ fibre provides greater margins in the field during installation and maintenance, and allows for the design and deployment of smaller and lighter cables which can improve duct utilization. The improved properties consolidate the foundation of new network and upgrades of existing networks.

Characteristics	Conditions	Parameters	Unit
Optical properties			
Attenuation Coefficient	1310 nm	≤ 0.32	dB/km
	1285-1330 nm	≤ 0.35	dB/km
	1383 nm (after hydrogen aging)	≤ 0.29	dB/km
	1490 nm	≤ 0.22	dB/km
	1550 nm	≤ 0.18	dB/km
	1525 - 1575 nm	≤ 0.19	dB/km
	1625 nm	≤ 0.20	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 Zero Dispersion Slope		1300 - 1324	nm
		≤ 0.090	ps/nm ² /km
Dispersion Coefficient	1285 - 1339 nm	≤ 3.2	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	≤ 0.04	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		242 ± 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°C, 85% R.H.)	≥ 20	
Macro Bending Sensitivity	100 turns of 30 mm radius, 1625 nm	≤ 0.05	dB
	10 turns of 15 mm radius, 1550nm	≤ 0.1	dB
	10 turns of 15 mm radius, 1625 nm	≤ 0.3	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°C, 85% R.H.)	Induced attenuation (1310 and 1550 nm)	≤ 0.05	dB/km
Dry heat aging (30days @ 85°C)	Induced attenuation (1310 and 1550 nm)	≤ 0.05	dB/km
Temperature Cycling (-60°C- +85°C)	Induced attenuation (1310 and 1550 nm)	≤ 0.05	dB/km
Water Soak (30 days @ 23°C)	Induced attenuation (1310 and 1550 nm)	≤ 0.05	dB/km