



Documents n. 11
rev 00/2012

TECHNICAL DATA SHEET - CABLE CONSTRUCTION

Specification for Extended reach 1Gb/s Ethernet 62,5 μ m MMF OM1
(Dual layer Primary coating)

Characteristics	Conditions	Specified Values	Units
		62,5 μm	
Optical Specifications (Uncabled Fibre)			
Attenuation Coefficient	850 nm	≤ 2.7	dB/km
	1300 nm	≤ 0.6	dB/km
1000BASE link Distance	850 nm (SX)	≤ 500	m
	1300 nm (LX)	≤ 1000	m
Overfilled Modal Bandwidth	850 nm	160 to 300	Mhz.km
	1300 nm	500 to 1000	Mhz.km
Numerical Aperture	-	0.275 ± 0.0015	-
Chromatic dispersion	-	FDDI Spec	-
Bending Loss	850nm, 1300 nm / 100 turn, 75mm diam.	$\leq 0,5$	dB
Backscatter Characteristics¹			
• Point of discontinuity ²	850nm, 1300 nm	$\leq 0,1$	dB
• Irregularities over fibre length	850nm, 1300 nm	$\leq 0,1$	dB
• Reflections	850nm, 1300 nm	Not allowed	-
• Group Index of Refraction (Typ.)	850nm	1.496	-
	1300 nm	1.491	-
Geometrical Specifications			
Core Diameter	-	62.5 ± 2	μ m
Core Non-Circularity	-	≤ 5	%
Core/Cladding Concentricity error	-	≤ 1	μ m
Cladding Diameter	-	125.0 ± 1	μ m
Cladding Non-Circularity	-	≤ 0.7	%
Coating Diameter	-	242 ± 5	μ m
Coating Non-Circularity	-	≤ 5	%
Coating/Cladding Concentricity error	-	≤ 10	μ m
Length	Standar lengths up to	17.6	km
Environmental Specifications			
Temperature cycling	850 nm, 1300 nm / -60°C to 85°C	≤ 0.1	dB/km
Temperature-Humidity cycling	850 nm, 1300 nm / -10°C to 85°C, 4-98% RH	≤ 0.1	dB/km
Water immersion	850 nm, 1300 nm / 23°C, 30 days	≤ 0.1	dB/km
Dry Heat	850 nm, 1300 nm / 85°C, 30 days	≤ 0.1	dB/km
Damp Heat	850 nm, 1300 nm / 85°C; 85% RH, 30 days	≤ 0.1	dB/km
Mechanical Specifications			
Proof test	Off line	> 0.7 (100)	GPa (kpsi)
Dynamic tensile strength (median value)	0.5 meter gauge length, unaged and aged ³	> 3.8 (550)	GPa (kpsi)
Fatigue parameter (Typ.)	Dynamic fatigue, unaged and aged ³	$n_d > 25$	-
Coating strip force	Average strip force, unaged and aged ⁴	1 to 3	N
	Peak strip force, unaged and aged ⁴	1.3 to 8.9	N