

Connectix Cabling Systems™

Fibre Specification

Single Mode Fibre			9/125 µm OS2 G.652D-ZWP	9/125 µm OS2 G.657.A1	9/125 µm OS2 G.657.A2	9/125 µm OS2 G.657.B3	9/125 µm OS2 G.655C&D	9/125 µm OS2 G.655C&E, G.656
Chromatic Dispersion	@1285 - 1330 nm	ps/(nm.km)	≥3.5	-	-	-	-	-
	@1550 nm	ps/(nm.km)	≥18	-	-	-	-	-
	@1530 - 1565 nm	ps/(nm.km)	-	-	-	-	2.6 - 6.0	5.5 - 8.9
	@1565 - 1625 nm	ps/(nm.km)	-	-	-	-	4.0 - 8.9	6.9 - 11.4
	@1460 - 1625 nm	ps/(nm.km)	-	-	-	-	-1.0 - 8.9	2.0 - 11.4
Attenuation - Loose Tube Cables	@1310 nm (typical / maximum)	dB/km	0.31 / 0.35	0.31 / 0.35	0.31 / 0.35	0.31 / 0.35	-	-
	@1550 nm (typical / maximum)	dB/km	0.20 / 0.24	0.20 / 0.24	0.20 / 0.24	0.20 / 0.24	0.25 / 0.30	0.25 / 0.30
	@1625 nm (typical / maximum)	dB/km	0.21 / 0.26	0.21 / 0.26	0.21 / 0.26	0.21 / 0.26	0.27 / 0.34	0.27 / 0.34
Attenuation - Tight Buffer Cables	@1310 nm (typical / maximum)	dB/km	0.35 / 0.40	0.35 / 0.40	0.35 / 0.40	0.35 / 0.40	-	-
	@1550 nm (typical / maximum)	dB/km	0.20 / 0.24	0.20 / 0.24	0.20 / 0.24	0.20 / 0.24	0.25 / 0.35	0.25 / 0.35
	@1625 nm (typical / maximum)	dB/km	0.21 / 0.26	0.21 / 0.26	0.21 / 0.26	0.21 / 0.26	0.27 / 0.34	0.27 / 0.34
Cable Cut-Off Wavelength (λ ₀)		µm	≥1260	≥1260	≥1260	≥1260	-	-
Mode Field Diameter	@1310 nm	µm	9.2 ± 0.4	8.95 ± 0.35	8.8 ± 0.4	7.9 ± 1.6	-	-
	@1550 nm	µm	10.4 ± 0.5	10.0 ± 0.5	-	9.8 ± 0.6	8.4 ± 0.6	8.6 ± 0.4
Cladding Diameter		µm	125.0 ± 0.7	125.0 ± 0.7	125.0 ± 0.7	125.0 ± 0.7	125.0 ± 0.7	125.0 ± 0.7
Cladding Non-Circularity		%	≥1	≥1	≥1	≥1.25	≥0.7	≥0.7
Coating Diameter		µm	240 ± 5	240 ± 5	240 ± 5	245 ± 10	245 ± 5	245 ± 5
Core/Cladding Concentricity Error		µm	≥0.5	≥0.5	≥0.5	-	≥0.5	≥0.5
Coating/Cladding Concentricity Error			≥12 µm	≥12 µm	≥5%	≥5%	≥10 µm	≥10 µm
Zero Dispersion Wavelength (λ ₀)		nm	1302 -1322	1302 -1322	1302 -1322	1302 -1324	-	≥1405
Group Refractive Index	@1310 nm		1.467	1.467	-	-	1.471	1.471
	@1550 nm		1.468	1.468	-	1.468	1.470	1.470
Fibre PMD Individual Fibre		ps/√km	0.1	0.1	0.1	0.2	0.1	0.1

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Multi Mode Fibre			62.5 / 125 µm OM1	50 / 125 µm OM2	50 / 125 µm OM2	50 / 125 µm OM2	50 / 125 µm OM3	50 / 125 µm OM4
Bandwidth (Overfilled Launch)	@805 nm @1300 nm	Mhz.km Mhz.km	≥220 ≥600	≥500 ≥500	≥600 ≥1200	≥600 ≥1200	≥1500 ≥500	≥3500 ≥500
Bandwidth (EMB ¹)	@850 nm @1300 nm	Mhz.km Mhz.km	- -	- -	- -	- -	≥2000 ≥5000	≥4700 ≥500
1 Gbps Ethernet Operation Link Length	@850 nm @1300 nm	m m	≥300 ≥550	550 ² 550 ³	≥600 ¹ ≥600 ²	≥750 ¹ ≥2000 ²	- -	- -
10 Gigabit Ethernet Operation Link Length	@850 nm	m	-	-	-	-	≥300	550
Attenuation - Loose Tube Cables	@850 nm (typical Max.) @1300 nm (Typical Max.)	dB/km dB/km	2.6 / 3.0 0.5 / 1.0	2.4 / 3.5 0.7 / 1.5	2.3 / 3.0 0.6 / 1.0	2.3 / 3.0 0.6 / 1.0	2.0 / 3.0 0.5 / 1.0	2.0 / 3.0 0.5 / 1.0
Attenuation - Tight Buffer Cables	@850 nm (typical Max.) @1300 nm (Typical Max.)	dB/km dB/km	2.6 / 3.2 0.5 / 1.0	2.0 / 3.5 0.5 / 1.5	2.0 / 3.5 0.5 / 1.5	2.0 / 3.5 0.5 / 1.5	2.1 / 3.5 0.7 / 1.5	2.1 / 3.5 0.7 / 1.5
Numerical Aperture		µm	0.275 ± 0.015	0.20 ± 0.015	0.20 ± 0.015	0.20 ± 0.015	0.20 ± 0.015	0.20 ± 0.015
Core Diameter		µm	62.5 ± 2.5	50.0 ± 2.5	50.0 ± 2.5	50.0 ± 2.5	50.0 ± 2.5	50.0 ± 2.5
Core Non-Circularity		%	≥5	≥5	≥5	≥5	≥5	
Cladding Diameter		µm	125 ± 10	125 ± 10	125 ± 10	125 ± 10	125 ± 10	125 ± 10
Cladding Non-Circularity		%	≥1	≥1	≥1	≥1	≥1	≥1
Coating Diameter		µm	245 ± 10	245 ± 10	245 ± 10	245 ± 10	245 ± 10	245 ± 10
Coating Non-Circularity		%	≥5	≥5	≥5	≥5	≥5	
Core/Cladding Concentricity Error		µm	≥1.0	≥1.5	≥1.5	≥1.5	≥1.5	≥1.5
Coating/Cladding Concentricity Error		µm	≥8	≥8	≥8	≥8	≥8	≥8
Zero Dispersion Wavelength (λ ₀)		nm	1320 to 1365	1295 to 1340	1295 to 1340	1295 to 1340	1295 to 1340	1295 to 1340
Group Refractive Index	@850 nm @1300 nm		1.496 1.491	1.483 1.479	1.483 1.479	1.483 1.479	1.483 1.479	1.483 1.479

1. Effective Modal Bandwidth per TIA/EIA-492AAAC and draft IEC 60793-2-10 for type A1a.2, ensured by DMD performance specifications for sources meeting launch conditions specified in 10 Gbit Ethernet (IEEE 802.3ae), OIF OC-192/STM-64 VSR-4-04, and 10 Gbit Fibre Channel (10FGC)

2. Serial laser 1000BASE-SX

3. Serial laser 1000BASE-LX