

Technical information

Singlemode optical fibre: according to G.652.D

Step index singlemode optical fibres G652 fibres provide optimum performance in the 1310 nm wavelength. They can be used on metropolitan and access networks, CATV and premises applications in telecom.

These fibres comply with or exceed the ITU-T Recommendation G.652.D, the IEC International Standard 60793-2-50 type B.1.3 Optical Fiber Specification, ISO/IEC 11801 OS1, ISO/IEC 24702 OS2, Telcordia GR-20-CORE, ANSI/ICEA S-87-640 and RUS 7CFR 1755.900

Geometrical and mechanical characteristics

Core diameter	125 ± 0,7 µm
Core / Cladding concentricity	≤ 0,5 µm
Cladding non-circularity	≤ 0,7 %
Primary coating diameter	242 ± 7 µm
Coating Non-Circularity	≤ 5 %
Coating / Cladding Concentricity	≤ 12,0 µm
Proof Test	≥ 8.8 N / ≥ 1 % / ≥ 100 Kpsi

Optical characteristics

		G.652.D
Mode Field Diameter (µm)	1310 nm	(8,9 – 9,2) ± 0,4
	1550 nm	(9,9 – 10,4) ± 0,5
Attenuation Coefficient (dB/km)	1310 nm	≤ 0,35
	1383 nm	≤ 0,35
	1460 nm	≤ 0,25
	1550 nm	≤ 0,21
	1625 nm	≤ 0,23
Chromatic Dispersion Coefficient ps/(nm·km)	1285 – 1330 nm	≤ 3
	1550 nm	≤ 18
	1625 nm	≤ 22
Zero Dispersion Wavelength (nm)		1300 - 1322
Zero Dispersion Slope (ps / nm ² km)		≤ 0,090
Group Index of Refraction	1310 nm	1,467
	1550 nm	1,468
Cable Cut-Off Wavelength (nm)		≤ 1260
PMD (ps/√ km)	1550 nm	< 0,1

Characteristics according to ITU-T G.652.D, IEC 60793-2-50 B.1.3, ISO/IEC 11801, ISO/IEC 24702, EN 50173, Telcordia GR- 20-CORE, ANSI/ICEA S-87-640 and RUS 7CFR 1755.900.
Optical specifications for uncabled fibre.

Technical information

Singlemode optical fibre: according to G.657

Low macrobending sensitive fibres G.657 provide high resistance to additional losses due to macrobending. Ideal for cable mounting inside buildings, patchcords and/or interconnection cables. It offers significant added value in Fibre-to-the-Home (FTTH) access networks.

The fibre fully comply with or exceeds the IEC 60793-2-50, ITU G.652.D, G657A1, G.657A2, G.657B2, G657B3, Telcordia GR-20-CORE, ANSI/IECA S-87-640.

Geometrical and mechanical characteristics

	G.657.A1	G.657.A2 / B2	G.657.B3
Core diameter	125 ± 0,7 µm		125 ± 0,4 µm
Core / Cladding concentricity	≤ 0,5 µm		≤ 0,3 µm
Cladding non-circularity	≤ 0,7 %		≤ 0,3 %
Primary coating diameter	242 ± 0,7 µm		242 ± 0,5 µm
Coating Non-Circularity	≤ 5 %		
Coating / Cladding Concentricity	≤ 12,0 µm	≤ 10,0 µm	≤ 12,0 µm
Proof Test	≥ 8.8 N / ≥ 1 % / ≥ 100 Kpsi		≥ 200 Kpsi

Optical characteristics

		G.657.A1	G.657.A2 / B2	G.657.B3
Attenuation with Bending* (1550 nm)	1 turn / Mandrel 10mm	≤ 0,75	≤ 0,10	≤ 0,03
	10 turns / Mandrel 15mm	≤ 0,25	≤ 0,03	-
	1 turn / Mandrel 7,5mm	-	-	≤ 0,35
	1 turn / Mandrel 5mm	-	-	≤ 0,35
Mode Field Diameter μm)	1310 nm	(8,9 – 9,2) ± 0,4		
	1550 nm	(9,9 – 10,4) ± 0,5		
Attenuation Coefficient (dB/km)	1310 nm	≤ 0,35	≤ 0,35	≤ 0,35
	1383 nm	≤ 0,35	≤ 0,35	≤ 0,35
	1460 nm	≤ 0,25	≤ 0,25	-
	1550 nm	≤ 0,21	≤ 0,21	≤ 0,22
	1625 nm	≤ 0,23	≤ 0,23	≤ 0,24
Chromatic Dispersion Coefficient ps/(nm·km)	1285 – 1330 nm	≤ 3		
	1550 nm	≤ 18		
	1625 nm	≤ 22		
Zero Dispersion Wavelength (nm)		1300 - 1322	1300 - 1324	
Zero Dispersion Slope (ps / nm² km)		≤ 0,090	≤ 0,092	
Cable Cut-Off Wavelength (nm)		≤ 1260		
PMD (ps/√ km)	1550 nm	≤ 0,1		

Characteristics according to ITU-T G652.D, G657A, G657B, IEC 60793-2-50, ISO/IEC 11801, ISO/IEC 24702 OS2, Telcordia GR-20-CORE, ANSI/IECA S-87-640.

Important notice- At present, G657 fibres are not recognized by some splicing machines. Check your machine before use or ask your local distributor.

* Mandrel dimension = Radius

Optical specifications for uncabled fibre.

Technical information

Multimode optical fibre 50/125: according to G.651.1

Graded-Index multimode optical fibres 50/125 micron. The fibres are designed for use at 850, 953 and 1300 nm. These fibres are suitable for use in premises wiring applications, like Local Area Networks (LAN) with video, data and voice using LED, VCSEL or Laser Fabry Perot sources.

The fibre complies with or exceeds ITU-T Recommendation G651.1 (OM2, OM3 and OM4), IEC 60793-2-10 A1a.1, A1a.2, A1a.3, A1a.4 Optical Fibre Specification, ISO/IEC 11801 OM2 / OM3 / OM4 / OM5 specification, TIA/EIA-492AAAB, TIA/EIA-492AAAC, TIA/EIA-492AAD, TIA/EIA-492AAE, Telcordia GR-20-CORE, GR-409-CORE.

Geometrical and mechanical characteristics according to IEC 60793-2-10

Core diameter	50 ± 2,5 µm
Core non-circularity	≤ 5 %
Core / Cladding concentricity error	≤ 1,5 µm
Cladding diameter	125 ± 1,0 µm
Cladding non-circularity	≤ 1,0 %
Primary coating diameter	245 ± 10 µm
Coating concentricity error	≤ 12,0 µm
Proof Test	≥ 8,8 N / ≥ 1 % / ≥ 100 Kpsi

Optical characteristics

		OM2	OM3	OM4	OM5
Attenuation Coefficient (dB/km)	850 nm	≤ 2,4	≤ 2,4	≤ 2,4	≤ 2,4
	953 nm	-	-	-	≤ 1,8
	1300 nm	≤ 0,7	≤ 0,7	≤ 0,7	≤ 0,6
Bandwidth (MHz/km)	850 nm	≥ 500	≥ 1500	≥ 3500	≥ 3500
	953 nm	-	-	-	≥ 1850
	1300 nm	≥ 500	≥ 500	≥ 500	≥ 500
Link Distance (m)	1000Base-SX	550	900	1100	1000
	1000Base-LX	550	550	550	600
	10GBASE-SX	82	300	550	400
	40GBASE-SR4	-	100	150	150
	100GBASE-SR1	-	100	150	100
Numerical Aperture	0,200 ± 0,015				
Group Index of Refraction	850 nm	1,482			
	1300 nm	1,477			

Optical properties according to IEC 60793-2-10, ISO/IEC 11801, EN 50173, TIA/EIA-492AAAB, TIA/EIA-492AAAC-A, TIA/EIA-492AAD, Telcordia GR-20-CORE, GR-409-CORE.
Optical specifications for uncabled fibre.