

Specification for single mode fibre (G.657.A1) used in tubes

Single mode glass fiber for 1310, 1550 and 1625 nm. Primary coating made of acrylate

I. FIBRE GEOMETRY

Coating diameter, coloured	250 ± 10	µm
Cladding diameter	125 ± 1,0	µm
Cladding non-circularity	≤ 1,0	%
Core concentricity error	≤ 0,5	µm

II. MECHANICAL PROPERTIES

Minimum bending radius	15	mm
Proof stress	1	%

III. TRANSMISSION PROPERTIES – for fibre in cable

Attenuation at 1310 nm	med 0,37	dB/km
	max 0,40	dB/km
Attenuation at 1383 nm*	med 0,37	dB/km
	max 0,40	dB/km
Attenuation at 1550 nm	med 0,22	dB/km
	max 0,28	dB/km
Attenuation at 1625 nm	med 0,30	dB/km
	max 0,40	dB/km
Cable cut-off wavelength	≤ 1260	nm
Mode field diameter	8,4–9,7	µm
Zero-dispersion wavelength	1300–1324	nm
Zero-dispersion slope	≤ 0,092	ps/ nm/ nm/ km
Chromatic dispersion at 1550 nm	≤ 18	ps/ nm/ km
Chromatic dispersion at 1310 nm	≤ 3,5	ps/ nm/ km
PMD 1550 nm (link design value)	≤ 0,2	Ps/ √km

IV. REFERENCES

International standard: IEC 60793-2-50 Sub-category B-652.D
 Generic specification: Optical Fibres ITU-T G.652 Sub-category G.652.D

*After hydrogen ageing according to IEC60793-2-50