

Optical fibre characteristics

The optical characteristics below pertain to cabled fibres.

Single Mode Fibres

Parameter	Standard grade	Special grade	Units
Attenuation, loose tube cables			
@1310nm	≤ 0.38	≤ 0.35	dB/km
@1550nm	≤ 0.25	≤ 0.22	dB/km
Attenuation, Tight buffer or semi-tight cables			
@1310nm	≤ 0.45	≤ 0.45	dB/km
@1550nm	≤ 0.35	≤ 0.35	dB/km
Dispersion		Between 1285 and 1330nm	≤ 0.35 ps/nm/km
		Between 1525 and 1575nm	≤ 19 ps/nm/km
Zero dispersion wavelength		1310 ± 10	nm
Mode field diameter		1300nm	9.3 ± 0.5 μm
		1550nm	9.3 ± 0.5 μm
Cable cut-off wavelength		≤ 1250 nm	
Cladding diameter		125 ± 1.0 μm	
Mode field concentricity error		≤ 0.8 μm	
Cladding non-circularity		≤ 1 %	
Coating diameter		250 ± 15 μm	
Proof-test level		100 kpsi	

Multi Mode Fibres

Parameter	50/125	62.5/125	Units
Attenuation, loose tube cables			
@850nm	≤ 3.0	≤ 3.2	dB/km
@1300nm	≤ 1.0	≤ 1.2	dB/km
Attenuation, Tight buffer or semi-tight cables			
@850nm	≤ 3.5	≤ 3.5	dB/km
@1300nm	≤ 1.2	≤ 1.5	dB/km
Bandwidth		@850nm	≤ 400 MHz / km
		@1300nm	≤ 600 MHz / km
Numerical aperture		0.2 ± 0.02	0.275 ± 0.015
Core diameter		50 ± 3	62.5 ± 3 μm
Cable cut-off wavelength		0.2	≤ 1250 nm
Cladding diameter		125 ± 2	125 ± 2 μm
Core non circularity		≤ 6	≤ 6 %
Cladding non-circularity		≤ 2	≤ 2 %
Coating diameter		250 ± 15	250 ± 15 μm
Proof-test level		50	50 kpsi

Single Mode Fibres Multi Mode Fibres



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