

# Multimode OM4

Fibre type	50/125 µm
OPK code	OM4
<b>Optical Characteristics</b>	
Attenuation coefficient Loose tube Cables (Typical / Maximum) <sup>(1,2)</sup>	
at 850 nm	2.2 / 3.5 dB/km
at 1300 nm	0.5 / 1.5 dB/km
Attenuation coefficient Tight Buffered Cables (Typical / Maximum) <sup>(1,2)</sup>	
at 850 nm	2.5 / 3.5 dB/km
at 1300 nm	0.6 / 1.5 dB/km
Attenuation discontinuity <sup>(2)</sup>	≤ 0.2 dB
Zero dispersion wavelength	1295–1340 nm
Zero dispersion slope 1295 ≤ λ <sub>0</sub> ≤ 1310 nm	≤ 0.105 ps/(nm <sup>2</sup> ·km)
Zero dispersion slope 1310 ≤ λ <sub>0</sub> ≤ 1340 nm	≤ 0.000375·(1590-λ <sub>0</sub> ) ps/(nm <sup>2</sup> ·km)
Numerical Aperture	0.200 ± 0.015
Effective group index of refraction at 850 nm	1.483
Effective group index of refraction at 1300 nm	1.478
<b>Performance Characteristics</b>	
Bandwidth (Overfilled launch) at 850 nm	≥ 3500 MHz·km
Bandwidth (Overfilled launch) at 1300 nm	≥ 500 MHz·km
Effective Modal Bandwidth (EMB) at 850 nm	≥ 4700 MHz·km
Transmission Link Lengths for 10 Gb/s <sup>(3)</sup> at 850 nm	550 m <sup>(4)</sup>
Transmission Link Lengths for 10 Gb/s <sup>(3)</sup> at 1300 nm	300 m <sup>(4)</sup>
<b>Geometrical Characteristics</b>	
Core diameter	50 ± 2.5 µm
Core non-circularity	≤ 5.0 %
Core/Cladding concentricity error	≤ 1 µm
Cladding diameter	125.0 ± 1.0 µm
Cladding non-circularity	≤ 1.0 %
Primary coating diameter (uncoloured fibre)	242 ± 7 µm
Primary coating diameter (coloured fibre)	250 ± 10 µm
Coating-Cladding concentricity	≤ 10 µm
<b>Macrobending loss</b>	
100 turns, mandrel radius 37.5 mm at 850 nm	≤ 0.05 dB
100 turns, mandrel radius 37.5 mm at 1300 nm	≤ 0.15 dB
2 turns, mandrel radius 7.5 mm at 850 nm	≤ 0.2 dB
2 turns, mandrel radius 7.5 mm at 1300 nm	≤ 0.5 dB
2 turns, mandrel radius 15 mm at 850 nm	≤ 0.1 dB
2 turns, mandrel radius 15 mm at 1300 nm	≤ 0.3 dB
<b>Mechanical Characteristics</b>	
Proof test level	≥ 0.69 GPa (≥ 8.8 N)
Coating strip force	1.9 N
Dynamic fatigue resistance parameter	≥ 23

(1) Unless stated otherwise directly in the cable specification

(2) Cabled fibre

(3) 850 nm operating wavelength with transmitters meeting encircled flux of ≤ 30 % @ radius 4.5 µm and ≥ 86 % @ radius 19.0 µm.

(4) At 1300nm link length using LX4

- Typical attenuation is the value measured for at least 90% of the fibers in the cable.
- OTDR measurement values can only be guaranteed for cable lengths of 1000 m and more.
- Cable on the reel may show a discontinuity of the OTDR curve caused by winding of the cable on the reel.
- The above values apply, unless otherwise stated directly in the cable specification