

Multimode Fiber OM3

Specifications:

Fiber type 50/125

OPK code OM3

Rev. 007-21/41

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Optical Characteristics

Attenuation coefficient Loose tube Cables (Typical / Maximum)

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)

at 850 nm 2.5 / 3.5 dB/km
at 1300 nm 0.6 / 1.5 dB/km

Point of discontinuity at 1300 nm ≤ 0.2 dB

Zero dispersion wavelength 1295 - 1340 nm

Zero dispersion slope $1295 \leq \lambda \leq 1310$ nm ≤ 0.105 ps/(nm²·km)

Zero dispersion slope $1310 \leq \lambda \leq 1340$ nm $\leq 0.000375 \cdot (\lambda - 1590)$ ps/(nm²·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

Performance Characteristics

Bandwidth (Overfilled launch)

at 850 nm ≥ 1500 MHz·km

at 1300 nm ≥ 500 MHz·km

Effective Modal Bandwidth (EMB) at 850 nm ≥ 2000 MHz·km

Transmission Link Lengths for 10 Gb/s1

at 850 nm 300 m

at 1300 nm 300 m

Geometrical Characteristics

Core diameter 50 ± 2.5 μ m

Core non-circularity ≤ 5.0 %

Core/Cladding concentricity error ≤ 1 μ m

Cladding diameter 125.0 ± 1.0 μ m

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

Macrobending loss

100 turns, mandrel diameter 75 mm at 850 nm	≤ 0.05 dB
100 turns, mandrel diameter 75 mm at 1300 nm	≤ 0.15 dB
2 turns, mandrel diameter 30 mm at 850 nm	≤ 0.1 dB
2 turns, mandrel diameter 30 mm at 1300 nm	≤ 0.3 dB
2 turns, mandrel diameter 15 mm at 850 nm	≤ 0.2 dB
2 turns, mandrel diameter 15 mm at 1300 nm	≤ 0.5 dB

Mechanical Characteristics

Proof test level	≥ 0.69 Gpa (≥ 8.8 N)
Coating strip force	1.9 N
Dynamic fatigue resistance parameter	≥ 23

1 850 nm operating wavelength with transmitters meeting encircled flux of ≤ 30% @ radius 4.5 µm and ≥ 86 % @ radius 19.0 µm.

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 an discontinuity of the OTDR curve caused by winding of the cable on the reel.