

Multimode Fiber OM5

Specifications:

Fiber type 50/125

OPK code OM5

Rev. 005-21/41

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Optical Characteristics

Attenuation coefficient Loose tube Cables (Typical / Maximum)

at 850 nm 2.2 / 3.0 dB/km

at 1300 nm 0.5 / 1.5 dB/km

Attenuation coefficient Tight Buffered Cables (Typical / Maximum)

at 850 nm 2.5 / 3.0 dB/km

at 1300 nm 0.6 / 1.5 dB/km

Point of discontinuity at 1300 nm ≤ 0.2 dB

Zero dispersion wavelength 1297 – 1328 nm

Zero dispersion slope $\leq 4(-103)/(840(1-(10/840)^4))$ 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 ≥ 3500 MHz·km

at 953 nm ≥ 1850 MHz·km

at 1300 nm ≥ 500 MHz·km

Effective Modal Bandwidth (EMB)

at 850 nm ≥ 4700 MHz·km

at 953 nm ≥ 2470 MHz·km

Geometrical Characteristics

Core diameter	$50 \pm 2.5 \mu\text{m}$
Core non-circularity	$\leq 5.0 \%$
Core/Cladding concentricity error	$\leq 1 \mu\text{m}$
Cladding diameter	$125.0 \pm 1.0 \mu\text{m}$
Cladding non-circularity	$\leq 1.0 \%$
Primary coating diameter (uncoloured fibre)	$242 \pm 7 \mu\text{m}$
Primary coating diameter (coloured fibre)	$250 \pm 10 \mu\text{m}$
Coating-Cladding concentricity	$\leq 10 \mu\text{m}$

Macrobending loss

2 turns, mandrel diameter 30 mm at 850 nm	$\leq 0.1 \text{ dB}$
2 turns, mandrel diameter 30 mm at 1300 nm	$\leq 0.3 \text{ dB}$
2 turns, mandrel diameter 15 mm at 850 nm	$\leq 0.2 \text{ dB}$
2 turns, mandrel diameter 15 mm at 1300 nm	$\leq 0.5 \text{ dB}$

Mechanical Characteristics

Proof test level	$\geq 0.69 \text{ GPa } (\geq 8.8 \text{ N})$
Coating strip force	1.9 N
Dynamic fatigue resistance parameter	≥ 23

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.