

MULTIMODE FIBER OM3 & OM4

Core Diameter	$50 \pm 2,5 \mu\text{m}$	$50 \pm 2,5 \mu\text{m}$
Core Non-Circularity	$\leq 5\%$	$\leq 5\%$
Cladding Diameter	$125,0 \pm 1,0 \mu\text{m}$	$125,0 \pm 1,0 \mu\text{m}$
Cladding Non-Circularity	$\leq 0,7 \%$	$\leq 0,7 \%$
Core/Cladding Concentricity Error (Offset)	$\leq 1,0 \mu\text{m}$	$\leq 1,0 \mu\text{m}$
Coating Diameter (Coloured)	$242,0 \pm 5,0 \mu\text{m}$	$242,0 \pm 5,0 \mu\text{m}$
Coating – Cladding Concentricity Error (Offset)	$\leq 10 \mu\text{m}$	$\leq 10 \mu\text{m}$
Attenuation – Loose Tube Cables		
@ 850 nm (typical / maximum)	2,0 / 3,5 dB/km	2,0 / 3,5 dB/km
@ 1300 nm (typical / maximum)	0,5 / 1,5 dB/km	0,5 / 1,5 dB/km
Attenuation – Tight Buffer Cables		
@ 850 nm (typical / maximum)	2,1 / 3,5 dB/km	2,1 / 3,5 dB/km
@ 1300 nm (typical / maximum)	0,7 / 1,5 dB/km	0,7 / 1,5 dB/km
Chromatic Dispersion		
Zero Dispersion Wavelength (λ_0)	1295 – 1340 nm	1295 – 1340 nm
Zero Dispersion Slope (S_0)	$\leq 0,105 \text{ ps/nm}^2 \text{ km}$	$\leq 0,105 \text{ ps/nm}^2 \text{ km}$
Group Refractive Index		
@ 850 nm	1,482	1,482
@ 1300 nm	1,477	1,477
Laser Bandwidth/EMB		
Overfilled @850 nm	1500 MHz-km	3500 MHz-km
Overfilled @1300 nm	500 MHz-km	500 MHz-km
Numerical Aperture	$0,200 \pm 0,015$	$0,200 \pm 0,015$
Fiber capacity		
100 G Ethernet (100GBASE-SR10)	140 m	170 m
40 G Ethernet (40GBASE-SR4)	140 m	170 m
10 G Ethernet (10GBASE-SR)	300 m	550 m
1 G Ethernet (1GBASE-SR)	1000 m	1100 m
Tensile Proof Test	100 kpsi (0,7 GPa)	100 kpsi (0,7 GPa)
Coating Strip Force	$1,3 – 8,9 \text{ N}$ (3,8 N typical)	$1,3 – 8,9 \text{ N}$ (3,8 N typical)
Banding Loss 100 turns, 75,0 mm, @ 850 nm	$\leq 0,5 \text{ dB}$	$\leq 0,5 \text{ dB}$
Banding Loss 100 turns, 75,0 mm, @ 1300 nm	$\leq 0,5 \text{ dB}$	$\leq 0,5 \text{ dB}$

Values are valid for cabled fiber, local attenuation discontinuity $\leq 0,2 \text{ dB}$

Note: due to OTDR measurement uncertainty KDP cannot guarantee attenuation values at fibers shorter than 1000m.

1) Distances assume maximum 1.0 dB total splice/connector loss, maximum 3.0 dB/km cable attenuation at 850 nm, and VCSEL spectral width of $\leq 0,45 \text{ nm}$. 100

Meter reach over OM3 and 150 meter reach over OM4 as defined by IEEE 802.3ba.

2) 1000-meter reach assuming total connection plus splice loss of 0.9 dB.

3) 550 meter reach assuming 3.5 dB/Km maximum cabled attenuation at 850 nm plus 1.0 dB of total connection and splice loss, or 3.0 dB maximum cabled

Attenuation at 850 nm and 1.3 dB total connection and splice loss. 400 meter reach as defined by IEEE 802.3ae.