

➤ Multi Mode 50/125 OM4

OM4 fiber offers a minimum effective modal bandwidth of 4700 MHz-km at 850 nm, compared with 2000 MHz-km for OM3. This OM4 fiber is a 50 µm laser-optimized fiber with extended bandwidth with 40 and 100 Gigabit Ethernet speeds, supports Ethernet, Fiber Channel, and OIF applications, allowing extended reach upwards of 550 meters at 10 Gb/s for ultra long building backbones and medium length campus backbones. With an Effective Modal Bandwidth of 4700 MHz-km (more than double the IEEE requirement for 10 Gb/s 300 meters support), OM4 fiber is also especially well suited for shorter reach data Centers and high performance computing applications.

The OM4 multimode fiber complies with or exceeds IEC 60793-2-10 type A1a.3 Optical Fiber Specification, ISO/IEC 11801 OM-4 Specification, TIA/EIA-492AAAD detail Specification.

➤ Optical Characteristics For Multi Mode 50/125 µm (OM4)

CHARACTERISTIC	CONDITION	SPECIFIC VALUE	UNIT
Optical characteristics			
OM4			
Attenuation	850 nm	≤2.3	[dB/km]
	1300 nm	≤0.6	
Minimum Modal Bandwidth	850 nm	≥3500	[MHz.km]
	1300 nm	≥500	
Effective Modal band width	850 nm	≥4700	[MHz.km]
	10 GB SX 850 nm	550	
Application Support Distance on	GB SX 850 nm	1100	[m]
	GB LX 1300 nm	600	
	40 & 100 GB 850nm	150	
Numerical Aperture (NA)		0.200±0.015	
Group index of refraction (Typical)	850 nm	1.482	
	1300 nm	1.477	
Zero Dispersion Wavelength		1295-1340	[nm]
Zero Dispersion Slope	1295-1310 nm	≤0.105	[ps/(nm ² .km)]
	1310-1320 nm	≤0.000375*(1590-λ ₀)	
Macro bending induced loss 100 turns@30mm diameter	850 nm	≤0.50	[dB]
	1300 nm	≤0.50	
Geometrical characteristics			
Core Diameter		50±2.5	[µm]
Cladding diameter		125.0+1.0	[µm]
Core Non-circularity		≤5.0	[%]
Cladding non circularity		≤1.0	[%]
Coating diameter		245±7	[µm]
Coating/cladding concentricity error		≤12.0	[µm]
Coating no circularity		≤6.0	[%]
Core/cladding concentricity error		≤1.0	[µm]
Delivery Length		Upto 8.8	[km/reel]
Environmental Characteristics			
	850 nm, 1300 nm		
Temperature dependence induced attenuation	- 60°C to +85°C	≤0.10	[dB/km]
Temperature humidity cycling induced attenuation	-10°C to +85°C, 98% RH	≤0.10	[dB/km]
Damp heat dependence induced attenuation	85°C and 85% RH, for 30days	≤0.10	[dB/km]
Water soak dependence induced attenuation	23°C, for 30days	≤0.10	[dB/km]
Dry heat aging	85°C, for 30days	≤0.10	[dB/km]
Back scatter Characteristics			
	1300 nm		
Step (Mean of Bidirectional measurement)		≤0.10	[dB]
Irregularities over fiber length & point discontinuity		≤0.10	[dB]
Attenuation uniformity		≤0.08	[dB/km]
Mechanical Characteristics			
Proof test		≥9.0	[N]
		≥1.0	[%]
		≥100	[Kpsi]
Coating Strip Force	Typical Average	1.5	[N]
	Peak	≥1.3 & ≤8.9	[N]
Dynamic Stress corrosion susceptibility Parameter		27	