Multimode 50/125 OM2

This graded-index 50/125 μm multimode fiber has a 50 μm core diameter and a 125 μm cladding diameter. The fiber is designed for use at 850 nm and/or 1300 nm and is suitable for use in premises cabling applications, like Local Area Networks (including backbone, riser and horizontal) with video, data and/or voice services Using LED, VCSEL and Fabry-Perot laser sources at 850 nm or 1300 nm.

This multimode fiber assures full compatibility with legacy systems, like Fast Ethernet, FDDL, ATM, Fiber Channel and 1Gb/s Ethernet. Because of the nature of the Plasma-activated Chemical Vapor Deposition(PVCD) manufacturing process, this fiber offers the highest bandwidth available in the market.
The fiber complies with or exceeds IEC 60793-2-10 type A1a.1 Optical Fiber Specification, TIA/EIA-492AAAB-A detail specification.

Optical Characteristics for Multimode 50/125 μm (OM2)

CHARACTERISTIC	CONDITION	SPECIFIC VALUE	UNIT
Optical Characteristics	OM2		
Attenuation	850 nm	≤2.4	[dB/km]
	1300 nm	≤0.6	
Minimum Modal Bandwidth	850 nm	≥700	[MHz.km]
	1300 nm	≥500	
Effective Modal Bandwidth	850 nm	≥950	[MHz.km]
Application Support Distance on	1000 BASE-SX (850nm)	750	[m]
	10G BASE-SR (850nm)	150	
	40&100Gigabit Ethernet (850nm)	-	
Numerical Aperture (NA)		0.200±0.015	
Group Index of Refraction (Typical)	850 nm	1.482	
	1300 nm	1.477	
Zero Dispersion Wavelength, λ_0		1295-1340	[nm]
Zero Dispersion Slope, S_0	1295nm ≤ λ_0 ≤ 1310nm	≤0.105	[ps/(nm².km)]
	1310nm ≤ λ_0 ≤ 1340nm	≤0.000375(1590 -λ_0)	
Macro Bending Induced loss 100 Turns @ 37.5mm Radius	850 nm	≤0.50	[dB]
	1300 nm	≤0.50	
Macro Bending Induced loss 2 Turns @ 15mm Radius	850 nm	≤1.0	[dB]
	1300 nm	≤1.0	
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		≤10.0	[μm]
Coating Non-Circularity		≤6.0	[%]
Core/Cladding Concentricity Error		≤1.5	[μm]
Delivery Length		Up to 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 Force	1.5	[N]
	Peak Force	≥1.3 & ≤8.9	[N]
Dynamic Stress Corrosion Susceptibility Parameter (N_d, Typical)		27	