

Description

CONNECSYS 50/125µm OM2 multimode fiber is a graded-index multimode optical fiber with a 50µm core diameter and a 125µm cladding diameter. The optical fiber is comprehensively optimized for the performance at the 850nm and 1300nm operating wavelengths, which complies with the ITU-T Recommendation G.651 and IEC 793-2 Type A1 Optical Fiber Specification. With the optical fiber low attenuation and high bandwidth, it overfills the transmission demand of IEEE 802.3z Gigabit Ethernet.

Characteristics	Conditions	Specified Values
Optical Characteristics		
Attenuation	850 nm	≤ 2.3 dB/km
	1300 nm	≤ 0.6 dB/km
Minimum Modal Bandwidth	850 nm	600 MHz▪km
	1300 nm	1200 MHz▪km
Numerical Aperture		0.200 ± 0.015
Zero Dispersion Wavelength		1295 – 1320 nm
Zero Dispersion Slope	1295 – 1300 nm	≤ 0.001 X (λ _o - 1190) ps/(nm ² · km)
	1300 – 1320 nm	≤ 0.11 ps/(nm ² · km)
Group Index of Refraction	850 nm	1.482
	1300 nm	1.477
Backscatter Characteristics		
@ 1300 nm		
Step (Bidirectional Measurement)		≤ 0.10 dB
Irregularities Over Fiber Length And Point Discontinuity		≤ 0.10 dB
Attenuation Uniformity		≤ 0.08 dB/km
Geometrical Characteristics		
Core Diameter		50 ± 2.5 µm
Cladding Diameter		124.8 ± 1.0 µm
Cladding Non-Circularity		≤ 1.0 %
Coating Diameter		245 ± 7 µm
Coating – Cladding Concentricity Error		≤ 12.0 µm
Coating Non-Circularity		≤ 6.0 %
Core – Cladding Concentricity Error		≤ 1.5 µm
Environmental Characteristics		
@ 850 nm & 1300 nm		
Temperature Dependence Induced Attenuation at	-60°C to +85°C	≤ 0.10 dB/km
Temperature - Humidity Cycling Induced Attenuation at	-10°C to +85°C, 98% RH	≤ 0.10 dB/km
Water Soak Dependence Induced Attenuation at	23°C, for 30 Days	≤ 0.10 dB/km
Damp Heat Dependence Induced Attenuation at	85°C & 85% RH, 30 Days	≤ 0.10 dB/km
Dry Heat Aging at	85°C	≤ 0.10 dB/km
Mechanical Specifications		
Proof Test	Off Line	≥ 9.0 N; ≥ 1.0 %; ≥ 100 kpsi
Macro – Bend Induced Attenuation		
100 Turns Around a Mandrel of 60 mm Diameter	850 nm & 1300 nm	≤ 0.50 dB
Coating Strip Force	Typical Average Force	1.5 N
	Peak Force	≥ 1.3 N ≤ 8.9 N
Dynamic Stress Corrosion Susceptibility Parameter nd		≥ 27

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