## **CONNECSYS**

## Multi-Mode 50/125 µm OM3 Optical Fiber

## Description

CONNECSYS 50/125µm OM3 multimode fiber is a graded-index multimode optical fiber complies with ISO/IEC 11801 OM3 specification, IEC 60793-2-10 type A1a.2 Optical Fibre Specification, and TIA/EIA-492AAAC detail specification.

Characteristics	Conditions	Specified Values
Optical Characteristics		
Attenuation	850 nm	≤ 2.3 dB/km
	1300 nm	≤ 0.6 dB/km
Overfilled Modal Bandwidth	850 nm	≥ 1500 MHz•km
	1300 nm	≥ 500 MHz•km
Effective Modal Bandwidth	850 nm	≥ 2000 MHz•km
10 Gb/s Ethernet Link Distance SX(850 nm)		≤ 300 m
Differential Mode Delay (DMD)	850 nm	See Note 1
Numerical Aperture		0.200 ± 0.015 NA
Zero Dispersion Wavelength		1295 – 1320 nm
Zero Dispersion Slope	1295 – 1300 nm	$\leq$ 0.001 X ( $\lambda_0$ - 1190) ps/(nm <sup>2</sup> · km)
	1300 – 1320 nm	$\leq 0.11 \text{ ps/(nm}^2 \cdot \text{km)}$
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
Difference Backscatter Coefficient (Bidirectional Measurement)		≤ 0.08 dB/km
Geometrical Characteristics		
Core Diameter		50 ± 2.5 μm
Core Non-Circularity		≤ 5.0 %
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		≤ 1.0 µm
<b>Environmental Characteristics</b>	@ 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
Dynamic Stress Corrosion Susceptibility Parameter nd		≥ 27 nd

Note 1: DMD specifications are comply with IEC 60793-2-10 (Type A1a.2 for OM3) and TIA-492AAAC (OM3).

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