fibex
global resources solutions

50µm, OM4 FIBER

DESCRIPTION	VALUE		UNIT
● Optical characteristics			
Attenuation	850 nm	<2.3	[dB / km]
	1300 nm	<0.6	[dB / km]
Overfilled Modal Bandwidth	850 nm		[MHz • km]
	1300 nm	>3500	[MHz • km]
Effective Modal Bandwidth	850 nm	>3500	[MHz • km]
Application support distance on		>4700	[MHz • km]
10 Gb / s Ethernet link distance SX (850 nm)		<500	[m]
1 Gb / s Ethernet link distance SX (850 nm)		<1000	[m]
1 Gb / s Ethernet link distance LX (1300 nm)		<1100	[m]
40 & 100 Gb / s Ethernet link distance SX (850 nm)		<150	[m]
Numerical Aperture (NA)		0.200±0.015	
Group index of refraction (typical)	850 nm	1.482	
	1300 nm	1.477	
Zero dispersion wavelength	>1295	<1320	[nm]
Zero dispersion slope	1295-1300 nm	<0.001	[(λ 0 1190) ps / (nm² • km)]
	1300-1320 nm	<0.11	[ps / (nm² • km)]
● Backscatter characteristics	1300 nm	0.200±0.015	
Step (Mean of bidirectional measurement)		<0.10	[dB]
Irregularities over fibre length and		<0.10	[dB]
point discontinuity			
Difference backscatter coefficient		<0.08	[dB / km]
(bidirectional measurement)			

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DESCRIPTION	VALUE		UNIT
● Geometrical characteristics			
Core diameter		50±2.5	[µ m]
Core non-circularity		<5.0	[%]
Cladding diameter		125.0±1.0	[µ m]
Cladding non-circularity		<1.0	[%]
Coating diameter		245±7	[µ m]
Coating / cladding concentricity error		<12.0	[µ m]
Coating non-circularity		<6.0	[%]
Core / cladding concentricity error	850 nm, 1300 nm	<1.0	[µ m]
● Environmental characteristics			
Temperature dependence	-60°C to +85°C		
Induced attenuation		<0.10	[dB / km]
Temperature-humidity cycling	-10°C to +85°C, 90% R.H.		
Induced attenuation		<0.10	[dB / km]
Damp heat dependence	85°C, 85% R.H., 30 days		
Induced attenuation		<0.10	[dB / km]
Watersoak dependence	20°C for 30 days		
Induced attenuation		<0.10	[dB / km]
● Mechanical characteristics	off line		
Proof test		>9.0	[N]
		>1.0	[%]
		>100	[kpsi]
Bending Dependence	850 nm, 1300 nm		
Induced Attenuation	100 turns, 75 mm diameter	<0.50	[dB]
Coating strip force	Typical average force	1.5	[N]
	Peak force >1.3	<8.9	[N]
Dynamic stress corrosion susceptibility		>27	
parameter (n^d, Typical)			

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