



# 50 $\mu$ m, OM3 FIBER

DESCRIPTION	VALUE	UNIT
● <b>Optical characteristics</b>		
Attenuation	850 nm <2.5 1300 nm <0.7	[dB / km]
Overfilled Modal Bandwidth	850 nm >1500 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	850 nm Any one of the following template [ps / m]:	
	DMD DMD Inner Mask DMD Outer Mask	
	Templates (Radius 5-18 $\mu$ m) (Radius 0-23 $\mu$ m)	
Note:A minimum, effective system mode bandwidth-length product of 2000 MHz · km is achieved when combining this 50 / 125 $\mu$ m fibre with transmitters meeting the following transmitter power distribution (per FOTP-203) : Flux at radius 4.5 $\mu$ m : <30% and Encircled Flux at radius 19 $\mu$ m:>86%. (Ref: TIA-492AAAC)	1 <0.33 2 <0.27 3 <0.26 4 <0.25 5 <0.24 6 <0.23	<0.33 <0.35 <0.40 <0.50 <0.60 <0.70
Numerical Aperture (NA)	0.200 $\pm$ 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 1300-1320 nm <0.11	[ ( $\lambda$ 0 1190) ps / (nm <sup>2</sup> · km)] [ ps / (nm <sup>2</sup> · km)]
● <b>Backscatter characteristics</b>	1300 nm 0.200 $\pm$ 0.015	
Step (Mean of bidirectional measurement)	<0.10	[dB]
Irregularities over fibre length and point discontinuity	<0.10	[dB]
Difference backscatter coefficient (bidirectional measurement)	<0.08	[dB / km]



# 50μm, OM3 FIBER

DESCRIPTION	VALUE	UNIT
● Geometrical characteristics		
Core diameter	50±2.5	[μ m]
Core non-circularity	<6.0	[%]
Cladding diameter	125.0±1.0	[μ m]
Cladding non-circularity	<1.0	[%]
Coating diameter	242±7	[μ m]
Coating / cladding concentricity error	<12.0	[μ m]
Coating non-circularity	<6.0	[%]
Core / cladding concentricity error	850 nm, 1300 nm	<1.5 [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	<0.20	[dB / km]
Damp heat dependence	85°C, 85% R.H., 30 days	
Induced attenuation	<0.20	[dB / km]
Watersoak dependence	20°C for 30 days	
Induced attenuation	<0.20	[dB / km]
● Mechanical characteristics	off line	
Proof test	>9.0 >1.0 >100	[N] [%] [kpsi]
Bending Dependence	850 nm, 1300 nm	
Induced Attenuation	100 turns, 75 mm diameter	<0.50 [dB]
Coating strip force	Typical average force	1.7 [N]
	Peak force	>1.3 <8.9 [N]
Dynamic stress corrosion susceptibility parameter (n <sup>d</sup> , Typical)		>27