

Alcatel 6932

62.5/125 Multimode Fiber

OPTICAL SPECIFICATIONS

Typical Spectral Attenuation and Bandwidth (modal dispersion)

Attenuation 850/1300nm	Bandwidth 850/1300nm
2.8/0.8 dB/km	250/800 MHz.km
2.9/0.8 dB/km	200/500 MHz.km
3.5/1.5 dB/km	160/200 MHz.km

Point Discontinuity

@850nm/1300nm ≤ 0.2 dB

Bending Sensitivity Attenuation

The maximum attenuation with bending does not exceed the following values @ 850nm and 1300nm:
100 turns on 75mm diameter ≤ 0.5 dB

Chromatic Dispersion

Zero Dispersion Wavelength (λ_0) 1320 to 1365nm
Zero Dispersion Slope (S₀):
for 1320nm < λ_0 < 1348nm is typically ≤ 0.11 ps/nm²·km
for 1348nm < λ_0 < 1365nm is typically $\leq 0.001 \cdot (1458 - \lambda_0)$ ps/nm²·km

Numerical Aperture (NA)

Numerical Aperture 0.275 ± 0.015

Effective Group Index of Refraction

@ 850nm 1.497
@ 1300nm 1.492

Fibers with different characteristics and lengths available upon request

References for products: IEC pub 60793/2 EN 188000-206

Alcatel reserves the right to change specifications without prior notice.

GENERAL SPECIFICATIONS

Core Diameter	62.5 ± 3µm
Core Non-Circularity	≤ 6%
Cladding Diameter	125 ± 2µm
Cladding Non-Circularity	≤ 2%
Core/Cladding Concentricity Error	≤ 3µm
Coating Diameter	245 ± 15µm
Coating Non-Circularity	≤ 6%
Coating/Cladding Concentricity Error	≤ 12.5µm

ENVIRONMENTAL SPECIFICATIONS

Induced Attenuation Change @ 850 & 1300nm

Operating Temperature -60 to +85°C	≤ 0.2 dB/km
Temperature/Humidity Cycling -10/+70°C RH 95%	≤ 0.2 dB/km

MECHANICAL SPECIFICATIONS

Proof-test

The entire length is subjected to a tensile proof-test > 100 kpsi.

Other Values

Stress corrosion factor (n)	≥ 20
Strippability (50-500mm/minute)	> 1N

Delivery Lengths

1.1, 2.2, 3.3, 4.4, 5.5, 6.6, 7.7, 8.8 km

References for measurements

EC Pub 60793 1-1, 1-2, 1-3, 1-4, 1-B6

EIA-TIA 455-31C/46A/58A/59/168A/173/176/177A/204

For additional information visit Alcatel online or call your nearest Optical Fiber Sales Representative

www.alcatel.com/opticalfiber

Brazil	+55 11 3068 9993
France	+33 1 55 51 51 36
France (HQ)	+33 1 39 19 12 00
Germany	+49 2166 27 2164
India	+91 11 335 9650
Spain	+34 942 247 111
UK	+44 1633 413 600
North America	+1 828 459 9787 800 879 9862

Alcatel 6900 Singlemode Fiber

OPTICAL SPECIFICATIONS

Attenuation (cabled)	
Attenuation @ 1310nm	≤ 0.35 dB/km
Attenuation @ 1550nm	≤ 0.25 dB/km
Attenuation at 1383nm	≤ 1.5 dB/km
Attenuation Uniformity (cabled)	
No point discontinuity greater than 0.1 dB at 1310nm and 1550nm.	
Wavelength vs. Attenuation	
Maximum attenuation change over the window.	
Wavelength (nm)	Attenuation (dB/km)
1285-1310	≤ 0.035
1310-1330	≤ 0.03
1525-1550	≤ 0.03
1575-1550	≤ 0.03
Attenuation with Bending	
100 turns, 60mm diameter @ 1550 & 1620nm:	≤ 0.05 dB
1 turn, 32mm diameter @ 1550 & 1620nm:	≤ 0.5 dB
Wavelength	
Cutoff Wavelength (cabled)	≤ 1260nm
Zero Dispersion Wavelength	1310±10nm
Dispersion Slope	
Zero Dispersion Slope	< 0.092 ps/nm ² *km
PMD (cabled)	
PMD Quadrature Average:	≤ 0.1ps/√km

DIMENSIONAL SPECIFICATIONS

Mode Field Diameter @1310nm:	9.0±0.5µm
Mode Field Diameter @1550nm:	10.2±1.0µm
Fiber Outside Diameter:	125.0±1.0µm
Core/Cladding Offset:	≤ 0.6µm
Fiber Non-Circularity:	≤ 1.0%
Colored Coating Outside Diameter:	242±7µm
Colored Coating/Clad Concentricity Error:	≤ 12µm
Fiber Curl (radius):	> 4 meters

Alcatel's Singlemode Fiber is fully ITU G.652, IEC 60793-1 and Telcordia GR-20-CORE compliant.

Cable specifications apply to Alcatel manufactured cables and are tested or characterized in compliance to international standards.

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MECHANICAL SPECIFICATIONS

Proof Test of AFC™ ColorLock™ Coated

The entire length is subjected to a tensile proof stress >100 kpsi (0.7 GN/m²); 1% strain equivalent

Tensile Strength

Dynamic Tensile Strength (0.5 meter gauge length):

Aged* & Unaged median ≥ 550 kpsi (3.8GN/m²)

Dynamic and Static Fatigue

Dynamic Fatigue, Tensile:

N_d ≥ 20 unaged and aged*

Dynamic Fatigue, 2 Point Bend:

N_d ≥ 20 unaged and aged*

Static Fatigue:

N_s ≥ 20 aged at 85°C, 85% RH

Coating Performance

Coating Strip Force: 2.0lbf (8.9N) max, 0.3 lbf (1.3N) min.
23°C, 0°C, and 45°C

Aged: 30 days at 85°C and 85% relative humidity

14 days water immersion at 23°C

Wasp spray exposure (Telcordia)

Aged: 30 days at 85°C water

No delimitation

ENVIRONMENTAL SPECIFICATIONS

Induced Attenuation@1550nm	(dB/km)
Temperature Cycling Performance (-60°C to 85°C):	≤ 0.05
Temperature Humidity Cycling (-10°C to 85°C, 4-98%RH):	≤ 0.05
Water Immersion (23°C):	≤ 0.05
Heat Aging (85°C):	≤ 0.05

TYPICAL CHARACTERIZATION VALUES

Nominal Zero Dispersion Wavelength:	1310nm
Nominal Zero Dispersion Slope:	0.086 ps/nm ² *km
Effective Group Index @ 1310nm:	1.4640
@ 1550nm:	1.4645
Backscatter Coefficient @ 1310nm:	-76.7 dB
Backscatter Coefficient @ 1550nm:	-81.7 dB
Typical Core Diameter:	8.8µm
Dynamic Tensile Strength (*Aged):	median 750 kpsi (5.26GN/m ²)
(0.5m gauge length)	
Dynamic Fatigue (*Aged):	N _d =22
Static Fatigue:	N _s ≥ 25 aged @ 85°C, 85% RH
Dispersion @1285-1330nm:	≤ 2.7 ps/nm*km
Dispersion @1550nm:	≤ 17 ps/nm*km

*Aged for 30 days at 85°C, 85% relative humidity

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