

The tables below describe all the technical specifications for barpa fiber. Complies the standards ISO11801 and EN50173-1. If you have any special request for fiber please contact our team, we are glad to find a solution for your needs.

FOR MULTIMODE:

Optical Performance	Conditions	OM2	OM3	OM4	OM5
Attenuation (dB/km)	850nm	≤ 2,7	≤ 3,0	≤ 3,0	≤ 3,0
	953nm	-	-	-	≤ 2,3
	1300nm	≤ 0,8	≤ 1,0	≤ 1,0	≤ 1,0
Bandwidth (MHz.km)	850nm	≥ 500	≥ 1500	≥ 3500	≥ 3500
	953nm	-	-	-	≥ 1850
	1300nm	≥ 500	≥ 500	≥ 500	≥ 500
Effective Modal Bandwidth (MHz.km)	850nm	-	≥ 2000	≥ 4700	≥ 4700
	953nm	-	-	-	≥ 2470
Numerical Aperture			0,200 ± 0,015		
Effective Group Index of Refraction	850nm		1,482		
	1300nm		1,477		

Geometrical Data	OM2	OM3	OM4	OM5
Core Diameter (µm)		50,0 ± 2,5		
Core Non-Circularity (%)		≤ 5,0		
Core / Cladding Concentricity error (µm)	≤ 1,0	≤ 1,0	≤ 1,0	≤ 1,0
Cladding Diameter (µm)		125,0 ± 1,0		
Cladding Non-Circularity (%)		≤ 0,7		
Overall coating Diameter (µm)		250 ± 15		
Coating/Clad concentricity error (µm)		≤ 10		

Mechanical Characteristics	OM2	OM3	OM4	OM5
Proof Stress Level (GPa)		≥ 0,7 (1%)		
Coating Strip Force (typical) (N)		1,3 ≤ F _{peak.strip} ≤ 8,9		

Transmission Distance	OM3	OM4	OM5
10GBASE-SR	300m	550m*	550m*
40GBASE-SR4	140m*	190m*	190m*
100GBASE-SR10	140m*	-	-
25GBASE-SR	-	100m	100m
100GBASE-SR4	70m	100m	100m
400GBASE-SR4.2	-	100m	150m
40G-BiDi	-	150m	200m
100G-BiDi	-	100m	150m
40G SWDM4	-	350m	440m
100G SWDM4	-	100m	150m

*Indicated link distances require total connector loss ≤ 1.0 dB, and VCSEL spectral bandwidth of ≤ 0.45 nm

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FOR SINGLEMODE:

Optical Performance	Conditions	G652D	G657A2	G657B3
Attenuation (dB/km)	1310nm	≤ 0,39	≤ 0,38	≤ 0,36
	1383nm	≤ 0,39	≤ 0,38	≤ 0,36
	1550nm	≤ 0,25	≤ 0,23	≤ 0,22
	1625nm	≤ 0,25	≤ 0,25	≤ 0,25
Dispersion Coefficient (ps/km.nm)	1285 para 1330nm	≤ 3	≤ 3,7	≤ 3,7
	1550nm	≤ 18	≤ 18,5	≤ 18,5
	1625nm	≤ 22	≤ 23	≤ 23
Mode Field Diameter (μm)	1310nm	9,00 ± 0,40	8,80 ± 0,40	8,80 ± 0,40
	1550nm	10,10 ± 0,50	9,80 ± 0,50	9,80 ± 0,50
Effective Group Index of Refraction	1310nm	1,467	1,467	1,467
	1550nm	1,468	1,467	1,467
	1625nm	1,468	1,468	1,468
Zero Dispersion Wavelength λ _o (nm)		1300 < λ _o < 1322	1300 < λ _o < 1324	1300 < λ _o < 1324
Zero Dispersion Slope, S _o (ps/nm ² .km)		≤ 0,090	≤ 0,092	≤ 0,092
Cable Cutoff Wavelength λ _{cc} (nm)			≤ 1260	

Geometrical Data	G652D	G657A2	G657B3
Cladding Diameter (μm)		125 ± 0,7	
Cladding Npn-Circularity (%)		≤ 0,70	
Coating Diameter (μm)		242 ± 7	
Coating / Cladding Concentricity error (μm)		≤ 12,0	
Coating Non-Circularity (%)	≤ 5,0	≤ 7,0	≤ 6,0
Core / Cladding Concentricity error (μm)		≤ 0,5	

Mechanical Characteristics	G652D	G657A2	G657B3
Proof Test (GPa)		≥ 0,7	
Strip Force (N)		1,2 ≤ F _{peak.strip} ≤ 8,9	
Dynamic Fatigue	≥ 20	≥ 20	≥ 27

MACROBEND LOSS FOR SINGLEMODE:

• G652D

	Diameter of mandrel	Turns	Wavelength	Inducted Attenuation (dB)
Macrobend Loss	φ25mm	100 turns	1310nm e 1550nm	≤ 0,05
	φ30mm	100 turns	1625nm	≤ 0,05

• G657A2

	Diameter of mandrel	Turns	Wavelength	Inducted Attenuation (dB)
Macrobend Loss	φ15mm	10 turns	1550nm	≤ 0,03
	φ15mm	10 turns	1625nm	≤ 0,1
	φ10mm	1 turn	1550nm	≤ 0,1
	φ10mm	1 turn	1625nm	≤ 0,2
	φ7.5mm	1 turn	1550nm	≤ 0,5
	φ7.5mm	1 turn	1625nm	≤ 1,0

• G657B3

	Diameter of mandrel	Turns	Wavelength	Inducted Attenuation (dB)
Macrobend Loss	φ15mm	10 turns	1550nm	≤ 0,03
	φ15mm	10 turns	1625nm	≤ 0,10
	φ10mm	1 turn	1550nm	≤ 0,03
	φ10mm	1 turn	1625nm	≤ 0,10
	φ7.5mm	1 turn	1550nm	≤ 0,08
	φ7.5mm	1 turn	1625nm	≤ 0,20
	φ5mm	1 turn	1550nm	≤ 0,10
	φ5mm	1 turn	1625nm	≤ 0,30