



This enhanced low macro bending sensitive, low water peak fibre, gives unsurpassed bending performance. The preferred use of the G.657A and B fibre is in office installations, for patch cords, interconnection cables and for Fibre-to-the-Home networks. The G.657A and B fibre offers reduced bending radii for many cables types. It fulfils the new ITU G.657.A1, A2 and B2 specification, as well as G.652.D.

Standards and norm

This fiber fulfils the requirements of:	<ul style="list-style-type: none"> IEC 60793-2-50 Category B.1.3 EN 60793-2-50: Class B1.3 ITU Recommendation G.657.A and B ITU Recommendation G.652.D <p>The older ITU designations A, B and C are also fulfilled.</p>
When cabled, the fibers fulfil the requirements for use in a number of cabling systems, among them is:	<ul style="list-style-type: none"> EN 50 173-1: 2011, cat. OS1 + OS2 ISO/IEC 24702: 2006, cat. OS1 + OS2 ISO/IEC 11801: 2002, cat. OS1 + OS2 IEEE 802.3 - 2002 incl. 802.3 Section Four
Testing methods are in accordance with the following standards:	<ul style="list-style-type: none"> IEC 60793-1-XX: 2002 EN 60793-1-XX: 2002

Material

Criteria	Value
Core	The core is germanium doped
Coating	The fiber coating is dual layer UV curable acrylate.

Optical properties

Property	Unit	Value
Attenuation (of cable with fibers)	[dB/km]	In the range 1310 - 1625 nm: ≤ 0.40 At 1550 nm: ≤ 0.25
In homogeneity of OTDR trace for any two 1000 metre fiber lengths	[dB/km]	Max.: 0.1
Group index of refraction	–	At 1310 nm: 1.467 At 1550 nm: 1.467 At 1625 nm: 1.468

Dimensional and mechanical properties

Property	Unit	Value	Standard
Cladding diameter	[µm]	125.0 ± 0.7	IEC/EN 60793-1-20
Cladding non-circularity	[%]	≤ 0.7	IEC/EN 60793-1-20
Core (MFD) non-circularity	[%]	≤ 5	IEC/EN 60793-1-20
Core (MDF) -cladding concentricity error	[%]	≤ 0.5	IEC/EN 60793-1-20
Primary coating diameter - uncoloured	[µm]	242 ± 7	IEC/EN 60793-1-21
Primary coating diameter - coloured	[µm]	250 ± 15	IEC/EN 60793-1-21
Primary coating non-circularity	[%]	≤ 5	IEC/EN 60793-1-21

Property	Unit	Value	Standard
Primary coating-cladding concentricity error	[μm]	≤ 10	IEC/EN 60793-1-21
Proof stress level	[GPa]	≥ 0.7 ($\approx 1\%$)	IEC/EN 60793-1-30
Strip force (peak)	[N]	$1.0 \leq F_{\text{peak.strip}} \leq 8.9$	IEC/EN 60793-1-32
Chromatic dispersion coefficient:			IEC/EN 60793-1-42
In the interval 1285 nm – 1330 nm	[ps/km \times nm]	$\leq 3 $	
At 1550 nm	[ps/km \times nm]	≤ 18.0	
At 1625nm	[ps/km \times nm]	≤ 22.0	
Zero dispersion wavelength, λ_0	[nm]	1312 ± 12	
Zero dispersion slope	[ps/(nm 2 \times km)]	≤ 0.092	
Cut-off wavelength λ_c	[nm]	≤ 1260	IEC/EN 60793-1-44
Mode field diameter at 1310 nm	[μm]	8.9 ± 0.4	IEC/EN 60793-1-45
Mode field diameter at 1550 nm	[μm]	9.9 ± 0.5	
Macrobending loss at 1550 nm			IEC/EN 60793-1-47
10 turns on a radius = 15 mm mandrel	[dB]	≤ 0.03	
1 turn on a radius = 10 mm mandrel	[dB]	≤ 0.10	
1 turn on a radius = 7.5 mm mandrel	[dB]	≤ 0.50	
Polarisation mode dispersion (PMD) coefficient, cabled	[ps/ $\sqrt{\text{km}}$]	≤ 0.1	IEC/EN 60793-1-48
PMD $_{\text{Link}}$ Design Value	[ps/ $\sqrt{\text{km}}$]	≤ 0.06	IEC/EN 60794-3