



This enhanced Singlemode fiber provides improved performance across the entire 1260 nm to 1625 nm wavelength spectrum due to its low attenuation in 1383 nm the water-peak region. The fiber design is matched cladding.

## Standards and norm

This fiber fulfils the requirements of:

- IEC 60793-2-50 Category B.1.3
  - EN 60793-2-50: Class B1.3
  - ITU Recommendation G.652.D
  - ITU Recommendation G.657.A1
- The older ITU designations A, B and C are also fulfilled.

When cabled, the fibers fulfil the requirements for use in a number of cabling systems, among them is:

- 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:

- 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: $\leq 0.39$ At 1550 nm: $\leq 0.25$
In homogeneity of OTDR trace for any two 1000 metre fiber lengths	[dB/km]	Max.: 0.1
Group index of refraction	–	At 1310 / 1550 / 1625 nm: 1.467

## Dimensional and mechanical properties

Property	Unit	Value	Standard
Cladding diameter	[ $\mu\text{m}$ ]	$125.0 \pm 0.7$	IEC/EN 60793-1-20
Cladding non-circularity	[%]	$\leq 0.7$	IEC/EN 60793-1-20
Core (MFD) non-circularity	[%]	$\leq 6$	IEC/EN 60793-1-20
Core (MDF) -cladding concentricity error	[ $\mu\text{m}$ ]	$\leq 0.5$	IEC/EN 60793-1-20
Primary coating diameter - uncoloured	[ $\mu\text{m}$ ]	$242 \pm 7$	IEC/EN 60793-1-21
Primary coating diameter - coloured	[ $\mu\text{m}$ ]	$250 \pm 15$	IEC/EN 60793-1-21
Primary coating non-circularity	[%]	$\leq 5$	IEC/EN 60793-1-21
Primary coating-cladding concentricity error	[ $\mu\text{m}$ ]	$\leq 12.0$	IEC/EN 60793-1-21
Proof stress level	[GPa]	$\geq 0.7$ ( $\approx 1\%$ )	IEC/EN 60793-1-30

Property	Unit	Value	Standard
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 × nm]	$\leq  3 $	
At 1550 nm	[ps/km × nm]	$\leq 18.0$	
At 1625nm	[ps/km × nm]	$\leq 22.0$	
Zero dispersion wavelength, $\lambda_0$	[nm]	$1312 \pm 10$	
Zero dispersion slope	[ps/(nm <sup>2</sup> × km)]	$\leq 0.090$	
Cut-off wavelength $\lambda_c$	[nm]	High limit: 1330	IEC/EN 60793-1-44
	[nm]	Low limit: 1150	
Cut-off wavelength $\lambda_{cc}$	[nm]	$\leq 1260$	
Mode field diameter at 1310 nm	[ $\mu\text{m}$ ]	$9.2 \pm 0.4$	IEC/EN 60793-1-45
Mode field diameter at 1550 nm	[ $\mu\text{m}$ ]	$10.3 \pm 0.5$	
Macrobending loss at 1550 nm, 100 turns on a $\varnothing$ 60 mandrel	[dB]	$\leq 0.05$	IEC/EN 60793-1-47
Polarisation mode dispersion (PMD) coefficient, cabled	[ps/ $\sqrt{\text{km}}$ ]	$\leq 0.5$	IEC/EN 60793-1-48
PMD <sub>Q</sub> Link Design Value	[ps/ $\sqrt{\text{km}}$ ]	$\leq 0.2$	IEC/EN 60794-3