

MaxCap-OM3 multimode fibre

Properties for cabled MaxCap-OM3 fibre

General and application

This cabled fibre is a graded-index multimode fibre optimised for 10 Gb/s transmission speeds. It has a 50 µm core diameter and a 125 µm cladding diameter. The fibre is designed for use at 850 nm, but can also be used at 1300 nm. The fibre is compliant with all relevant network standards. This fibre was formerly named MaxCap 300

Standards and Norms

IEC 60793-2-10: type A1a.2	EN 50 173:2002 category OM3
EN 60793-2-10: type A1a.2	ISO/IEC 11801:2002 category OM3
TIA/EIA-492 AAAC	IEEE 802.3 - 2002 incl. amendment 802.3ae - 2002.

Attenuation

IEC 60793-1-40

Maximum value of cable attenuation at 850 nm	≤ 3.0 dB/km
Maximum value of cable attenuation at 1300 nm	≤ 1.0 dB/km
Attenuation limit according to IEC 60793-2-10, 850 nm	≤ 2.5 dB/km
Attenuation limit according to IEC 60793-2-10, 1300 nm	≤ 0.8 dB/km
Inhomogeneity of OTDR trace for any two 1000 metre fibre lengths	Max. 0.1 dB/km

Bandwidth

IEC 60793-1-41

Overfilled (OFL) modal bandwidth at 850 nm	≥ 1500 MHz • km
Overfilled (OFL) modal bandwidth at 1300 nm	≥ 500 MHz • km
Effective Modal Bandwidth (EMB) at 850 nm (<i>assured by means of differential mode delay (DMD) measurement as specified in IEC 60793-1-49</i>)	≥ 2000 MHz • km

Group index of refraction

IEC 60793-1-22

Group index of refraction at 850 nm	1.482
Group index of refraction at 1300 nm	1.477

Other properties

IEC 60793-1-xx

Attribute	Measurement method	Units	Limits
Core diameter	IEC/EN 60793-1-20	µm	50 ± 2.5
Cladding diameter	IEC/EN 60793-1-20	µm	125.0 ± 1.0
Cladding non-circularity	IEC/EN 60793-1-20	%	≤ 0.7
Core non-circularity	IEC/EN 60793-1-20	%	≤ 5
Core-cladding concentricity error	IEC/EN 60793-1-20	µm	≤ 1.5
Primary coating diameter – uncoloured	IEC/EN 60793-1-21	µm	242 ± 7
Primary coating diameter - coloured	IEC/EN 60793-1-21	µm	250 ± 15
Primary coating non-circularity	IEC/EN 60793-1-21	%	≤ 5
Primary coating-cladding concentricity error	IEC/EN 60793-1-21	µm	≤ 10
Proof stress level	IEC/EN 60793-1-30	GPa	≥ 0.7 (≈ 1 %)
Typical average strip force	IEC/EN 60793-1-32	N	1.7
Strip force (peak)	IEC/EN 60793-1-32	N	1.3 ≤ F _{peak,strip} ≤ 8.9
Numerical aperture:	IEC/EN 60793-1-43	N	0.200 ± 0.015