

## Fiber properties - EMEA

### Introduction

This document provides technical data on the fibers used in Optical Fiber Cables produced in the EMEA region.

### Optical Characteristics

#### Characteristics Single-Mode – Matched-Cladded optical fibers according to ITU

EMEA P/N Coding, Position 5	Fibre-Type	Mode-Field /Cladding Diameter (um)	Wave-length (nm)	Dispersion (ps/(nm-km))	PMD <sup>A</sup> (ps/km)	Cable Cut-off Wave-length (nm)
7	9/125 G.655 C&D	8.4 ± 0.6 125 ± 0.7	1550 1625	≤ 4.5 ≤ 7.9	≤ 0.04	≤ 1260
8	9/125 G.652D & G.657A1 BI OS2	9.2 ± 0.4 125 ± 0.7	1310 1550 1625	≤ 3.5 ≤ 18	≤ 0.06	≤ 1260
A	9/125 G.657A1 BI	8.9 ± 0.4 125.0 ± 0.3	1310 1550 1625	≤ 3.5 ≤ 18	≤ 0.06	≤ 1260
F	9/125 G.657A2 BI	8.9 ± 0.4 124.8 ± 0.3	1310 1550 1625	≤ 3.5 ≤ 18	≤ 0.06	≤ 1260
I	9/125 G.657B3 BI	8.8 ± 0.4 125 ± 0.4	1310 1550 1625	≤ 3.5 ≤ 18	≤ 0.06	≤ 1260

Note A- Link design value

#### Characteristics Multi-Mode – Graded-Index optical fibers according to IEC 60793

EMEA P/N Coding, Position 5	Fibre-Type	Core/Cladding Diameter (um)	Wave-length (nm)	Band-width (MHz•km)	Ethernet Performance (m)				Num. Apert. (µm)
					1 GBE	10 GBE	40 Gbps WDM	100 Gbps WDM	
1	62.5/125 OM1	62.5 ± 2.5 125 ± 1	850 1300	≥ 200 ≥ 600	220 550	33 300			0.275 ± 0.015
2	50/125 OM2 BI	50 ± 2.5 125 ± 1	850 1300	≥ 500 ≥ 500	600 600	83 300			0.20 ± 0.015
D	50/125 OM3 BI	50 ± 2.5 125 ± 1	850 1300	≥ 1500 ≥ 500	1000 550	300 300			0.20 ± 0.015
E	50/125 OM4 BI	50 ± 2.5 125 ± 1	850 1300	≥ 3500 ≥ 500	1100 550	550 300			0.20 ± 0.015
C	50/125 OM5 BI	50 ± 2.5 125 ± 1	850 1300	≥ 3500 ≥ 500			440	150	0.20 ± 0.015

## Macro Bending Performance Fibers

Maximum attenuation increase for Bend Insensitive Single Mode fibers in dB depending on turns and radius

EMEA P/N Coding, Position 5	Fibre-Type	Wave-length (nm)	Turns 100 Radius 30 mm (dB)	Turns 10 Radius 15 mm (dB)	Turn 1 Radius 16 mm (dB)	Turn 1 Radius 10 mm (dB)	Turn 1 Radius 7.5 mm (dB)	Turn 1 Radius 5 mm (dB)
7	9/125 G.655 C & D	1550 1625	0.05 0.05		0.5 0.5			
8	9/125 G.652D & G.657A1 BI OS2	1550 1625	0.03 0.03	0.25 1.0		0.75 1.5		
A	9/125 G.657A1	1550 1625	0.03 0.03	0.25 1.0		0.75 1.5		
F	9/125 G.657A2 BI	1550 1625		0.03 0.1		0.1 0.2	0.5 1.0	
I	9/125 G.657B3 BI	1550 1625				0.03 0.1	0.08 0.25	0.15 0.45

Maximum attenuation increase for Bend Insensitive Multi Mode fibers in dB depending on turns and radius

EMEA P/N Coding, Position 5	Fibre-Type	Wave-length (nm)	Turns 100 Radius 37.5 mm (dB)	Turns 2 Radius 15 mm (dB)	Turns 2 Radius 7.5 mm (dB)
1	62.5/125 OM1	850 1300	0.5 0.5		
2	50/125 OM2 BI	850 1300	0.5 0.5	0.1 0.3	0.2 0.5
D	50/125 OM3 BI	850 1300	0.5 0.5	0.1 0.3	0.2 0.5
E	50/125 OM4 BI	850 1300	0.5 0.5	0.1 0.3	0.2 0.5
C	50/125 OM5 BI	850 1300	0.5 0.5	0.1 0.3	0.2 0.5