Ma-Fia.cz

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Fibre Units, G657 A1, A2, B2 and B3

Reduced Bend sensitivity singlemode

Product Description

Fibre Unit (FU) with up to twelve fibres set in an encapsulating layer providing excellent dimensional and thermal stability. An outer thermoplastic layer provides a high level of protection and excellent installation properties. The FU is designed for blowing into microducts and tube bundles.
The fibres are dry, not coated with gel, thus permitting fast and contamination –free connections.
The FU contain various single mode fibres meeting the ITU-T recommendation G.657 (A1, A2, B2 or B3)

Features

- Designed to be installed by blowing
- Low weight
- Small diameter
- All dielectric design
- Ultra low friction sheath
- Best in class blowing performance
- Low coil set

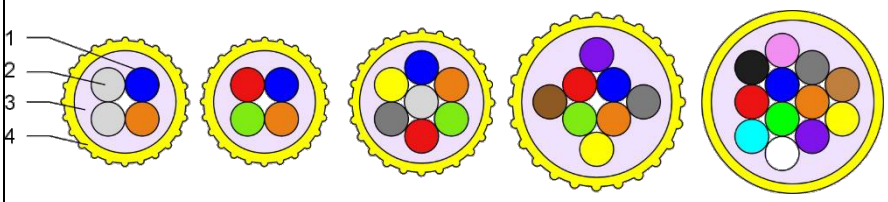
Identification

Sheath Colour:	Yellow with black print every 1 metre
Fibre colours:	blue, orange, green, red, grey, yellow, brown, violet, black, aqua, pink, white
Fillers:	natural (mechanical fibre)

Fibre Unit Properties

Construction
1: Optical Fibre
2: Filler (mechanical fibre)
3: Encapsulation
4: Low friction sheath

Fibre Unit FU



	2f	4f	6f	8f	12f
Outer diameter (nominal)	1.1 mm	1.1 mm	1.3 mm	1.5 mm	1.6 mm
Mass (nominal)	1.0 g/m	1.0 g/m	1.6 g/m	1.8 g/m	2.2 g/m
Min bend radius	50 mm	50 mm	65 mm	80 mm	80mm
Fibre type	Singlemode compliant with G657 (ITU-T) and MHT 2050				
Temperatures Storage Installation Lifetime	-20°C to +70°C -10°C to +50°C -20°C to +60°C				

Attenuation at 20ºC (dB/km)	0.40 dB/km max at 1310nm to 1625nm 0.30 dB/km max at 1550nm 0.34 dB/km max at 1383nm waterpeak
PMD_Q (M= 20, Q=0.01%)	≤0.2 ps / $(km)^{0.5}$

Properties for G657 Fibre (Individual stripped out fibres)

Parameter	Type A1		Type A2			Type B2			Type B3		
Radius	15	10	15	10	7.5	15	10	7.5	15	10	7.5
Number of turns	10	1	10	1	1	10	1	1	10	1	1
Max. at 1550 nm (dB)	0.25	0.75	0.03	0.1	0.5	0.03	0.1	0.5	0.03	0.08	0.15
Max at 1625 nm (dB)	1.0	1.5	0.1	0.2	1.0	0.1	0.2	1.0	0.1	0.25	0.45
Mode Field Diameter Nominal Value (at 1310nm)	8.6 to 9.5µm (0.4µm tolerance)					6.3 to 9.5µm 0.4µm tolerance)					

Mechanical Performance (all optical measurements at 1550 nm)

Test	Test Method	Test Parameters	Product Specification
Tensile Performance	EN 187000 A1/ 501 IEC60 794-12-E1	Load is 1km mass (1W) Duration 10 min	Fibre strain ≤0.4% at max. force Attenuation increment 0.05dB and fibre strain ≤0.05% after test.
Tensile Service Load		Maximum W/3 Duration of product lifetime	Given tensile performance above, product lifetime loading as per industry best practice.
Flexing	IEC 60794-1-2-E11A Change @ 1550nm	Diam 40mm x 3 turns 5 cycles at 20°C	Attenuation ≤0.05dB increment after test.
Crush I	IEC 60794-1-2-E3 Change @ 1550nm	100 mm plate, 100N, 1 min, 3 tests at different places	≤0.05dB increment after test.
Crush II	IEC 60794-1-2-E3 Change @ 1550nm	100 mm plate, 500N, 15 min, 3 tests at different places	No fibres broken.

Environmental Performance (all optical measurements at 1310nm and 1550nm)

Test	Test Method	Test Parameters	Product Specification
Water Soak	IEC 60794-5	1000 hours in water, 18 C/22 C	Test after temp cycle ≤0.07 dB/km change during and after test
Temperature Cycle	IEC 60794-1-2-F1 (3 cycles)	+20°C, –40°C, +60°C	Attenuation to be ≤0.5dB/km during test ≤0.1dB/km change during and after test
Damp Heat Cycle	IEC 60068-2-38 (10 cycles)	25°C, 65°C, 25°C, 65°C, 25°C, -10°C, 25°C	Attenuation to be ≤0.5dB/km during test ≤0.1dB/km change during and after test

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