

SINGLEMODE OPTICAL FIBRE

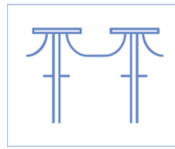
TYPE OF FIBER CHARACTERISTICS

Low-loss high performance fiber SM

Fiber used:

Corning® SMF-28® Ultra fiber

ITU-T G. 657 A1



OTDr ADSS

(round shape)

OPTICAL CHARACTERISTICS

Wavelength attenuation	
850 nm	-
1300 nm	-
1310 nm	≤ 0,32 dB/km
1550 nm	≤ 0,18 dB/km
Mode field diameter	8,6-9,5 μm (1310 nm)
Cutoff wavelength	
λ _c (OF – 2 m)	1190-1330 nm
λ _{cc} (OF or OC – 22 m)	≤ 1260 nm
Chromatic dispersion	
1285 – 1330 nm	
1550 nm	≤ 18 pc/(nm·km)
1530 – 1565 nm	-
1525 – 1575 nm	
1625 nm	≤ 22 pc/(nm·km)
Band width	
λ = 850 nm	-
λ = 1300 nm	-
Wavelength range with zero variance value	1300 – 1324 nm
Maximum slope of dispersion curve at the point of its zero value	≤ 0,092 pc/(nm ² ·km)
Polarization mode dispersion (PMD) 1550 nm	≤ 0,2 pc·km ^{1/2}
Numerical aperture (NA)	-

GEOMETRICAL CHARACTERISTICS

Non-circularity of core	-
Core diameter	-
Cladding diameter	125 ± 0,7 μm
Cladding Non-circularity	≤ 1,0 %
Excentricity	
- core / cladding	-
- mode field / cladding	≤ 0,5 μm
Coating diameter	245 ± 10 μm

MECHANICAL CHARACTERISTICS

Strength test	≥ 1,0 % (0,69 hPa)
Radius of own bend	≥ 4,0 m
Macrobend losses:	
- radius of mandrel, mm	10 15
- number of coils, pc.	10 1
- Increase in attenuation, dB at wavelength	
1550 nm	0,25 0,75
1625 nm	1,0 1,5

ENVIRONMENTAL IMPACTS

Dependence of attenuation in the temperature range (-60...+85) °C at wavelength	
850 nm	-
1300 nm	-
1310 nm	≤ 0,05 dB/km
1550 nm	≤ 0,05 dB/km

AREA OF APPLICATION

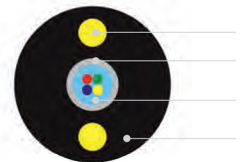
- Construction of broadband access networks
- it is designed and suitable for suspension and operation on supports of the air lines of communications, urban electric transport, overhead power transmission lines and overhead contact railway systems, where it may be exposed to wind load, ice load or combination of these loads

ADVANTAGES

- High performance
- Ease of preparation and installation

CABLE STRUCTURE

- 1 – Strength member – Fiber reinforced plastic (FRP)
- 2 – Peripheral strength member – glass yarns
- 3 – Central tubes gel-filled with optic fibers UV colored
- 4 – Outer sheath – polyethylene



International standard:
IEC60794; Telecordia gr-20; EN 50173; ISO/IEC 11801;
ANSI/TIA - 588-C.3

Quantity of optical fibres, pcs.	24
Cable diameter, mm	10,4 ± 0,3
Cable weight, kg/km	40
Maximum allowed tensile force (short-term load), kN	1,0
Minimum bending radius, mm	20 x cable diameter
Maximum allowed crushing force, N/mm	500
Operation temperature range, °C	- 40°C - +60°C
Storage temperature range, °C	- 20°C - +60°C
Installation temperature range, °C	- 10°C - +60°C