

SIMPLE MODE OPTICAL FIBRE

TYPE OF FIBER
CHARACTERISTICS

Low-loss high
performance fiber SM

Fiber used:
Corning® SMF-28® Ultra fiber

ITU-T G. 657 A1

OPTICAL CHARACTERISTICS

Wavelength attenuation	
850 nm	-
1300 nm	-
1310 nm	$\leq 0,32 \text{ dB/km}$
1550 nm	$\leq 0,18 \text{ dB/km}$

Mode field diameter	$8,6\text{--}9,5 \mu\text{m}$ (1310 nm)
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Cutoff wavelength λ_c (OF – 2 m) λ_{cc} (OF or OC – 22 m)	1190–1330 nm $\leq 1260 \text{ nm}$
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Chromatic dispersion 1285 – 1330 nm 1550 nm 1530 – 1565 nm	$\leq 18 \text{ pc/(nm}\cdot\text{km)}$
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1525 – 1575 nm 1625 nm	$\leq 22 \text{ pc/(nm}\cdot\text{km)}$
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Band width $\lambda = 850 \text{ nm}$ $\lambda = 1300 \text{ nm}$	-
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Wavelength range with zero variance value	1300 – 1324 nm
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Maximum slope of dispersion curve at the point of its zero value	$\leq 0,092 \text{ pc/(nm}^2\cdot\text{km)}$
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Polarization mode dispersion (PMD) 1550 nm	$\leq 0,2 \text{ pc}\cdot\text{km}^{1/2}$
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Numerical aperture (NA)	-
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GEOMETRICAL CHARACTERISTICS

Non-circularity of core	-
Core diameter	-
Cladding diameter	$125 \pm 0,7 \mu\text{m}$
Cladding Non-circularity	$\leq 1,0 \%$
Excentricity	
- core / cladding	-
- mode field / cladding	$\leq 0,5 \mu\text{m}$
Coating diameter	$245 \pm 10 \mu\text{m}$

MECHANICAL CHARACTERISTICS

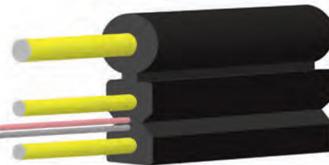
Strength test	$\geq 1,0 \%$ (0,69 hPa)
Radius of own bend	$\geq 4,0 \text{ m}$
Macrobend losses: - radius of mandrel, mm	10 15
- number of coils, pc.	10 1
- Increase in attenuation, dB at wavelength	
1550 nm	0,25 0,75
1625 nm	1,0 1,5

ENVIRONMENTAL IMPACTS

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

FTTH UDD ADSS

(remote and peripheral load-bearing elements – dielectric)

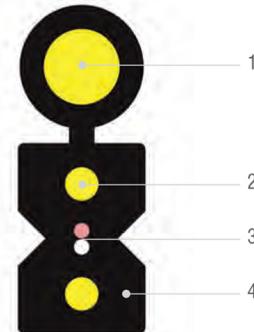


AREA OF APPLICATION

Drop cable is designed for last-one-mile in the FTTx network, enhancing the accessibility to the fiber and maximizes the installation workability

FEATURES

- 2 parallel peripheral strength members protecting the fibers ensure good performance of crush resistance
- Simple structure, small weight and high practicability
- Easy jacket removal without special tools
- Easily splice, simplify the installation and maintenance
- Environmental protection – Low smoke, zero halogen and flame retardant sheath
- Self-support structure



CABLE STRUCTURE

- 1 – Suspension member – Fiber reinforced plastic (FRP)
- 2 – Strength member – two FRP
- 3 – Singlemode optic fibers meet
- 4 – Outer sheath – LSZH

Material of protective coating : G.657 A1

singlemode optical fibre in accordance with recommendation of iTu-T g. 657 A1

OPERATING CHARACTERISTICS:

Quantity of optical fibres, pcs.	4
Cable diameter, mm	5,8 x 2,1
Cable weight, kg/km	25
Maximum allowed tensile force (short-term load), kN	0,7
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
Factory length, km	1,5

International standard:

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