

FREEDM® Loose Tube, Gel-Free Cable, Plenum

CORNING

Corning FREEDM® loose tube gel-free plenum cables are flame-retardant, indoor/outdoor, plenum-rated cables suitable for installation in interbuilding and intrabuilding backbones in aerial, duct and riser or plenum applications. The loose tube design offers mechanical ruggedness and environmental durability while the all-dielectric cable construction requires no grounding or bonding. The water-swellable yarn eliminates the need for gel-filling compound and allows more efficient and craft-friendly cable preparation. The 250 µm color-coded fibers allow quick and easy identification during installation. The flexible, flame-retardant outer jacket is UV-resistant and enables direct exposure to sunlight. Interlocking armor is available for special applications requiring additional mechanical durability. The plenum rating of this cable eliminates the need to transition splice when entering the building and minimizes routing restrictions once inside the building. Meeting the requirements of the National Electrical Code® (NEC®) Article 770, the cables are also OFNP and FT-6 listed.

Features and Benefits

Gel-free waterblocking technology

Craft-friendly cable preparation

Loose tube design

Stable performance and compatibility with all common fiber types

Color-coded fibers

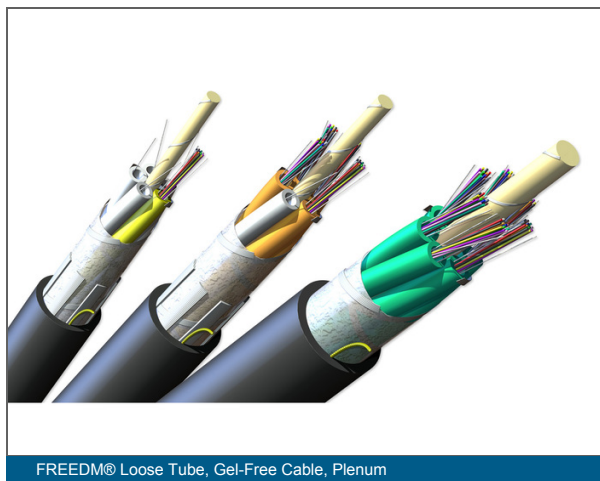
Quick and easy identification

All-dielectric construction

Requires no grounding or bonding

Common installations

Outdoor aerial and duct



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Standards

RoHS	Free of hazardous substances according to RoHS 2011/65/EU
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Specifications

General Specifications

Environment	Indoor/Outdoor
Product Type	Dielectric
Cable Type	Loose Tube
Flame Rating	Plenum (OFCP)

Temperature Range

Temperature Range, Storage	-40 °C - 70 °C (-40 °F - 158 °F)
Temperature Range, Installation	0 °C - 60 °C (32 °F - 140 °F)
Temperature Range, Operation	-40 °C - 70 °C (-40 °F - 158 °F)

Design Characteristics Cable

Fiber Count	Fibers per Tube	Number of Tube Positions	Number of Active Tubes	Buffer Tube Diameter
6	6	6	1	3 mm (0.12 in)
12 - 72	12	6	1 - 6	3 mm (0.12 in)

Mechanical Characteristics Cable

Fiber Count	Nominal Outer Diameter	Min. Bend Radius Installation	Min. Bend Radius Operation	Max. Tensile Strength, Short-Term	Max. Tensile Strength, Long-Term	Cable Weight
6 - 60	13.4 mm (0.53 in)	171 mm (6.73 in)	114 mm (4.49 in)	2700 N (606.98 lbf)	810 N (182.1 lbf)	207 kg/km (139.1 lb/1000 ft)

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Mechanical Characteristics Cable

Fiber Count	Nominal Outer Diameter	Min. Bend Radius Installation	Min. Bend Radius Operation	Max. Tensile Strength, Short-Term	Max. Tensile Strength, Long-Term	Cable Weight
72	13.8 mm (0.54 in)	177 mm (6.97 in)	118 mm (4.65 in)	2700 N (606.98 lbf)	810 N (182.1 lbf)	225 kg/km (151.19 lb/1000 ft)

Transmission Performance

Multimode

Fiber Category	OM1	OM2	OM3	OM4	OM4 Extended Distance
Fiber Code	K	T	T	T	T
Performance Option Code	30	31	80	90	91
Fiber Core Diameter	62.5 µm	50 µm	50 µm	50 µm	50 µm
Wavelengths	850 nm / 1300 nm	850 nm / 1300 nm	850 nm / 1300 nm	850 nm / 1300 nm	850 nm / 1300 nm
Maximum Attenuation	3.4 dB/km / 1.0 dB/km	3.0 dB/km / 1.0 dB/km	3.0 dB/km / 1.0 dB/km	3.0 dB/km / 1.0 dB/km	3.0 dB/km / 1.0 dB/km
Serial 1 Gigabit Ethernet	300 m / 550 m	750 m / 600 m	1000 m / 600 m	1000 m / 600 m	1100 m / 600 m
Serial 10 Gigabit Ethernet	33 m / -	150 m / -	300 m / -	550 m / -	600 m / -
Min. Overfilled Launch (OFL) Bandwidth	200 MHz*km / 500 MHz*km	700 MHz*km / 500 MHz*km	1500 MHz*km / - 500 MHz*km	3500 MHz*km / 500 MHz*km	
Minimum Effective Modal Bandwidth (EMB)	220 MHz*km / -	950 MHz*km / -	950 MHz*km / -	4700 MHz*km / -	5350 MHz*km / -

Transmission Performance

Single-mode

Fiber Name	Single-mode (OS2)
Performance Option Code	01
Fiber Category	OS2
Wavelengths	1310 nm / 1383 nm / 1550 nm
Fiber Code	E
Maximum Attenuation	0.4 dB/km / 0.4 dB/km / 0.3 dB/km

P
-
T
4
1

D
2
0

1 Select fiber count.

Standard offerings:

006 024 048 072
012 036 060

2 Select fiber code.

K = 62.5 µm multimode (OM1)
T = 50 µm multimode (OM2/OM3/OM4/OM4+)
E = Single-mode (OS2) SMF-28e+®
Z = Single-mode (OS2) SMF-28® Ultra fiber

3 Select cable type.

Loose tube cable
S = Fiber count ≤ 12
W = Fiber counts 24-72

4 Defines outer jacket.

P = Plenum

5 Defines fiber placement.

T = 12 fibers/buffer tube (standard)

6 Defines length markings.

4 = Markings in ft (standard)

7 Defines tensile strength.

1 = See specifications

8 Select performance option code.

30 = 62.5 µm multimode (OM1)
31 = 50 µm multimode (OM2)
80 = 50 µm multimode (OM3)
90 = 50 µm multimode (OM4)
91 = 50 µm multimode (OM4+)
01 = Single-mode (OS2)
(Max. attenuation 0.4/0.4/0.3 dB/km)

9 Defines cable type.

D = Gel-free cable

10 Defines special requirements.

20 = No special requirements



Corning Optical Communications LLC • 4200 Corning Place • Charlotte, NC • 28216 • United States
800-743-2675 • FAX: 828-325-5060 • International: +1-828-901-5000 • www.corning.com/opcomm

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