FREEDM® One Tight-Buffered Cables, Plenum

Features and Benefits

Waterblocking technology
Outside Plant (OSP) applications

Small diameter and bend radius
Easy installation in space-constrained areas

Color-coded fibers
Quick and easy identification

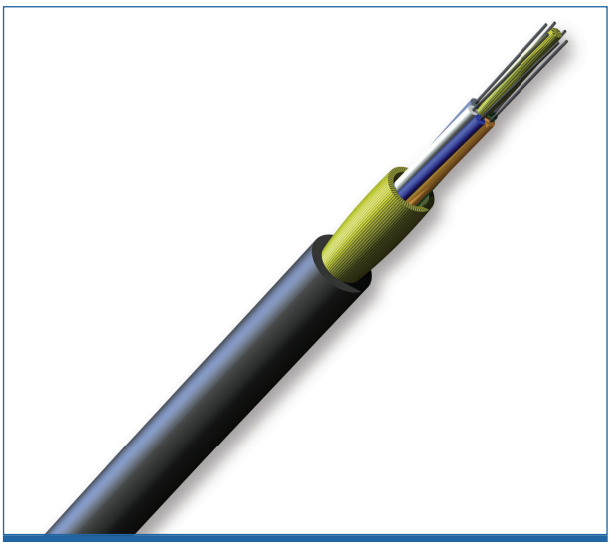
All-dielectric cable construction
Requires no grounding or bonding

UV-resistant, flame-retardant jacket
Rugged, durable and easy to strip

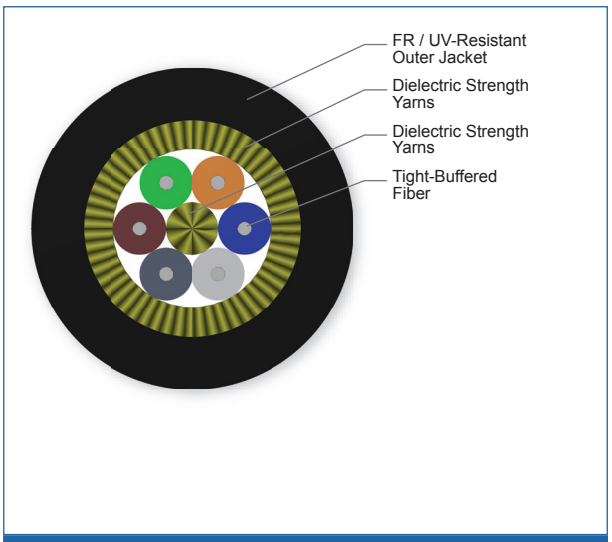
Corning FREEDM® One plenum cables are flame-retardant, UV-resistant, indoor/outdoor cables designed for aerial and duct applications with no need for a transition splice when entering the building. The tight-buffered construction facilitates easier termination for low-fiber-count applications in the local area network (LAN) and eliminates the need for fan-out kits. The design features TIA-598 color-coded 900 µm buffered fibers for easy identification, consistent stripping and direct termination. The small diameter and bend radius of the cable allow for easy installation in space-constrained areas while the innovative waterblocking technology is ideal for outside plant (OSP) applications. The all-dielectric cable construction requires no grounding or bonding, and the UV-resistant, flame-retardant jacket is rugged, durable and easy to strip.

Standards

Listings	National Electrical Code® (NEC®) OFNP, FT-6
Design and Test Criteria	NFPA 262 and CSA FT-6 (for plenum, riser and general building applications); ICEA S-104-696



FREEDM One Plenum Cables, 6 Fibers



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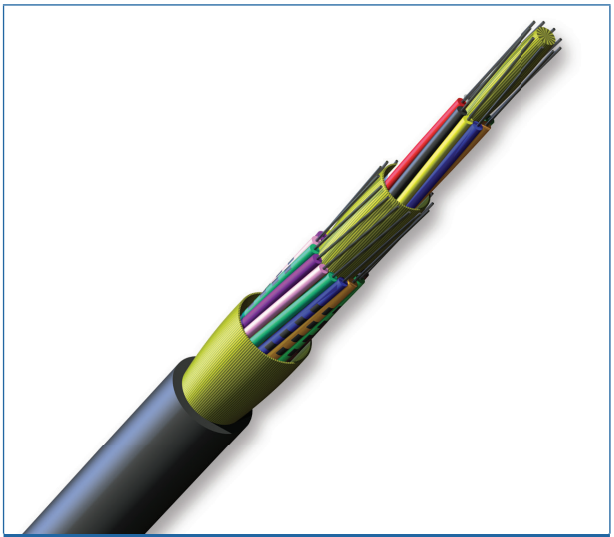
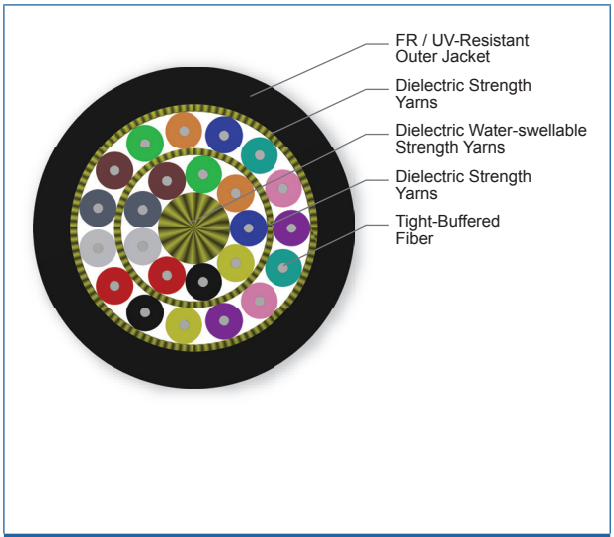


FREEDM One Plenum Cables, 24 Fibers



FREEDM One Plenum Cables, 24 Fibers

Specifications

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

** Note: Corning recommends storing cable in a proper temperature environment prior to installation to allow the cable temperature to meet installation temperature range specifications for best installation results.*

Mechanical Characteristics Cable						
Fiber Count	Nominal Outer Diameter	Max. Tensile Strength, Short-Term	Max. Tensile Strength, Long-Term	Min. Bend Radius Installation	Min. Bend Radius Operation	Weight
2	5.0 mm (0.20 in)	675 N (150 lbf)	200 N (45 lbf)	75 mm (3.0 in)	50 mm (2.0 in)	21.2 kg/km (14.2 lb/1000 ft)
4	5.3 mm (.21 in)	675 N (150 lbf)	200 N (45 lbf)	80 mm (3.1 in)	53 mm (2.1 in)	24.4 kg/km (16.4 lb/1000 ft)
6	5.3 mm (.21 in)	675 N (150 lbf)	200 N (45 lbf)	80 mm (3.1 in)	53 mm (2.1 in)	26.5 kg/km (17.8 lb/1000 ft)
12	6.3 mm (.25 in)	675 N (150 lbf)	200 N (45 lbf)	95 mm (3.7 in)	63 mm (2.5 in)	36.6 kg/km (24.6 lb/1000 ft)

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Mechanical Characteristics Cable						
Fiber Count	Nominal Outer Diameter	Max. Tensile Strength, Short-Term	Max. Tensile Strength, Long-Term	Min. Bend Radius Installation	Min. Bend Radius Operation	Weight
18	7.4 mm (.29 in)	1350 N (300 lbf)	400 N (90 lbf)	111 mm (4.4 in)	74 mm (2.9 in)	53.6 kg/km (36.0 lb/1000 ft)
24	8.0 mm (0.31 in)	1350 N (300 lbf)	400 N (90 lbf)	120 mm (4.7 in)	80 mm (3.1 in)	63.1 kg/km (42.4 lb/1000 ft)

Chemical Characteristics	
RoHS	Free of hazardous substances according to RoHS 2011/65/EU

Transmission Performance

Multimode					
Fiber Core Diameter (µm)	62.5	50	50	50	50
Fiber Category	OM1	OM2	OM3	OM4	OM4 Extended Distance
Fiber Code	K	T	T	T	T
Performance Option Code	30	31	80	90	91
Wavelengths (nm)	850/1300	850/1300	850/1300	850/1300	850/1300
Maximum Attenuation (dB/km)	3.4/1.0	2.8/1.0	2.8/1.0	2.8/1.0	2.8/1.0
Serial 1 Gigabit Ethernet (m)	300/550	750/600	1000/600	1000/600	1100/600
Serial 10 Gigabit Ethernet (m)	33/-	150/-	300/-	550/-	600/-
Min. Overfilled Launch (OFL) Bandwidth (MHz*km)	200/500	700/500	1500/500	3500/500	3500/500
Minimum Effective Modal Bandwidth (EMB) (MHz*km)	220/-	950/-	2000/-	4700/-	5350/-

** 50 µm multimode fiber (OM3/OM4) meets 0.75 ns optical skew when used in all Corning Plug & Play™/EDGE™ systems solutions.*
** 50 µm multimode fiber (OM4) T90 10 Gigabit Ethernet distance assumes 1.0 dB maximum total connector/splice loss.*
** 50 µm multimode fiber (OM4) T91 10 Gigabit Ethernet Distance assumes 0.7 dB maximum total connector/splice loss.*

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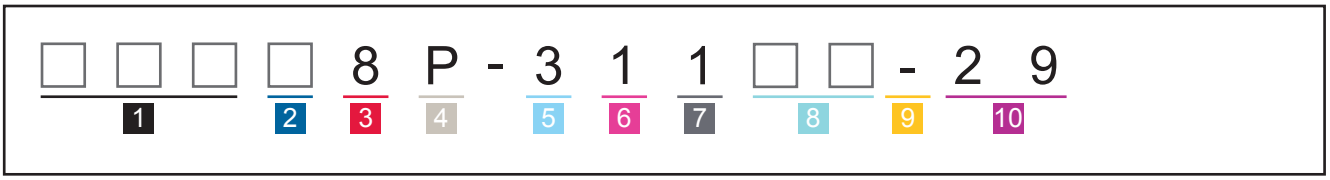
Single-mode		
Fiber Name	SMF-28e® fiber	SMF-28® Ultra fiber
Fiber Category	G.652.D	G.652.D/G.657.A1
Fiber Code	E	Z
Performance Option Code	31	31
Wavelengths (nm)	1310/1383/1550	1310/1383/1550
Maximum Attenuation (dB/km)	0.65/0.65/0.50	0.65/0.65/0.50

** Improved attenuation and bandwidth options available.*
** Bend-insensitive single-mode fibers available on request.*
** Contact a Corning Customer Care Representative for additional information.*

Ordering Information | *Note: Contact Customer Care at 1-800-743-2675 for other options.*



1 Select fiber count.
Standard offerings:
002 004 006 012 018 024

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 Defines cable type.
8 = FREEDM® One cable

4 Defines outer jacket.
P = Indoor/outdoor plenum

5 Defines fiber placement.
3 = Standard for FREEDM One plenum cable

6 Defines length markings.
1 = Markings in ft (standard) for single-layer design.

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+)
31 = Single-mode (OS2)
(Max. attenuation .65 / .65 / 0.5 dB/km)

9 Defines cable type.
- = FREEDM One cable

10 Defines special requirements.
29 = No special requirements

Note: This cable is available in 12 different jacket colors: blue, orange, green, brown, slate, white, red, black, yellow, violet, rose and aqua. Black is the standard jacket color using the part number configurator above. Contact Customer Care at 1-800-743-2675 to order other color options.

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Notes

RoHS COMPLIANT

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