

FREEDM® One Unitized, Tight-Buffered, Interlocking Armored Cables, Plenum



Features and Benefits

Flexible, interlocking armor design

Up to seven times crush protection compared to unarmored cables

Eliminates cable transition at building entrance

Reduces installation time and cost

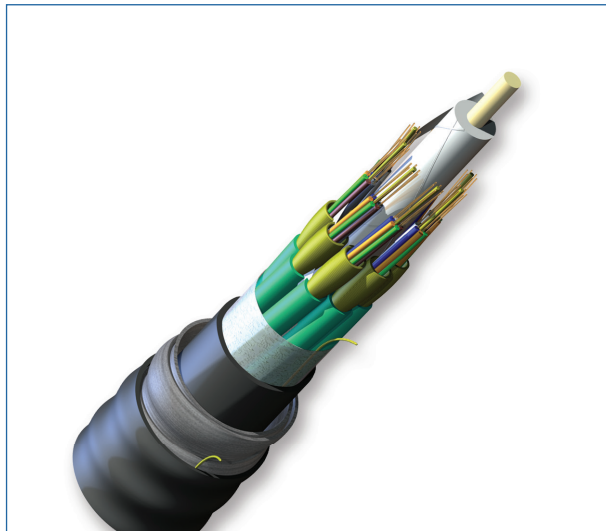
Tight-buffered design

Eliminates need for fan-out kits

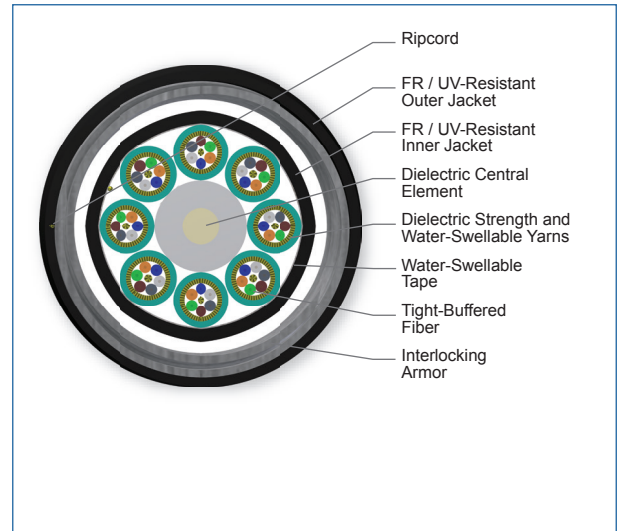
Corning FREEDM® One unitized interlocking armored plenum cables are standard FREEDM One unitized plenum cables inside a spirally wrapped aluminum interlocking armor for ruggedness and superior crush resistance. These cables meet the application requirements of the National Electrical Code® (NEC® Article 770) and are OFCP and FT-6 listed, as well as meeting ICEA S-104-696 test criteria. Available in 62.5 µm, standard 50 µm, laser-optimized 50 µm, single-mode and hybrid versions, the armored design allows easy, one-step installation of cable, with no inner duct required, reducing overall installation costs.

Standards

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



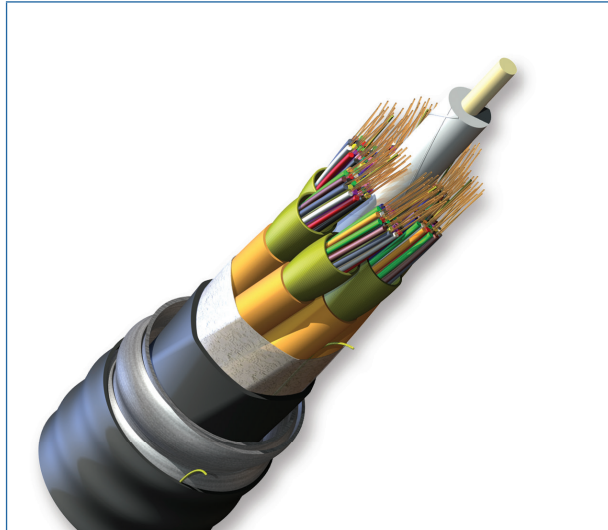
FREEDM One Unitized Interlocking Armored Plenum Cables, 48 Fibers



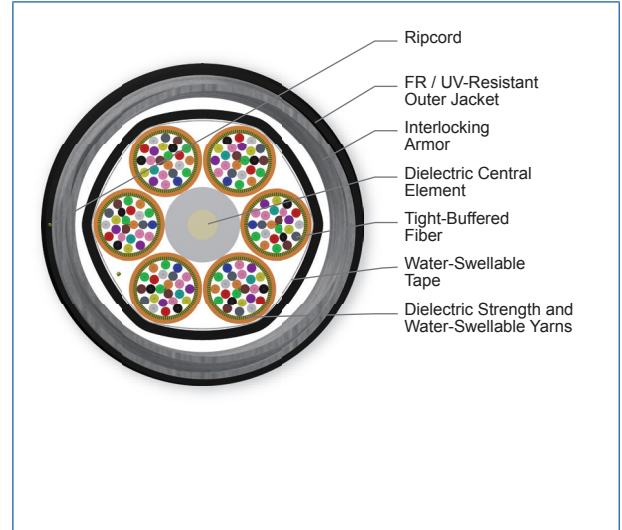
FREEDM One Unitized Interlocking Armored Plenum Cables, 48 Fibers

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FREEDM One Unitized Interlocking Armored Plenum Cables, 144 Fibers



FREEDM One Unitized Interlocking Armored Plenum Cables, 144 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 indoor/outdoor 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	
Max. Tensile Strength, Short-Term	2700 N (600 lbf)
Max. Tensile Strength, Long-Term	810 N (180 lbf)

Fiber Count	Nominal Outer Diameter	Min. Bend Radius Installation	Min. Bend Radius Operation	Weight	Number of Fibers per Subunit	Subunit Diameter
36	24.9 mm (0.98 in)	373.5 mm (14.7 in)	249 mm (9.8 in)	457.5 kg/km (307.4 lb/1000 ft)	6	4.40 mm (0.17 in)
48	27.4 mm (1.08 in)	411 mm (16.2 in)	274 mm (10.8 in)	576 kg/km (387.1 lb/1000 ft)	6	4.40 mm (0.17 in)
72	27.4 mm (1.08 in)	411 mm (16.2 in)	274 mm (10.8 in)	570.1 kg/km (383.1 lb/1000 ft)	12	5.55 mm (0.22 in)

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Fiber Count	Nominal Outer Diameter	Min. Bend Radius Installation	Min. Bend Radius Operation	Weight	Number of Fibers per Subunit	Subunit Diameter
96	26.2 mm (1.03 in)	393 mm (15.5 in)	262 mm (10.3 in)	515.3 kg/km (346.2 lb/1000 ft)	24	7.00 mm (0.27 in)
144	31.3 mm (1.23 in)	469.5 mm (18.5 in)	313 mm (12.3 in)	735.8 kg/km (494.4 lb/1000 ft)	24	7.00 mm (0.27 in)

Chemical Characteristics

RoHS	Free of hazardous substances according to RoHS 2011/65/EU
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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/OM4+) meets 0.75 ns optical skew when used in all Corning Plug and 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.

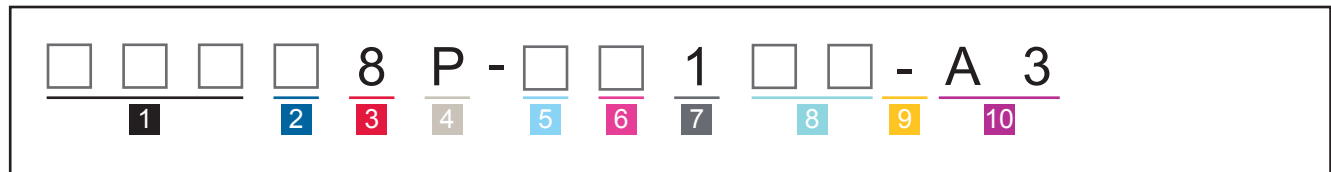
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Single-mode		
Fiber Name	SMF-28e® fiber	SMF-28® Ultra fiber
Fiber Category	G.652.D	G.652.D/G.657.A1
Fiber Code	E	Z
Performance Option Code	31	31
Wavelengths (nm)	1310/1383/1550	1310/1383/1550
Maximum Attenuation (dB/km)	0.65/0.65/0.50	0.65/0.65/0.50

* 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:
 036 048 072
 096 144

2 Select fiber code.
 K = 62.5 µm multimode (OM1)
 T = 50 µm multimode (OM2/OM3/OM4/OM4+)
 E = Single-mode (OS2) SMF-28e+® fiber
 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 Select fiber placement.
 6 = 6-fiber subunits for 36 and 48 fibers
 T = 12-fiber subunits for 72 fibers
 Y = 24-fiber subunits for 96 and 144 fibers

6 Select length markings.
 3 = Markings in ft for 72, 96 and 144 fibers
 1 = Markings in ft (standard) for 36 and 48 fibers

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.
 A3 = Aluminum interlocking armor with plenum-rated jacket

Note: This cable is available in 12 different jacket colors – blue, orange, green, brown, slate, white, red, black, yellow, violet, rose and aqua. The colored jacket allows for easy visual identification of the cables while still providing all of the required environmental protection of an indoor/outdoor cable jacket. Black is the standard jacket color using the part numbers shown here. Contact Customer Care at 1-800-743-2675 to order other color options.

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Notes



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