

FREEDM Ribbon, Gel-Filled Cable, Riser

CORNING

Corning FREEDM® ribbon riser cables are lightweight cables designed for indoor/outdoor installations such as campus backbones in aerial, duct and riser applications. A UV-resistant, flame-retardant jacket allows added flexibility in placing this cable outdoors, whether it is an aerial, duct or direct-buried application, or indoor general horizontal or riser applications.

The cable consists of a ribbon stack of 12-fiber ribbons within a gel-filled central buffer tube. With easily accessible individual 250 μm colored fibers, the ribbons have readily identifiable ribbon ID numbers and fiber colors. The precise fiber and ribbon geometries result in excellent mass splicing yields. Surrounding the tube are dielectric strength members that provide tensile strength and innovative waterblocking tapes that reduce cable weight and preparation time. This design is also compatible with standard ribbon cable procedures and hardware for easy field installation and reduced labor costs.

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.

Features and Benefits

Precise fiber and ribbon geometries

Excellent mass splicing yields

Waterblocked cable

Enables use of cables for outdoor applications

12-fiber ribbons with ribbon IDs

Easy identification

UV-resistant, flame-retardant jacket

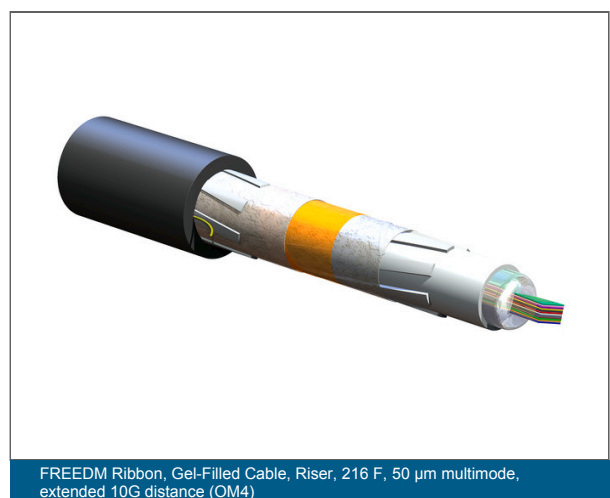
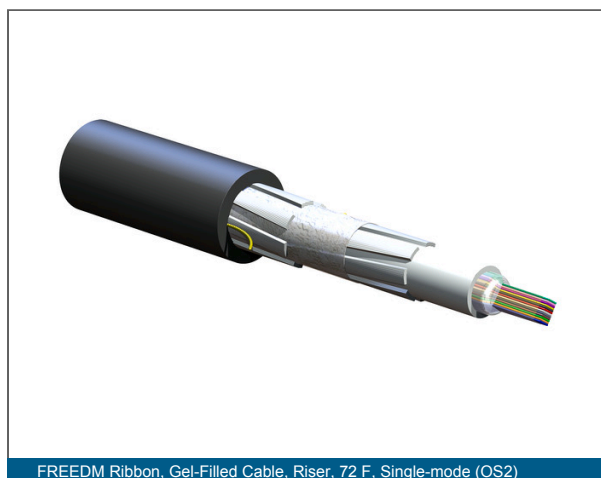
Rugged, durable and easy to strip

Available in preconnectorized assemblies

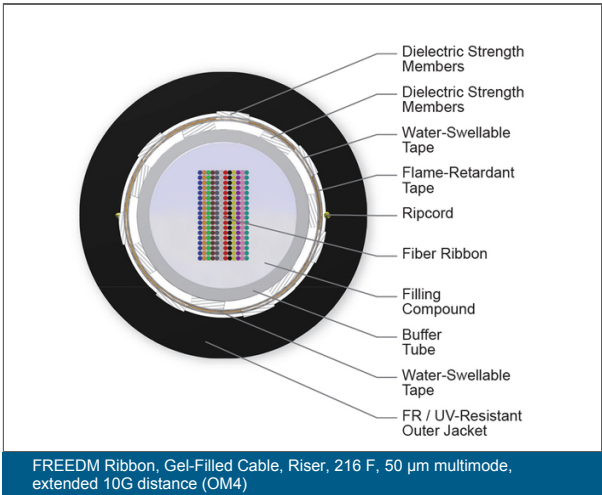
Easy field installation and reduced labor costs

Common installations

Outdoor aerial and duct



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

Specifications

General Specifications	
Environment	Indoor/Outdoor
Product Type	Dielectric
Cable Type	Ribbon
Flame Rating	Riser (OFNR)

Temperature Range	
Temperature Range, Storage	-40 °C - 70 °C (-40 °F - 158 °F)
Temperature Range, Installation	-10 °C - 60 °C (14 °F - 140 °F)
Temperature Range, Operation	-40 °C - 70 °C (-40 °F - 158 °F)

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Design Characteristics Cable

Fiber Count	Buffer Tube Diameter	Ribbons per Tube	Fibers per Ribbon
12	56 mm (2.2 in)	1	12
24	56 mm (2.2 in)	2	12
36	56 mm (2.2 in)	3	12
48	56 mm (2.2 in)	4	12
48	56 mm (2.2 in)	1	12
72	67 mm (2.64 in)	6	12
96	67 mm (2.64 in)	8	12
144	78 mm (3.07 in)	12	12
216	105 mm (4.13 in)	18	12

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
12 - 48	12 mm (0.47 in)	180 mm (7.09 in)	120 mm (4.72 in)	600 N (134.89 lbf)	600 N (134.89 lbf)	141 kg/km (94.75 lb/1000 ft)
72 - 96	12.7 mm (0.5 in)	191 mm (7.52 in)	127 mm (5 in)	600 N (134.89 lbf)	600 N (134.89 lbf)	157 kg/km (105.5 lb/1000 ft)
144	13.6 mm (0.54 in)	204 mm (8.03 in)	136 mm (5.35 in)	600 N (134.89 lbf)	600 N (134.89 lbf)	175 kg/km (117.59 lb/1000 ft)
216	17.6 mm (0.69 in)	264 mm (10.39 in)	176 mm (6.93 in)	600 N (134.89 lbf)	600 N (134.89 lbf)	286 kg/km (192.18 lb/1000 ft)

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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

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C
F
-

-

1
2
3
4
5
6
7
8
9
10

1 Select fiber count.

Standard offerings:

012 036 072 144
024 048 096 216

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.

C = FREEDM Ribbon cable

4 Defines outer jacket.

F = Indoor/outdoor riser

5 Defines fiber placement.

1 = 12 fibers/ribbon

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.

- = Gel-filled cable

10 Defines special manufacturing code.

20 = Standard



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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