

FREEDM® One Tight-Buffered Cable, Riser

CORNING

Corning FREEDM® One riser 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. 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

Waterblocking technology

OSP (outdoor) applications

Small diameter and bend radius

Easy installation in space-constrained areas

Color-coded fibers

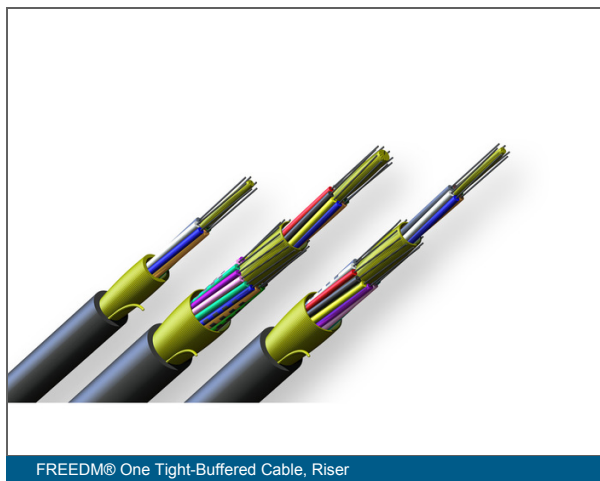
Quick and easy identification

All-dielectric construction

Requires no grounding or bonding

UV-resistant, flame-retardant jacket

Rugged, durable and easy to strip



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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	Tight-Buffered
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)

Design Characteristics Cable

Fiber Count
2 - 24

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
2	5.2 mm (0.2 in)	78 mm (3.07 in)	52 mm (2.05 in)	675 N (151.75 lbf)	200 N (44.96 lbf)	20.8 kg/km (13.98 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
2	5.2 mm (0.2 in)	78 mm (3.07 in)	52 mm (2.05 in)	675 N (151.75 lbf)	200 N (44.96 lbf)	21.25 kg/km (14.28 lb/1000 ft)
4	5.5 mm (0.22 in)	82.5 mm (3.25 in)	55 mm (2.17 in)	675 N (151.75 lbf)	200 N (44.96 lbf)	24.42 kg/km (16.41 lb/1000 ft)
4	5.5 mm (0.22 in)	82.5 mm (3.25 in)	55 mm (2.17 in)	675 N (151.75 lbf)	200 N (44.96 lbf)	24 kg/km (16.13 lb/1000 ft)
4	5.5 mm (0.22 in)	82.5 mm (3.25 in)	55 mm (2.17 in)	675 N (151.75 lbf)	200 N (44.96 lbf)	24.42 kg/km (16.41 lb/1000 ft)
6	5.5 mm (0.22 in)	82.5 mm (3.25 in)	55 mm (2.17 in)	675 N (151.75 lbf)	200 N (44.96 lbf)	26.45 kg/km (17.77 lb/1000 ft)
6	5.5 mm (0.22 in)	82.5 mm (3.25 in)	55 mm (2.17 in)	675 N (151.75 lbf)	200 N (44.96 lbf)	26 kg/km (17.47 lb/1000 ft)
6	5.5 mm (0.22 in)	82.5 mm (3.25 in)	55 mm (2.17 in)	675 N (151.75 lbf)	200 N (44.96 lbf)	26.45 kg/km (17.77 lb/1000 ft)
6	5.3 mm (0.21 in)	82.5 mm (3.25 in)	27 mm (1.06 in)	675 N (151.75 lbf)	200 N (44.96 lbf)	26 kg/km (17.47 lb/1000 ft)
6	5.5 mm (0.22 in)	82.5 mm (3.25 in)	55 mm (2.17 in)	675 N (151.75 lbf)	200 N (44.96 lbf)	26.45 kg/km (17.77 lb/1000 ft)
12	6.5 mm (0.26 in)	97.5 mm (3.84 in)	65 mm (2.56 in)	675 N (151.75 lbf)	200 N (44.96 lbf)	35.9 kg/km (24.12 lb/1000 ft)
12	6.5 mm (0.26 in)	97.5 mm (3.84 in)	65 mm (2.56 in)	675 N (151.75 lbf)	200 N (44.96 lbf)	36.55 kg/km (24.56 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
12	6.5 mm (0.26 in)	97.5 mm (3.84 in)	65 mm (2.56 in)	675 N (151.75 lbf)	200 N (44.96 lbf)	35.9 kg/km (24.12 lb/1000 ft)
12	6.5 mm (0.26 in)	97.5 mm (3.84 in)	65 mm (2.56 in)	675 N (151.75 lbf)	200 N (44.96 lbf)	36.55 kg/km (24.56 lb/1000 ft)
12	6.5 mm (0.26 in)	97.5 mm (3.84 in)	65 mm (2.56 in)	675 N (151.75 lbf)	200 N (44.96 lbf)	35.9 kg/km (24.12 lb/1000 ft)
18	7.4 mm (0.29 in)	111 mm (4.37 in)	74 mm (2.91 in)	1350 N (303.49 lbf)	400 N (89.92 lbf)	51.16 kg/km (34.38 lb/1000 ft)
18	7.4 mm (0.29 in)	111 mm (4.37 in)	74 mm (2.91 in)	1350 N (303.49 lbf)	400 N (89.92 lbf)	50.5 kg/km (33.93 lb/1000 ft)
18	7.4 mm (0.29 in)	111 mm (4.37 in)	74 mm (2.91 in)	1350 N (303.49 lbf)	400 N (89.92 lbf)	51.16 kg/km (34.38 lb/1000 ft)
18	7.4 mm (0.29 in)	111 mm (4.37 in)	74 mm (2.91 in)	1350 N (303.49 lbf)	400 N (89.92 lbf)	50.5 kg/km (33.93 lb/1000 ft)
24	8 mm (0.31 in)	120 mm (4.72 in)	80 mm (3.15 in)	1350 N (303.49 lbf)	400 N (89.92 lbf)	59.78 kg/km (40.17 lb/1000 ft)
24	8 mm (0.31 in)	120 mm (4.72 in)	80 mm (3.15 in)	1350 N (303.49 lbf)	400 N (89.92 lbf)	59.1 kg/km (39.71 lb/1000 ft)
24	8 mm (0.31 in)	120 mm (4.72 in)	80 mm (3.15 in)	1350 N (303.49 lbf)	400 N (89.92 lbf)	59.78 kg/km (40.17 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	2.8 dB/km / 1.0 dB/km	2.8 dB/km / 1.0 dB/km	2.8 dB/km / 1.0 dB/km	2.8 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	3500 MHz*km / 500 MHz*km
Minimum Effective Modal Bandwidth (EMB)	220 MHz*km / -	950 MHz*km / -	2000 MHz*km / -	4700 MHz*km / -	5350 MHz*km / -

Transmission Performance

Single-mode

Fiber Name	ClearCurve® ZBL	Single-mode (OS2)
Performance Option Code	31	31
Fiber Category	OS2	OS2
Wavelengths	1310 nm / 1383 nm / 1550 nm	1310 nm / 1383 nm / 1550 nm
Fiber Code	U	E
Maximum Attenuation	0.4 dB/km / 0.4 dB/km / 0.3 dB/km	0.4 dB/km / 0.4 dB/km / 0.4 dB/km

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□ □ □ □ 8 F - 3 1 1 □ □ - 2 9
 1 2 3 4 5 6 7 8 9 10

1 Select fiber count.

Standard offerings:
 006 012 018 024

2 Select fiber code.

K = 62.5 μ m multimode (OM1)
 T = 50 μ m 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.

F = Indoor/outdoor riser

5 Defines fiber placement.

3 = Standard for FREEDM
 One riser 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 μ m multimode (OM1)
 31 = 50 μ m multimode (OM2)
 80 = 50 μ m multimode (OM3)
 90 = 50 μ m multimode (OM4)
 91 = 50 μ m 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



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