FREEDM® One Riser Cables

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

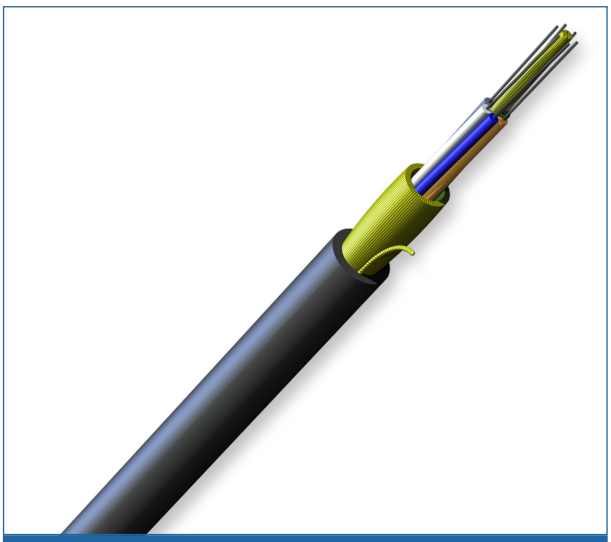
All-dielectric cable construction
Requires no grounding or bonding

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

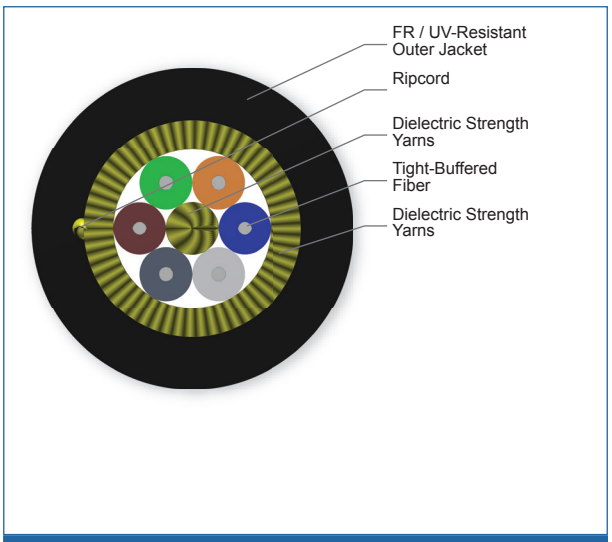
Corning FREEDM® One riser cables are flame-retardant, UV-resistant, indoor/outdoor cables designed for aerial, duct and direct-buried applications with no need for a transition splice when entering the building. The tight-buffered construction facilitates easier termination for low-fiber-count applications in the local area network (LAN) and eliminates the need for fan-out kits. The design features TIA-598 color-coded 900 µm TBII® 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

Approval and Listings	National Electrical Code® (NEC®) OFNR, CSA FT-4, ICEA S-104-696
Flame Resistance	UL 1666 (for riser and general purpose building applications)



FREEDM One Riser Cables, 6 Fibers
| Photo PIM0820



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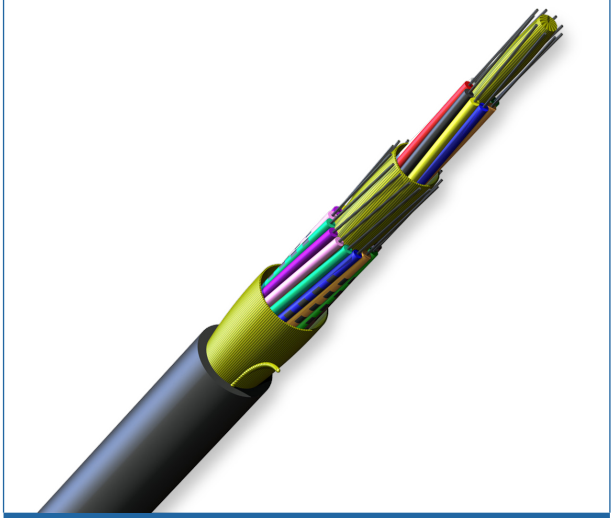
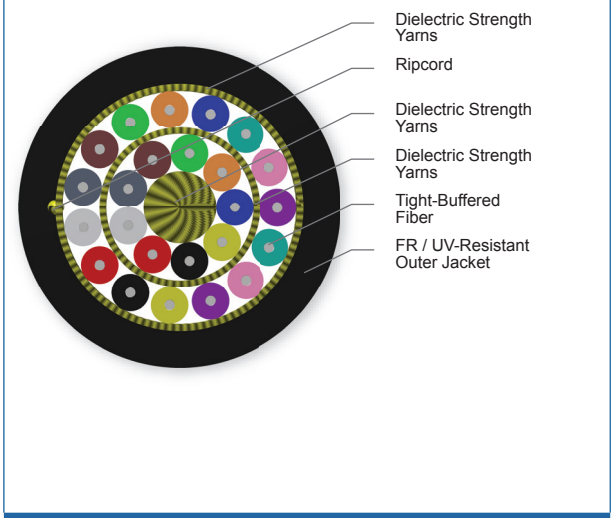


FREEDM One Riser Cables, 24 Fibers
| Photo PIM0823



FREEDM One Riser Cables, 24 Fibers
| Photo PIM1723

Specifications

Temperature Range	
Storage	-40 °C to 70 °C (-40 °F to 158 °F)
Installation	-10 °C to 60 °C (14 °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	Product Type	Max. Tensile Strength, Short-Term	Max. Tensile Strength, Long-Term	Min. Bend Radius Installation	Min. Bend Radius Operation	Weight
2	5.2 mm (0.20 in)	Dielectric	675 N (150 lbf)	200 N (45 lbf)	78 mm (3.1 in)	26 mm (1.0 in)	21 kg/km (14 lb/1000 ft)
4	5.5 mm (0.22 in)	Dielectric	675 N (150 lbf)	200 N (45 lbf)	83 mm (3.2 in)	28 mm (1.1 in)	24 kg/km (16 lb/1000 ft)
6	5.5 mm (0.22 in)	Dielectric	675 N (150 lbf)	200 N (45 lbf)	83 mm (3.2 in)	28 mm (1.1 in)	26 kg/km (18 lb/1000 ft)
12	6.5 mm (0.26 in)	Dielectric	675 N (150 lbf)	200 N (45 lbf)	98 mm (3.8 in)	33 mm (1.3 in)	36 kg/km (24 lb/1000 ft)

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Mechanical Characteristics Cable							
Fiber Count	Nominal Outer Diameter	Product Type	Max. Tensile Strength, Short-Term	Max. Tensile Strength, Long-Term	Min. Bend Radius Installation	Min. Bend Radius Operation	Weight
18	7.4 mm (0.29 in)	Dielectric	1350 N (300 lbf)	400 N (90 lbf)	111 mm (4.4 in)	37 mm (1.5 in)	51 kg/km (34 lb/1000 ft)
24	8.0 mm (0.31 in)	Dielectric	1350 N (300 lbf)	400 N (90 lbf)	120 mm (4.7 in)	40 mm (1.6 in)	60 kg/km (40 lb/1000 ft)

Chemical Characteristics	
RoHS	Free of hazardous substances according to RoHS 2002/95/EG

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)	200/500	750/600	1000/600	1100/600	1100/600
Serial 10 Gigabit Ethernet (m)	220/-	150/-	300/-	550/-	600/-
Min. Overfilled Launch (OFL) Bandwidth (MHz*km)	300/550	700/500	1500/500	3500/500	3500/500
Minimum Effective Modal Bandwidth (EMB) (MHz*km)	33/-	950/-	2000/-	4700/-	5350/-

** Single-mode (OS2) fiber is ITU-T G.652.D compliant.*
** Bend-Improved Single-mode (OS2) fiber is ITU-T G.652.D compliant, ITU 657.A compliant.*
** 50 µm multimode fiber (OM3/OM4) meets 0.75 ns optical skew when used in all Corning Plug and Play™/Pretium 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.*

Notes: 1) *Improved attenuation and bandwidth options available.*
2) *Bend-insensitive single-mode fibers available on request.*
3) *50 µm multimode fiber macrobend loss ≤ 0.2 dB at 850 nm for two turns around 7.5 mm radius mandrel.*
4) *Contact a Corning Customer Care Representative for additional information.*

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Single-mode		
Fiber Name	SMF-28e® fiber	ClearCurve® XB**
Fiber Category	G.652.D	G.652.D/G.657.A1
Fiber Code	E	H
Performance Option Code	31	31
Wavelengths (nm)	1310/1383/1550	1310/1383/1550
Maximum Attenuation (dB/km)	0.65/0.65/0.50	0.65/0.65/0.5

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

□ □ □	□	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
See Note 1

2 Select fiber code.
K = 62.5 µm multimode (OM1)
T = 50 µm multimode (OM2/OM3/OM4/OM4+)
E = Single-mode (OS2) SMF-28e+®
H = ClearCurve® XB Single-mode (OS2)

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 Select 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)
01 = Single-mode (OS2) (Max. attenuation 0.4 / 0.4 / 0.3 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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