

FREEDM® Loose Tube, Gel-Free Cable, Riser

CORNING

Corning FREEDM® loose tube gel-free riser cables are flame-retardant, indoor/outdoor, riser-rated cables designed for interbuilding and intrabuilding backbones in aerial, duct and riser applications. These cables are protected against water penetration by innovative waterblocking materials that swell to absorb water. Waterblocking without the use of messy gels provides more efficient and craft-friendly cable preparation. It also makes cable access easier and simplifies the use of buffer tube fan-out kits. The buffer tubes and fibers in each tube are color coded for quick, easy identification. The SZ-stranded, loose tube design isolates fibers from installation and environmental rigors and allows for easy mid-span access. The cable design is also National Electrical Code® (NEC®) listed (OFNR and FT-4). 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

Gel-free waterblocking technology

Craft-friendly cable preparation

Loose tube design

Stable performance and compatibility with all common fiber types

Color-coded tubes and fibers

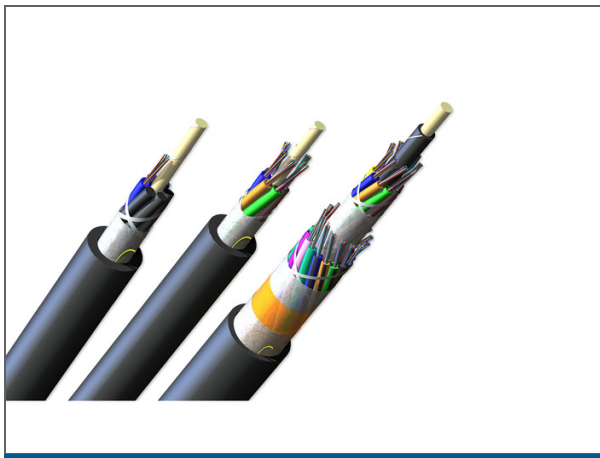
Quick and easy identification

All-dielectric construction

Requires no grounding or bonding

Common installations

Outdoor lashed aerial and duct



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Standards

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

General Specifications

Cable Type	Loose Tube
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	Fibers per Tube	Number of Tube Positions	Number of Active Tubes	Buffer Tube Diameter
12 - 72	12	6	1 - 6	2.5 mm (0.1 in)
96	12	8	8	2.5 mm (0.1 in)
144	12	12	12	2.5 mm (0.1 in)
192 - 216	12	18	16 - 18	2.5 mm (0.1 in)
288	12	24	24	2.5 mm (0.1 in)

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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			130 mm (5.12 in)			180 kg/km (120.95 lb/1000 ft)
12	13 mm (0.51 in)	195 mm (7.68 in)	130 mm (5.12 in)	2700 N (606.98 lbf)	810 N (182.1 lbf)	146 kg/km (98.11 lb/1000 ft)
12	13 mm (0.51 in)	195 mm (7.68 in)	130 mm (5.12 in)	2700 N (606.98 lbf)	810 N (182.1 lbf)	380 kg/km (255.35 lb/1000 ft)
12	13 mm (0.51 in)	195 mm (7.68 in)	130 mm (5.12 in)	2700 N (606.98 lbf)	810 N (182.1 lbf)	146 kg/km (98.11 lb/1000 ft)
24 - 72			130 mm (5.12 in)			
96			139 mm (5.47 in)			
144			178 mm (7.01 in)			
192 - 216	17.7 mm (0.7 in)	266 mm (10.47 in)	177 mm (6.97 in)	2700 N (606.98 lbf)	810 N (182.1 lbf)	225 kg/km (151.19 lb/1000 ft)
288			199 mm (7.83 in)			

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

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Multimode

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 MHz*km / 550 MHz*km	750 MHz*km / 500 MHz*km	1000 MHz*km / 600 MHz*km	1100 MHz*km / 600 MHz*km	1100 MHz*km / 600 MHz*km
Serial 10 Gigabit Ethernet	33 MHz*km / -	150 MHz*km / -	300 MHz*km / -	550 MHz*km / -	600 MHz*km / -
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	Single-mode (OS2)	Single-mode (OS2) - SMF-28® Ultra fiber
Performance Option Code	00	01
Fiber Category	G.652.D	G.652.D - G.652.D/G.657.A1
Wavelengths	1310 nm / 1383 nm / 1550 nm	1310 nm / 1383 nm / 1550 nm
Fiber Code	E	E - Z
Maximum Attenuation	0.35 dB/km / 0.35 dB/km / 0.25 dB/km	0.4 dB/km / 0.4 dB/km / 0.3 dB/km

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□ □ □ □ U F - T 4 1 □ □ D 2 0

1 2 3 4 5 6 7 8 9 10

1 Select fiber count.

Standard offerings:
012-288
Increments of 12

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.

U = Loose tube cable

4 Defines outer jacket.

F = Indoor/outdoor riser

5 Defines fiber placement.

T = 12 fibers/buffer tube
(standard)

6 Defines length markings.

4 = Markings in ft
(standard)

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+)
01 = Single-mode (OS2)
(Max. attenuation 0.4/0.4/0.3 dB/km)

9 Defines cable type.

D = Gel-free cable

10 Defines special requirements.

20 = No special requirements



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