FREEDM® Loose Tube Gel-Free Cables

A LANscape® Pretium™ Solutions Product

Corning Cable Systems

Applications

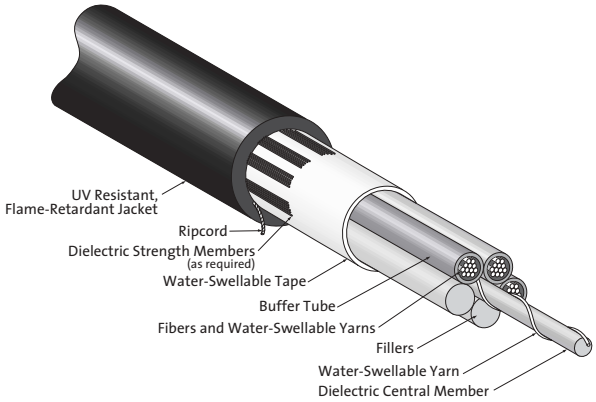
- Inter- and intra building backbones in aerial, duct and riser applications

Description

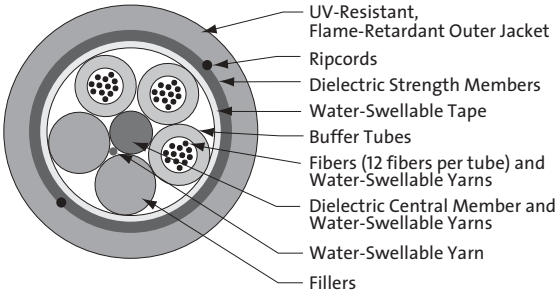
Corning Cable Systems FREEDM® Loose Tube Gel-Free Cables are flame-retardant, indoor/outdoor, riser-rated cables suitable for installation in aerial, duct and riser applications. Because of the riser rating, there is no need for a transition splice when entering the building. Using water-swellable yarns both inside and surrounding the buffer tubes, these cables are fully waterblocked without the use of messy gels, providing for more efficient and craft-friendly cable preparation. Available from 2 to 288 fibers, the buffer tubes and fibers in each tube are color-coded for quick, easy identification.

Features / Benefits

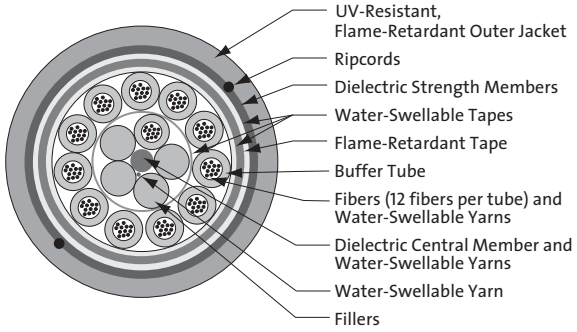
- Gel-free design is fully waterblocked using craft-friendly, water-swellable yarns, making cable access and use of buffer tube fan-out kits simple
- Available in 62.5 µm, 50 µm, single-mode and hybrid versions
- Standard 3.0 mm buffer tube size reduces the number of access tools required by crafts personnel
- SZ-stranded, loose tube design isolates fibers from installation, environmental rigors and allows for easy mid-span access
- UV-resistant, flame-retardant jacket is rugged, durable and easy to strip
- All-dielectric cable construction requires no grounding or bonding
- Color-coded fibers and buffer tubes for quick and easy identification during installation
- Listed OFNR and FT-4
- Available with interlocking armor
- Available with Gigabit Ethernet and 10 Gigabit Ethernet performance



FREEDM Loose Tube Gel-Free Cable | Drawing ZA-1894



36-Fiber FREEDM Loose Tube Gel-Free Cable | Drawing ZA-1596



144-Fiber FREEDM Loose Tube Gel-Free Cable | Drawing ZA-511

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Product Specifications

FREEDM® Loose Tube Gel-Free Cables

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Corning Cable Systems

Specifications

Maximum Tensile Loads	Short-Term: 2700 N (600 lbf) Long-Term: 810 N (180 lbf)
Temperatures	Storage: -40° to +70°C (-40° to +158°F) Installation: -10° to +60°C (+14° to +140°F) Operation: -40° to +70°C (-40° to +158°F)
Approvals and Listings	National Electrical Code® (NEC®) OFNR, CSA OFN FT-4
Common Installations	Outdoor aerial and duct; indoor vertical riser and general purpose horizontal according to NEC Article 770
Design and Test Criteria	ANSI/ICEA S-104-696

Corning Cable Systems 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.

Fiber Count	Maximum Fibers per Tube	Number of Tube Positions	Nominal Weight kg/km (lb/1000 ft)	Nominal Outer Diameter mm (in)	Minimum Bend Radius Loaded cm (in)	Minimum Bend Radius Installed cm (in)
≤ 60	12	5	136 (91)	12.9 (0.51)	19.4 (7.6)	12.9 (5.1)
72	12	6	150 (100)	13.3 (0.52)	20.0 (7.9)	13.3 (5.2)
96	12	8	199 (133)	15.5 (0.61)	23.3 (9.2)	15.5 (6.1)
120	12	10	255 (171)	17.8 (0.70)	26.7 (10.5)	17.8 (7.0)
144	12	16	258 (173)	19.4 (0.76)	29.1 (11.5)	19.4 (7.6)
216	12	18	277 (186)	19.8 (0.78)	29.7 (11.7)	19.8 (7.8)
240	12	20	301 (202)	20.7 (0.81)	31.1 (12.2)	20.7 (8.1)
288	12	24	362 (243)	22.9 (0.90)	34.4 (13.5)	22.9 (9.0)

Transmission Performance

Fiber Code	K	C	S	S	E
Performance Option Code	**30**	**31**	**80**	**90**	**01**
Fiber Type	62.5/125 µm (850/1300 nm)	50/125 µm (850/1300 nm)	50/125 µm (850/1300 nm)	50/125 µm (850/1300 nm)	Single-mode (1310/1383/1550 nm)
Maximum Attenuation (dB/km)	3.5/1.0	3.5/1.5	3.0/1.5	3.0/1.5	0.4/0.4/0.3
Minimum LED Bandwidth (MHz•km)	200/500	500/500	1500/500	1500/500	– / – / –
Minimum Effective Modal Bandwidth (MHz•km)	*220/ –	*510/ –	**2000/ –	***4700/ –	– / – / –
Serial Gigabit Ethernet Distance (m)	300/550	600/600	1000/600	1000/600	5000/ – / –
Serial 10 Gigabit Ethernet Distance (m)	33/ –	82/ –	300/ –	****550/ –	10000/40000

** As predicted by RML BW, per TIA/EIA 455-204 and IEC 60793-1-41, for intermediate performance laser-based systems (up to 1 Gb/s).*
*** As predicted by minEMBc, per TIA/EIA 455-220 and IEC 60793-1-49, for high performance laser-based systems (up to 10 Gb/s).*
**** As predicted by minEMBc, per TIA/EIA 455-220 and IEC 60793-1-49, for high performance laser-based systems (up to 10 Gb/s).*
***** The 550 m distance is equivalent to a 4700 EMB system with standards-compliant transceiver and fiber characteristics, 3.0 dB/km cable attenuation and 1.0 dB total connector loss.*

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Ordering Information

Contact Customer Service for other options.

☐ ☐ ☐ ☐ **W F - T 4 1** ☐ ☐ **D 2 0**

1 2 3 4 5 6 7 8 9 10 11 12 13 14

1 - 3 Select fiber count.

Standard Offerings:

036	072	144	216
048	096	192	288

4 Select fiber code (see Transmission Performance Table).

5 / 12 Defines cable type.

W/D = FREEDM® Gel-Free Cable

6 Defines outer jacket.

F = Indoor/outdoor riser

7 Defines fiber placement.

T = 12 fibers/buffer tube (standard)

8 Defines length markings.

4 = Markings in feet (standard)

9 Defines tensile strength (see Specifications).

10 - 11 Select performance option code. (see Transmission Performance Table).

13 - 14 Defines special requirements.

20 = No special requirements

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