

# FREEDM® Loose Tube Gel-Free Interlocking Armored Cables

An Evolant® Solutions Product

## Applications

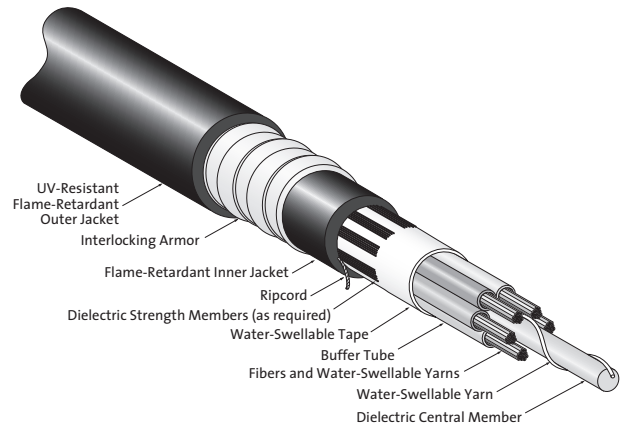
- Inter- and intrabuilding backbones in aerial, duct and riser applications
- Installations requiring extra protection for optical cables

## Description

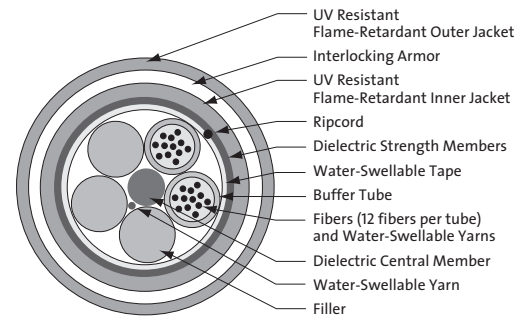
Corning Cable Systems FREEDM® Loose Tube Gel-Free Interlocking Armored Cables are flame-retardant, indoor/outdoor, riser-rated cables encased in a spirally wrapped aluminum interlocking armor for ruggedness and superior crush resistance. Because of the riser rating, there is no need for a transition splice when entering the building. Using water-swappable 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 up to 288 fibers, the buffer tubes and fibers in each tube are color-coded for quick, easy identification.

## Features / Benefits

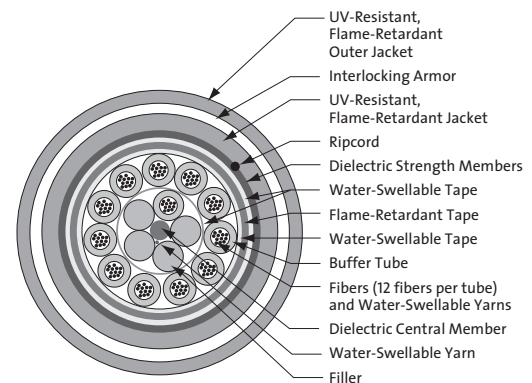
- Gel-free design is fully waterblocked using craft-friendly, water-swappable yarns, making cable access and use of buffer tube fan-out kits simple
- Available in single-mode, 50 µm, 62.5 µm and hybrid versions
- Standard 3.0 mm buffer tube size reduces the number of access tools required by crafts persons
- SZ-stranded, loose tube design isolates fibers from installation, environmental rigors and allows for easy midspan access
- Ideal for high-fiber-count trunking applications, especially in areas with limited conduit or vault space
- Listed National Electrical Code® (NEC®) OFCR and CSA OFC FT-4
- Flexible interlocking armor offers superior crush resistance and cable protection
- Interlocking armor design allows easy one-step installation of protected cable reducing overall installation costs



FREEDM Loose Tube Gel-Free Interlocking Armored Cable  
| Drawing ZA-2107



FREEDM Loose Tube Gel-Free Interlocking Armored Cable, 24-Fiber  
| Drawing ZA-2108



FREEDM Loose Tube Gel-Free Interlocking Armored Cable, 144-Fiber  
| Drawing ZA-2109



# FREEDM<sup>®</sup> Loose Tube Gel-Free Interlocking Armored Cables

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## Specifications

<b>Maximum Tensile Loads</b>	Short-Term: 2700 N (600 lbf) Long-Term: 810 N (180 lbf)
<b>Operating Temperatures*</b>	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)
<b>Approvals and Listings</b>	NEC <sup>®</sup> OFCR, CSA OFC FT-4
<b>Common Installations</b>	Outdoor aerial, direct buried and duct; indoor vertical riser and general purpose horizontal according to NEC Article 770
<b>Design and Test Criteria</b>	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	Nominal Weight (kg/km)	Nominal Inner Cable Diameter mm (in)	Nominal Outer Diameter mm (in)	Minimum Bend Radius	
				Loaded cm (in)	Installed cm (in)
≤ 60	370 (248)	12.9 (0.51)	23.2 (0.91)	34.8 (13.7)	23.2 (9.1)
72	384 (258)	13.3 (0.52)	23.2 (0.91)	34.8 (13.7)	23.2 (9.1)
96	448 (300)	15.5 (0.61)	24.5 (0.96)	36.8 (14.5)	24.5 (9.6)
120	533 (357)	17.8 (0.70)	27.0 (1.06)	40.5 (16.0)	27.0 (10.6)
144	565 (379)	19.4 (0.76)	29.6 (1.17)	44.4 (17.5)	29.6 (11.7)
216	584 (392)	19.8 (0.78)	29.6 (1.17)	44.4 (17.5)	29.6 (11.7)
240	602 (403)	20.7 (0.82)	29.6 (1.17)	44.4 (17.5)	29.6 (11.7)
288	690 (462)	22.9 (0.90)	32.10 (1.26)	48.2 (19.0)	32.1 (12.6)

## Transmission Performance

Fiber Code	E	C	K
<b>Performance Option Code</b>	<b>01</b>	<b>31</b>	<b>30</b>
<b>Fiber Type</b>	Single-mode (1310/1383/1550 nm)	50/125 μm (850/1300 nm)	62/125 μm (850/1300 nm)
<b>Maximum Attenuation (dB/km)</b>	0.4/0.4/0.3	3.5/1.5	3.5/1.0
<b>Minimum LED Bandwidth (MHz•km)</b>	- / - / -	500/500	200/500
<b>Minimum Effective Modal Bandwidth (MHz•km)</b>	- / - / -	510/ - *	220/ - *
<b>Serial Gigabit Ethernet Distance (m)</b>	5000 / - / -	600/600	300/550
<b>Serial 10 Gigabit Ethernet Distance (m)</b>	10000/40000	82/ -	33/ -

\*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).

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## Ordering Information

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Contact Customer Service for availability of non-standard offerings.

W F - T 4 1   D A 1

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

**1** - **3** Select fiber count.

Standard Offerings:

036 072 120 216 288

048 096 144 240

**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.

A1 = Interlocking armor with riser-rated outer jacket

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Solutions

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