

FREEDM® Loose Tube Interlocking Armored Cables, Plenum

CORNING

Features and Benefits

Flexible, interlocking armor design

Seven times crush protection compared to unarmored cables

Gel-free waterblocking technology

Craft-friendly cable preparation

Color-coded tubes and fibers

Quick and easy identification

UV-resistant, flame-retardant jacket

Rugged, durable and easy to strip

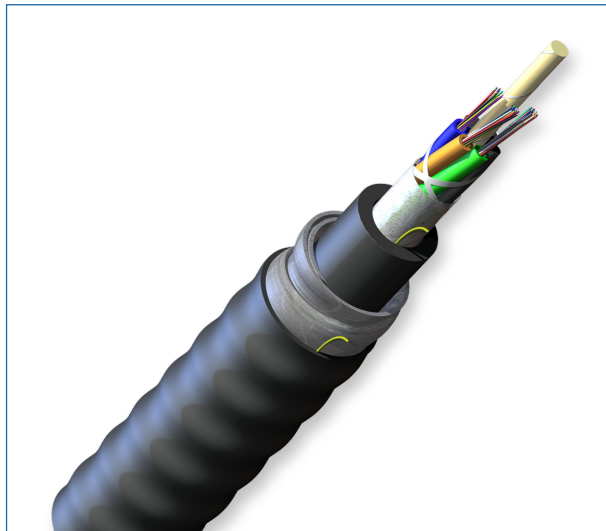
Standards

Approval and Listings	National Electrical Code® (NEC®) OFCR, CSA OFC 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

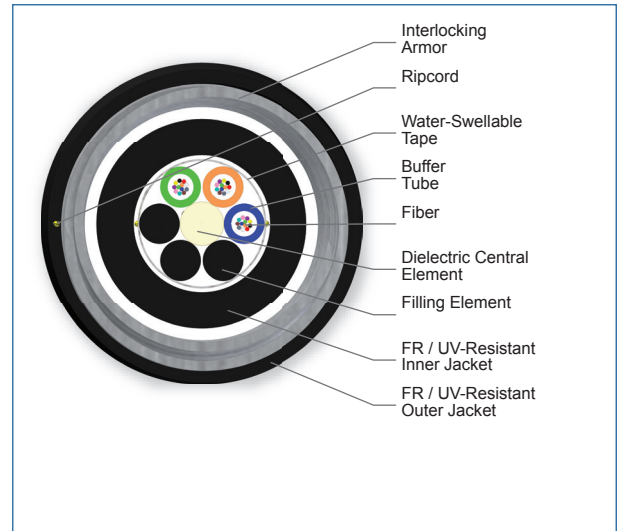
Corning FREEDM® loose tube gel-free interlocking armored cables are flame-retardant, indoor/outdoor, plenum-rated cables for interbuilding and intrabuilding backbones in aerial, duct and riser applications. Encased in a spirally wrapped, aluminum interlocking armor for ruggedness and superior crush resistance, these cables are ideal for industrial and heavy traffic areas and installations requiring extra protection for optical cables and for high-fiber-count trunking applications in areas with limited conduit or vault space. The plenum rating precludes the need for a transition splice when entering the building.

These cables are available in fiber counts up to 72 fibers and are protected against water penetration by innovative waterblocking materials. These materials swell to absorb water without the use of messy gels to provide more efficient and craft-friendly cable preparation, making cable access easier and simplifying 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, environmental rigors and allows for easy mid-span access. Available in 50 μm, 62.5 μm, single-mode and hybrid versions, the cable design is NEC listed.

The armored design allows for easy one-step installation which reduces overall installation costs. The UV-resistant, flame-retardant jacket is rugged and easy to strip.



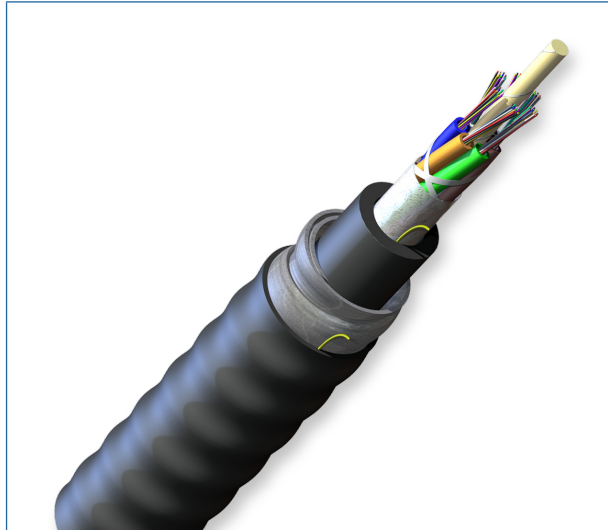
FREEDM Loose Tube, Interlocking Armored Cables, 36 Fibers | Photo PIMtbd



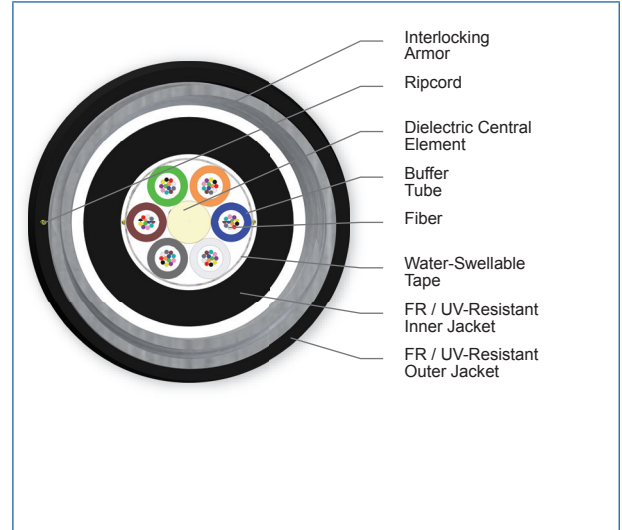
FREEDM Loose Tube, Interlocking Armored Cables, 36 Fibers | Photo PIMtbd

FREEDM[®] Loose Tube Interlocking Armored Cables, Plenum

CORNING



FREEDM Loose Tube, Interlocking Armored Cables, 72 Fibers | Photo PIMtbd



FREEDM Loose Tube, Interlocking Armored Cables, 72 Fibers | Photo PIMtbd

Specifications

Temperature Range	
Storage	-40 °C to 70 °C (-40 °F to 158 °F)
Installation	0 °C to 60 °C (32 °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	Number of Tube Positions	Number of Active Tubes	Weight	Nominal Outer Diameter	Min. Bend Radius Installation	Min. Bend Radius Operation
12	6	1	192.4 kg/km (129.3 lb/1000 ft)	14.3 mm (0.56 in)	299 mm (11.8 in)	199 mm (7.8 in)
24 - 60	6	2 - 5	306 kg/km (205.6 lb/1000 ft)	18.8 mm (0.74 in)	299 mm (11.8 in)	199 mm (7.8 in)
72	6	6	389.4 kg/km (261.7 lb/1000 ft)	22.1 mm (0.87 in)	299 mm (11.8 in)	199 mm (7.8 in)

CORNING

FREEDM[®] Loose Tube Interlocking Armored Cables, Plenum

CORNING

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	3.0/1.0	3.0/1.0	3.0/1.0	3.0/1.0
Serial 1 Gigabit Ethernet (m)	300/550	750/500	1000/600	1100/600	1100/600
Serial 10 Gigabit Ethernet (m)	33/-	150/-	300/-	550/-	600/-
Min. Overfilled Launch (OFL) Bandwidth (MHz*km)	200/500	700/500	1500/500	3500/500	3500/500
Minimum Effective Modal Bandwidth (EMB) (MHz*km)	220/-	950/-	2000/-	4700/-	5350/-

* Single-mode (OS2) fiber is ITU-T G.652.D 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.

Single-mode

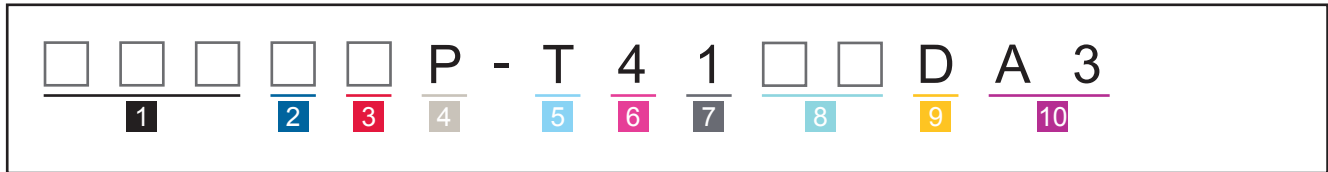
Fiber Name	SMF-28e+ [®] fiber
Fiber Category	G.652.D
Fiber Code	E
Performance Option Code	01
Wavelengths (nm)	1310/1383/1550
Maximum Attenuation (dB/km)	0.4/0.4/0.3
Typical Attenuation* (dB/km)	0.33/0.33/0.19

CORNING

FREEDM® Loose Tube Interlocking Armored Cables, Plenum

CORNING

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



1 Select fiber count.
Standard offerings:
012-072
Increments of 12

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 Select cable type.
FREEDM® Gel-Free Loose Tube Cable
S = ≤ 12 fibers
W = > 12 fibers

4 Defines outer jacket.
P = Indoor/outdoor plenum

5 Defines fiber placement.
T = 12 fibers/buffer tube (standard)

6 Defines length markings.
4 = Markings in feet (standard)

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

9 Defines cable type.
D = FREEDM® Gel-Free Loose Tube Cable

10 Defines special manufacturing code.
A3 = Interlocking armor with plenum-rated outer jacket

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.

Corning Optical Communications LLC • PO Box 489 • Hickory, NC 28603-0489 USA

800-743-2675 • FAX: 828-325-5060 • International: +1-828-901-5000 • www.corning.com/opcomm

A complete listing of the trademarks of Corning Optical Communications is available at www.corning.com/opcomm/trademarks. Corning Optical Communications is ISO 9001 certified. © 2014 Corning Optical Communications. All rights reserved.

CORNING