

FREEDM® Loose Tube, Gel-Free, Interlocking Armored Cable, Plenum 12 F, Single-mode (OS2)

CORNING

**Part Number:
012ESP-T4101DA3**

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 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, environmental rigors and allows for easy midspan access. Available in 50 µm, 62.5 µm, single-mode and hybrid, the cable design is National Electrical Code® (NEC®) listed.



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

Flexible interlocking armor

Up to seven times the crush protection compared to non-armored cables

Common installations

Outdoor aerial and duct; indoor vertical riser and general purpose horizontal according to NEC Article 770

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Specifications

Mechanical Specifications	
Max. Tensile Strength, Long-Term	400 N
Max. Tensile Strength, Short-Term	1350 N
Min. Bend Radius Installation	299 mm (11.77 in)
Min. Bend Radius Operation	199 mm (7.83 in)
Nominal Outer Diameter	14.3 mm (0.56 in)

Cable Design	
Central Element	Dielectric
Fiber Count	12
Buffer Tube Color Coding	Blue
Number of Ripcords	2
Outer Jacket Color	Black
Outer Jacket Material	Flame-Retardant, UV-Resistant
Tensile Strength Elements and/or Armoring - Layer 1	Interlocking Armor
Buffer Tube Color	Blue
Buffer Tube Diameter	3 mm (0.12 in)
Inner Jacket Material	Flame-Retardant, UV-Resistant
Number of Active Tubes	1
Number of Filling Elements	5
Number of Tube Positions	6
Tape	Water-swellable
Fiber Coloring	Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Rose, Aqua
Fibers per Tube	12

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Environmental Conditions

Temperature Range, Installation	0 °C - 60 °C (32 °F - 140 °F)
Temperature Range, Storage	-40 °C - 70 °C (-40 °F - 158 °F)
Temperature Range, Operation	-40 °C - 70 °C (-40 °F - 158 °F)

General Specifications

Environment	Indoor/Outdoor
Cable Type	Loose Tube
Product Type	Interlocking Armor
Fiber Category	Single-mode (OS2)
Flame Rating	Plenum (OFCP)
Application	Aerial , Direct Buried , Duct , General Purpose Horizontal

Ordering Information

Weight	192.4 kg/km
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Standards

RoHS	Free of hazardous substances according to RoHS 2011/65/EU
Approvals and Listings	National Electrical Code® (NEC®) OFNP
Design and Test Criteria	ANSI/ICEA S-104-696, CSA FT-6

Optical Characteristics

Fiber Code	E
Fiber Name	Single-mode (OS2)
Fiber Type	Single-mode
Performance Option Code	01
Maximum Attenuation	0.4 dB/km / 0.4 dB/km / 0.3 dB/km

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Optical Characteristics

Wavelengths	1310 nm / 1383 nm / 1550 nm
Fiber Category	G.652.D



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