

# FREEDM® Loose Tube, Gel-Free Cable, Riser

24 F, 50 µm multimode (OM3)

CORNING

Corning Cable Systems 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 tapes and yarns 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 midspan 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.

This cable is available in 12 different jacket colors - blue, orange, green, brown, slate, white, red, black, yellow, purple, 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 standard part numbers shown here. Contact Customer Care at 1-800-743-2675 to order other color options.

## Features and Benefits

### Riser rating

No transition splices when entering buildings

### Gel-free waterblocking technology

Craft-friendly cable preparation

### Color-coded tubes and fibers

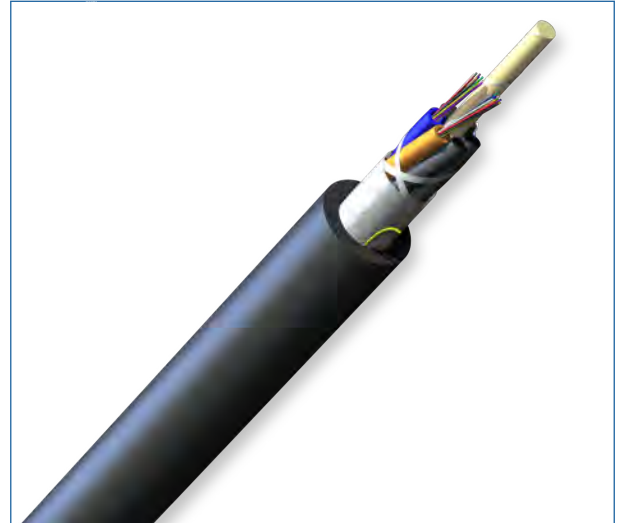
Quick and easy identification

### All-dielectric construction

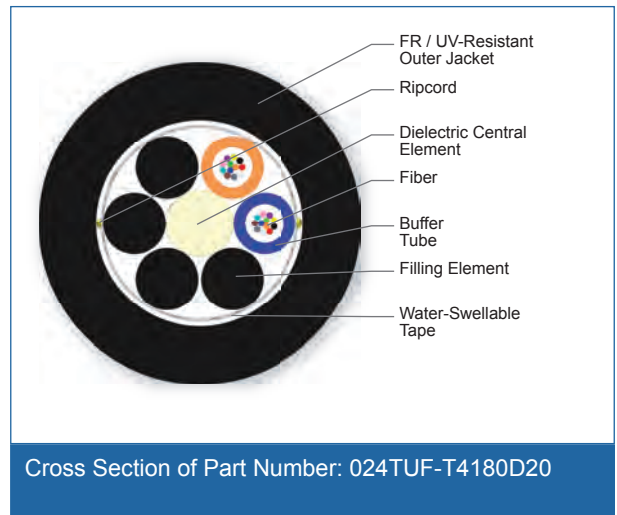
Requires no grounding or bonding

### UV-resistant, flame-retardant jacket

Rugged, durable and easy to strip



Part Number: 024TUF-T4180D20



Cross Section of Part Number: 024TUF-T4180D20

## Standards

### Approval and Listings

National Electrical Code®  
(NEC®) OFNR, CSA OFN  
FT-4

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## Standards

**Common Installations** Outdoor lashed aerial and duct; indoor when installed according to National Electrical Code® (NEC®) Article 770

**Design and Test Criteria** ANSI/ICEA S-104-696

## Specifications

### General Specifications

Environment	Indoor/Outdoor Cables
Application	Aerial, Direct Buried, Duct, General Purpose Horizontal, (Vertical Riser)
Cable Type	Loose Tube
Product Type	Dielectric
Flame Rating	Riser (OFNR)
Fiber Category	50 µm MM (OM3)

### Temperature Range

Storage	-40 °C to 70 °C (-40 °F to 158 °F)
Installation	-10 °C to 60 °C (14 °F to 140 °F)
Operation	-40 °C to 70 °C (-40 °F to 158 °F)

### Cable Design

Central Element	Dielectric
Fiber Count	24
Fiber Coloring	Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Rose, Aqua
Fibers per Tube	12
Number of Tube Positions	6
Number of Active Tubes	2
Buffer Tube Color Coding	Blue, Orange
Buffer Tube Diameter	2.5 mm (0.1 in)
Number of Filling Elements	4
Tape	Water-swellaable
Number of Ripcords	2

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### Cable Design

Outer Jacket Material	Flame-Retardant, UV-Resistant
Outer Jacket Color	Black

### Mechanical Characteristics Cable

Max. Tensile Strengths, Short-Term	2700 N (600 lbf)
Max. Tensile Strengths, Long-Term	810 N (180 lbf)
Weight	145 kg/km (98 lb/1000 ft)
Nominal Outer Diameter	12.9 mm (0.51 in)
Min. Bend Radius Installation	194 mm (7.6 in)
Min. Bend Radius Operation	129 mm (5.1 in)

### Chemical Characteristics

RoHS	Free of hazardous substances according to RoHS 2002/95/EG
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## Fiber Specifications

### Optical Characteristics (cabled)

Fiber Type	Multimode
Fiber Core Diameter	50 µm
Fiber Category	OM3
Fiber Code	T
Performance Option Code	80
Wavelengths	850 nm / 1300 nm
Maximum Attenuation	3.0 dB/km / 1.0 dB/km
Min. Overfilled Launch (OFL) Bandwidth	1500 MHz*km / 500 MHz*km
Minimum Effective Modal Bandwidth (EMB)	2000 MHz*km / -
Serial 1 Gigabit Ethernet	1000 m / 600 m
Serial 10 Gigabit Ethernet	300 m / -

\* Meets 0.75 ns optical skew when used in all Corning Cable Systems Plug & Play™/Pretium EDGE® Systems Solutions.

Notes: 1) 50 µm multimode fiber macrobend loss  $\leq 0.2$  dB at 850 nm for two turns around 7.5 mm radius mandrel.  
2) Improved attenuation and bandwidth options available.  
3) Bend-insensitive single-mode fibers available on request.  
4) Contact a Corning Cable Systems Customer Care Representative for additional information.

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## Ordering Information

Part Number	024TUF-T4180D20
Product Description	FREEDM® Loose Tube, Gel-Free Cable, Riser, 24 F, 50 µm multimode (OM3)



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