

# FREEDM® Loose Tube, Gel-Free Cable, Riser 12 F, 50 µm multimode (OM2)

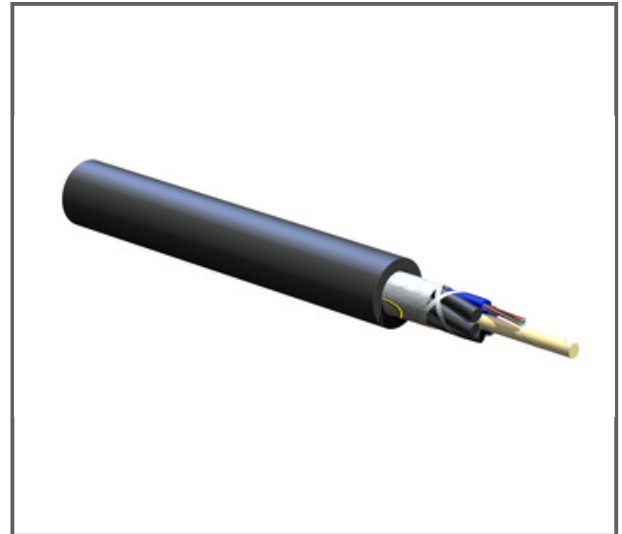
CORNING

## Part Number: 012TUF-T4131D20

Corning 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 materials 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 mid-span 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.

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



## 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

### **All-dielectric construction**

Requires no grounding or bonding

### **Common installations**

Outdoor lashed aerial and duct; indoor vertical riser and general purpose horizontal according to National Electrical Code (NEC) Article 770

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## Specifications

### Mechanical Specifications

|                                   |                  |
|-----------------------------------|------------------|
| Max. Tensile Strength, Long-Term  | 810 N            |
| Max. Tensile Strength, Short-Term | 2700 N           |
| Min. Bend Radius Installation     | 195 mm (7.68 in) |
| Min. Bend Radius Operation        | 130 mm (5.12 in) |
| Nominal Outer Diameter            | 13 mm (0.51 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  |
| Buffer Tube Color          | Blue   |
| Buffer Tube Diameter       | 2.5 mm (0.1 in)  |
| Number of Active Tubes     | 1  |
| Number of Filling Elements | 5  |
| Number of Tube Positions   | 6  |
| Tape                       | Water-swellaable   |
| 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 | -10 °C - 60 °C (14 °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   | Dielectric   |
| Fiber Category | 50 µm MM (OM2)   |
| Flame Rating   | Riser (OFNR)   |
| Application    | Aerial , Direct Buried , Duct , General Purpose Horizontal |

## Ordering Information

|        |           |
|--------|-----------|
| Weight | 146 kg/km |
|--------|-----------|

## Standards

|                          |   |
|--------------------------|---|
| RoHS                     | Free of hazardous substances according to RoHS 2011/65/EU |
| Approvals and Listings   | National Electrical Code® (NEC®) OFNR CSA OFN FT-4        |
| Design and Test Criteria | ANSI/ICEA S-104-696                                       |

## Optical Characteristics

|            |   |
|------------|---|
| Fiber Code | T |
|------------|---|

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The Corning logo is a blue square with the word "CORNING" in white, uppercase, sans-serif font.

## Optical Characteristics

|   |                         |
|---|-------------------------|
| Fiber Type                              | Multimode               |
| Performance Option Code                 | 31                      |
| Fiber Core Diameter                     | 50 µm                   |
| Minimum Effective Modal Bandwidth (EMB) | 950 MHz*km / -          |
| Maximum Attenuation                     | 3.0 dB/km / 1.0 dB/km   |
| Min. Overfilled Launch (OFL) Bandwidth  | 700 MHz*km / 500 MHz*km |
| Serial 1 Gigabit Ethernet               | 750 MHz*km / 500 MHz*km |
| Serial 10 Gigabit Ethernet              | 150 MHz*km / -          |
| Wavelengths                             | 850 nm / 1300 nm        |
| Fiber Category                          | OM2                     |



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