

# FREEDM® LST™ Single-Tube, Gel-Free Cable, Riser

12 F, 50 µm multimode (OM3)

CORNING

Corning Cable Systems FREEDM® LST™ Gel-Free Cables are flame-retardant, indoor/outdoor, riser-rated cables designed for interbuilding and intrabuilding backbones in aerial, duct and riser applications. With a riser rating, there is no need for a transition splice when entering the building. Available in a compact design, 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, allows easier cable access 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 fibers

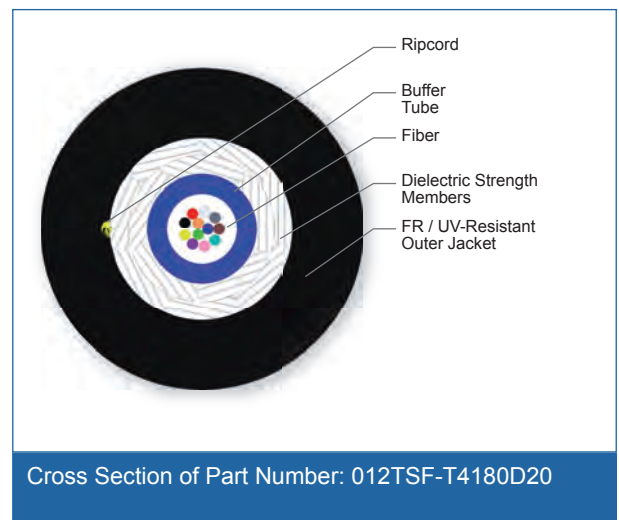
Quick and easy identification

### All-dielectric construction

Requires no grounding or bonding

### UV-resistant, flame-retardant jacket

Rugged, durable and easy to strip



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## Standards

|                                 |                                                                                                                                               |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Approval and Listings</b>    | National Electrical Code® (NEC®) OFNR, CSA OFN FT-4                                                                                           |
| <b>Common Installations</b>     | Outdoor lashed aerial and duct; indoor vertical riser and general purpose horizontal according to National Electrical Code® (NEC) Article 770 |
| <b>Design and Test Criteria</b> | 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                                        |                                                                                  |
|-----------------------------------------------------|----------------------------------------------------------------------------------|
| Fiber Count                                         | 12                                                                               |
| Fiber Coloring                                      | Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Rose, Aqua |
| Fibers per Tube                                     | 12                                                                               |
| Number of Tube Positions                            | 1                                                                                |
| Number of Active Tubes                              | 1                                                                                |
| Tensile Strength Elements and/or Armoring - Layer 1 | Dielectric strength members                                                      |
| Tensile Strength Elements and/or Armoring - Layer 2 | Water-swellable dielectric strength members                                      |

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## Cable Design

|                       |                               |
|-----------------------|-------------------------------|
| Number of Ripcords    | 1                             |
| Outer Jacket Material | Flame-Retardant, UV-Resistant |
| Outer Jacket Color    | Black                         |

## Mechanical Characteristics Cable

|                                    |                          |
|------------------------------------|--------------------------|
| Weight                             | 56 kg/km (38 lb/1000 ft) |
| Nominal Outer Diameter             | 7.4 mm (0.29 in)         |
| Max. Tensile Strengths, Short-Term | 1350 N (300 lbf)         |
| Max. Tensile Strengths, Long-Term  | 400 N (90 lbf)           |
| Min. Bend Radius Installation      | 111 mm (4.4 in)          |
| Min. Bend Radius Operation         | 37 mm (1.5 in)           |

## Chemical Characteristics

|      |                                                           |
|------|-----------------------------------------------------------|
| RoHS | Free of hazardous substances according to RoHS 2002/95/EG |
|------|-----------------------------------------------------------|

## 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 / -                |

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\* 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.

## Ordering Information

|                     |                                                                              |
|---------------------|------------------------------------------------------------------------------|
| Part Number         | 012TSF-T4180D20                                                              |
| Product Description | FREEDM® LST™ Single-Tube, Gel-Free Cable, Riser, 12 F, 50 µm multimode (OM3) |



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