

# FREEDM® Ribbon, Gel-Filled Cable, Riser

96 F, 50 µm multimode, extended 10G distance (OM4+)

CORNING

Corning FREEDM® ribbon riser cables are lightweight cables designed for indoor/outdoor installations such as campus backbones in aerial, duct and riser applications. A UV-resistant, flame-retardant jacket allows added flexibility in placing this cable outdoors, whether it is an aerial, duct or direct-buried application, or indoor general horizontal or riser applications.

The cable consists of a ribbon stack of 12-fiber ribbons within a gel-filled central buffer tube. With easily accessible individual 250 µm colored fibers, the ribbons have readily identifiable ribbon ID numbers and fiber colors. The precise fiber and ribbon geometries result in excellent mass splicing yields. Surrounding the tube are dielectric strength members that provide tensile strength and innovative waterblocking tapes that reduce cable weight and preparation time. This design is also compatible with standard ribbon cable procedures and hardware for easy field installation and reduced labor costs.

*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

### Precise fiber and ribbon geometries

Excellent mass splicing yields

### Waterblocked cable

Enables use of cables for outdoor applications

### 12-fiber ribbons with ribbon IDs

Easy identification

### UV-resistant, flame-retardant jacket

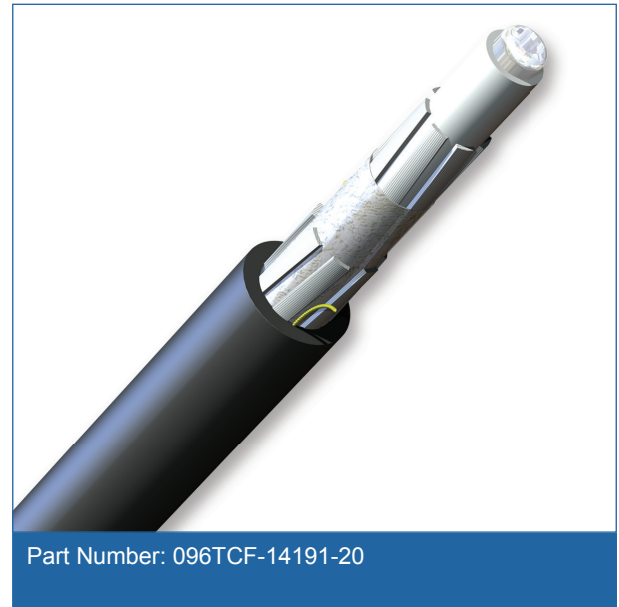
Rugged, durable and easy to strip

### Available in preconnectorized assemblies

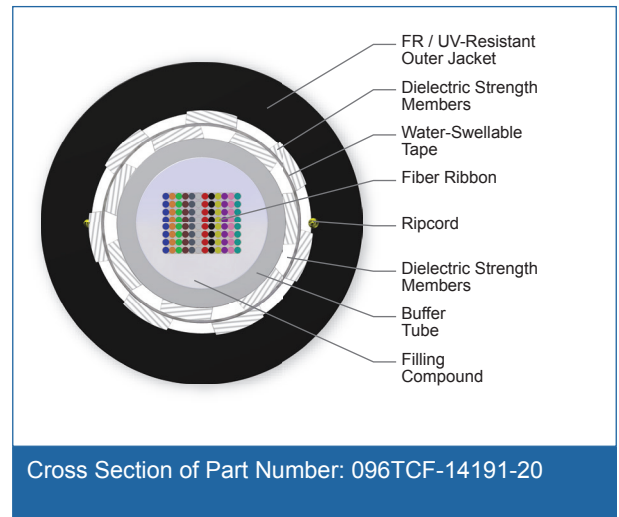
Easy field installation and reduced labor costs

### Common installations

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



Part Number: 096TCF-14191-20



Cross Section of Part Number: 096TCF-14191-20

CORNING

# FREEDM<sup>®</sup> Ribbon, Gel-Filled Cable, Riser

96 F, 50  $\mu$ m multimode, extended 10G distance (OM4+)

CORNING

## Standards

<b>Listings</b>	National Electrical Code <sup>®</sup> (NEC <sup>®</sup> ) OFNR, FT-4
<b>Design and Test Criteria</b>	ANSI/ICEA S-104-696, CSA OFN FT-4

## Specifications

General Specifications	
Environment	Indoor/Outdoor Cables
Application	Aerial, Direct Buried, Duct, General Purpose Horizontal, (Vertical Riser)
Cable Type	Ribbon
Product Type	Dielectric
Flame Rating	Riser (OFNR)
Fiber Category	50 $\mu$ m MM (OM4+)

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	96
Ribbons per Tube	8
Fibers per Ribbon	12
Fiber Coloring	Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Rose, Aqua
Buffer Tube Color	Natural
Buffer Tube Diameter	6.7 mm (0.26 in)
Tensile Strength Elements and/or Armoring - Layer 1	Dielectric strength members
Tape	Water-swellaable
Tensile Strength Elements and/or Armoring - Layer 2	Dielectric strength members
Number of Ripcords	2
Outer Jacket Material	Flame-Retardant, UV-Resistant
Outer Jacket Color	Black

# FREEDM<sup>®</sup> Ribbon, Gel-Filled Cable, Riser

96 F, 50 µm multimode, extended 10G distance (OM4+)

CORNING

## Mechanical Characteristics Cable

Max. Tensile Strength, Short-Term	2700 N (600 lbf)
Max. Tensile Strength, Long-Term	600 N (135 lbf)
Weight	157 kg/km (105 lb/1000 ft)
Nominal Outer Diameter	12.7 mm (0.50 in)
Min. Bend Radius Installation	191 mm (7.5 in)
Min. Bend Radius Operation	127 mm (5 in)

## Chemical Characteristics

RoHS	Free of hazardous substances according to RoHS 2011/65/EU
------	---

## Fiber Specifications

### Optical Characteristics (cabled)

Fiber Core Diameter	50 µm
Fiber Category	OM4 Extended Distance
Fiber Code	T
Performance Option Code	91
Wavelengths	850 nm / 1300 nm
Maximum Attenuation	3.0 dB/km / 1.0 dB/km
Serial 1 Gigabit Ethernet	1100 m / 600 m
Serial 10 Gigabit Ethernet	600 m / -
Min. Overfilled Launch (OFL) Bandwidth	3500 MHz*km / 500 MHz*km
Minimum Effective Modal Bandwidth (EMB)	5350 MHz*km / -

\* Assumes 0.7 dB maximum total connector/splice loss.

\* Meets 0.75 ns optical skew when used in all Corning Plug and Play™/EDGE™ systems solutions.

- Notes:
- 1) 50 µm multimode fiber macrobend loss ≤ 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 Customer Care Representative for additional information.

CORNING

# FREEDM® Ribbon, Gel-Filled Cable, Riser

96 F, 50 µm multimode, extended 10G distance (OM4+)



## Ordering Information

Part Number	096TCF-14191-20
Product Description	FREEDM® Ribbon, Gel-Filled Cable, Riser, 96 F, 50 µm multimode, extended 10G distance (OM4)



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](http://www.corning.com/opcomm)

A complete listing of the trademarks of Corning Optical Communications is available at [www.corning.com/opcomm/trademarks](http://www.corning.com/opcomm/trademarks).

All other trademarks are the properties of their respective owners. Corning Optical Communications is ISO 9001 certified.

© 2016 Corning Optical Communications. All rights reserved.

