

FREEDM® Ribbon, Gel-Filled Cable, Riser

144 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

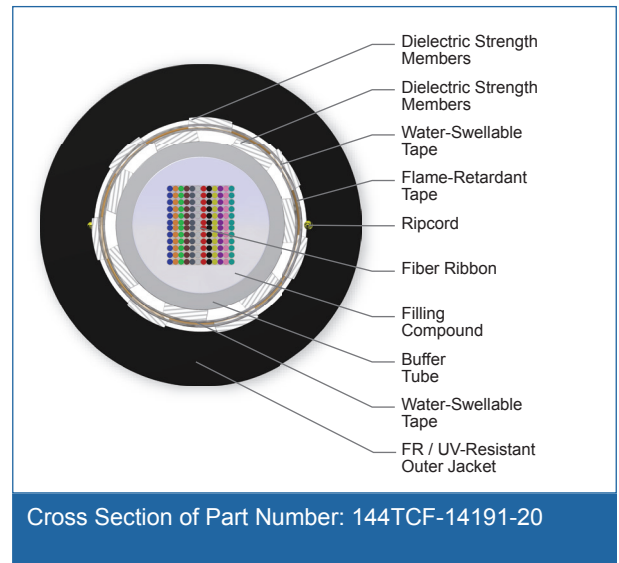
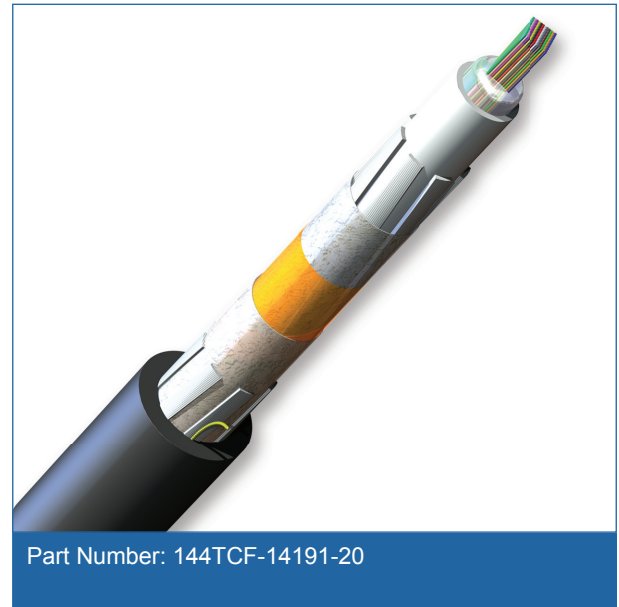
Rugged, durable and easy to strip

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



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Standards

Listings	National Electrical Code [®] (NEC [®]) OFNR, FT-4
Design and Test Criteria	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 µm 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	144
Ribbons per Tube	12
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	7.8 mm (0.31 in)
Tensile Strength Elements and/or Armoring - Layer 1	Dielectric strength members
Tape	Water-swellable
Tape, Layer 2	Flame-retardant tape
Tape, Layer 3	Water-swellable
Tensile Strength Elements and/or Armoring - Layer 2	Dielectric strength members
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 Strength, Short-Term	2700 N (600 lbf)
Max. Tensile Strength, Long-Term	600 N (135 lbf)
Weight	175 kg/km (118 lb/1000 ft)
Nominal Outer Diameter	13.6 mm (0.54 in)
Min. Bend Radius Installation	204 mm (8.0 in)
Min. Bend Radius Operation	136 mm (5.4 in)

Chemical Characteristics

RoHS	Free of hazardous substances according to RoHS 2011/65/EU
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Fiber Specifications

Optical Characteristics (cabled)

Fiber Core Diameter	50 μ m
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 μ m 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 Customer Care Representative for additional information.

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Ordering Information

Part Number	144TCF-14191-20
Product Description	FREEDM [®] Ribbon, Gel-Filled Cable, Riser, 144 F, 50 μ m 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

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