

# FREEDM® UltraRibbon™ Gel-Filled Cable, Riser

648 F, Single-mode (OS2)

CORNING

Corning FREEDM® UltraRibbon™ riser cables provide the ultimate solution for indoor/outdoor high-fiber-count applications. The smallest and lightest in the industry, these cables are designed to maximize the use of critical duct space with excellent installation results. The UV-resistant, flame-retardant jacket allows this cable to be installed outdoors or in indoor general purpose horizontal and riser applications. FREEDM UltraRibbon riser cables employ a single buffer tube containing a stack of 24- and 36-fiber ribbons that are easily separated by hand into two or three 12-fiber ribbons respectively. This cable is also available with interlocking armor for additional mechanical durability.

## 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

### 504-864 fibers in a compact design

Maximizes use of critical duct space

### Common installations

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

## Standards

### Listings

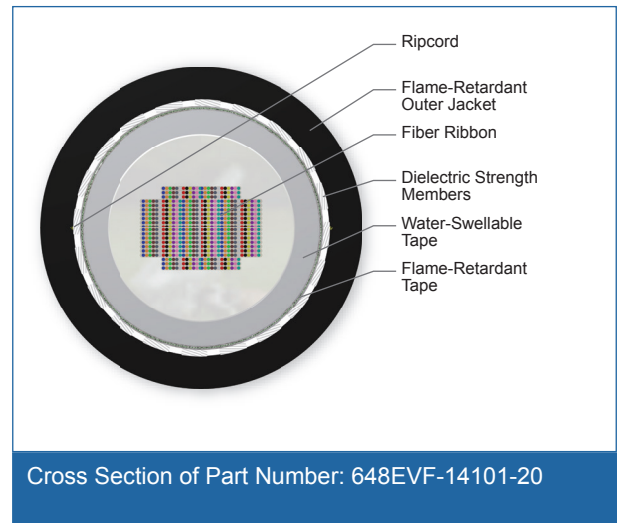
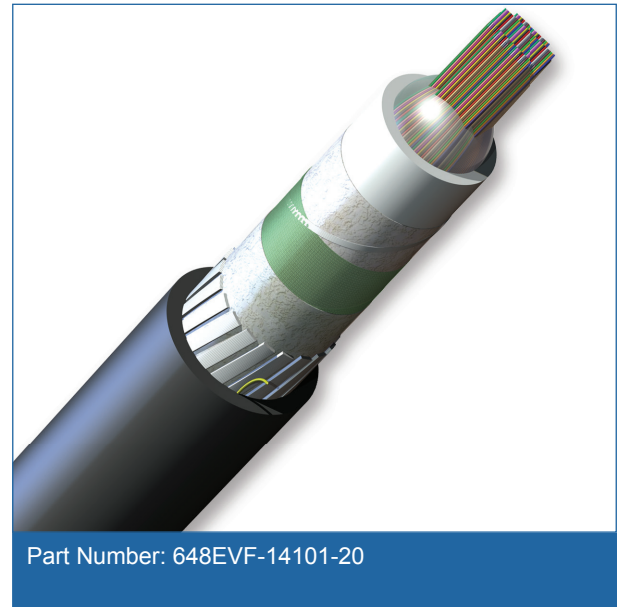
National Electrical Code® (NEC®) OFNR

### Design Criteria

CSA OFN FT-4

### Test Criteria

ANSI/ICEA S-104-696, Telcordia GR-409 and GR-20



# FREEDM® UltraRibbon™ Gel-Filled Cable, Riser

648 F, Single-mode (OS2)

CORNING

## Specifications

General Specifications	
Environment	Indoor/Outdoor
Application	Aerial, Direct Buried, Duct, General Purpose Horizontal, (Vertical Riser)
Cable Type	Ribbon
Product Type	Dielectric
Flame Rating	Riser (OFNR)
Fiber Category	Single-mode (OS2)

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	648
Ribbons per Tube	6 and 14
Fibers per Ribbon	24 and 36
Fiber Coloring	Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Rose, Aqua
Buffer Tube Color	Natural
Buffer Tube Diameter	17.9 mm (0.7 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
Number of Ripcords	2
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	890 N (200 lbf)
Nominal Outer Diameter	25.4 mm (1.0 in)

# FREEDM® UltraRibbon™ Gel-Filled Cable, Riser

648 F, Single-mode (OS2)



## Mechanical Characteristics Cable

Min. Bend Radius Installation	381 mm (15 in)
Min. Bend Radius Operation	254 mm (10 in)
Weight	569 kg/km (382 lb/1000 ft)

## Chemical Characteristics

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

## Fiber Specifications

### Optical Characteristics (cabled)

Fiber Name	Single-mode (OS2)
Fiber Category	G.652.D
Fiber Code	E
Performance Option Code	01
Wavelengths	1310 nm / 1383 nm / 1550 nm
Maximum Attenuation	0.4 dB/km / 0.4 dB/km / 0.3 dB/km

## Ordering Information

Part Number	648EVF-14101-20
Product Description	FREEDM® UltraRibbon™ Gel-Filled Cable, Riser, 648 F, Single-mode (OS2)



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.

© 2018 Corning Optical Communications. All rights reserved.

