

# FREEDM® One Tight-Buffered Cable, Riser

12 F, 50 µm multimode (OM2)

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Corning Cable Systems FREEDM® One Cables are flame-retardant, UV-resistant, indoor/outdoor cables designed for aerial, duct and direct-buried applications with no need for a transition splice when entering the building. The tight-buffered construction facilitates easier termination for low-fiber-count applications in the local area network (LAN) and eliminates need for fan-out kits. The design features TIA-598 color-coded 900 µm TBII® Buffered Fibers for easy identification, consistent stripping and direct termination. The small diameter and bend radius of the cable allow for easy installation in space-constrained areas while the innovative waterblocking technology is ideal for OSP applications. 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

### Waterblocking technology

OSP (outdoor) applications

### Small diameter and bend-radius

Easy installation in space-constrained areas

### 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

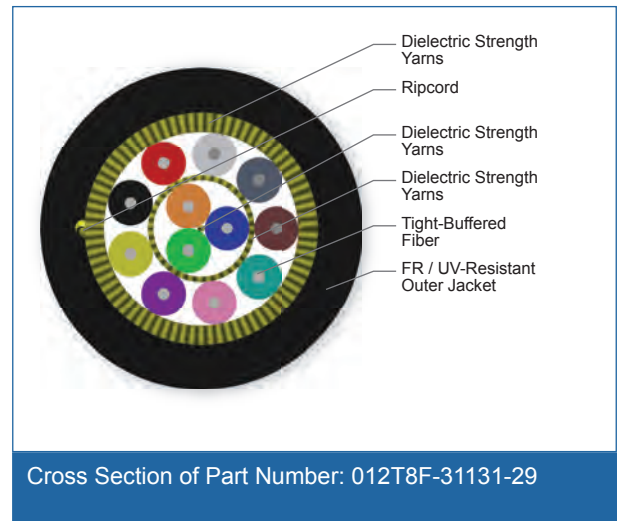
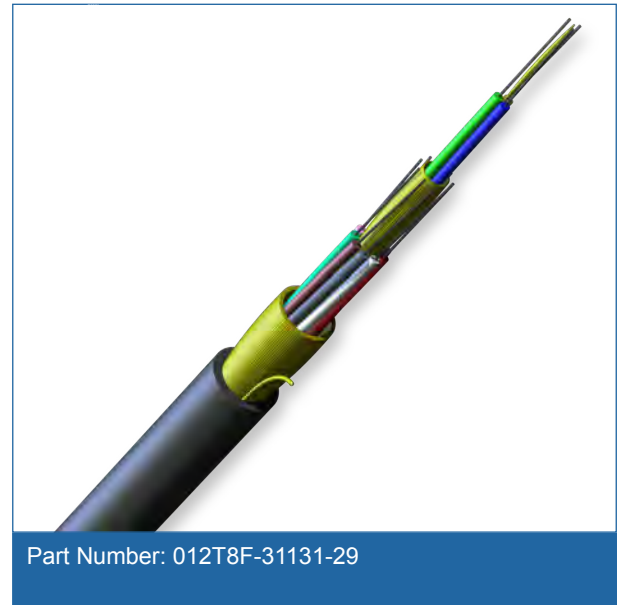
## Standards

### Approval and Listings

National Electrical Code®  
(NEC®) OFNR, FT-4

### Design and Test Criteria

ICEA S-104-696



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## Specifications

General Specifications	
Environment	Indoor/Outdoor Cables
Application	Aerial, Direct Buried, Duct, General Purpose Horizontal, (Vertical Riser)
Cable Type	Tight-Buffered
Product Type	Dielectric
Flame Rating	Riser (OFNR)
Fiber Category	50 µm MM (OM2)

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	
Central Element	Dielectric
Fiber Count	12
Tight Buffer Color	Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Rose, Aqua
Tensile Strength Elements and/or Armoring - Layer 1	Water-swellable strength members
Number of Ripcords	1
Outer Jacket Material	Flame-Retardant, UV-Resistant
Outer Jacket Color	Black

Mechanical Characteristics Cable	
Weight	36 kg/km (24 lb/1000 ft)
Nominal Outer Diameter	6.5 mm (.26 in)
Min. Bend Radius Installation	98 mm (3.8 in)
Min. Bend Radius Operation	33 mm (1.3 in)
Max. Tensile Strengths, Short-Term	675 N (150 lbf)
Max. Tensile Strengths, Long-Term	200 N (45 lbf)

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## Chemical Characteristics

RoHS	Free of hazardous substances according to RoHS 2002/95/EG
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## Fiber Specifications

### Optical Characteristics (cabled)

Fiber Type	Multimode
Fiber Core Diameter	50 µm
Fiber Category	OM2
Fiber Code	T
Performance Option Code	31
Wavelengths	850 nm / 1300 nm
Maximum Attenuation	2.8 dB/km / 1 dB/km
Min. Overfilled Launch (OFL) Bandwidth	700 MHz*km / 500 MHz*km
Minimum Effective Modal Bandwidth (EMB)	950 MHz*km / -
Serial 1 Gigabit Ethernet	750 m / 600 m
Serial 10 Gigabit Ethernet	150 m / -

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	012T8F-31131-29
Product Description	FREEDM® One Tight-Buffered Cable, Riser, 12 F, 50 µm multimode (OM2)



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