

FREEDM® Loose Tube, Gel-Free Cable, Plenum

48 F, 50 μ m multimode (OM4)

CORNING

Corning Cable Systems FREEDM® Loose Tube Gel-Free Plenum Cables are flame-retardant, indoor/outdoor, plenum-rated cables suitable for installation in interbuilding and intrabuilding backbones in aerial, duct and riser or plenum applications. The loose tube design offers mechanical ruggedness and environmental durability while the all-dielectric cable construction requires no grounding or bonding. The water-swellable yarn eliminates the need for gel-filling compound and allows more efficient and craft-friendly cable preparation. The 250 μ m color-coded fibers allow quick and easy identification during installation.

The flexible, flame-retardant outer jacket is UV-resistant and enables direct exposure to sunlight. Interlocking armor is available for special applications requiring additional mechanical durability. The plenum rating of this cable eliminates the need to transition splice when entering the building and minimizes routing restrictions once inside the building. Meeting the requirements of the National Electrical Code® (NEC®) Article 770, the cables are also OFNP and FT-6 listed.

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

Gel-free waterblocking technology

Craft-friendly cable preparation

Loose tube design

Stable performance and compatibility with all common fiber types

Color-coded fibers

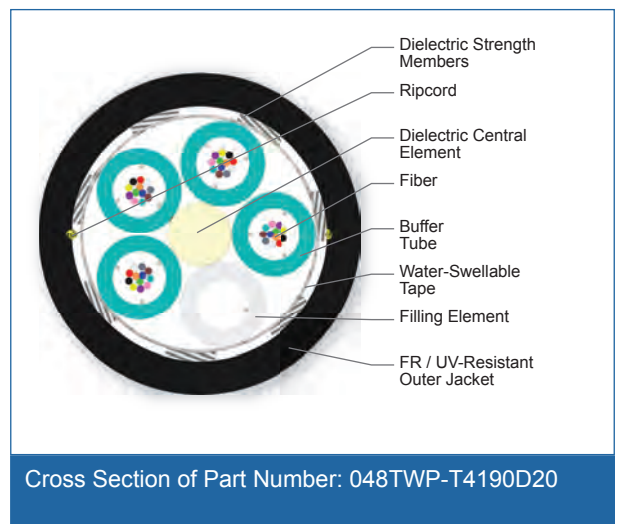
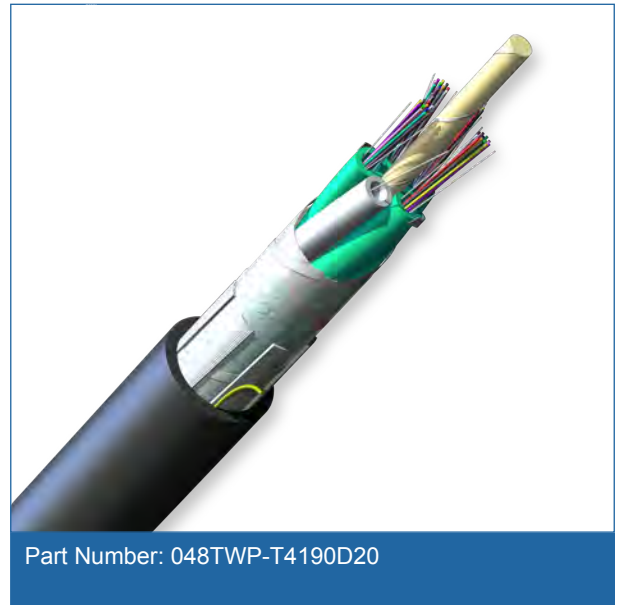
Quick and easy identification

All-dielectric construction

Requires no grounding or bonding

Meets NEC requirements

Meets burn test criteria



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Standards

Approval and Listings	National Electrical Code® (NEC®) OFNP, CSA FT-6
Design and Test Criteria	ANSI/ICEA S-104-696; NFPA 262 (for plenum, riser and general building applications)

Specifications

General Specifications	
Environment	Indoor/Outdoor Cables
Application	Aerial, Direct Buried, Duct, General Purpose Horizontal, (Vertical Riser, Plenum)
Cable Type	Loose Tube
Product Type	Dielectric
Flame Rating	Plenum (OFCP)
Fiber Category	50 µm MM (OM4)

Temperature Range	
Storage	-40 °C to 70 °C (-40 °F to 158 °F)
Installation	0 °C to 60 °C (32 °F to 140 °F)
Operation	-40 °C to 70 °C (-40 °F to 158 °F)

Cable Design	
Central Element	Dielectric
Fiber Count	48
Fiber Coloring	Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Rose, Aqua
Fibers per Tube	12
Number of Tube Positions	5
Number of Active Tubes	4
Buffer Tube Color Coding	Aqua
Number of Filling Elements	1
Tape	Water-swellaable
Tensile Strength Elements and/or Armoring - Layer 1	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

Weight	127 kg/km (85 lb/1000 ft)
Nominal Outer Diameter	11.1 mm (0.44 in)
Max. Tensile Strengths, Short-Term	2700 N (600 lbf)
Max. Tensile Strengths, Long-Term	810 N (180 lbf)
Min. Bend Radius Installation	167 mm (6.6 in)
Min. Bend Radius Operation	111 mm (4.4 in)

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	OM4
Fiber Code	T
Performance Option Code	90
Wavelengths	850 nm / 1300 nm
Maximum Attenuation	3.0 dB/km / 1.0 dB/km
Min. Overfilled Launch (OFL) Bandwidth	3500 MHz*km / 500 MHz*km
Minimum Effective Modal Bandwidth (EMB)	4700 MHz*km / -
Serial 1 Gigabit Ethernet	1100 m / 600 m
Serial 10 Gigabit Ethernet	550 m / -

* Assumes 1.0 dB maximum total connector/splice loss.

* 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 ≤ 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.

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Ordering Information

Part Number	048TWP-T4190D20
Product Description	FREEDM® Loose Tube, Gel-Free Cable, Plenum, 48 F, 50 µm multimode (OM4)



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