

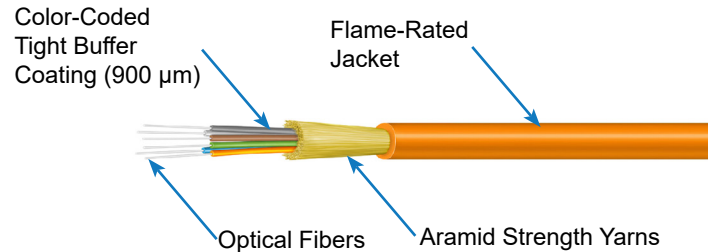
Indoor Cable

Riser or Plenum Rated

Indoor tight buffered cables assure reliable broadband performance, meet flame retardant safety codes, and support easy field termination.

This cable family packages 900µm tight buffered fibers into a single flame retardant cable. This cable design is available in both riser rated and plenum rated versions for deployment in any indoor application.

The tight buffered distribution cable supports standard installation practices and may be easily terminated using established field connectorization methods.



Features

- 900µm tight buffered fibers are designed to support rapid field termination
- Industry standard color coding provides quick, error-free fiber identification
- Single-Unit designs provide space savings and cost advantages
- Subunit construction improves organization and termination practices
- Available with bend-insensitive singlemode and multimode optical fibers
- Flexible, flame-retardant, and color coded outer jacket
- Supports all high performance networks including OM4/10 Gigabit Ethernet systems

Fiber Information

Fiber Type	Wavelength (nm)	Attenuation (dB/km)	Bandwidth (MHz km)	1 GbE Distance (meters)	10 GbE Distance (meters)
Singlemode	1310 / 1383 / 1550	0.7/0.7/0.7	N/A	N/A	N/A
Singlemode Bend Insensitive	1310 / 1383 / 1550	0.7/0.7/0.7	N/A	N/A	N/A
Multimode (62.5µm)	850/1300	3.5/1.0	200/500	300/550	33
Multimode (50µm)	850/1300	3.5/1.5	500/500	550/550	82
Multimode OM3 (50µm)	850/1300	3.5/1.5	1500/500	1000/550	300
Multimode OM4 (50µm)	850/1300	3.5/1.5	3500/500	1100/550	550

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Riser Specifications

Fiber Count	Diameter inches (mm)	Cable Weight lb/kft (kg/km)	Bend Radius Load inches (cm)	Bend Radius No Load inches (cm)	Maximum Installation Load lbs (newtons)	Maximum Operation Load lbs (newtons)
2	0.19 (4.8)	15 (22)	3.8 (9.7)	1.9 (4.9)	148 (660)	44.4 (198)
4	0.22 (5.6)	19 (28)	4.4 (11.2)	2.2 (5.6)	148 (660)	44.4 (198)
6	0.24 (6.0)	21 (31)	4.8 (12.2)	2.4 (6.1)	148 (660)	44.4 (198)
8	0.25 (6.2)	23 (34)	5.0 (12.7)	2.5 (6.4)	148 (660)	44.4 (198)
12	0.28 (7.0)	30 (45)	5.6 (14.3)	2.8 (7.2)	148 (660)	44.4 (198)
18	0.28 (7.0)	35 (51)	5.5 (14.0)	2.8 (7.0)	296 (1320)	88.8 (396)
24	0.32 (8.1)	43 (64)	6.4 (16.3)	3.2 (8.2)	296 (1320)	88.8 (396)

Plenum Specifications

Fiber Count	Diameter inches (mm)	Cable Weight lb/kft (kg/km)	Bend Radius Load inches (cm)	Bend Radius No Load inches (cm)	Maximum Installation Load lbs (newtons)	Maximum Operation Load lbs (newtons)
2	0.16 (4.2)	9 (13)	3.2 (8.2)	1.6 (4.1)	98.9 (440)	29.6 (132)
4	0.17 (4.3)	14 (21)	3.4 (8.7)	1.7 (4.4)	98.9 (440)	29.6 (132)
6	0.18 (4.7)	15 (22)	3.6 (9.2)	1.8 (4.6)	98.9 (440)	29.6 (132)
8	0.20 (5.0)	18 (27)	4.0 (10.2)	2.0 (5.1)	98.9 (440)	29.6 (132)
12	0.23 (5.8)	22 (33)	4.6 (11.7)	2.3 (5.9)	98.9 (440)	29.6 (132)
18	0.26 (6.5)	32 (48)	5.1 (13.0)	2.6 (6.5)	148 (660)	44.4 (198)
24	0.30 (7.6)	42 (62)	6.0 (15.3)	3.0 (7.7)	148 (660)	44.4 (198)

Specifications

Applications: Versatile Indoor Flame-Rated Cable provides unsurpassed performance for intrabuilding applications that require crossing floors in multi-level buildings or placement in air handling spaces

Constructions: Single-Unit (≤ 24f); Subunits (≥ 18f); Interlock Armor optional

Flame Ratings: Riser (OFNR / OFCR / FT4); Plenum (OFNP / OFCP / FT6)

Standards: ANSI/ICEA S-83-596, UL-1666, NFPA 262, CSA 22.2 No 230, Telcordia GR-409, RoHS Compliant

Temperatures: Shipping and Storage - Riser/Plenum: -40 °F to +176 °F (-40 °C to +80 °C)

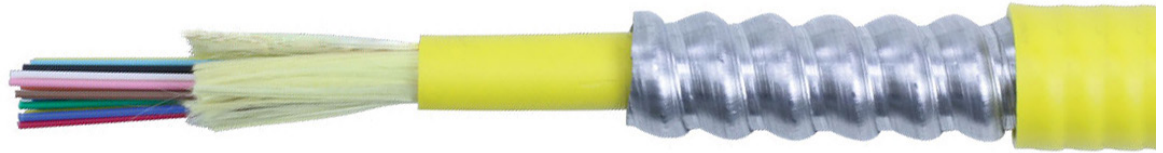
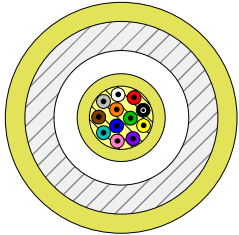
Installation - Riser: +14 °F to +140 °F (-10 °C to +60 °C), Plenum: +32 °F to +140 °F (0 °C to +60 °C)

Operation - Riser: -4 °F to +176 °F (-20 °C to +80 °C), Plenum: +32 °F to +176 °F (0 °C to +80 °C)



Indoor Cable

Interlocking Armor Plenum Rated



Overview

With a rugged, armored design delivering up to 10 to 13 times the crush resistance of standard fiber optic cable, interlocking armor fiber cables are ideal for campus & building backbones, data centers and industrial applications.

Interlocking Armor Plenum fiber cables are not governed by fill ratios because they are UL listed as cable assemblies, allowing a higher concentration of cables in an area compared to conduit. Because the cable is extremely durable and has an indoor rating, Interlocking Armor Plenum is an excellent choice for campus environments.

Interlocking Armor Plenum fiber cables also provide outstanding flexibility for modifications, alterations and changes, (MACs) as well as relocations, pathway changes or design modifications after the cable has been pulled, something conduit cannot easily accommodate.

Protecting optical fiber cables with interlocking armor provides improved network reliability, flexibility and security. It is a user-friendly, cost and space effective alternative to conduit or plenum innerduct. By installing Interlocking Armor Plenum fiber cables instead of plenum innerduct or conduit, savings can run from 25-50% in materials, and reduce costly installation time and labor costs by as much as 60%. This is a significant advantage over traditional installation methods.

Interlocking armor delivers superior crush and rodent resistance as well as security and is available in fiber counts of 6-24.

Specifications

Parameter	Value
Type	Step index singlemode or graded index multimode optical fiber with protective UV cured acrylate coating
Coating Diameter	245 ± 10 µm
Buffer Jacket	PVC - 900 ± 50 µm (0.0354 in) Outer Diameter (OD)
Configuration	12-24 tight buffer fibers are in a matrix of aramid strength members enclosed under an inner jacket. Armor and a second jacket is applied
Armor	Aluminum Interlock
Jacket Material, Inner & Outer	Plenum Grade Thermoplastic
Jacket Color	Orange for Multimode, Aqua for OM3, or Yellow for Singlemode
Cable Weight	129 kg/km (87 lb/1000 ft) (12 Fiber)
Cable Outer Diameter	13.3-15.3 mm (0.523-0.602 in) (12-24 Fiber)

Indoor Cable

Interlocking Armor Plenum Rated

Description	Singlemode	Multimode 62.5 μ m	Multimode 50 μ m	Multimode OM3 50 μ m	Multimode OM4 50 μ m
Cladding Diameter	125.0 \pm 1.0 μ m	125.0 \pm 2.0 μ m	125.0 \pm 1.0 μ m	125.0 \pm 1.0 μ m	125.0 \pm 1.0 μ m
Numerical Aperture	0.12	0.275 \pm 0.015	0.200 \pm 0.015	0.200 \pm 0.015	0.200 \pm 0.015
Maximum Attenuation @ 850/1300 nm (dB/km)	N/A	3.5/1.0	3.5/1.5	3.0/1.0	3.0/1.0
Minimum Bandwidth @ 850/1300 nm (MHz•km)	N/A	200/500	500/500	2000/500	4700/500
100 Mb Transmission distance @ 850/1300 nm (m)	> 5000 @ 1310 nm	300/2000	300/2000	300/2000	300/2000
1 GbE Transmission distance @ 850/1300 nm (m)	> 5000 @ 1310 nm	300/600	550/550	1000/600	1040/600
10 GbE Transmission distance @ 850/1300 nm (m)	> 10,000 @ 1310 nm	36/300	N/A	300/300	550/300
40/100 GbE Transmission distance @ 850 nm (m)	10k/40k @ 1310 nm	N/A	N/A	100	150

Ratings

Flame Listing: Engineering Testing Laboratories (ETL) or Underwriters Laboratories (UL) Type OFNP (Nonconductive Optical Fiber Plenum Cable) and c(ETL or UL) OFN-FT6 75C

Operating Temperature: -20°C to +75°C

Storage Temperature: -40°C to +85°C

Maximum Loading: Installation - 1335 N (300 lb) & Long Term - 400 N (90 lb).

Minimum Bend Radius: Installation 19.9 cm (7.8 in) & Long Term 13.3 cm (5.2 in).

Compression (crush) Strength: 440 N/cm per TIA/EIA FOTP-41.

Impact: 2 impacts at 5.88 N-m per TIA/EIA FOTP-25.

Cable Flex: 25 cycles per TIA/EIA FOTP-104.

Proof Test: 0.7 GPa (100 kpsi) per TIA/EIA FOTP-31

Applications

IEEE 802.3ae 10GBASE-X (10 Gb/s)
 IEEE 802.3 1000BASE-SX/LX (1 Gb/s)
 Fiber Channel FC-PH (1.062 Gb/s)
 IEEE 802.3 10BASE-F (10 Mb/s)
 IEEE 802.3 FOIRL (10 Mb/s)
 FDDI (100 Mb/s)
 ATM (155 Mb/s, 622 Mb/s, 1.2/2.4 Gb/s)

Standards

ISO/IEC 11801
 EN 50173
 Telcordia GR-409 & GR-20
 ICEA S-104-696
 ANSI/ICEA S-87-640
 ETL, UL
 OFNR/FT4, OFNP/FT6
 ANSI/TIA/EIA-568-B.3