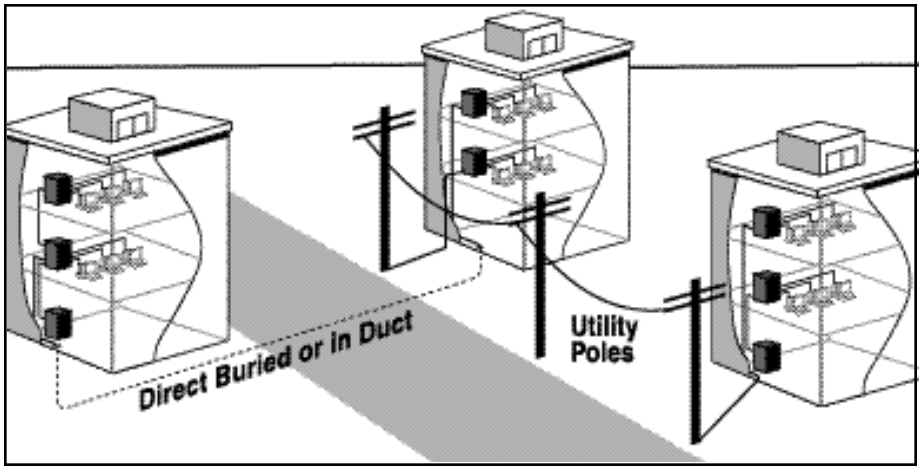
Indoor/Outdoor Cables



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The concept, production, and application of indoor/outdoor fiber optic cables has been a big part of General Cable's product line for over a decade. As a leader in easy-to-use, field-friendly fiber optic cables, the indoor/outdoor product line has been especially well known to users who appreciate the features it provides.

Applications: Whether primarily for indoor or outdoor use, General Cable has an impressive choice of products that have the ability to route from either a plenum or riser building space to an outdoor run. This eliminates the costly and space-consuming transition point at the building entrance and improves the system loss budget. These cables are most efficient when used to directly connect equipment rooms (on any floor) in different buildings or to connect a manhole location to an equipment room.

Range of Products: Indoor/Outdoor fiber optic cables include loose tube (gel-filled) and tight buffer (900µm) designs. These are available in a variety of configurations and jacket types to cover riser and plenum requirements for indoor cable and the ability to be run in duct, direct buried, or aerial/lashed in the outside plant. The following catalog pages provide information on proper interbuilding and intra-building applications.

Features: These products reduce the system cost by bypassing splice points, simplifying cable handling, and gaining flexibility with the choice of building entrances. All cables meet appropriate NEC requirements and are listed with ETL or UL. Tight buffer designs allow direct termination of fibers with industry standard connectors and techniques. Loose tube designs provide more fiber protection in harsh outdoor environments and are readily spliced to existing outside plant cables. Most indoor/outdoor fiber optic cables utilize Dry Water Block technology in the cable core to protect the fibers and provide fast, clean fiber preparation.

As with all General Cable fiber optic cables, splitter kits are available to reinforce and assist in preparing the fibers for termination.

Universal Plenum Cable

Type OFNP, CSA FT-6

Product Construction

Fiber:
- 2 - 144 fibers
- Loose tube gel-filled
- Color coding per TIA/EIA 598A

Central Strength Member:
- Epoxy/Glass Rod

Overall Strength Member:
- Aramid fiber yarn or fiberglass

Jacket:
- Black UV, moisture-resistant, and flame-retardant materials
- Sequential meter markings

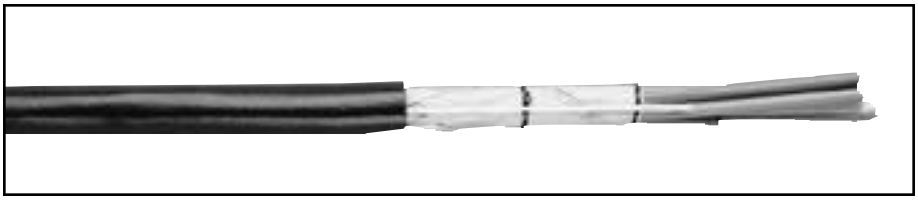
Features:
- Loose tube plenum design provides maximum cable route flexibility
- Loose tube gel-filled for moisture protection
- Enhanced temperature performance
- Excellent chemical resistant cable for harsh industrial environments

Performance:
- Temperature:
  Storage -40˚C (-40˚F) to +70˚C (+158˚F)
  Operating -20˚C (-4˚F) to +70˚C (+158˚F)
- Minimum Bend Radius:
  20 X OD - Installation
  10 X OD - In-Service
- Maximum Crush Resistance:
  150 lbs/in (263 N/cm)

Applications:
- Interbuilding and intrabuilding voice or data communication backbones
- Install in ducts, underground conduits, or aerial/lashed
- ETL Listed Type OFNP for installation in plenum airways and horizontal applications when installed in accordance with NEC article 770-51 (a) and 770-53 (a)

Compliances:
- ETL and c(ETL) Listed Type OFNP
- CSA FT-6

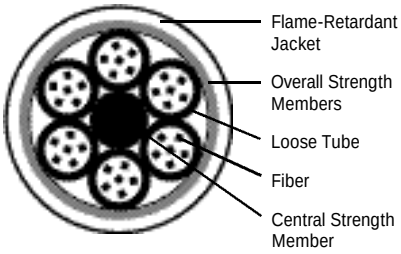
Accessories:
- SPK splitter kits are suitable for Universal Plenum Cables



CATALOG NUMBER	FIBER COUNT	# OF LOOSE TUBES	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
							INSTALLATION		IN-SERVICE	
			in	(mm)	lbs/1000'	(kg/km)	lbs	(N)	lbs	(N)
XX0023M1D	2	2	.313	(7.9)	29	(43)	300	(1334)	100	(445)
XX0044M1D	4	1	.313	(7.9)	33	(48)	300	(1334)	100	(445)
XX0064M1D	6	1	.313	(7.9)	33	(48)	300	(1334)	100	(445)
XX0084M1D	8	2	.313	(7.9)	33	(48)	300	(1334)	100	(445)
XX0124M1D	12	2	.313	(7.9)	33	(48)	300	(1334)	100	(445)
XX0184M1D	18	3	.313	(7.9)	50	(74)	300	(1334)	100	(445)
XX0244M1D	24	4	.313	(7.9)	50	(74)	300	(1334)	100	(445)
XX0304M1D	30	5	.313	(7.9)	50	(74)	300	(1334)	100	(445)
XX0364M1D	36	6	.340	(8.6)	59	(88)	300	(1334)	100	(445)
XX0484M1D	48	4	.375	(9.5)	70	(104)	300	(1334)	100	(445)
XX0604M1D	60	5	.375	(9.5)	69	(103)	300	(1334)	100	(445)
XX0724M1D	72	6	.410	(10.4)	84	(125)	300	(1334)	100	(445)
XX0964M1D	96	8	.482	(12.2)	120	(179)	300	(1334)	100	(445)
XX1444H1D*	144	12	.657	(16.7)	197	(293)	300	(1334)	100	(445)

XX Denotes fiber type
* Double Jacket Design

Typical Cross-Section



RECOMMENDED FIBER TYPES

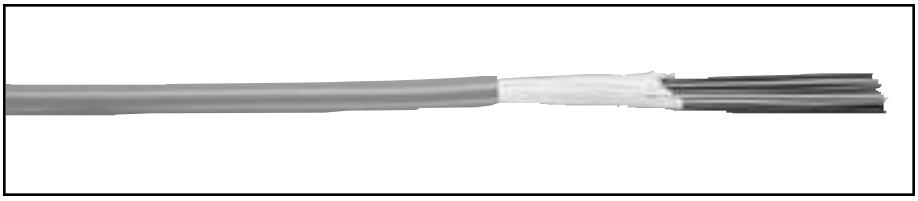
DESCRIPTION	FIBER TYPE	DIMENSIONS (µm)			MIN. BANDWIDTH (Mhz•km)		MAX. ATTENUATION (dB/km)	
		CORE	CLAD	COATING	850nm	1300nm	850/1300nm	1310/1550nm
Super/FDDI	CT	62.5	125	245	160	500	3.5/1.0	-
G300	CG	62.5	125	245	220	500	3.5/1.0	-
Super/50	BG	50.0	125	245	500	500	3.0/1.0	-
Super	AP	8.3	125	245	-	-	-	0.5/0.4

Note: Additional fiber types available. Reference the Fiber Specification and Selection on page 2.

General Cable

Advantage Riser Cable

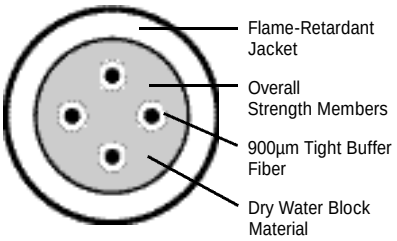
Type OFNR, CSA FT-4



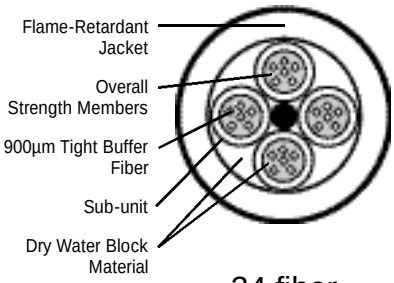
CATALOG NUMBER	FIBER COUNT	# OF SUB-UNITS	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
							INSTALLATION		IN-SERVICE	
			in	(mm)	lbs/1000'	(kg/km)	lbs	(N)	lbs	(N)
XX0021ANR	2	-	.188	(4.8)	13.7	(20.4)	300	(1334)	90	(400)
XX0041ANR	4	-	.201	(5.1)	15.9	(23.7)	320	(1423)	96	(427)
XX0061ANR	6	-	.215	(5.5)	18.1	(26.9)	320	(1423)	96	(427)
XX0081ANR	8	-	.223	(5.7)	19.8	(29.5)	320	(1423)	96	(427)
XX0101ANR	10	-	.240	(6.1)	22.7	(33.8)	400	(1780)	120	(534)
XX0121ANR	12	-	.245	(6.2)	24.2	(36.0)	400	(1780)	120	(534)
XX0181A1R	18	3	.471	(12.0)	79.1	(117.7)	750	(3336)	250	(1112)
XX0241A1R	24	4	.529	(13.4)	86.2	(128.3)	1000	(4448)	300	(1334)
XX0361A1R	36	6	.664	(16.9)	147.3	(219.2)	1300	(5783)	390	(1735)
XX0481A1R	48	4	.639	(16.2)	136.9	(203.7)	1300	(5783)	390	(1735)
XX0601A1R	60	5	.695	(17.6)	167.7	(249.5)	1500	(6672)	450	(2002)
XX0721A1R	72	6	.770	(19.6)	207.2	(308.3)	1900	(8452)	570	(2535)

XX Denotes fiber type

Typical Cross-Section



4 fiber



24 fiber

Product Construction

Fiber:
- 2 - 72 fibers
- 900µm tight buffer
- Color coding per TIA/EIA 598A

Central Strength Member:
- Epoxy/Glass Rod (above 12 fibers)

Overall Strength Member:
- Aramid fiber yarn

Jacket:
- Flame-retardant polyvinyl chloride (PVC)
- Sequential meter markings
- Orange Jacket - Multimode fibers
- Yellow Jacket - Singlemode fibers

Features:
- Dry Water Block cable core for fiber protection
- Improved temperature performance
- Direct termination of connectors on tight buffer

Performance:
- Temperature:
  Storage -40˚C (-40˚F) to +70˚C (+158˚F)
  Operating -40˚C (-40˚F) to +70˚C (+158˚F)
- Minimum Bend Radius:
  20 X OD - Installation
  10 X OD - In-Service
- Maximum Crush Resistance:
  850 lbs/in (1485 N/cm)
- Maximum Vertical Rise – 1,640 ft (500 m)

Applications:
- Intrabuilding and Interbuilding voice or data communication backbones
- Outdoor use in duct and underground conduits
- UL Listed Type OFNR for installation in vertical riser and general horizontal applications when installed in accordance with NEC article 770-51 (b) and 770-53 (b)

Compliances:
- UL and c(UL) Listed Type OFNR
- CSA FT-4
- ICEA S-104-696

Accessories:
- BOKP Breakout kits are suitable for Advantage Riser Cables

RECOMMENDED FIBER TYPES

DESCRIPTION	FIBER TYPE	DIMENSIONS (µm)			MIN. BANDWIDTH (Mhz•km)		MAX. ATTENUATION (dB/km)	
		CORE	CLAD	COATING	850nm	1300nm	850/1300nm	1310/1550nm
G300	CG	62.5	125	245	220	500	3.5/1.0	-
Super/50	BG	50.0	125	245	500	500	3.0/1.0	-
Super	AP	8.3	125	245	-	-	-	0.8/0.6

Note: Additional fiber types available. Reference the Fiber Specification and Selection on page 2.

c UL us LISTED

UL Listed Type OFNR

General Cable

Central Tube Riser Cable

Type OFNR, CSA FT-4

Product Construction

Fiber:

- 2 - 12 fibers
- Loose tube gel-filled
- Color coding per TIA/EIA 598A

Overall Strength Member:

- Aramid fiber yarn or fiberglass

Jacket:

- Black UV, moisture-resistant and flame-retardant materials
- Sequential meter markings

Features:

- Simple, flexible design allows for easier installations
- Riser rated for indoor applications
- UV and moisture-resistant for outdoor applications
- Loose tube gel-filled for maximum fiber protection
- Dry Water Block cable core for ease of handling

Performance:

- Temperature:
  Storage -40˚C (-40˚F) to +70˚C (+158˚F)
  Operating -20˚C (-4˚F) to +70˚C (+158˚F)
- Minimum Bend Radius:
  20 X OD - Installation
  10 X OD - In-Service
- Maximum Crush Resistance:
  150 lbs/in (263 N/cm)
- Maximum Vertical Rise – 1,200 ft (366 m)

Applications:

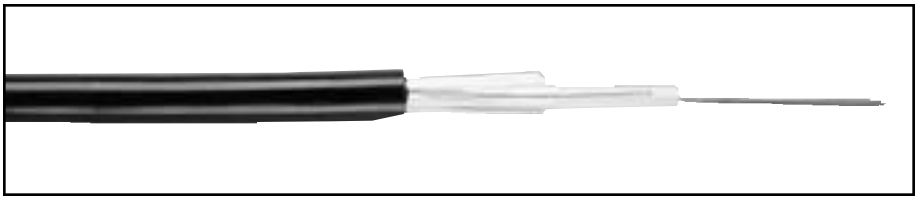
- Intrabuilding voice or data communication backbones
- Installed in ducts, underground conduit or aerial/lashed
- ETL Listed Type OFNR for installation in vertical riser and general horizontal applications when installed in accordance with NEC article 770-51 (b) and 770-53 (b)

Compliances:

- ETL and c(ETL) Listed Type OFNR
- CSA FT-4

Accessories:

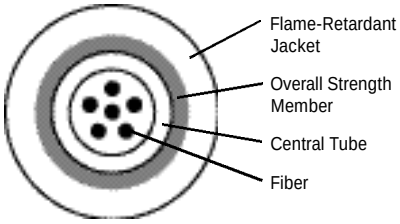
- SPK splitter kits are suitable for Central Tube Riser Cables



CATALOG NUMBER	FIBER COUNT	# OF LOOSE TUBES	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
							INSTALLATION		IN-SERVICE	
			in	(mm)	lbs/1000'	(kg/km)	lbs	(N)	lbs	(N)
XX0024UNM	2	1	.340	(8.6)	53.0	(78.8)	300	(1334)	100	(445)
XX0044UNM	4	1	.340	(8.6)	53.0	(78.8)	300	(1334)	100	(445)
XX0064UNM	6	1	.340	(8.6)	53.0	(78.8)	300	(1334)	100	(445)
XX0084UNM	8	1	.340	(8.6)	53.0	(78.8)	300	(1334)	100	(445)
XX0124UNM	12	1	.340	(8.6)	53.0	(78.8)	300	(1334)	100	(445)

XX Denotes fiber type

Typical Cross-Section



RECOMMENDED FIBER TYPES

DESCRIPTION	FIBER TYPE	DIMENSIONS (µm)			MIN. BANDWIDTH (Mhz•km)		MAX. ATTENUATION (dB/km)	
		CORE	CLAD	COATING	850nm	1300nm	850/1300nm	1310/1550nm
Super/FDDI	CT	62.5	125	245	160	500	3.5/1.0	-
G300	CG	62.5	125	245	220	500	3.5/1.0	-
Super/50	BG	50.0	125	245	500	500	3.0/1.0	-
Super	AP	8.3	125	245	-	-	-	0.5/0.4

Note: Additional fiber types available. Reference the Fiber Specification and Selection on page 2.

General Cable

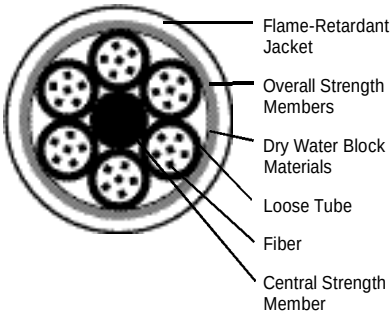
Standard Riser Cable

Type OFNR, CSA FT-4

CATALOG NUMBER	FIBER COUNT	# OF LOOSE TUBES	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
							INSTALLATION		IN-SERVICE	
			in	(mm)	lbs/1000'	(kg/km)	lbs	(N)	lbs	(N)
XX0023M1M	2	2	.356	(9.0)	53.5	(79.5)	600	(2670)	135	(600)
XX0044M1M	4	1	.356	(9.0)	53.5	(79.5)	600	(2670)	135	(600)
XX0064M1M	6	1	.356	(9.0)	53.5	(79.5)	600	(2670)	135	(600)
XX0084M1M	8	2	.356	(9.0)	53.5	(79.5)	600	(2670)	135	(600)
XX0124M1M	12	2	.356	(9.0)	53.5	(79.5)	600	(2670)	135	(600)
XX0184M1M	18	3	.356	(9.0)	53.5	(79.5)	600	(2670)	135	(600)
XX0244M1M	24	4	.356	(9.0)	53.5	(79.5)	600	(2670)	135	(600)
XX0304M1M	30	5	.356	(9.0)	53.5	(79.5)	600	(2670)	135	(600)
XX0364M1M	36	6	.383	(9.7)	61.6	(91.7)	600	(2670)	135	(600)
XX0484M1M	48	4	.418	(10.6)	70.2	(104.5)	600	(2670)	135	(600)
XX0604M1M	60	5	.418	(10.6)	69.6	(103.6)	600	(2670)	135	(600)
XX0724M1M	72	6	.453	(11.5)	83.9	(124.8)	600	(2670)	135	(600)

XX Denotes fiber type

Typical Cross-Section



Product Construction

Fiber:
- 2 - 72 fibers
- Loose tube gel-filled
- Color coding per TIA/EIA 598A

Central Strength Member:
- Epoxy/Glass Rod

Overall Strength Member:
- Aramid fiber yarn

Jacket:
- Black UV, moisture-resistant, and flame-retardant polymer material
- Sequential meter markings

Features:
- Dry Water Block cable core for ease of handling
- Loose tube gel-filled for maximum fiber protection
- Riser rated for indoor applications

Performance:
- Temperature:
  Storage -40˚C (-40˚F) to +70˚C (+158˚F)
  Operating -40˚C (-40˚F) to +70˚C (+158˚F)
- Minimum Bend Radius:
  20 X OD - Installation
  10 X OD - In-Service
- Maximum Crush Resistance:
  150 lbs/in (263 N/cm)
- Maximum Vertical Rise – 1,640 ft (500 m)

Applications:
- Interbuilding and intrabuilding voice or data communication backbones
- Installed in ducts, underground conduits, or aerial/lashed
- ETL Listed Type OFNR for installation in vertical riser and general horizontal applications when installed in accordance with NEC article 770-51 (b) and 770-53 (b)

Compliances:
- ETL and c(ETL) Listed Type OFNR
- CSA FT-4

Accessories:
- SPK splitter kits are suitable for Standard Riser Cables

RECOMMENDED FIBER TYPES

DESCRIPTION	FIBER TYPE	DIMENSIONS (µm)			MIN. BANDWIDTH (Mhz•km)		MAX. ATTENUATION (dB/km)	
		CORE	CLAD	COATING	850nm	1300nm	850/1300nm	1310/1550nm
Super/FDDI	CT	62.5	125	245	160	500	3.5/1.0	-
G300	CG	62.5	125	245	220	500	3.5/1.0	-
Super/50	BG	50.0	125	245	500	500	3.0/1.0	-
Super	AP	8.3	125	245	-	-	-	0.5/0.4

Note: Additional fiber types available. Reference the Fiber Specification and Selection on page 2.

General Cable

Heavy Duty Riser Cable

Type OFNR, CSA FT-4

Product Construction

Fiber:
- 2 - 216 fibers
- Loose tube gel-filled
- Color coding per TIA/EIA 598A

Central Strength Member:
- Epoxy/Glass Rod

Overall Strength Member:
- Aramid fiber yarn or fiberglass

Inner Jacket:
- Black UV, moisture-resistant and flame-retardant material

Outer Jacket:
- Black UV, moisture-resistant and flame-retardant material
- Sequential meter markings

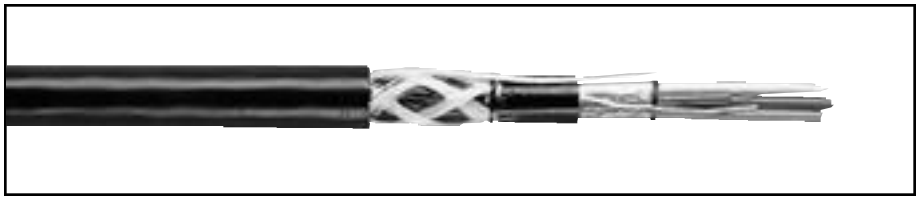
Features:
- Excellent chemical resistance
- Dual jacketed for harsh environments
- Riser rated for indoor applications
- UV and moisture-resistant for outdoor applications

Performance:
- Temperature:
  Storage -40˚C (-40˚F) to +70˚C (+158˚F)
  Operating -40˚C (-40˚F) to +70˚C (+158˚F)
- Minimum Bend Radius:
  20 X OD - Installation
  10 X OD - In-Service
- Maximum Crush Resistance:
  500 lbs/in (875 N/cm)
- Maximum Vertical Rise – 1,640 ft (500 m)

Applications:
- Interbuilding and intrabuilding voice or data communication backbones
- Installed in ducts, aerial/lashed or direct burial
- UL Listed Type OFNR for installation in vertical riser and general horizontal applications when installed in accordance with NEC article 770-51 (b) and 770-53 (b)

Compliances:
- UL and c(UL) Listed Type OFNR
- CSA FT-4

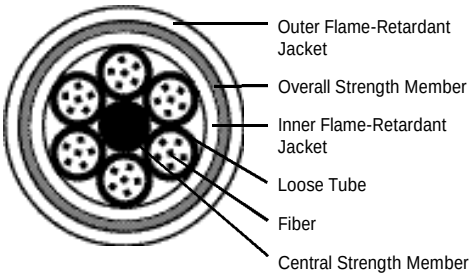
Accessories:
- SPK splitter kits are suitable for Heavy Duty Riser Cables



CATALOG NUMBER	FIBER COUNT	# OF LOOSE TUBES	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
							INSTALLATION		IN-SERVICE	
			in	(mm)	lbs/1000'	(kg/km)	lbs	(N)	lbs	(N)
XX0023H1M	2	2	.411	(10.4)	77.5	(115.4)	600	(2670)	135	(600)
XX0044H1M	4	1	.411	(10.4)	77.5	(115.4)	600	(2670)	135	(600)
XX0064H1M	6	1	.411	(10.4)	77.5	(115.4)	600	(2670)	135	(600)
XX0084H1M	8	2	.411	(10.4)	77.5	(115.4)	600	(2670)	135	(600)
XX0124H1M	12	2	.411	(10.4)	77.5	(115.4)	600	(2670)	135	(600)
XX0184H1M	18	3	.411	(10.4)	77.5	(115.4)	600	(2670)	135	(600)
XX0244H1M	24	4	.411	(10.4)	77.5	(115.4)	600	(2670)	135	(600)
XX0364H1M	36	6	.438	(61.1)	88.0	(131.0)	600	(2670)	135	(600)
XX0484H1M	48	4	.473	(12.0)	100.7	(149.9)	600	(2670)	135	(600)
XX0604H1M	60	5	.473	(12.0)	100.7	(149.9)	600	(2670)	135	(600)
XX0724H1M	72	6	.508	(12.9)	116.5	(173.3)	600	(2670)	135	(600)
XX0964H1M	96	8	.580	(14.7)	154.3	(229.7)	600	(2670)	135	(600)
XX1204H1M	120	10	.681	(17.3)	202.1	(300.8)	600	(2670)	135	(600)
XX1444H1M	144	12	.681	(17.3)	202.1	(300.8)	600	(2670)	135	(600)
XX1924H1M	192	16	.732	(18.6)	232.9	(346.6)	600	(2670)	135	(600)
XX2164H1M	216	18	.732	(18.6)	232.9	(346.6)	600	(2670)	135	(600)

XX Denotes fiber type

Typical Cross-Section



RECOMMENDED FIBER TYPES

DESCRIPTION	FIBER TYPE	DIMENSIONS (µm)			MIN. BANDWIDTH (Mhz•km)		MAX. ATTENUATION (dB/km)	
		CORE	CLAD	COATING	850nm	1300nm	850/1300nm	1310/1550nm
Super/FDDI	CT	62.5	125	245	160	500	3.5/1.0	-
G300	CG	62.5	125	245	220	500	3.5/1.0	-
Super/50	BG	50.0	125	245	500	500	3.0/1.0	-
Super	AP	8.3	125	245	-	-	-	0.5/0.4

Note: Additional fiber types available. Reference the Fiber Specification and Selection on page 2.

General Cable

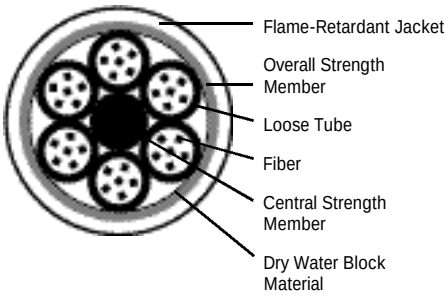
Standard Low-Smoke, Zero-Halogen (LSZH) Cable

Type OFN/LS

CATALOG NUMBER	FIBER COUNT	# OF LOOSE TUBES	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
							INSTALLATION		IN-SERVICE	
			in	(mm)	lbs/1000'	(kg/km)	lbs	(N)	lbs	(N)
XX0023M1Z	2	2	.376	(9.5)	63.3	(94.2)	600	(2670)	135	(600)
XX0044M1Z	4	1	.376	(9.5)	64.7	(96.3)	600	(2670)	135	(600)
XX0064M1Z	6	1	.376	(9.5)	64.8	(96.5)	600	(2670)	135	(600)
XX0084M1Z	8	2	.376	(9.5)	63.6	(94.6)	600	(2670)	135	(600)
XX0124M1Z	12	2	.376	(9.5)	63.8	(94.9)	600	(2670)	135	(600)
XX0184M1Z	18	3	.376	(9.5)	62.7	(93.4)	600	(2670)	135	(600)
XX0244M1Z	24	4	.376	(9.5)	61.7	(91.8)	600	(2670)	135	(600)
XX0364M1Z	36	6	.403	(10.2)	69.8	(103.8)	600	(2670)	135	(600)
XX0484M1Z	48	4	.438	(11.1)	80.3	(119.5)	600	(2670)	135	(600)
XX0604M1Z	60	5	.438	(11.1)	78.5	(116.9)	600	(2670)	135	(600)
XX0724M1Z	72	6	.473	(12.0)	93.3	(138.8)	600	(2670)	135	(600)
XX0964M1Z	96	8	.545	(13.8)	121.4	(180.7)	600	(2670)	135	(600)
XX1204M1Z	120	10	.657	(16.7)	163.4	(243.1)	600	(2670)	135	(600)
XX1444M1Z	144	12	.657	(16.7)	159.8	(237.8)	600	(2670)	135	(600)

XX Denotes fiber type

Typical Cross-Section



Product Construction

Fiber:
- 2 - 144 fibers
- Loose tube gel-filled
- Color coding per TIA/EIA 598A

Central Strength Member:
- Epoxy/Glass Rod

Overall Strength Member:
- Aramid fiber yarn

Jacket:
- Black UV, moisture-resistant, and flame-retardant polymer
- Sequential meter markings

Features:
- Dry Water Block cable core for ease of handling
- Loose tube gel-filled for maximum fiber protection
- LSZH jacket for fire protection

Performance:
- Temperature:
  Storage -40˚C (-40˚F) to +70˚C (+158˚F)
  Operating -40˚C (-40˚F) to +70˚C (+158˚F)
- Minimum Bend Radius:
  20 X OD - Installation
  10 X OD - In-Service
- Maximum Crush Resistance:
  150 lbs/in (263 N/cm)
- Maximum Vertical Rise – 1,640 ft (500 m)

Applications:
- Interbuilding and intrabuilding voice or data communication backbones
- Installed in ducts, underground conduits, or aerial/lashed
- UL Listed Type OFN/LS for installation in cable trays and general horizontal applications when installed in accordance with NEC article 770-51 (d) and 770-53 (c)

Compliances:
- UL Listed Type OFN/LS
- IEEE-383

Accessories:
- SPK splitter kits are suitable for Standard Low-Smoke, Zero-Halogen (LSZH) cables

RECOMMENDED FIBER TYPES

DESCRIPTION	FIBER TYPE	DIMENSIONS (µm)			MIN. BANDWIDTH (Mhz•km)		MAX. ATTENUATION (dB/km)	
		CORE	CLAD	COATING	850nm	1300nm	850/1300nm	1310/1550nm
Super/FDDI	CT	62.5	125	245	160	500	3.5/1.0	-
G300	CG	62.5	125	245	220	500	3.5/1.0	-
Super/50	BG	50.0	125	245	500	500	3.0/1.0	-
Super	AP	8.3	125	245	-	-	-	0.5/0.4

Note: Additional fiber types available. Reference the Fiber Specification and Selection on page 2.

c UL us LISTED

UL Listed Type OFN/LS

General Cable