NEXTGEN® BRAND

Fiber Optic Cable

FOR VOICE AND DATA TRANSMISSION

General Cable

NEXTGEN BRAND

Fiber Optic Cable Products

This catalog contains in-depth information on the General Cable line of fiber optic cable for voice, video and data transmission.

The product and technical sections feature the latest information on fiber optic cable products, from applications and construction to detailed technical and specific data.

Our products are readily available through our network of authorized stocking distributors and distribution centers.

We are dedicated to customer service and satisfaction – so call our team of professionally trained sales personnel to meet your application needs.

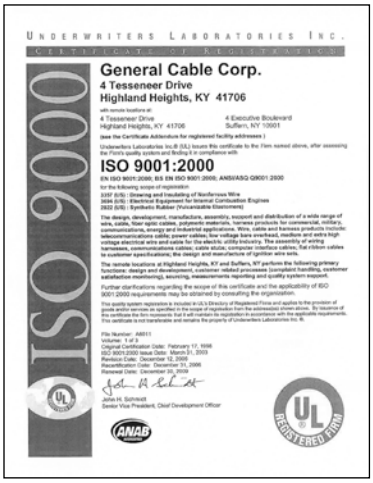
Fiber Optic Cable for the 21st Century

General Cable

Delivering Solutions

THAT KEEP YOU CONNECTED

QUALITY


UNDERWRITERS LABORATORIES INC.
CERTIFICATE OF REGISTRATION
General Cable Corp.
4 Tesseneer Drive
Highland Heights, KY 41706
ISO 9001:2000
ISO 9000

General Cable is committed to developing, producing, and marketing products that exceed performance, quality, value and safety requirements of our customers. General Cable's goal and objectives reflect this commitment, whether it's through our focus on customer service, continuous improvement and manufacturing excellence demonstrated by our TL9000-registered business management system, the independent third-party certification of our products, or the development of new and innovative products. Our aim is to deliver superior performance from all of General Cable's processes and to strive for world-class quality throughout our operations.

INTERNATIONAL ISO 9002 CERTIFICATION

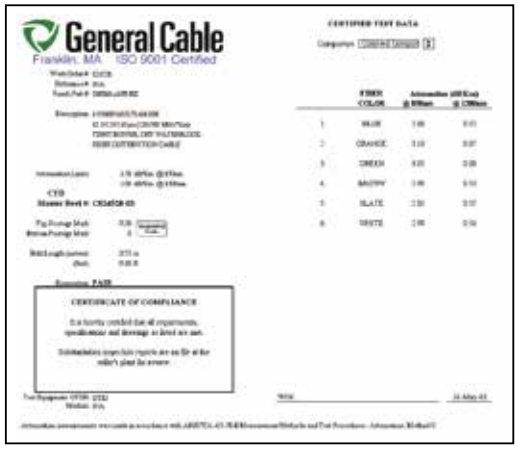
Intertek

RUS Compliant

TIA 568 C.3

RoHS Compliant Directive 2011/65/EU

LISTED


General Cable
Franklin, MA ISO 9001 Certified
CERTIFICATE OF COMPLIANCE

CUSTOMER SERVICE

General Cable is dedicated to customer service and satisfaction. Call our team of professionally trained sales associates at

800-424-5666

with any questions to meet your application needs, or visit our website at www.generalcable.com.

GENERALCABLE.COM

What's New?

NEXTGEN® BRAND BLOWABLE FIBER BUNDLES & INSTALLATION EQUIPMENT

General Cable has added Blown Optical Fiber Bundles to its product portfolio. Blown Optical Fiber Bundles are engineered for long, straight cable pathways. This is the perfect complement to our Blolite® Blown Optical Fiber Solution, which excels in premise enterprise applications containing many difficult turns and bends.

In support of this exciting new product, General Cable has also introduced a revolutionary new installation machine capable of blowing both Blolite Blown Fiber or NextGen® blowable fiber bundles. This unique piece of equipment gives the installer the ability to use the blown optical fiber product best suited to the application.

NEXTGEN® 17 FREE®

General Cable offers halogen-free NextGen® Brand ETL-Listed Riser (CMR) cable. By removing halogens, the cable has reduced toxicity, resulting in a truly "green" cable that is less toxic and more environmentally friendly. Look for this product on page 23 in the catalog and visit us online at www.generalcable.com for a complete line of products to meet your green cabling needs.

U.S. GREEN BUILDING COUNCIL

U.S. Green Building Council (USGBC) Membership

General Cable has accelerated its environmental commitment, addressing its green alternative approach by identifying greener opportunities and promoting green cabling solutions wherever feasible. This includes promoting our existing green products, partnering with key customers in their green endeavors, identifying and providing resources for green product gaps, and participating as members in collaborative ventures such as the Green Suppliers Network (GSN) and the United States Green Building Council (USGBC).

One Company
Connecting The World

POWERFUL PRESENCE · PRODUCTS PERFORMANCE · PEOPLE

General Cable has been a wire and cable innovator for over 170 years, always dedicated to connecting and powering people's lives. Today, with approximately 14,000 employees and approaching $6 billion in revenues, we are one of the largest wire and cable manufacturers in the world.

Our company serves customers through a network of 38 manufacturing facilities in our core markets and has worldwide sales representation and distribution. We are dedicated to the production of high-quality aluminum, copper and fiber optic wire and cable and systems solutions for the energy, construction, industrial, specialty and communications sectors. With a vast portfolio of products to meet thousands of diverse application requirements, we continue to invest in research and development in order to maintain and extend our technology leadership by developing new materials, designing new products, and creating new solutions to meet tomorrow's market challenges.

In addition to our strong brand recognition and strengths in technology and manufacturing, General Cable is also competitive in such areas as distribution and logistics, marketing, sales and customer service. This combination enables us to better serve our customers globally and as they expand into new geographic markets.

General Cable offers our customers all the strengths and value of a large company, but our people give us the agility and responsiveness of a small one. We service you globally and locally.

General Cable | ONE COMPANY
CONNECTING THE WORLD

Visit our Website at
www.generalcable.com

General Cable

Corporate Social Responsibility

CREATING SHARED VALUE

General Cable believes corporate social responsibility (CSR) is about creating shared value. That means keeping a dual focus in our business decisions: what is good for us as a company and what contributes to the greater good of the communities in which we live and work.

SAFETY

Working safer by working together

General Cable has one worldwide safety vision and goal – ***ZERO & BEYOND***. We measure safety performance globally, share best practices and implement sound health and safety management systems. Many of our facilities worldwide are OHSAS 18001 (safety management system) certified. All North American facilities have implemented an equivalent health and safety management system. General Cable was a pioneer in obtaining the OHSAS 18001 Certificate for Occupational Health and Safety Management Systems in Europe and North Africa.

SUSTAINABILITY

Responsible practices in daily operations

As a global leader in the wire and cable industry, General Cable recognizes its role and responsibility in promoting sustainability. Our strongest business value is continuous improvement in all areas of our company. Across our many businesses, the quest to introduce new and better products through continuous improvement in environmental designs reflects our commitment to achieving industry-leading standards and responding proactively to global environmental issues. General Cable was the first cable manufacturer to obtain certification for its environmental management system, in accordance with the ISO 14001 and EMAS Standards.

CITIZENSHIP

A commitment to being good citizens

Being responsible citizens in our communities is of the utmost importance to us. Unequivocal honesty, integrity, forthrightness and fair dealing have long been part of General Cable's core values and are expected globally in all of our business relationships with our customers, employees, suppliers, neighbors and competitors. Our company leaders and employees strive to make a difference throughout a host of volunteer activities and financial support, improving the communities in which we live and work.

INNOVATION

Technologies that power and connect the world

General Cable is delivering innovation that matters. We are focusing on R&D expertise and investing in developing wire and cable solutions that meet the challenges confronting our customers and the world. In working together and using all the ingenuity and creativity we have, we will reach the goal of being the preeminent supplier of wire and cabling solutions in the industry, with both green constructions and designs for the ever-growing renewable energy market.

GREEN INITIATIVE

A commitment to achieving industry-leading standards and responding proactively to environmental global issues.

+1.859.572.8000
info@generalcable.com

Visit www.GeneralCableCSR.com to learn more.

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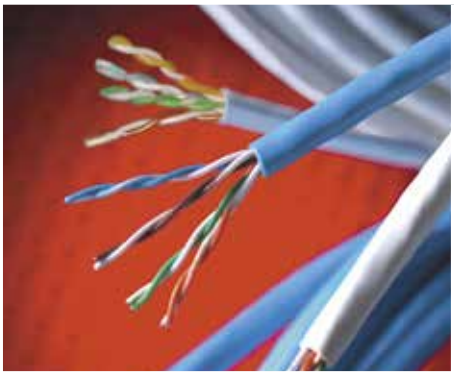
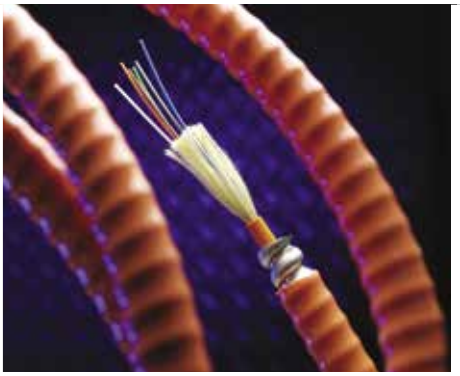
GenAssurance℠ Product Warranty

FOR GENERAL CABLE DATACOM PRODUCTS


General Cable is committed to exceeding our customers' expectations for quality and performance. We strive to ensure this quality through extensive in-house and third-party testing with strict adherence to our product specifications and industry standards. As such, our products carry a standard one-year limited warranty. Additionally, a 25-year extended warranty protection plan is available for registered products.

Standard Warranty

Products covered are Voice and Data Communications cables, including Category 3 cable and higher, Fiber Optic cables, Central Office cables (e.g., switchboard cable), Terminating cable, and Distribution Frame Wire, Electronics and Telecommunications (e.g., OSP and OVD) products.

Standard Warranty Term and Conditions

General Cable warrants that its product will conform to its applicable specifications and will be otherwise free from defects in material and workmanship for a period of 12 months from the date the product is shipped from its factory (the "Warranty Period").

General Cable must be given immediate written notice of any defect and the opportunity to inspect the product to determine whether a breach of warranty has occurred. This warranty covers only products installed at the original installation location. All repairs or replacements covered by this warranty will be shipped to the destination point specified in the original order. The defective product will, at General Cable's option, be either scrapped or returned to General Cable at its expense and per its shipping instructions.

If General Cable replaces a product under this warranty, the replacement will be warranted for the balance of the original Warranty Period.

General Cable's sole responsibility under this warranty will be to repair or replace, at its option and expense, any length of product found to be defective during either installation or normal or proper use. This warranty does not apply to normal wear and tear or damage caused by negligence, lack of maintenance, accident, abnormal operation, improper installation or service, unauthorized repair, fire, floods, and acts of God. All costs incidental to repairing or replacing defective products, including but not limited to removal, disassembly, reinstallation and reconstruction, will be borne by the buyer, and in no event will General Cable be liable for such costs.

THE FOREGOING CONSTITUTES GENERAL CABLE'S SOLE AND EXCLUSIVE OBLIGATIONS AND LIABILITIES. GENERAL CABLE MAKES NO OTHER WARRANTIES ON ITS PRODUCTS, EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. ALL OTHER WARRANTIES ARE EXPRESSLY DISCLAIMED.

In no event will General Cable be liable for any incidental, special, consequential or punitive damages of any nature or kind, however arising, whether in contract, tort or otherwise, even if General Cable is deemed to be aware of the possibility of such damages.

General Cable, in no event, will be responsible for any claims or damage arising out of or connected with this warranty or the manufacture, sale, delivery, installation, or use of the product in excess of the purchase price of the product.

Count on us to deliver the solutions that keep you connected.

Extended Warranty

General Cable offers a 25-year limited cable warranty on Datacom and Electronics products. Registration is required, and the warranty is administered by General Cable. To register, please complete the registration form, found at www.generalcable.com in the Product Warranty section, and return along with required documents.

In addition to offering an extended 25-year limited warranty on Datacom and Electronics products, General Cable now offers the same extended limited warranty on OVD and OSP Telecom products. In order to become eligible for the Telecom extended GenAssurance warranty, the network project must use only General Cable Datacom copper and fiber for the structured cable portion (horizontal cable and inside backbone). Upon meeting this criteria, submit the completed registration documents to General Cable, and the extended GenAssurance warranty will be provided for the Telecom cable products.

Datacom System Warranties

System warranties include the link and channel. End-to-end warranties are typically issued by the connectivity partner.

- Panduit — Premier Connectivity Partner

PanGen® STRUCTURED CABLING SOLUTIONS NetGen® STRUCTURED CABLING SOLUTIONS

Registered PanGen and NetGen solutions have a 25-year warranty that covers repair or replacement of defective components and one point of contact for all cable and component inquiries. The warranty is issued by Panduit and maintained by both Panduit and General Cable. Program information can be found at www.pangensolutions.com.

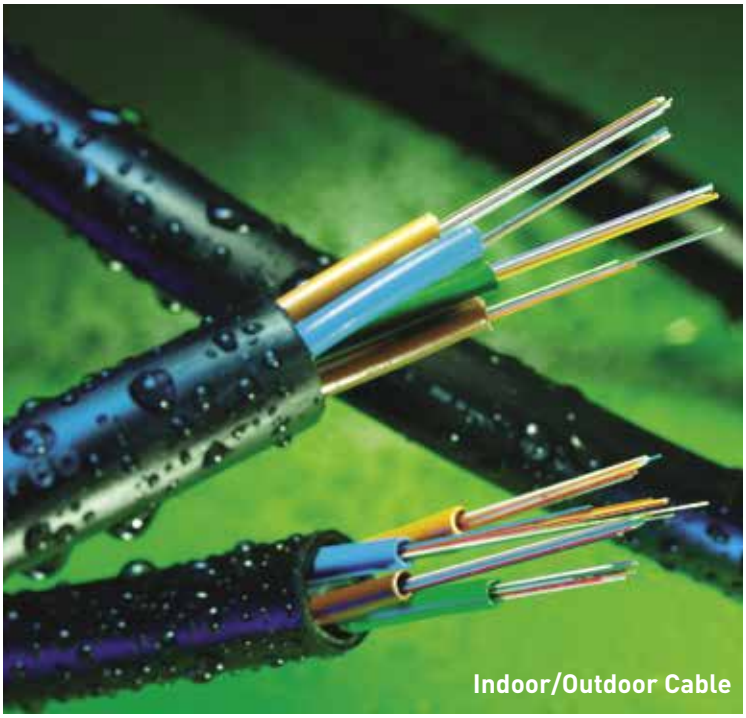
Additional connectivity partners include:

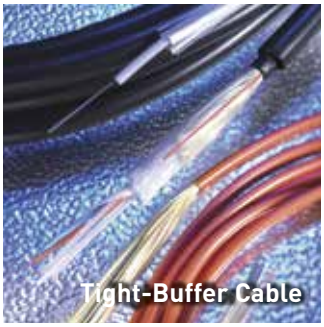
- Allen-Tel
- Hubbell
- Leviton
- Siemon

General Cable

NEXTGEN® BRAND

Fiber Optic Cable for the 21st Century


Indoor/Outdoor Cable


Tight-Buffer Cable


NextGen® Blown Fiber


Interlock Armor Cable

Not the new kid on the block.

General Cable's NextGen® Brand fiber optic solutions derive from over 25 years of technical expertise and manufacturing excellence. Long recognized as a leader in copper cabling systems, General Cable offers a broad range of fiber optic cables for every application. NextGen Brand fiber optic cables meet today's performance expectations while setting the standards for tomorrow.

NextGen Brand delivers the cable construction and performance that best fits — whatever the demand.

Whatever the Demand, NextGen Delivers.

General Cable

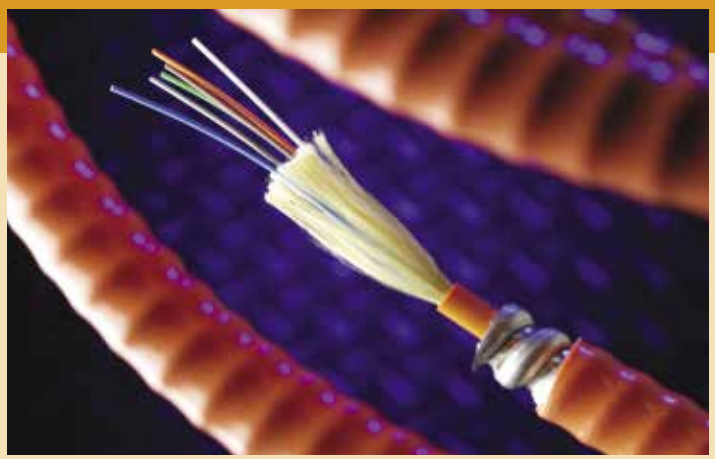
4 Tesseneer Drive
Highland Heights, KY 41076
Phone (800) 424-5666
www.generalcable.com

General Cable

plus CORNING Optical Fiber

Optical Fiber

General Cable, Corning® Optical Fiber. Names that are synonymous with cable and fiber combine to create the ultimate in fiber optics. General Cable partners with Corning Optical Fiber to deliver the world's most reliable and technologically advanced optical fiber cables.



Singlemode

Standard

General Cable utilizes Corning® SMF-28e+™ fiber as its standard singlemode offering. This is a full-spectrum fiber that is fully backward-compatible with legacy singlemode fiber. It enables increased optical launch power of legacy singlemode fiber, improved macrobend specifications from 0.05 dB to 0.03 dB, and tighter zero dispersion wavelength (λ_0) tolerance from a range of ± 10 nm to ± 7 nm. This fiber supports all broadband applications and complies with the most stringent industry standards, such as:

- ITU-T G.652 (Tables A, B, C and D)
- IEC 60793-2-50 Type B1.3
- ISO 11801 052
- TIA/EIA 492-CAAB
- Telecordia GR-20-CORE

Long-Haul

For long-haul applications, rely on General Cable's long history of cable experience and the technology of Corning® LEAF® fiber. This is the most widely deployed non-zero dispersion shifted (NZ-DSF) fiber in the world and the first low water peak NZ-DSF fiber. Its large effective area and industry-leading polarization mode dispersion (PMD) specifications enable 10 Gb/s and 40 Gb/s network systems of the future.

ClearCurve® ZBL

General Cable, utilizing Corning® ClearCurve® ZBL Optical Fiber, delivers the best macrobending performance in the industry while maintaining compatibility with current optical fibers, equipment, practices and procedures. This full-spectrum singlemode optical fiber, when subjected to smaller radii bends, experiences virtually no signal loss. ClearCurve fiber exceeds the most stringent bend performance requirements of ITU-T Recommendations G.657.B3 while remaining fully compliant with ITU-T Recommendation G.652.D and the installed base of Corning SMF-28e® and SMF-28e+® fiber.

Multimode

ClearCurve® Multimode Fiber

Corning® ClearCurve® ultra-bendable laser-optimized™ multimode optical fiber delivers the best macrobending performance in the industry while maintaining compatibility with current optical fibers, equipment, practices and procedures. ClearCurve OM3/OM4 multimode fiber is designed to withstand tight bends and challenging cable routes with substantially less signal loss than conventional multimode fiber.

These fibers have superior measurement technology and manufacturing control, and industry-leading CPC® coatings for superior microbend and environmental performance. ClearCurve fiber performance is ensured by minEMBc, the industry's leading standards-approved bandwidth measurement for OM3 fibers. ClearCurve fibers are the only ones to use this measurement to ensure 10 Gb/s performance.

50 micron

These fibers support data rates of 10 Gb/s at 850 nm. They also comply with the most stringent industry standards, such as:

- ISO/IEC 11801, type OM2, OM3 and OM4* fibers
- IEC 60793-2-10, type A1a.1, A1a.2 and A1a.3* fibers
- TIA/EIA, 492AAAB, 492AAAC-A and 492AAAD

* Assumes IEC draft standard is harmonized with 492AAAD, which was approved by TIA

62.5 micron

These fibers support data rates of 1 Gb/s in both the 850 nm and 1300 nm windows. They comply with the most stringent industry standards, such as:

- ISO/IEC 11801, type OM1 fiber
- IEC 60793-2-10, type A1b fiber
- TIA/EIA, 492AAAA-A

NEXTGEN® BRAND

General Cable

plus CORNING Optical Fiber

Optical Fiber Code Cross-Reference

Fiber Type	General Cable	Corning® Optical Fiber	Description
Standard Loose Tube SM	AQ	SMF-28® Ultra	Full spectrum, low water peak singlemode, ITU-T Recommendation G.657.A1, IEC 60793-2-50 for B1.3 and B6_a1 class fibers, TIA/EIA-492CAAB and Telcordia GR-20-CORE, Issue 3
Performance Loose Tube SM	AT	SMF-28® Ultra	Full spectrum, high performance low water peak singlemode with 0.35/0.25 attenuation, ITU-T Recommendation G.657.A1, IEC 60793-2-50 for B1.3 and B6_a1 class fibers, TIA/EIA-492CAAB and Telcordia GR-20-CORE, Issue 3
Tight Buffer SM	AP	SMF-28® Ultra	Full spectrum, low water peak singlemode with 900 µm PVC buffer, ITU-T Recommendation G.657.A1, IEC 60793-2-50 for B1.3 and B6_a1 class fibers, TIA/EIA-492CAAB and Telcordia GR-20-CORE, Issue 3
Long-Haul SM	AL	LEAF® Fiber	Large A_{eff}, low water peak, NZ-DSF singlemode, ITU-T G.655
Bendable SM	AY	ClearCurve® LBL	Full spectrum with best macrobending performance, ITU-T G.652.D and ITU-T G.657.A21B2
Ultra-Bendable SM	AZ	ClearCurve® ZBL	Full spectrum with best macrobending performance, ITU-T G.652.D and ITU-T G.657.A
62.5 µm MM	CG	InfiniCor® 300 Fiber	1 Gb/s ≤ 300 m at 850 nm, OM1* 1 Gb/s ≤ 550 m at 1300 nm
62.5 µm MM	CL	InfiniCor® CL™ 1000 Fiber	1 Gb/s ≤ 500 m at 850 nm, OM1* 1 Gb/s ≤ 1000 m at 1300 nm
Ultra-Bendable 50 µm MM	BI	ClearCurve® OM2 Fiber	10 Gb/s ≤ 150 m at 850 nm, OM2* 1 Gb/s ≤ 750 m at 850 nm
Ultra-Bendable 50 µm MM	BE	ClearCurve® OM3 Fiber	10 Gb/s ≤ 300 m at 850 nm, OM3* 1 Gb/s ≤ 1000 m at 850 nm
Ultra-Bendable 50 µm MM	BL	ClearCurve® OM4 Fiber	10 Gb/s ≤ 550 m at 850 nm, OM4* 1 Gb/s ≤ 1100 m at 850 nm
Ultra-Bendable 50 µm MM	BM	ClearCurve® OM4 Fiber	10 Gb/s ≤ 600 m at 850 nm, OM4+* 1 Gb/s ≤ 1100 m at 850 nm

* Designation per ISO 11801 Fiber Standards

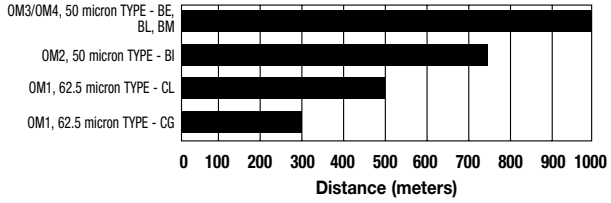
Fiber Specification and Selection 1

MULTIMODE FIBER SELECTION GUIDE

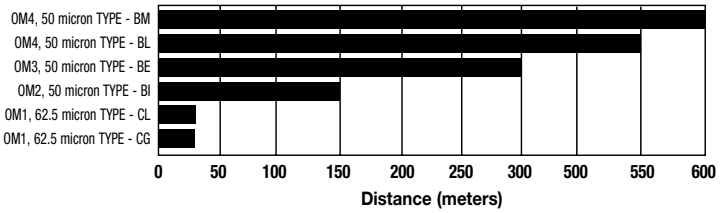
Optical Characteristics:		50/125 PRODUCT FAMILY				62.5/125 PRODUCT FAMILY		UNITS
		OM2 Type-BI	OM3 Type-BE	OM4 Type-BL	OM4 Type-BM	OM1 Type-CG	OM1 Type-CL	
Maximum Finished Cable Attenuation Coefficient	@850 nm	3.0	3.0	3.0	3.0	3.5	3.5	dB/km
	@1300 nm	1.0	1.0	1.0	1.0	1.0	1.0	dB/km
Overfill Launch Bandwidth	@850 nm	700	1500	1500	1500	200	200	MHz.km
	@1300 nm	500	500	500	500	500	500	MHz.km
Laser Bandwidth	@850 nm	850	2000	4700	5350*	220	385	MHz.km
Gigabit Ethernet Link Length (1 Gbps)	1000 BASE-SX (850 nm)	750	1000	1100	1100	300	500	meters
	1000 BASE-LX (1300 nm)	550	550	550	550	550	1000	meters
10 Gigabit Ethernet Length (10 Gbps)	10G BASE-SR (850 nm)	150	300	550	600	33	33	meters

* Using 3.0 dB cable attenuation and 0.7 dB connector allocation

1 Gbps Link Lengths @ 850 nm



10 Gbps Link Lengths @ 850 nm



SINGLEMODE FIBER SELECTION GUIDE

FIBER DESCRIPTION	FIBER TYPE	TYPICAL ATTENUATION (dB/km)				GIGABIT ETHERNET DISTANCE (METERS)	10 GIGABIT ETHERNET DISTANCE (METERS)	
		1310 nm	1383 nm	1550 nm	1625 nm	1310 nm	1310 nm	1550 nm
OS2 Singlemode - Loose Tube								
Premium	AQ	0.40	0.40	0.30	0.35	10,000	5,000	30,000
High Performance	AT	0.35	0.35	0.25	0.30	10,000	5,000	30,000
OS2 Singlemode - Tight Buffer								
Distribution	AP	0.65	–	0.65	–	10,000	5,000	30,000
Breakout	AP	1.00	–	1.00	–	10,000	5,000	30,000

SPECIALTY FIBERS — SINGLEMODE

FIBER DESCRIPTION	FIBER TYPE	TYPICAL ATTENUATION (dB/km)				TYPICAL APPLICATION
		1310 nm	1383 nm	1550 nm	1625 nm	
Singlemode (NZDS)						
Large Effective Area	AL	–	–	0.30	0.30	DWDM
Singlemode						
Bend-Insensitive	AZ	0.40	0.40	0.30	0.30	SMALL BEND RADIUS

Use the code in the “Fiber Type” column to replace the XX notation in the catalog number shown on the catalog page. This identifies the fiber that will be provided with the cable choice.

The fibers in all completed cables are tested 100% at the factory for attenuation, and each fiber must meet the minimum requirements specified by the customer.

Fiber Optic Ordering Information 2

We strive to have a variety of cables in stock for immediate delivery to our customers. Should the cable not be in stock, it will be manufactured to your specifications.

To choose a fiber optic cable, you need to know the following:

1) What type and grade of fiber is required?

The system designer will have identified the fiber that is required for the network. Find the fiber type that is needed from the Fiber Specification and Selection Guide. Use the two-digit NextGen® Fiber Type code to identify the fiber. This code becomes the first two digits of the catalog part number, replacing the XX notation.

2) How many fibers are required?

The system designer will also have identified the number of fibers that will be in each cable. Fibers are usually cabled in groups of 6 or 12.

3) What cable construction is needed?

The cable construction that is needed is based on a variety of factors. We have a full range of products for premises, outside plant and indoor/outdoor to solve nearly every application need. Using the catalog as a guide, identify the cable type and construction that is needed.

With the cable construction decided, move down the table on the catalog page to find the number of fibers required. The first column of that row is the catalog part number. Simply replace the XX at the beginning of the catalog number shown with the Fiber Type code found in step 1, and the part number is complete.

Fiber Optic Part Number System

Example: AP0121PNU-ILPA
Singlemode, 12 Fibers, Tight Buffer Distribution Plenum, Interlock Armor Plenum Aluminum

A	P	0	1	2	1	P	N	U	ILPA
1	2	3	4	5	6	7	8	9	[SUFFIX]

Fiber Grade — Position 1, 2

In position 1
A: Singlemode (sm)
B: 50 MM Multimode (mm)
C: 62.5 MM Multimode (mm)
For position 2, reference pages 2 and 3 for fiber specifications and grades.

Requested Fiber Count — Position 3, 4, 5

Standard Offerings:
6 12 24 36 48 72

Buffer Construction — Position 6

1) Tight Buffer; 3) Single Fiber Loose Tube
4) Multi-Fiber Loose Tube 6) Bare/Ribbon
Note: 2) Quick Strip and 5) Loose Buffer no longer available

Suffixes

- **BK** Black Jacket (UV Resistant)
- **DWB** Dry Water Block Cable Core
- **DT** Dry Tube
- **ILP** Interlock Armor Plenum Steel
- **ILPA** Interlock Armor Plenum Aluminum
- **ILPS** Interlock Armor Plenum Steel w/Sub-Units
- **ILPAS** Interlock Armor Plenum Aluminum w/Sub-Units
- **ILR** Interlock Armor Riser Steel
- **ILRA** Interlock Armor Riser Aluminum
- **ILRS** Interlock Armor Riser Steel w/Sub-Units
- **ILRAS** Interlock Armor Riser Aluminum w/Sub-Units
- **RIP** Ripcord

Series Type — Position 7, 8, 9

Outdoor:

E1S: Loose Tube TJ Dual Armor
H1A: Loose Tube DJ
H1F: Loose Tube DJ Armored
H1S: Loose Tube DJ Dual Armor
M1A: Loose Tube SJ
M1F: Loose Tube SJ Armored
M1N: Loose Tube SJ Armored Self-Supporting
M1Y: Loose Tube SJ Self-Supporting
R1A: Loose Tube SJ Ribbon cable
U1A: All-Dielectric Flat Drop Cable
U1A.TF: Toneable Flat Drop Cable
U2A: Mini (Figure-8) Drop Cable
UNFC: Compact Central Loose Tube Drop Cable
UNFS: Central Tube SJ Armored

Indoor:

B3D: Tight Buffer Breakout Plenum
B3R: Tight Buffer Breakout Riser
PNR/P1R: Tight Buffer Distribution Riser
PNU/P1D: Tight Buffer Distribution Plenum
PNZ/P1Z: Tight Buffer Distribution LSZH
RNP: Tight Buffer Distribution Ribbon Plenum

Indoor/Outdoor:

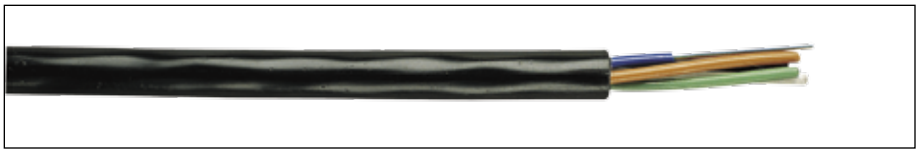
ANR/A1R: Tight Buffer Distribution Riser
ANU/A1D: Tight Buffer Distribution Plenum
M1D: Loose Tube SJ Plenum
M1M: Loose Tube SJ Riser
M1Z: Loose Tube SJ LSZH

Specialty:

GNC: Military Tactical Distribution Cable

Note: DJ = Dual Jacket
SJ = Single Jacket
TJ = Triple Jacket

NextGen® Brand Outside Plant Cables 3



NextGen® Brand fiber optic cable is right for any outside plant application.

Applications: Outside plant cables with loose tube constructions are built to withstand adverse environments and provide the maximum fiber protection. These cables perform exceptionally well in wet conditions and during extreme temperature cycles. They can be installed in ducts, direct buried and aerial/lashed, providing the flexibility needed to meet the demands of campus backbones and other outside plant requirements.

Range of Products: A wide range of cables from 2–312 fibers are manufactured with a variety of designs to meet the demands of most installation conditions.

Features: Only the highest quality materials are used in NextGen fiber optic cables to ensure that the cable strength and optical integrity are not compromised. Rugged jacket materials and the addition of armor provide the right level of protection. The line of outside plant products conforms to TIA/EIA, ICEA, Telcordia and RUS standards.

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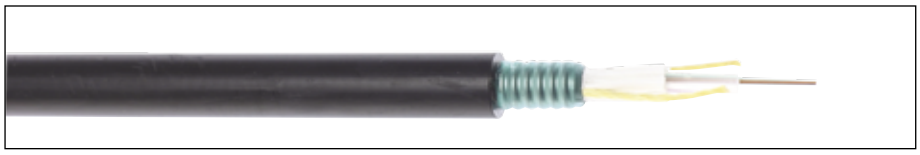
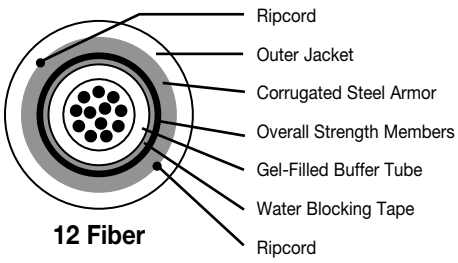
Central Tube Single Jacket Armored Cable



CATALOG NUMBER	FIBER COUNT	NO. 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
XX0024UNFS	2	1	0.42	10.7	78	116	600	2670	180	800
XX0044UNFS	4	1	0.42	10.7	78	116	600	2670	180	800
XX0064UNFS	6	1	0.42	10.7	78	116	600	2670	180	800
XX0084UNFS	8	1	0.42	10.7	78	116	600	2670	180	800
XX0124UNFS	12	1	0.42	10.7	78	116	600	2670	180	800

XX denotes glass type.
A complete listing of NextGen® Brand glass types is specified on page 3 of this catalog.

Typical Cross-Section



Hybrid designs (containing singlemode and multimode fiber) and composite designs (containing copper conductors) are also available.

Ordering Part Number Example

AQ0064UNFS

Singlemode, 6 fibers, central tube SJ armored
Please see pages 4 and 5 for a complete guide on part number selection and ordering information.

Product Construction:

Fiber:
- 2–12 fibers
- Central tube gel-filled
- Color-coding per TIA/EIA 598 B

Armor:
- Corrugated coated steel tape

Outer Jacket:
- Black UV- and moisture-resistant polyethylene (PE)
- Sequential footage markings*

Features:
- Compact, user-friendly design
- Central tube armored design provides excellent fiber protection

Performance:
- Temperature:
  Storage -40°C (-40°F) to +70°C (+158°F)
  Installation -30°C (-22°F) to +60°C (+140°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 (440 N/cm)

Applications:
- Interbuilding voice or data communication backbones
- Installed in ducts, underground conduits, aerial/lashed or direct buried
- FTTX

Compliances:
- Tested in accordance with EIA/TIA-455 FOTPs
- GR-20
- RoHS Compliant Directive 2011/65/EU

*Sequential meter markings available upon request

NEXTGEN® BRAND

EIA/TIA 455

RoHS Compliant Directive 2011/65/EU

General Cable

Loose Tube Single Jacket Cable

Product Construction:

Fiber:
- 4–432 fibers
- Loose tube gel-filled
- Color-coding per TIA/EIA 598 B

Central Strength Member:
- Epoxy/glass rod

Jacket:
- Black UV- and moisture-resistant polyethylene (PE)
- Sequential footage markings*

Features:
- Loose tube gel-filled construction for superior fiber protection
- UV- and moisture-resistant design
- Dry Water Block cable core for ease of handling

Performance:
- Temperature:
  Storage -40˚C (-40˚F) to +75˚C (+167˚F)
  Installation -30˚C (-22˚F) to +60˚C (+140˚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:
  Short - 125 lbs/in (220 N/cm)
  Long - 63 lbs/in (110 N/cm)

Applications:
- Interbuilding voice or data communication backbones
- Installed in ducts, underground conduit or aerial/lashed

Compliances:
- Tested in accordance with EIA/TIA-455 FOTPs
- ICEA S-87-640
- Rural Utilities Service (RUS) 7 CFR 1755.900 (REA PE-90)
- GR-20
- RoHS Compliant Directive 2011/65/EU

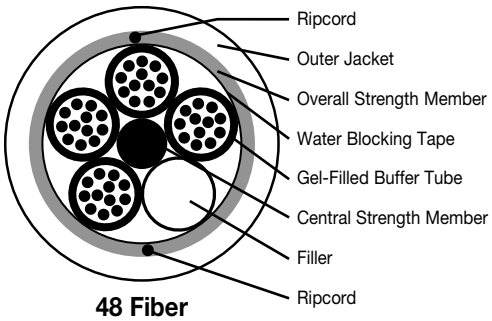
Options:
- Gel-free tube versions also available, use "-DT" suffix (XX0124M1A-DT)
- Alternate 6-fiber per tube available upon request

*Sequential meter markings available upon request

CATALOG NUMBER	FIBER COUNT	NO. OF LOOSE TUBES	NO. OF FILLERS	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
								INSTALLATION		IN-SERVICE	
				IN	mm	LBS/1000'	kg/km	LBS	N	LBS	N
XX0044M1A-DWB	4	1	4	0.40	10.1	46	69	600	2700	180	800
XX0064M1A-DWB	6	1	4	0.40	10.1	46	69	600	2700	180	800
XX0084M1A-DWB	8	1	4	0.40	10.1	46	69	600	2700	180	800
XX0124M1A-DWB	12	1	4	0.40	10.1	46	69	600	2700	180	800
XX0184M1A-DWB	18	2	3	0.40	10.1	46	69	600	2700	180	800
XX0244M1A-DWB	24	2	3	0.40	10.1	46	69	600	2700	180	800
XX0364M1A-DWB	36	3	2	0.40	10.1	46	69	600	2700	180	800
XX0484M1A-DWB	48	4	1	0.40	10.1	46	69	600	2700	180	800
XX0604M1A-DWB	60	5	0	0.40	10.1	46	69	600	2700	180	800
XX0724M1A-DWB	72	6	0	0.43	10.9	55	81	600	2700	180	800
XX0964M1A-DWB	96	8	0	0.50	12.6	71	105	600	2700	180	800
XX10841M1A-DWB	108	9	1	0.55	14.1	88	131	600	2700	180	800
XX1204M1A-DWB	120	10	0	0.55	14.1	88	131	600	2700	180	800
XX1444M1A-DWB	144	12	0	0.63	15.9	117	174	600	2700	180	800
XX1924M1A-DWB	192	16	2	0.63	15.9	120	179	600	2700	180	800
XX2164M1A-DWB	216	18	0	0.63	15.9	120	179	600	2700	180	800
XX2404M1A-DWB	240	20	2	0.68	17.3	143	212	600	2700	180	800
XX2644M1A-DWB	264	22	0	0.68	17.3	143	212	600	2700	180	800
XX2884M1A-DWB	288	24	0	0.72	18.3	162	240	600	2700	180	800
XX3124M1A-DWB	312	26	0	0.80	20.4	210	313	600	2700	180	800

XX denotes glass type.
A complete listing of NextGen® Brand glass types is specified on page 3 of this catalog.

Typical Cross-Section



48 Fiber

Hybrid designs (containing singlemode and multimode fiber) and composite designs (containing copper conductors) are also available.

For complete listing of all fiber counts offered, please contact your General Cable sales representative.

Factory-installed eyelet option for quick cable-pull setups available.

Ordering Part Number Example

AQ0124M1A-DWB

Singlemode, 12 fibers, loose tube SJ

Please see pages 4 and 5 for a complete guide on part number selection and ordering information.

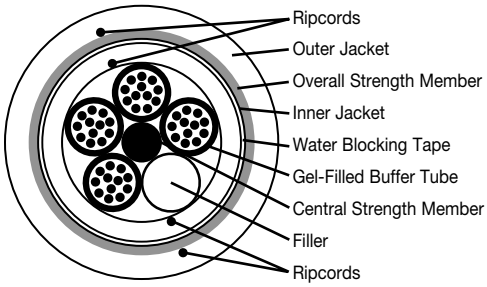
General Cable
RoHS Compliant Directive 2011/65/EU
RUS Compliant
EIA/TIA 455
NEXTGEN BRAND

Loose Tube Dual Jacket Cable

CATALOG NUMBER	FIBER COUNT	NO. OF LOOSE TUBES	NO. OF FILLERS	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
								INSTALLATION		IN-SERVICE	
				IN	mm	LBS/1000'	kg/km	LBS	N	LBS	N
XX0023H1A-DWB	2	2	3	0.51	13.0	78	116	600	2700	180	800
XX0044H1A-DWB	4	1	4	0.51	13.0	78	116	600	2700	180	800
XX0064H1A-DWB	6	1	4	0.51	13.0	78	116	600	2700	180	800
XX0084H1A-DWB	8	1	4	0.51	13.0	78	116	600	2700	180	800
XX0124H1A-DWB	12	1	4	0.51	13.0	78	116	600	2700	180	800
XX0184H1A-DWB	18	2	3	0.51	13.0	78	116	600	2700	180	800
XX0244H1A-DWB	24	2	3	0.51	13.0	78	116	600	2700	180	800
XX0364H1A-DWB	36	3	2	0.51	13.0	78	116	600	2700	180	800
XX0484H1A-DWB	48	4	1	0.51	13.0	78	116	600	2700	180	800
XX0604H1A-DWB	60	5	0	0.51	13.0	78	116	600	2700	180	800
XX0724H1A-DWB	72	6	0	0.54	13.7	90	134	600	2700	180	800
XX0964H1A-DWB	96	8	0	0.61	15.4	111	165	600	2700	180	800
XX1204H1A-DWB	120	10	0	0.67	17.1	131	195	600	2700	180	800
XX1444H1A-DWB	144	12	0	0.75	19.0	167	248	600	2700	180	800

XX denotes glass type.
A complete listing of NextGen® Brand glass types is specified on page 3 of this catalog.

Typical Cross-Section



48 Fiber

Hybrid designs (containing singlemode and multimode fiber) and composite designs (containing copper conductors) are also available.

For complete listing of all fiber counts offered, please contact your General Cable sales representative.

Factory-installed eyelet option for quick cable-pull setups available.

Ordering Part Number Example

AQ0124H1A-DWB

Singlemode, 12 fibers, loose tube DJ

Please see pages 4 and 5 for a complete guide on part number selection and ordering information.

Product Construction:

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

Central Strength Member:
- Epoxy/glass rod

Inner Jacket:
- Black UV- and moisture-resistant polyethylene (PE)

Outer Jacket:
- Black UV- and moisture-resistant polyethylene (PE)
- Sequential footage markings*

Features:
- Loose tube gel-filled construction for superior fiber protection
- UV- and moisture-resistant design
- Added protection of an inner jacket
- Dry Water Block cable core for ease of handling

Performance:
- Temperature:
  Storage -40°C (-40°F) to +75°C (+167°F)
  Installation -30°C (-22°F) to +60°C (+140°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:
  Short - 125 lbs/in (220 N/cm)
  Long - 63 lbs/in (110 N/cm)

Applications:
- Interbuilding voice or data communication backbones
- Installed in ducts, underground conduits or aerial/lashed

Compliances:
- Tested in accordance with EIA/TIA-455 FOTPs
- ICEA S-87-640
- Rural Utilities Service (RUS) 7 CFR 1755.900 (REA PE-90)
- GR-20
- RoHS Compliant Directive 2011/65/EU

Options:
- Alternate 6-fiber per tube available upon request

*Sequential meter markings available upon request

NEXTGEN® BRAND EIA/TIA 455 RUS Compliant RoHS Compliant Directive 2011/65/EU General Cable

Loose Tube Single Jacket Armored Cable

Product Construction:

Fiber:
- 4–432 fibers
- Loose tube gel-filled
- Color-coding per TIA/EIA 598 B

Central Strength Member:
- Epoxy/glass rod

Armor:
- Corrugated coated steel tape

Outer Jacket:
- Black UV- and moisture-resistant polyethylene (PE)
- Sequential footage markings*

Features:
- Loose tube gel-filled construction for superior fiber protection
- UV- and moisture-resistant design
- Rodent-resistant construction
- Dry Water Block cable core for ease of handling

Performance:
- Temperature:
  Storage -40˚C (-40˚F) to +75˚C (+167˚F)
  Installation -30˚C (-22˚F) to +60˚C (+140˚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:
  Short - 125 lbs/in (220 N/cm)
  Long - 63 lbs/in (110 N/cm)

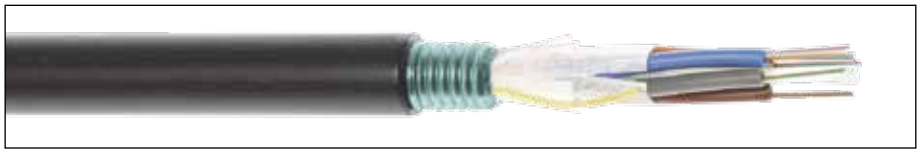
Applications:
- Interbuilding voice or data communication backbones
- Installed in ducts, underground conduits or aerial/lashed

Compliances:
- Tested in accordance with EIA/TIA-455 FOTPs
- ICEA S-87-640
- Rural Utilities Service (RUS) 7 CFR 1755.900 (REA PE-90)
- GR-20
- RoHS Compliant Directive 2011/65/EU

Options:
- Gel-free tube versions also available, use "-DT" suffix (XX0124M1F-DT)**
- Alternate 6-fiber per tube available upon request

*Sequential meter markings available upon request

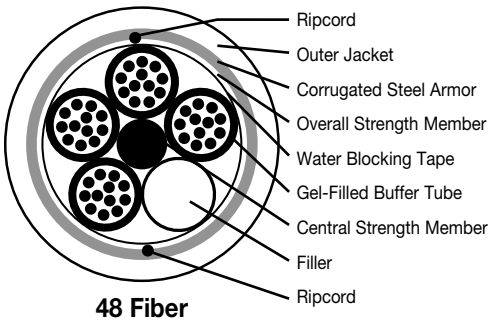
**DT-Max 216 Fiber (call to request cable dimensions)



CATALOG NUMBER	FIBER COUNT	NO. OF LOOSE TUBES	NO. OF FILLERS	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
								INSTALLATION		IN-SERVICE	
				IN	mm	LBS/1000'	kg/km	LBS	N	LBS	N
XX0044M1F-DWB	4	1	4	0.46	11.8	92	137	600	2670	180	800
XX0064M1F-DWB	6	1	4	0.46	11.8	92	137	600	2670	180	800
XX0084M1F-DWB	8	1	4	0.46	11.8	92	137	600	2670	180	800
XX0124M1F-DWB	12	1	4	0.46	11.8	92	137	600	2670	180	800
XX0184M1F-DWB	18	2	3	0.46	11.8	92	137	600	2670	180	800
XX0244M1F-DWB	24	2	3	0.46	11.8	92	137	600	2670	180	800
XX0364M1F-DWB	36	3	2	0.46	11.8	92	137	600	2670	180	800
XX0484M1F-DWB	48	4	1	0.46	11.8	92	137	600	2670	180	800
XX0604M1F-DWB	60	5	0	0.46	11.8	92	137	600	2670	180	800
XX0724M1F-DWB	72	6	0	0.50	12.6	101	157	600	2670	180	800
XX0964M1F-DWB	96	8	0	0.56	14.3	121	180	600	2670	180	800
XX1204M1F-DWB	120	10	0	0.62	15.8	150	223	600	2670	180	800
XX1444M1F-DWB	144	12	0	0.69	17.6	188	280	600	2670	180	800
XX1924M1F-DWB	192	16	2	0.70	17.9	183	272	600	2670	180	800
XX2164M1F-DWB	216	18	0	0.70	17.9	183	272	600	2670	180	800
XX2404M1F-DWB	240	20	2	0.76	19.4	205	305	600	2670	180	800
XX2644M1F-DWB	264	22	0	0.76	19.4	205	305	600	2670	180	800
XX2884M1F-DWB	288	24	0	0.81	20.7	224	334	600	2670	180	800
XX3124M1F-DWB	312	26	0	0.90	23.0	277	412	600	2670	180	800

XX denotes glass type.
A complete listing of NextGen® Brand glass types is specified on page 3 of this catalog.

Typical Cross-Section



48 Fiber

Hybrid designs (containing singlemode and multimode fiber) and composite designs (containing copper conductors) are also available.

For complete listing of all fiber counts offered, please contact your General Cable sales representative.

Factory-installed eyelet option for quick cable-pull setups available.

Ordering Part Number Example

AQ0124M1F-DWB

Singlemode, 12 fibers, loose tube SJ armored

Please see pages 4 and 5 for a complete guide on part number selection and ordering information.

General Cable

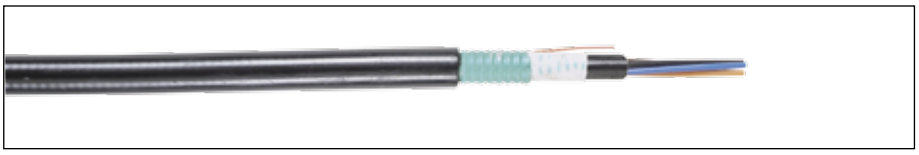
RoHS Compliant Directive 2011/65/EU

RUS Compliant

EIA/TIA 455

NEXTGEN BRAND

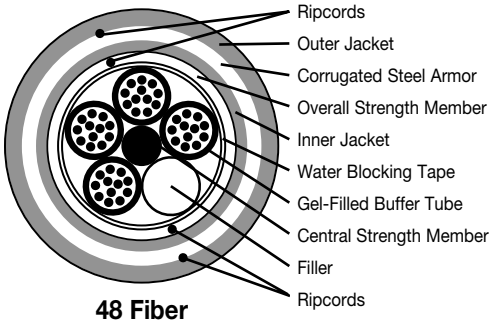
Loose Tube Dual Jacket Armored Cable



CATALOG NUMBER	FIBER COUNT	NO. OF LOOSE TUBES	NO. OF FILLERS	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
								INSTALLATION		IN-SERVICE	
				IN	mm	LBS/1000'	kg/km	LBS	N	LBS	N
XX0023H1F-DWB	2	2	3	0.59	15.0	128	190	600	2670	180	800
XX0044H1F-DWB	4	1	4	0.59	15.0	128	190	600	2670	180	800
XX0064H1F-DWB	6	1	4	0.59	15.0	128	190	600	2670	180	800
XX0084H1F-DWB	8	1	4	0.59	15.0	128	190	600	2670	180	800
XX0124H1F-DWB	12	1	4	0.59	15.0	128	190	600	2670	180	800
XX0184H1F-DWB	18	2	3	0.59	15.0	128	190	600	2670	180	800
XX0244H1F-DWB	24	2	3	0.59	15.0	128	190	600	2670	180	800
XX0364H1F-DWB	36	3	2	0.59	15.0	128	190	600	2670	180	800
XX0484H1F-DWB	48	4	1	0.59	15.0	128	190	600	2670	180	800
XX0604H1F-DWB	60	5	0	0.59	15.0	128	190	600	2670	180	800
XX0724H1F-DWB	72	6	0	0.63	15.9	143	213	600	2670	180	800
XX0964H1F-DWB	96	8	0	0.69	17.6	169	251	600	2670	180	800
XX1204H1F-DWB	120	10	0	0.76	19.3	201	299	600	2670	180	800
XX1444H1F-DWB	144	12	0	0.84	21.2	234	348	600	2670	180	800
XX1924H1F-DWB	192	16	2	0.85	21.5	230	342	600	2670	180	800
XX2164H1F-DWB	216	18	0	0.85	21.5	230	342	600	2670	180	800
XX2404H1F-DWB	240	20	2	0.90	22.9	259	385	600	2670	180	800
XX2644H1F-DWB	264	22	0	0.90	22.9	259	385	600	2670	180	800
XX2884H1F-DWB	288	24	0	0.94	23.9	282	420	600	2670	180	800
XX3124H1F-DWB	312	26	0	0.99	25.2	310	461	600	2670	180	800

XX denotes glass type.
A complete listing of NextGen® Brand glass types is specified on page 3 of this catalog.

Typical Cross-Section



48 Fiber

Hybrid designs (containing singlemode and multimode fiber) and composite designs (containing copper conductors) are also available.

For complete listing of all fiber counts offered, please contact your General Cable sales representative.

Factory-installed eyelet option for quick cable-pull setups available.

Ordering Part Number Example

AQ0124H1F-DWB

Singlemode, 12 fibers, loose tube DJ armored

Please see pages 4 and 5 for a complete guide on part number selection and ordering information.

Product Construction:

Fiber:
- 2–312 fibers
- Loose tube gel-filled
- Color-coding per TIA/EIA 598 B

Central Strength Member:
- Epoxy/glass rod

Inner Jacket:
- Black UV- and moisture-resistant polyethylene (PE)

Armor:
- Corrugated coated steel tape

Outer Jacket:
- Black UV- and moisture-resistant polyethylene (PE)
- Sequential footage markings*

Features:
- Loose tube gel-filled construction for superior fiber protection
- UV- and moisture-resistant design
- Rodent-resistant construction
- Dry Water Block cable core for ease of handling

Performance:
- Temperature:
  Storage -40°C (-40°F) to +75°C (+167°F)
  Installation -30°C (-22°F) to +60°C (+140°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:
  Short - 125 lbs/in (220 N/cm)
  Long - 63 lbs/in (110 N/cm)

Applications:
- Interbuilding voice or data communication backbones
- Installed in ducts, underground conduits, aerial/lashed or direct buried

Compliances:
- Tested in accordance with EIA/TIA-455 FOTPs
- ICEA S-87-640
- Rural Utilities Service (RUS) 7 CFR 1755.900 (REA PE-90)
- GR-20
- RoHS Compliant Directive 2011/65/EU

Options:
- Gel-free tube versions also available, use "-DT" suffix (XX0124M1F-DT)**
- Alternate 6-fiber per tube available upon request

*Sequential meter markings available upon request

**DT-Max 216 Fiber (call to request cable dimensions)

NEXTGEN® BRAND

EIA/TIA 455

RUS Compliant

RoHS Compliant Directive 2011/65/EU

General Cable

Loose Tube Single Jacket Self-Supporting (Figure-8) Cable

Product Construction:

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

Central Strength Member:
- Epoxy/glass rod

Jacket:
- Black UV- and moisture-resistant polyethylene (PE)
- Sequential footage markings*

Messenger Wire:
- 1/4" stranded EHS galvanized steel
- MRCL with messenger** = 14,923 N/ 3,350 kF

Features:
- Loose tube gel-filled construction for superior fiber protection
- UV- and moisture-resistant design
- Self-supporting figure-8 design

Performance:
- Temperature:
  Storage -40˚C (-40˚F) to +75˚C (+167˚F)
  Installation -30˚C (-22˚F) to +60˚C (+140˚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:
  Short - 125 lbs/in (220 N/cm)
  Long - 63 lbs/in (110 N/cm)

Applications:
- Interbuilding voice or data communication backbones
- Installed aerially

Compliances:
- Tested in accordance with EIA/TIA-455 FOTPs
- ICEA S-87-640
- GR-20
- RoHS Compliant Directive 2011/65/EU

Options:
- Alternate 6-fiber per tube available upon request

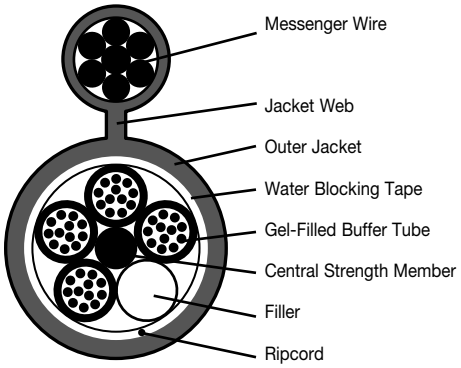
*Sequential meter markings available upon request

**Installation load should be lower than maximum rated cable load to allow for wind and ice loading in accordance with NESC guidelines.

CATALOG NUMBER	FIBER COUNT	NO. OF LOOSE TUBES	NO. OF FILLERS	NOMINAL CABLE DIAMETER X CABLE HEIGHT		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD WITHOUT MESSENGER			
								INSTALLATION		IN-SERVICE	
				IN	mm	LBS/1000'	kg/km	LBS	N	LBS	N
XX0023M1Y-DWB	2	2	3	0.465 x 0.925	11.8 x 23.5	208	310	600	2700	180	800
XX0044M1Y-DWB	4	1	4	0.465 x 0.925	11.8 x 23.5	208	310	600	2700	180	800
XX0064M1Y-DWB	6	1	4	0.465 x 0.925	11.8 x 23.5	208	310	600	2700	180	800
XX0084M1Y-DWB	8	1	4	0.465 x 0.925	11.8 x 23.5	208	310	600	2700	180	800
XX0124M1Y-DWB	12	1	4	0.465 x 0.925	11.8 x 23.5	208	310	600	2700	180	800
XX0184M1Y-DWB	18	2	3	0.465 x 0.925	11.8 x 23.5	208	310	600	2700	180	800
XX0244M1Y-DWB	24	2	3	0.465 x 0.925	11.8 x 23.5	208	310	600	2700	180	800
XX0364M1Y-DWB	36	3	2	0.465 x 0.925	11.8 x 23.5	208	310	600	2700	180	800
XX0484M1Y-DWB	48	4	1	0.465 x 0.925	11.8 x 23.5	208	310	600	2700	180	800
XX0604M1Y-DWB	60	5	0	0.465 x 0.925	11.8 x 23.5	208	310	600	2700	180	800
XX0724M1Y-DWB	72	6	0	0.500 x 0.957	12.7 x 24.3	217	323	600	2700	180	800
XX0964M1Y-DWB	96	8	0	0.567 x 1.028	14.4 x 26.1	236	351	600	2700	180	800
XX1204M1Y-DWB	120	10	2	0.697 x 1.157	17.7 x 29.4	278	426	600	2700	180	800
XX1444M1Y-DWB	144	12	0	0.697 x 1.157	17.7 x 29.4	278	426	600	2700	180	800
XX1924M1Y-DWB	192	16	2	0.709 x 1.169	18.0 x 29.7	286	414	600	2700	180	800
XX2164M1Y-DWB	216	18	0	0.709 x 1.169	18.0 x 29.7	286	414	600	2700	180	800

XX denotes glass type.
A complete listing of NextGen® Brand glass types is specified on page 3 of this catalog.

Typical Cross-Section



48 Fiber

Hybrid designs (containing singlemode and multimode fiber) and composite designs (containing copper conductors) are also available.

For complete listing of all fiber counts offered, please contact your General Cable sales representative.

Installation Notes:
The Maximum Tensile Load in the data table refers to the cable core only. Users should base sag and tension calculations on 1/4" EHS messenger per local guidelines and practices. Additional data is available upon request.

Ordering Part Number Example

AQ0244M1Y-DWB

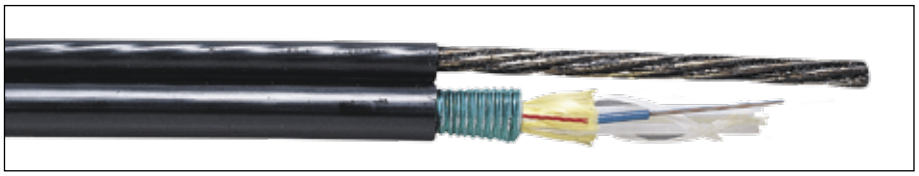
Singlemode, 24 fibers, loose tube (figure 8)

Please see pages 4 and 5 for a complete guide on part number selection and ordering information.

RoHS Compliant Directive 2011/65/EU

EIA/TIA 455

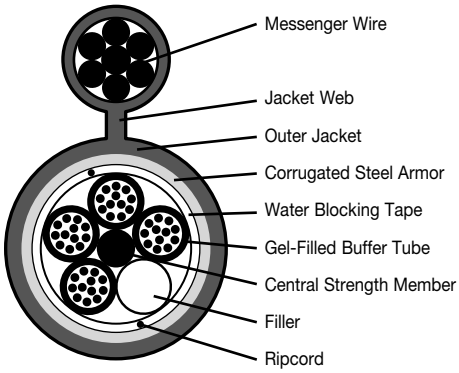
Loose Tube Single Jacket Armored Self-Supporting (Figure-8) Cable



CATALOG NUMBER	FIBER COUNT	NO. OF LOOSE TUBES	NO. OF FILLERS	NOMINAL CABLE DIAMETER X CABLE HEIGHT		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD WITHOUT MESSENGER			
								INSTALLATION		IN-SERVICE	
				IN	mm	LBS/1000'	kg/km	LBS	N	LBS	N
XX0023M1N-DWB	2	2	3	0.469 x 0.929	11.9 x 23.6	237	352	600	2700	180	800
XX0044M1N-DWB	4	1	4	0.469 x 0.929	11.9 x 23.6	237	352	600	2700	180	800
XX0064M1N-DWB	6	1	4	0.469 x 0.929	11.9 x 23.6	237	352	600	2700	180	800
XX0084M1N-DWB	8	1	4	0.469 x 0.929	11.9 x 23.6	237	352	600	2700	180	800
XX0124M1N-DWB	12	1	4	0.469 x 0.929	11.9 x 23.6	237	352	600	2700	180	800
XX0184M1N-DWB	18	2	3	0.469 x 0.929	11.9 x 23.6	237	352	600	2700	180	800
XX0244M1N-DWB	24	2	3	0.469 x 0.929	11.9 x 23.6	237	352	600	2700	180	800
XX0364M1N-DWB	36	3	2	0.469 x 0.929	11.9 x 23.6	237	352	600	2700	180	800
XX0484M1N-DWB	48	4	1	0.469 x 0.929	11.9 x 23.6	237	352	600	2700	180	800
XX0604M1N-DWB	60	5	0	0.469 x 0.929	11.9 x 23.6	237	352	600	2700	180	800
XX0724M1N-DWB	72	6	0	0.535 x 0.996	13.6 x 25.3	255	379	600	2700	180	800
XX0964M1N-DWB	96	8	0	0.602 x 1.063	15.3 x 27.0	275	409	600	2700	180	800
XX1204M1N-DWB	120	10	2	0.752 x 1.213	19.1 x 30.8	339	498	600	2700	180	800
XX1444M1N-DWB	144	12	0	0.752 x 1.213	19.1 x 30.8	339	498	600	2700	180	800
XX1924M1N-DWB	192	16	2	0.764 x 1.228	19.4 x 31.2	335	505	600	2700	180	800
XX2164M1N-DWB	216	18	0	0.764 x 1.228	19.4 x 31.2	335	505	600	2700	180	800

XX denotes glass type.
A complete listing of NextGen® Brand glass types is specified on page 3 of this catalog.

Typical Cross-Section



48 Fiber

Hybrid designs (containing singlemode and multimode fiber) and composite designs (containing copper conductors) are also available.

For complete listing of all fiber counts offered, please contact your General Cable sales representative.

Ordering Part Number Example

AQ0244M1N-DWB

Singlemode, 24 fibers, loose tube SJ armored (figure 8)

Please see pages 4 and 5 for a complete guide on part number selection and ordering information.

Installation Notes:

The Maximum Tensile Load in the data table refers to the cable core only. Users should base sag and tension calculations on 1/4" EHS messenger per local guidelines and practices. Additional data is available upon request.

Product Construction:

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

Central Strength Member:
- Epoxy/glass rod

Armor:
- Corrugated coated steel tape

Outer Jacket:
- Black UV- and moisture-resistant polyethylene (PE)
- Sequential footage markings*

Messenger Wire:
- 1/4" stranded EHS galvanized steel
- MRCL with messenger** = 14,923 N/ 3,350 kF

Features:
- Loose tube gel-filled construction for superior fiber protection
- UV- and moisture-resistant design
- Self-supporting figure-8 design

Performance:
- Temperature:
  Storage -40°C (-40°F) to +75°C (+167°F)
  Installation -30°C (-22°F) to +60°C (+140°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:
  Short - 125 lbs/in (220 N/cm)
  Long - 63 lbs/in (110 N/cm)

Applications:
- Interbuilding voice or data communication backbones
- Installed aerially

Compliances:
- Tested in accordance with EIA/TIA-455 FOTPs
- ICEA S-87-640
- GR-20
- RoHS Compliant Directive 2011/65/EU

Options:
- Alternate 6-fiber per tube available upon request

*Sequential meter markings available upon request

**Installation load should be lower than maximum rated cable load to allow for wind and ice loading in accordance with NESC guidelines.

NEXTGEN® BRAND

EIA/TIA 455

RoHS Compliant Directive 2011/65/EU

General Cable

Loose Tube Dual Jacket Dual Armored Cable

Product Construction:

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

Central Strength Member:
- Epoxy/glass rod

1st Armor:
- Corrugated coated steel tape

Inner Jacket:
- Black UV- and moisture-resistant polyethylene (PE)

2nd Armor:
- Corrugated coated steel tape

Outer Jacket:
- Black UV- and moisture-resistant polyethylene (PE)
- Sequential footage markings*

Features:
- Loose tube gel-filled construction for superior fiber protection
- UV- and moisture-resistant design
- Rodent-resistant construction
- Dry Water Block cable core for ease of handling

Performance:
- Temperature:
  Storage -40˚C (-40˚F) to +75˚C (+167˚F)
  Installation -30˚C (-22˚F) to +60˚C (+140˚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:
  Short - 125 lbs/in (220 N/cm)
  Long - 250 lbs/in (440 N/cm)

Applications:
- Interbuilding voice or data communication backbones
- Installed in ducts, underground conduits, aerial/lashed or direct buried

Compliances:
- Tested in accordance with EIA/TIA 455 FOTPs
- ICEA S-87-640
- Rural Utilities Service (RUS) 7 CFR 1755.900 (REA PE-90)
- GR-20
- RoHS Compliant Directive 2011/65/EU

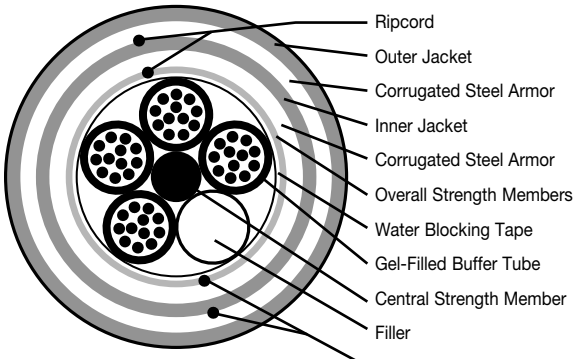
Options:
- Gel-free tube versions also available, use "-DT suffix" (XX0124M1F-DT)
- Alternate 6-fiber per HIS tube available upon request

*Sequential meter markings available upon request

CATALOG NUMBER	FIBER COUNT	NO. OF LOOSE TUBES	NO. OF FILLERS	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
								INSTALLATION		IN-SERVICE	
				IN	mm	LBS/1000'	kg/km	LBS	N	LBS	N
XX0024H1S-DWB	2	5	3	0.66	16.8	188	280	600	2700	180	800
XX0044H1S-DWB	4	5	4	0.66	16.8	188	280	600	2700	180	800
XX0064H1S-DWB	6	5	4	0.66	16.8	188	280	600	2700	180	800
XX0084H1S-DWB	8	5	4	0.66	16.8	188	280	600	2700	180	800
XX0124H1S-DWB	12	5	4	0.66	16.8	188	280	600	2700	180	800
XX0184H1S-DWB	18	5	3	0.66	16.8	188	280	600	2700	180	800
XX0244H1S-DWB	24	5	3	0.66	16.8	188	280	600	2700	180	800
XX0364H1S-DWB	36	5	2	0.66	16.8	188	280	600	2700	180	800
XX0484H1S-DWB	48	5	1	0.66	16.8	188	280	600	2700	180	800
XX0604H1S-DWB	60	5	0	0.66	16.8	188	280	600	2700	180	800
XX0724H1S-DWB	72	6	0	0.72	18.3	217	324	600	2700	180	800
XX0964H1S-DWB	96	8	0	0.79	20.0	247	368	600	2700	180	800
XX1204H1S-DWB	120	10	2	0.86	21.9	292	435	600	2700	180	800
XX1444H1S-DWB	144	12	0	0.94	23.8	338	505	600	2700	180	800

XX denotes glass type.
A complete listing of NextGen® Brand glass types is specified on page 3 of this catalog.

Typical Cross-Section



48 Fiber

Hybrid designs (containing singlemode and multimode fiber) and composite designs (containing copper conductors) are also available.

For complete listing of all fiber counts offered, please contact your General Cable sales representative.

Factory-installed eyelet option for quick cable-pull setups available.

Ordering Part Number Example

AQ0124H1S-DWB

Singlemode, 12 fibers, DJ dual armored

Please see pages 4 and 5 for a complete guide on part number selection and ordering information.

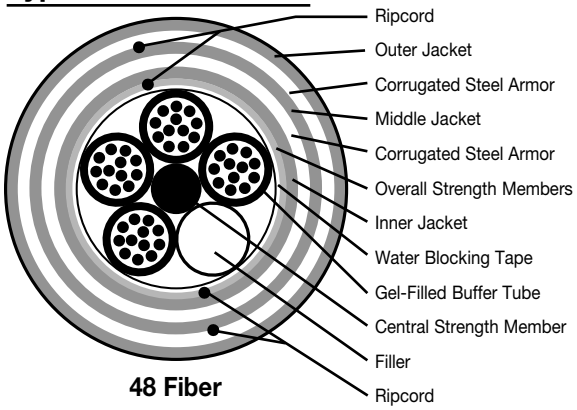
General Cable RoHS Compliant Directive 2011/65/EU RUS Compliant EIA/TIA 455 NEXTGEN BRAND

Loose Tube Triple Jacket Dual Armored Cable

CATALOG NUMBER	FIBER COUNT	NO. OF LOOSE TUBES	NO. OF FILLERS	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
								INSTALLATION		IN-SERVICE	
				IN	mm	LBS/1000'	kg/km	LBS	N	LBS	N
XX0024E1S-DWB	2	5	3	0.78	19.7	243	362	600	2700	180	800
XX0044E1S-DWB	4	5	4	0.78	19.7	243	362	600	2700	180	800
XX0064E1S-DWB	6	5	4	0.78	19.7	243	362	600	2700	180	800
XX0084E1S-DWB	8	5	4	0.78	19.7	243	362	600	2700	180	800
XX0124E1S-DWB	12	5	4	0.78	19.7	243	362	600	2700	180	800
XX0184E1S-DWB	18	5	3	0.78	19.7	243	362	600	2700	180	800
XX0244E1S-DWB	24	5	3	0.78	19.7	243	362	600	2700	180	800
XX0364E1S-DWB	36	5	2	0.78	19.7	243	362	600	2700	180	800
XX0484E1S-DWB	48	5	1	0.78	19.7	243	362	600	2700	180	800
XX0604E1S-DWB	60	5	0	0.78	19.7	243	362	600	2700	180	800
XX0724E1S-DWB	72	6	0	0.81	20.6	262	390	600	2700	180	800
XX0964E1S-DWB	96	8	0	0.88	22.3	302	450	600	2700	180	800
XX1204E1S-DWB	120	10	2	0.94	24.0	346	515	600	2700	180	800
XX1444E1S-DWB	144	12	0	1.02	25.9	392	585	600	2700	180	800

XX denotes glass type.
A complete listing of NextGen® Brand glass types is specified on page 3 of this catalog.

Typical Cross-Section



48 Fiber

Hybrid designs (containing singlemode and multimode fiber) and composite designs (containing copper conductors) are also available.

For complete listing of all fiber counts offered, please contact your General Cable sales representative.

Factory-installed eyelet option for quick cable-pull setups available.

Ordering Part Number Example

AQ0124E1S-DWB

Singlemode, 12 fibers, TJ dual armored
Please see pages 4 and 5 for a complete guide on part number selection and ordering information.

Product Construction:

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

Central Strength Member:
- Epoxy/glass rod

Inner Jacket:
- Black UV- and moisture-resistant polyethylene (PE)

1st Armor:
- Corrugated coated steel tape

Middle Jacket:
- Black UV- and moisture-resistant polyethylene (PE)

2nd Armor:
- Corrugated coated steel tape

Outer Jacket:
- Black UV- and moisture-resistant polyethylene (PE)
- Sequential footage markings*

Features:
- Loose tube gel-filled construction for superior fiber protection
- UV- and moisture-resistant design
- Rodent-resistant construction
- Dry Water Block cable core for ease of handling

Performance:
- Temperature:
  Storage -40°C (-40°F) to +75°C (+167°F)
  Installation -30°C (-22°F) to +60°C (+140°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:
  Short - 125 lbs/in (220 N/cm)
  Long - 250 lbs/in (440 N/cm)

Applications:
- Interbuilding voice or data communication backbones
- Installed in ducts, underground conduits, aerial/lashed or direct buried

Compliances:
- Tested in accordance with EIA/TIA-455 FOTPs
- ICEA S-87-640
- GR-20
- RoHS Compliant Directive 2011/65/EU

Options:
- Gel-free tube versions also available, use "-DT suffix" (XX0124M1F-DT)
- Alternate 6-fiber per tube available upon request

*Sequential meter markings available upon request

NEXTGEN® BRAND
EIA/TIA 455
RoHS Compliant Directive 2011/65/EU
General Cable

Loose Tube Single Jacket Ribbon Cable

Product Construction:

Fiber:
- 288–864 fibers
- Loose tube gel-filled
- Color-coding per TIA/EIA 598 B

Central Strength Member:
- Epoxy/glass rod

Overall Strength Member:
- Fiberglass yarns
- Aramid yarn overall strength member available upon request

Outer Jacket:
- Black UV- and moisture-resistant polyethylene (PE)
- Sequential footage markings*

Features:
- Loose tube gel-filled construction for superior fiber protection
- UV- and moisture-resistant design
- Rodent-resistant construction**
- Dry Water Block cable core for ease of handling

Performance:
- Temperature:
  Storage -40˚C (-40˚F) to +75˚C (+167˚F)
  Installation -30˚C (-22˚F) to +60˚C (+140˚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:
  Short - 125 lbs/in (220 N/cm)
  Long - 63 lbs/in (110 N/cm)

Applications:
- Interbuilding voice or data communication backbones
- Installed in ducts, underground conduits or aerial/lashed

Compliances:
- Tested in accordance with EIA/TIA-455 FOTPs
- ICEA S-87-640
- GR-20
- RoHS Compliant Directive 2011/65/EU

Options:
- Copper trace wire (unarmored design)
- Armor — corrugated steel tape

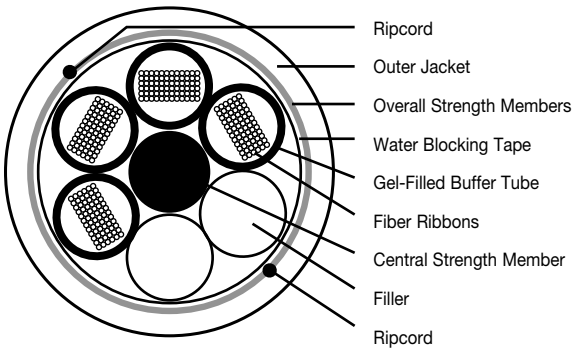
*Sequential meter markings available upon request

**Rodent resistance and direct-buried applies to armored design only

CATALOG NUMBER	FIBER COUNT	NO. OF RIBBONS	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
							INSTALLATION		IN-SERVICE	
			IN	mm	LBS/1000'	kg/km	LBS	N	LBS	N
XX2886R1A-DWB	228	24	0.841	21.4	208	310	1000	4500	180	800
XX3606R1A-DWB	360	30	0.841	21.4	208	310	1000	4500	180	800
XX4326R1A-DWB	432	36	0.841	21.4	208	310	1000	4500	180	800
XX4446R1A-DWB	444	37	1.050	26.7	297	442	1000	4500	180	800
XX5046R1A-DWB	504	42	1.050	26.7	297	442	1000	4500	180	800
XX5766R1A-DWB	576	48	1.050	26.7	297	442	1000	4500	180	800
XX6486R1A-DWB	648	54	1.050	26.7	297	442	1000	4500	180	800
XX7206R1A-DWB	720	60	1.050	26.7	297	442	1000	4500	180	800
XX7926R1A-DWB	792	66	1.050	26.7	297	442	1000	4500	180	800
XX8646R1A-DWB	864	72	1.050	26.7	297	442	1000	4500	180	800

XX denotes glass type.
A complete listing of NextGen® Brand glass types is specified on page 3 of this catalog.

Typical Cross-Section



288 Fiber

Hybrid designs (containing singlemode and multimode fiber) and composite designs (containing copper conductors) are also available.

For complete listing of all fiber counts offered, please contact your General Cable sales representative.

Factory-installed eyelet option for quick cable-pull setups available.

Ordering Part Number Example

AQ2886R1A-DWB

Singlemode, 12 fibers, loose tube ribbon

Please see pages 4 and 5 for a complete guide on part number selection and ordering information.

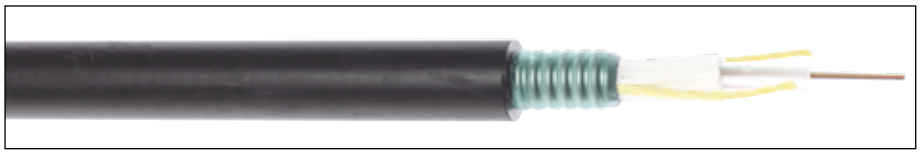
General Cable

RoHS Compliant Directive 2011/65/EU

EIA/TIA 455

NEXTGEN BRAND

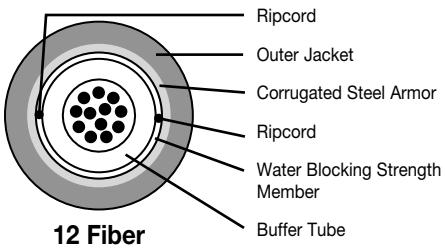
Compact Central Loose Tube Drop Cable



CATALOG NUMBER	FIBER COUNT	NO. 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
XX0024UNFC	2	1	0.36	9.1	62	93	600	2700	180	800
XX0044UNFC	4	1	0.36	9.1	62	93	600	2700	180	800
XX0064UNFC	6	1	0.36	9.1	62	93	600	2700	180	800
XX0084UNFC	8	1	0.36	9.1	62	93	600	2700	180	800
XX0124UNFC	12	1	0.36	9.1	62	93	600	2700	180	800

XX denotes glass type.
A complete listing of NextGen® Brand glass types is specified on page 3 of this catalog.

Typical Cross-Section



12 Fiber

Hybrid designs (containing singlemode and multimode fiber) and composite designs (containing copper conductors) are also available.

Ordering Part Number Example

AQ0064UNFC

Singlemode, 6 fibers, fiber compact central loose tube cable
Please see pages 4 and 5 for a complete guide on part number selection and ordering information.

Product Construction:

Fiber:
- 2–12 fibers
- Central tube gel-filled
- Color-coding per TIA/EIA 598 B

Armor:
- Corrugated coated steel tape

Outer Jacket:
- Black UV- and moisture-resistant polyethylene (PE)
- Sequential footage markings*

Features:
- Compact, user-friendly design
- Central tube armored design provides excellent fiber protection
- Easy to install

Performance:
- Temperature:
  Storage -40˚C (-40˚F) to +75˚C (+167˚F)
  Installation -30˚C (-22˚F) to +60˚C (+140˚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 (440 N/cm)

Applications:
- Broadband network
- Installed in ducts, underground conduits, aerial/lashed or direct buried
- FTTX

Compliances:
- Tested in accordance with EIA/TIA-455 FOTPs
- GR-20
- RoHS Compliant Directive 2011/65/EU

*Sequential meter markings available upon request

NEXTGEN® BRAND
EIA/TIA 455
RoHS Compliant Directive 2011/65/EU
General Cable

Toneable Flat Drop Cable

Product Construction:

Fiber:
- 2–12 fibers
- Central tube gel-filled
- Color-coding per TIA/EIA 598 B

Outer Jacket:
- Black UV- and moisture-resistant polyethylene (PE)
- Sequential footage markings*

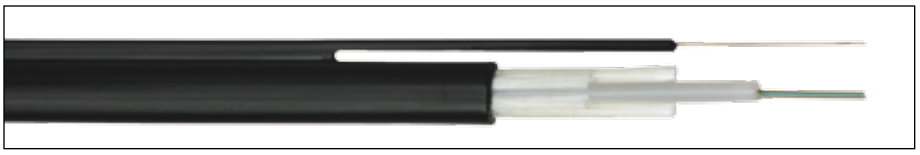
Features:
- Compact, user-friendly design
- Central tube armored design provides excellent fiber protection
- Easy to install

Performance:
- Temperature:
  Storage -40˚C (-40˚F) to +75˚C (+167˚F)
  Installation -30˚C (-22˚F) to +60˚C (+140˚F)
  Operating -40˚C (-40˚F) to +70˚C (+158˚F)
- Minimum Bend Radius:
  5.9 X OD—Installation
  3.9 X OD—In-Service
- Highly crush-resistant

Applications:
- Broadband network
- Installed in ducts
- FTTX

Compliances:
- Rural Utilities Service (RUS)
  7 CFR 1755.900 (REA PE-90)

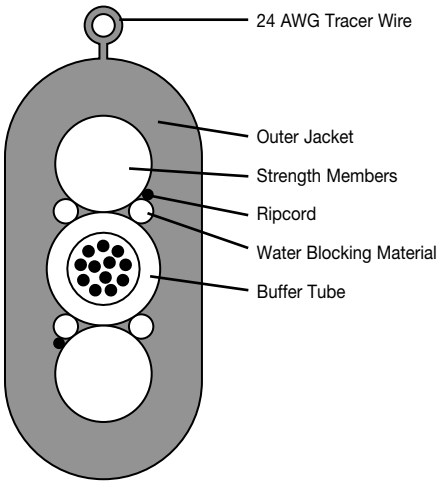
*Sequential meter markings available upon request



CATALOG NUMBER	FIBER COUNT	NO. OF LOOSE TUBES	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD INSTALLATION	
			IN	mm	LBS/1000'	kg/km	LBS	N
XX0024U1A.TF	2	1	0.440	0.20	28	42	300	1336
XX0044U1A.TF	4	1	0.440	0.20	28	42	300	1336
XX0064U1A.TF	6	1	0.440	0.20	28	42	300	1336
XX0084U1A.TF	8	1	0.440	0.20	28	42	300	1336
XX0124U1A.TF	12	1	0.440	0.20	28	42	300	1336

XX denotes glass type.
A complete listing of NextGen® Brand glass types is specified on page 3 of this catalog.

Typical Cross-Section



12 Fiber

Hybrid designs (containing singlemode and multimode fiber) and composite designs (containing copper conductors) are also available.

Ordering Part Number Example

AQ0064U1A.TF

Singlemode, 6 fibers, toneable flat drop cable

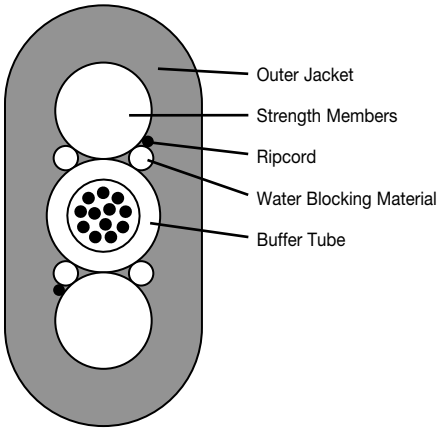
Please see pages 4 and 5 for a complete guide on part number selection and ordering information.

All-Dielectric Flat Drop Cable

CATALOG NUMBER	FIBER COUNT	NO. OF LOOSE TUBES	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD INSTALLATION	
			IN	mm	LBS/1000'	kg/km	LBS	N
XX0024U1A	2	1	0.33 x 0.20	8.5 x 5.0	26	39	300	1336
XX0044U1A	4	1	0.33 x 0.20	8.5 x 5.0	26	39	300	1336
XX0064U1A	6	1	0.33 x 0.20	8.5 x 5.0	26	39	300	1336
XX0084U1A	8	1	0.33 x 0.20	8.5 x 5.0	26	39	300	1336
XX0124U1A	12	1	0.33 x 0.20	8.5 x 5.0	26	39	300	1336

XX denotes glass type.
A complete listing of NextGen® Brand glass types is specified on page 3 of this catalog.

Typical Cross-Section



12 Fiber

Hybrid designs (containing singlemode and multimode fiber) and composite designs (containing copper conductors) are also available.

Ordering Part Number Example

AQ0064U1A

Singlemode, 6 fibers, all-dielectric flat drop cable
Please see pages 4 and 5 for a complete guide on part number selection and ordering information.

Product Construction:

Fiber:
- 2–12 fibers
- Central tube gel-filled
- Color-coding per TIA/EIA 598 B

Outer Jacket:
- Black UV- and moisture-resistant polyethylene (PE)
- Sequential footage markings*

Features:
- Compact, user-friendly design
- Easy to install

Performance:
- Temperature:
  Storage -40°C (-40°F) to +75°C (+167°F)
  Installation -30°C (-22°F) to +60°C (+140°F)
  Operating -40°C (-40°F) to +70°C (+158°F)
- Minimum Bend Radius:
  5.9 X OD—Installation
  3.9 X OD—In-Service
- Highly crush-resistant

Applications:
- Broadband network
- Installed in ducts or aerial/lashed
- FTTX

Compliances:
- Rural Utilities Service (RUS)
  7 CFR 1755.900 (REA PE-90)

*Sequential meter markings available upon request

NEXTGEN® BRAND RUS Compliant General Cable

Mini (Figure-8) Drop Cable

Product Construction:

Fiber:
- 2–12 fibers
- Color-coding per TIA/EIA 598 B

Outer Jacket:
- Black UV- and moisture-resistant polyethylene (PE)
- Sequential footage markings*

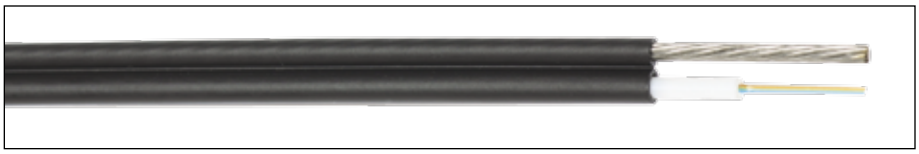
Features:
- Compact, user-friendly design
- Easy to install

Performance:
- Temperature:
  Storage -40˚C (-40˚F) to +75˚C (+167˚F)
  Installation -20˚C (-4˚F) to +60˚C (+140˚F)
  Operating -40˚C (-40˚F) to +70˚C (+158˚F)
- Minimum Bend Radius:
  6.7 X OD—Installation
  2.6 X OD—In-Service

Applications:
- Broadband network
- Installed in ducts or aerial/lashed
- FTTX

Compliances:
- Rural Utilities Service (RUS)
  7 CFR 1755.900 (REA PE-90)

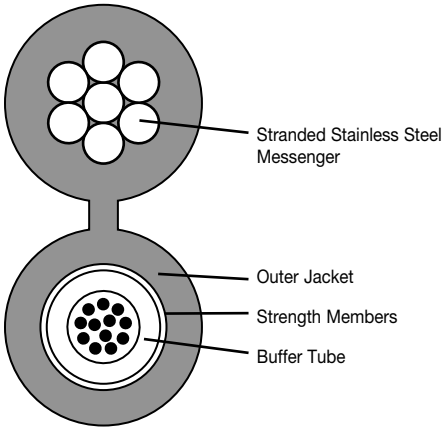
*Sequential meter markings available upon request



CATALOG NUMBER	FIBER COUNT	NO. 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
XX0024U2A	2	1	0.33 x 0.17	8.5 x 4.4	37	55	30	134	525	2335
XX0044U2A	4	1	0.33 x 0.17	8.5 x 4.4	37	55	30	134	525	2335
XX0064U2A	6	1	0.33 x 0.17	8.5 x 4.4	37	55	30	134	525	2335
XX0084U2A	8	1	0.33 x 0.17	8.5 x 4.4	37	55	30	134	525	2335
XX0124U2A	12	1	0.33 x 0.17	8.5 x 4.4	37	55	30	134	525	2335

XX denotes glass type.
A complete listing of NextGen® Brand glass types is specified on page 3 of this catalog.

Typical Cross-Section



12 Fiber

Hybrid designs (containing singlemode and multimode fiber) and composite designs (containing copper conductors) are also available.

Ordering Part Number Example

AQ0064U2A

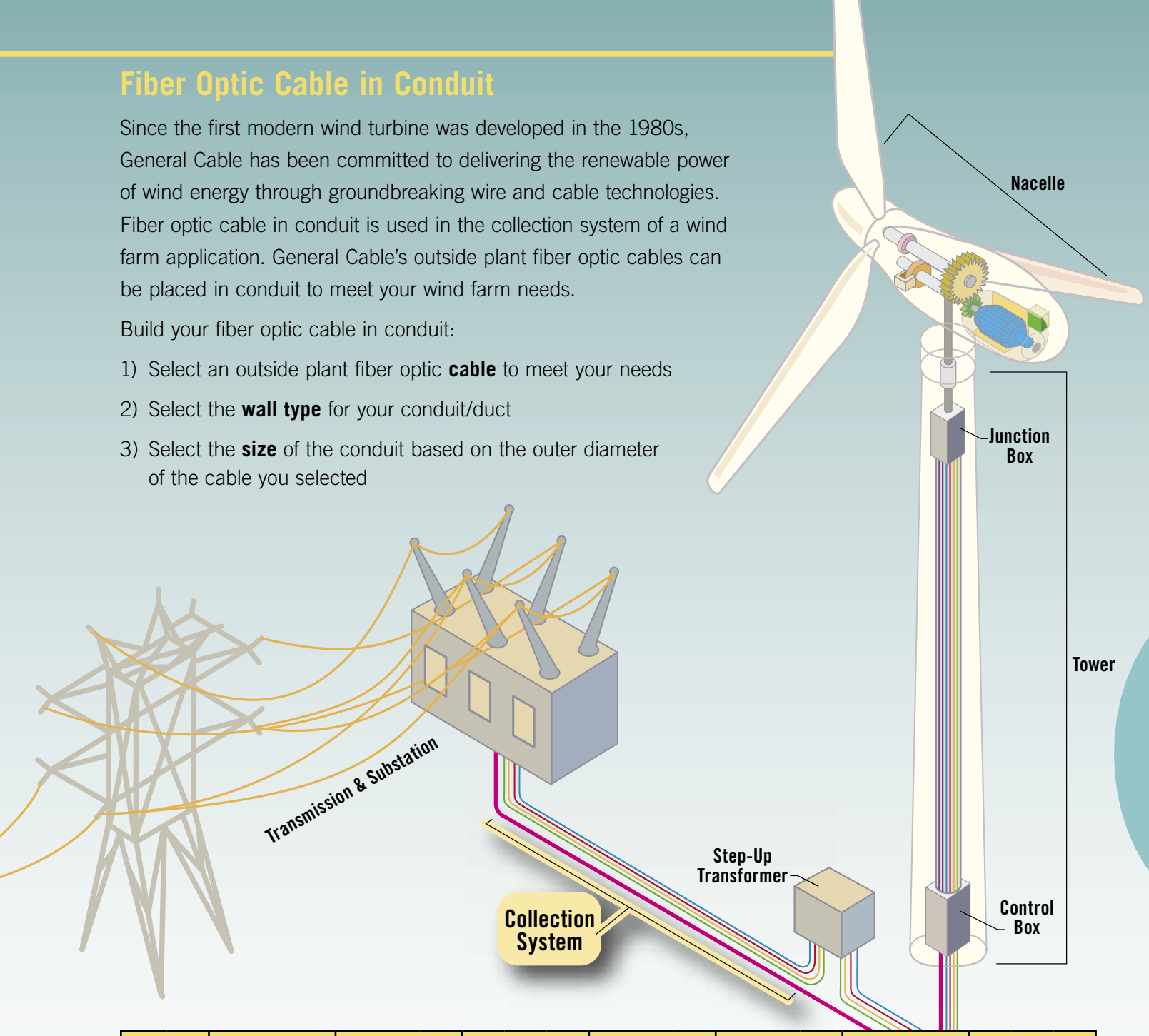
Singlemode, 6 fibers, aerial and duct drop cable
Please see pages 4 and 5 for a complete guide on part number selection and ordering information.

Fiber Optic Cable in Conduit

Since the first modern wind turbine was developed in the 1980s, General Cable has been committed to delivering the renewable power of wind energy through groundbreaking wire and cable technologies. Fiber optic cable in conduit is used in the collection system of a wind farm application. General Cable's outside plant fiber optic cables can be placed in conduit to meet your wind farm needs.

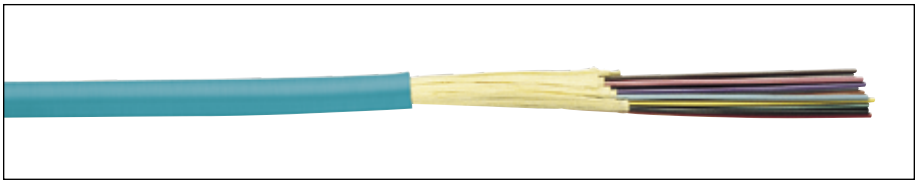
Build your fiber optic cable in conduit:

1) Select an outside plant fiber optic **cable** to meet your needs
2) Select the **wall type** for your conduit/duct
3) Select the **size** of the conduit based on the outer diameter of the cable you selected



WALL TYPE ⟶		SDR 9			SDR 11			SDR 13.5			SDR 17			STANDARD WALL			SCHEDULE 40			SCHEDULE 80		
TRADE SIZE	AVG. O.D.	AVG. WALL	AVG. I.D.	WT/FT	AVG. WALL	AVG. I.D.	WT/FT	AVG. WALL	AVG. I.D.	WT/FT	AVG. WALL	AVG. I.D.	WT/FT	AVG. WALL	AVG. I.D.	WT/FT	AVG. WALL	AVG. I.D.	WT/FT	AVG. WALL	AVG. I.D.	WT/FT
1/2"	0.840	0.103	0.633	0.099	0.086	0.667	0.085	0.072	0.696	0.072				0.060	0.700	0.070	0.119	0.602	0.111	0.157	0.526	0.139
3/4"	1.050	0.127	0.797	0.152	0.105	0.839	0.129	0.088	0.874	0.110	0.072	0.906	0.091	0.060	0.910	0.089	0.123	0.804	0.148	0.164	0.722	0.189
1"	1.315	0.156	1.003	0.235	0.130	1.056	0.200	0.107	1.100	0.169	0.087	1.140	0.139	0.085	1.145	0.136	0.143	1.029	0.218	0.190	0.936	0.277
1 1/4"	1.660	0.196	1.269	0.372	0.161	1.338	0.313	0.133	1.394	0.264	0.108	1.445	0.217	0.110	1.440	0.222	0.150	1.360	0.294	0.202	1.255	0.383
1 1/2"	1.900	0.224	1.452	0.487	0.183	1.534	0.408	0.151	1.599	0.343	0.122	1.656	0.281	0.125	1.650	0.288	0.155	1.590	0.351	0.212	1.476	0.465
2"	2.375	0.280	1.816	0.762	0.229	1.917	0.638	0.186	2.002	0.530	0.150	2.076	0.433	0.155	2.065	0.447	0.164	2.047	0.471	0.231	1.913	0.644
2 1/2"	2.875	0.339	2.198	1.116	0.277	2.321	0.935	0.226	2.424	0.777	0.179	2.516	0.628	0.215	2.445	0.744	0.215	2.445	0.744	0.293	2.290	0.982
3"	3.500	0.412	2.676	1.654	0.337	2.825	1.386	0.275	2.950	1.152	0.218	3.064	0.931	0.229	3.042	0.973	0.229	3.042	0.973	0.318	2.864	1.315
4"	4.500	0.530	3.440	2.734	0.434	3.633	2.291	0.353	3.793	1.904	0.281	3.939	1.538	0.254	3.991	1.403	0.251	3.998	1.387	0.357	3.786	1.923
5"	5.563	0.655	4.253	4.178	0.536	4.491	3.501	0.437	4.689	2.909	0.347	4.869	2.351	0.290	4.982	1.990	0.271	5.020	1.866	0.398	4.768	2.668
6"	6.625	0.780	5.064	5.926	0.638	5.348	4.966	0.520	5.585	4.126	0.413	5.799	3.334	0.315	5.995	2.581	0.297	6.031	2.440	0.458	5.709	3.669

NextGen® Brand Indoor Cables 4



NextGen® Brand fiber optic cables are optimized for any premises application.

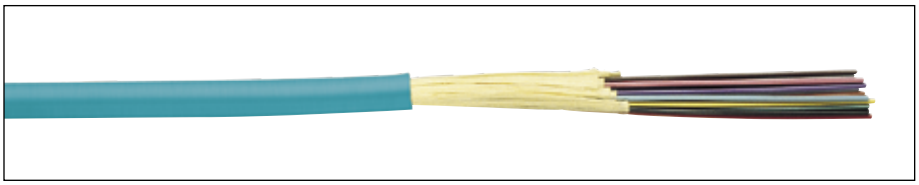
Applications: Premises cables with 900 µm tight buffer constructions are built to withstand the continuous handling and difficult routing typical of building backbones. These fiber optic cables emphasize flexibility, handling and proper fiber termination characteristics. This provides reliable and simple installations every time. These cables are used for intrabuilding vertical (backbone) and horizontal runs.

Range of Products: Includes the manufacture of riser, plenum and low-smoke, zero-halogen (LSZH) cables. This includes distribution designs as well as breakout style cables. Fiber counts range up to 144 fibers.

Features: Premises cables have an industry-standard 900 µm tight buffer for termination to connectors. The tight buffer diameter is tightly controlled to provide reliable, first-time connections. Breakout cables utilize 2.4 mm breakout dimensions for rugged environments and compatibility with connectors. All fibers are color-coded and subgrouped (if necessary) for easy identification for handling.

Index	Page

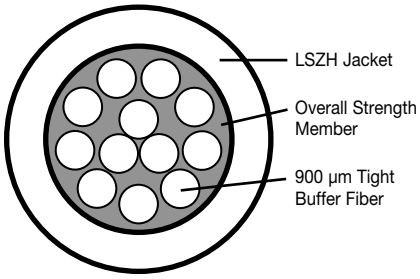
Tight Buffer Distribution Low-Smoke, Zero-Halogen (LSZH) Cable Type OFNR, CSA FT4



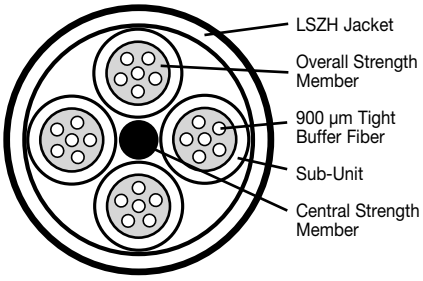
CATALOG NUMBER	FIBER COUNT	NO. OF SUB-UNITS	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
							INSTALLATION		IN-SERVICE	
			IN	mm	LBS/1000'	kg/km	LBS	N	LBS	N
XX0021PNZ	2	—	0.17	4	11	16	225	1000	65	290
XX0041PNZ	4	—	0.18	5	13	19	225	1000	65	290
XX0061PNZ	6	—	0.20	5	15	22	225	1000	65	290
XX0081PNZ	8	—	0.20	5	17	25	245	1090	70	310
XX0121PNZ	12	—	0.23	6	21	31	320	1425	112	500
XX0181P1Z	18	3	0.47	12	84	125	600	2670	200	890
XX0241P1Z	24	4	0.53	13	92	137	800	3560	270	1201
XX0361P1Z	36	6	0.64	16	142	211	1000	4448	335	1490
XX0481P1Z	48	4	0.61	15	122	182	1000	4448	335	1490
XX0601P1Z	60	5	0.67	17	156	232	1200	5338	400	1780
XX0721P1Z	72	6	0.74	19	192	286	1500	6672	500	2224

XX denotes glass type.
A complete listing of NextGen® Brand glass types is specified on page 3 of this catalog.

Typical Cross-Sections



PNZ ≤ 12 Fiber



P1Z ≥ 18 Fiber

Hybrid designs (containing singlemode and multimode fiber) and composite designs (containing copper conductors) are also available.

Ordering Part Number Example

BE0121PNZ or BE0241P1Z

50 µm multimode, 12 or 24 fibers, tight buffer LSZH
Please see pages 4 and 5 for a complete guide on part number selection and ordering information.

Product Construction:

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

Central Strength Member:
- Epoxy/glass rod (above 12 fibers)

Overall Strength Member:
- Aramid fiber yarn

Jacket:
- Flame-retardant LSZH compound
- Sequential footage markings*
- Orange jacket—multimode fibers (except 10 Gbps)
- Aqua jacket—10 Gbps multimode fibers
- Yellow jacket—singlemode fibers

Features:
- Lightweight, flexible design simplifies installation
- Tight buffer provides individual fiber protection
- Tight buffered fibers are easy to handle and strip for field connectorization
- Sub-units are numbered for identification

Performance:
- Temperature:
  Storage -40°C (-40°F) to +70°C (+158°F)
  Installation 0°C (+32°F) to +50°C (+122°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:
  850 lbs/in (1485 N/cm)
- Maximum Vertical Rise—1,640 ft (500 m)

Applications:
- Intrabuilding voice or data communication backbones
- ETL Listed Type OFNR for installation in vertical riser and general horizontal applications when installed in accordance with NEC article 770.154 and 770.179

Compliances:
- ETL Listed Type OFNR
- CSA FT4
- TIA 568 C.3
- ICEA S-83-596
- RoHS Compliant Directive 2011/65/EU
- GR-409

*Sequential meter markings available upon request

Tight Buffer Distribution Riser Cable

Type OFNR, CSA FT4

Product Construction:

Fiber:

- 2–144 fibers
- 900 µm tight buffer
- Color-coding per TIA/EIA 598 B

Central Strength Member:

- Epoxy/glass rod (P1R)

Overall Strength Member:

- Aramid fiber yarn

Jacket:

- Flame-retardant compound
- Sequential footage markings*
- Orange jacket—multimode fibers (except 10 Gbps)
- Aqua jacket—10 Gbps multimode fibers
- Yellow jacket—singlemode fibers

Features:

- Lightweight, flexible design simplifies installation
- Tight buffer provides individual fiber protection
- Tight buffered fibers are easy to handle and strip for field connectorization
- Sub-units are numbered for identification

Performance:

- Temperature:
  Storage -40˚C (-40˚F) to +70˚C (+158˚F)
  Installation 0˚C (+32˚F) to +50˚C (+122˚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:
  850 lbs/in (1485 N/cm)
- Maximum Vertical Rise—1,640 ft (500 m)

Applications:

- Intrabuilding voice or data communication backbones
- ETL Listed Type OFNR for installation in vertical riser and general horizontal applications when installed in accordance with NEC article 770.154 and 770.179

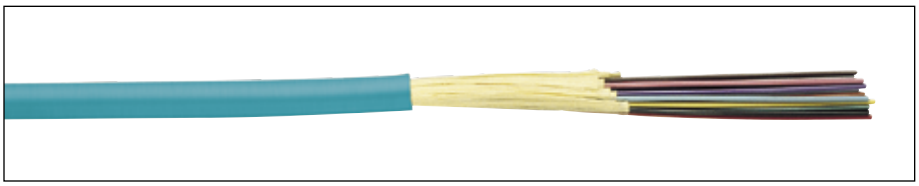
Compliances:

- ETL Listed Type OFNR
- CSA FT4
- TIA 568 C.3
- ICEA S-83-596
- GR-409
- RoHS Compliant Directive 2011/65/EU

Option:

- Ripcord available on PNRs, comes as standard on P1Rs

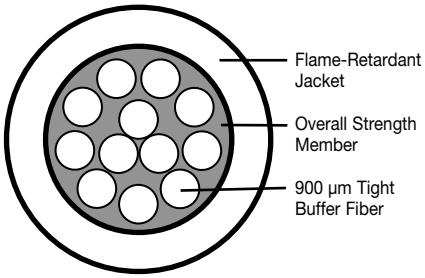
*Sequential meter markings available upon request



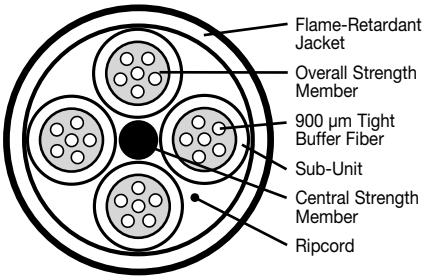
CATALOG NUMBER	FIBER COUNT	NO. OF SUB-UNITS	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
							INSTALLATION		IN-SERVICE	
			IN	mm	LBS/1000'	kg/km	LBS	N	LBS	N
XX0021PNR	2	—	0.19	5	14	20	225	1000	65	290
XX0041PNR	4	—	0.20	5	16	23	225	1000	65	290
XX0061PNR	6	—	0.20	5	18	27	225	1000	65	290
XX0081PNR	8	—	0.22	6	20	30	245	1090	70	310
XX0101PNR	10	—	0.24	6	23	34	320	1425	112	500
XX0121PNR	12	—	0.25	6	24	36	320	1425	112	500
XX0181P1R	18	3	0.46	12	76	113	600	2670	200	890
XX0181PNR	18	—	0.33	8	45	67	320	1425	112	500
XX0241P1R	24	4	0.52	13	84	125	800	3560	270	1201
XX0241PNR	24	—	0.34	9	47	70	320	1425	112	500
XX0361P1R	36	6	0.65	17	152	226	1000	4448	335	1490
XX0481P1R	48	4	0.63	16	133	197	1000	4448	335	1490
XX0601P1R	60	5	0.69	17	155	231	1200	5338	400	1780
XX0721P1R	72	6	0.76	19	202	301	1500	6672	500	2224
XX0961P1R	96	8	0.89	23	289	430	2000	8896	670	2980
XX1201P1R	120	10	1.00	25	297	442	3000	13345	1000	4448
XX1441P1R	144	12	1.00	25	304	452	3000	13345	1000	4448

XX denotes glass type.
A complete listing of NextGen® Brand glass types is specified on page 3 of this catalog.

Typical Cross-Sections



PNR ≤ 24 Fiber



P1R ≥ 18 Fiber

Hybrid designs (containing singlemode and multimode fiber) and composite designs (containing copper conductors) are also available.

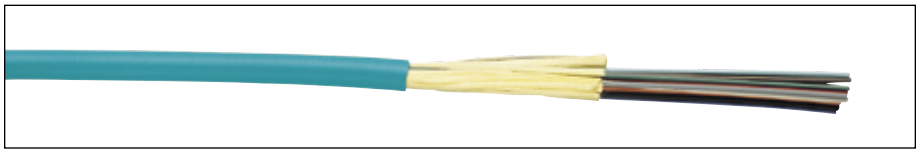
Ordering Part Number Example

BE0241PNR or BE0241P1R

50 µm multimode, 24 fibers, tight buffer distribution riser
Please see pages 4 and 5 for a complete guide on part number selection and ordering information.

Tight Buffer Distribution Plenum Cable

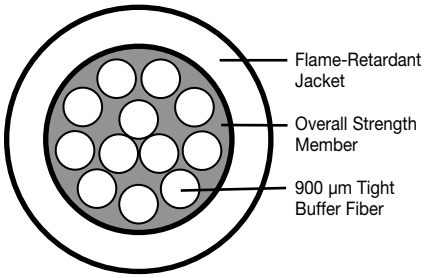
Type OFNP, CSA FT6



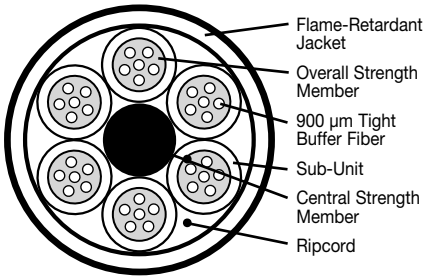
CATALOG NUMBER	FIBER COUNT	NO. OF SUB-UNITS	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
							INSTALLATION		IN-SERVICE	
			IN	mm	LBS/1000'	kg/km	LBS	N	LBS	N
XX0021PNU	2	—	0.17	4	12	17	225	1000	65	290
XX0041PNU	4	—	0.18	5	14	20	225	1000	65	290
XX0061PNU	6	—	0.18	5	16	24	225	1000	65	290
XX0081PNU	8	—	0.21	5	18	27	245	1090	70	311
XX0121PNU	12	—	0.22	6	23	34	320	1423	112	500
XX0181PNU	18	—	0.31	8	42	63	320	1423	112	500
XX0241PNU	24	—	0.32	8	45	67	320	1423	112	500
XX0361P1D	36	6	0.61	16	151	225	1000	4448	335	1490
XX0481P1D	48	4	0.58	15	135	200	1000	4448	335	1490
XX0601P1D	60	5	0.67	17	186	277	1000	4448	335	1490
XX0721P1D	72	6	0.73	19	217	323	1000	4448	335	1490
XX0961P1D	96	8	0.86	22	312	464	1500	6672	500	2224
XX1201P1D	120	10	0.96	24	374	556	1500	6672	500	2224
XX1441P1D	144	12	0.96	24	394	586	1500	6672	500	2224

XX denotes glass type.
A complete listing of NextGen® Brand glass types is specified on page 3 of this catalog.

Typical Cross-Sections



PNU ≤ 24 Fiber



P1D ≥ 36 Fiber

Hybrid designs (containing singlemode and multimode fiber) and composite designs (containing copper conductors) are also available.

Ordering Part Number Example

BE0241PNU or BE0361P1D

50 µm multimode, 24 or 36 fibers, tight buffer distribution plenum
Please see pages 4 and 5 for a complete guide on part number selection and ordering information.

Product Construction:

Fiber:

- 2–144 fibers
- 900 µm tight buffer
- Color-coding per TIA/EIA 598 B

Central Strength Member:

- Epoxy/glass rod (P1D)

Overall Strength Member:

- Aramid fiber yarn

Jacket:

- Flame-retardant compound or fluoropolymer
- Sequential footage markings*
- Orange jacket—multimode fibers (except 10 Gbps)
- Aqua jacket—10 Gbps multimode fibers
- Yellow jacket—singlemode fibers

Features:

- Lightweight, flexible design simplifies installation
- Tight buffer provides individual fiber protection
- Tight buffered fibers are easy to handle and strip for field connectorization
- Sub-units are numbered for identification

Performance:

- Temperature:
  Storage -40°C (-40°F) to +70°C (+158°F)
  Installation 0°C (+32°F) to +50°C (+122°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:
  850 lbs/in (1485 N/cm)
- Maximum Vertical Rise—1,640 ft (500 m)

Applications:

- Intrabuilding voice or data communication backbones
- ETL Listed Type OFNP for installation in ducts, plenums and other spaces used as environmental air returns when installed in accordance with NEC article 770.154 and 770.179

Compliances:

- ETL Listed Type OFNP
- CSA FT6
- TIA 568 C.3
- ICEA S-83-596
- GR-409
- RoHS Compliant Directive 2011/65/EU

Option:

- Ripcord available on PNUs, comes as standard on P1Ds

*Sequential meter markings available upon request

NEXTGEN® BRAND

Intertek

TIA 568 C.3

RoHS Compliant Directive 2011/65/EU

General Cable

Tight Buffer Breakout Riser Cable

Type OFNR, CSA FT4

Product Construction:

Fiber:

- 2–24 fibers
- 900 µm white tight buffer
- 2.4 mm jacketed sub-units, with overall jacket color coding

Central Strength Member:

- Aramid fiber yarn
- Optional epoxy glass rod (BIR)

Overall Strength Member:

- Aramid fiber yarn

Jacket:

- Flame-retardant compound
- Sequential footage markings*
- Orange jacket—multimode fibers (except 10 Gbps)
- Aqua jacket—10 Gbps multimode fibers
- Yellow jacket—singlemode fibers

Features:

- Rugged individual fiber protection
- Easily terminated with fiber sub-units
- Heavy-duty premises applications
- Sub-units are numbered for identification

Performance:

- Temperature:
  Storage -40˚C (-40˚F) to +70˚C (+158˚F)
  Installation 0˚C (+32˚F) to +50˚C (+122˚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:
  1000 lbs/in (1750 N/cm)
- Maximum Vertical Rise—1,640 ft (500 m)

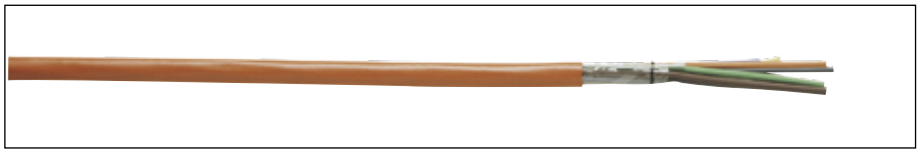
Applications:

- Intrabuilding voice or data communication backbones
- ETL Listed Type OFNR for installation in vertical riser and general horizontal applications when installed in accordance with NEC article 770.154 and 770.179

Compliances:

- ETL Listed Type OFNR
- CSA FT4
- TIA 568 C.3
- ICEA S-83-596
- GR-409
- RoHS Compliant Directive 2011/65/EU

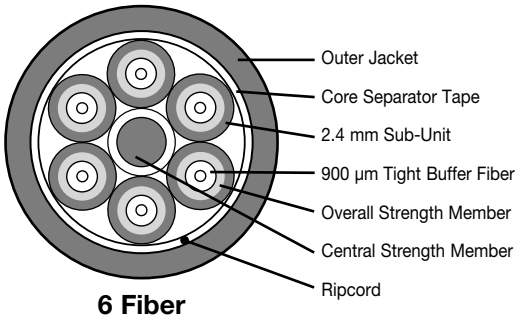
*Sequential meter markings available upon request



CATALOG NUMBER	FIBER COUNT	NO. 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
XX0021B3R	2	2	0.27	7	28	41	270	1200	110	490
XX0041B3R	4	4	0.31	8	37	54	450	2000	180	800
XX0061B3R	6	6	0.37	9	51	76	450	2000	180	800
XX0081B3R	8	8	0.43	11	71	106	600	2670	200	890
XX0121B3R	12	12	0.47	12	79	117	790	3515	270	1200
XX0181B3R	18	18	0.56	14	111	165	1000	4450	400	1780
XX0241B3R	24	24	0.65	16	153	228	1230	5470	450	2000

XX denotes glass type.
A complete listing of NextGen® Brand glass types is specified on page 3 of this catalog.

Typical Cross-Section



6 Fiber

Hybrid designs (containing singlemode and multimode fiber) and composite designs (containing copper conductors) are also available.

Ordering Part Number Example

BE0121B3R

50 µm multimode, 12 fibers, tight buffer breakout riser
Please see pages 4 and 5 for a complete guide on part number selection and ordering information.

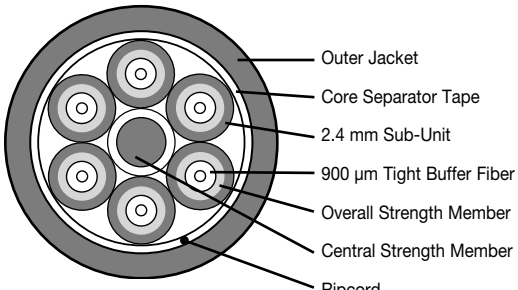
Tight Buffer Breakout Plenum Cable

Type OFNP, CSA FT6

CATALOG NUMBER	FIBER COUNT	NO. 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
XX0021B3D	2	2	0.24	6	27	40	270	1200	110	490
XX0041B3D	4	4	0.28	7	33	49	450	2000	180	800
XX0061B3D	6	6	0.34	9	50	74	450	2000	180	800
XX0081B3D	8	8	0.40	10	72	107	600	2670	200	890
XX0121B3D	12	12	0.44	11	76	113	790	3515	270	1200
XX0181B3D	18	18	0.54	14	122	181	1000	4450	400	1780
XX0241B3D	24	24	0.63	16	171	254	1230	5470	450	2000
XX0361B3D	36	36	0.73	19	209	311	2000	8896	600	2669
XX0481B3D	48	48	0.84	21	261	388	2600	11565	780	3470

XX denotes glass type.
A complete listing of NextGen® Brand glass types is specified on page 3 of this catalog.

Typical Cross-Section



6 Fiber

Hybrid designs (containing singlemode and multimode fiber) and composite designs (containing copper conductors) are also available.

Ordering Part Number Example

BE0121B3D

50 µm multimode, 12 fibers, tight buffer breakout plenum
Please see pages 4 and 5 for a complete guide on part number selection and ordering information.

Product Construction:

Fiber:

- 2–48 fibers
- 900 µm white tight buffer
- 2.4 mm jacketed sub-units, with overall jacket color coding

Central Strength Member:

- Aramid fiber yarn
- Optional epoxy glass rod (B1D)

Overall Strength Member:

- Aramid fiber yarn

Jacket:

- Flame-retardant compound
- Sequential footage markings*
- Orange jacket—multimode fibers (except 10 Gbps)
- Aqua jacket—10 Gbps multimode fibers
- Yellow jacket—singlemode fibers

Features:

- Rugged individual fiber protection
- Easily terminated with fiber sub-units
- Heavy-duty premises applications
- Sub-units are numbered for identification

Performance:

- Temperature:
  Storage -40°C (-40°F) to +70°C (+158°F)
  Installation 0°C (+32°F) to +50°C (+122°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:
  850 lbs/in (1485 N/cm)
- Maximum Vertical Rise—1,640 ft (500 m)

Applications:

- Intrabuilding voice or data communication backbones
- ETL Listed Type OFNP for installation in ducts, plenums and other spaces used as environmental air returns when installed in accordance with NEC article 770.154 and 770.179

Compliances:

- ETL and c(ETL) Listed Type OFNP
- CSA FT6
- TIA 568 C.3
- ICEA S-83-596
- RoHS Compliant Directive 2011/65/EU
- GR-409

*Sequential meter markings available upon request

NEXTGEN® BRAND · Intertek · TIA 568 C.3 · RoHS Compliant Directive 2011/65/EU · General Cable

Tight Buffer Distribution Interlock Armored Riser Cable

Type OFCR, CSA FT4

Product Construction:

Fiber:
- 2–144 fibers
- 900 µm tight buffer
- Color-coding per TIA/EIA 598 B

Overall Strength Member:
- Aramid fiber yarn

Inner Jacket:
- Flame-retardant compound

Armor:
- Interlock aluminum (-ILRA)

Outer Jacket:
- Flame-retardant compound
- Sequential footage markings*
- Orange jacket—multimode fibers (except 10 Gbps)
- Aqua jacket—10 Gbps multimode fibers
- Yellow jacket—singlemode fibers

Features:
- Interlock armor provides outstanding mechanical protection
- Interlock armor is flexible and easy to use
- Tight buffer provides individual fiber protection
- Sub-units are numbered for identification

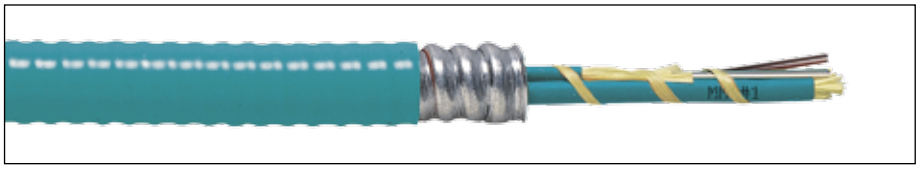
Performance:
- Temperature:
  Storage -40°C (-40°F) to +70°C (+158°F)
  Installation 0°C (+32°F) to +50°C (+122°F)
  Operating -20°C (-4°F) to +70°C (+158°F)
- Minimum Bend Radius:
  20 X OD—Installation
  10 X OD—In-Service
- Maximum Crush Resistance:
  1,500 lbs/in (2,627 N/cm)

Applications:
- Harsh premises environments requiring heavy-duty protection
- ETL Type OFCR for installation in any premises location when installed in accordance with NEC article 770.154 and 770.179

Compliances:
- ETL Listed Type OFCR
- CSA FT4
- TIA 568 C.3
- ICEA S-83-596
- GR-409
- RoHS Compliant Directive 2011/65/EU

Note:
Armored cable without an outer jacket available upon request (-IL)

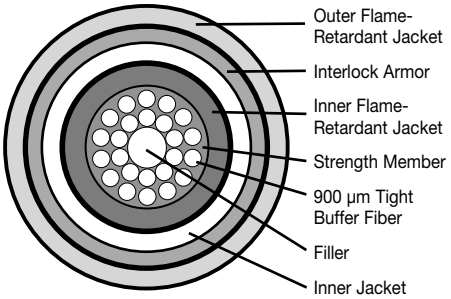
*Sequential meter markings available upon request



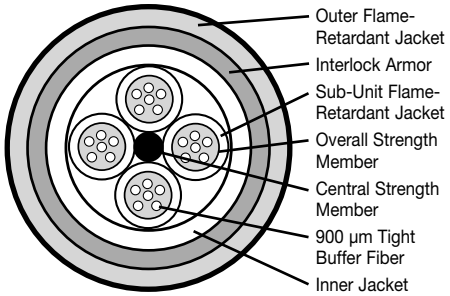
CATALOG NUMBER	FIBER COUNT	NO. OF SUB-UNITS	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
							INSTALLATION		IN-SERVICE	
			IN	mm	LBS/1000'	kg/km	LBS	N	LBS	N
XX0021PNR-ILRA	2	—	0.52	13	85	126	550	2447	165	734
XX0041PNR-ILRA	4	—	0.53	14	91	136	550	2447	165	734
XX0061PNR-ILRA	6	—	0.53	14	94	140	550	2447	165	734
XX0121PNR-ILRA	12	—	0.53	14	100	149	550	2447	165	734
XX0241PNR-ILRA	24	—	0.67	17	144	214	550	2447	165	734
XX0241P1R-ILRA	24	4	0.87	22	238	354	1000	4448	300	1334
XX0361P1R-ILRA	36	6	0.99	25	360	536	1000	4448	300	1334
XX0481P1R-ILRA	48	4	0.99	25	330	491	1000	4448	300	1334
XX0601P1R-ILRA	60	5	1.04	26	364	542	1000	4448	300	1334
XX0721P1R-ILRA	72	6	1.09	28	422	628	1000	4448	300	1334
XX0961P1R-ILRA	96	8	1.24	32	543	808	1000	4448	335	1490
XX1201P1R-ILRA	120	10	1.39	35	584	826	1000	4448	335	1490
XX1441P1R-ILRA	144	12	1.39	35	555	869	1000	4448	335	1490

XX Denotes glass type.
A complete listing of NextGen® Brand glass types is specified on page 3 of this catalog.

Typical Cross-Sections



PNR-ILRA ≤ 24 Fiber



P1R-ILRA ≥ 24 Fiber

Hybrid designs (containing singlemode and multimode fiber) and composite designs (containing copper conductors) are also available.

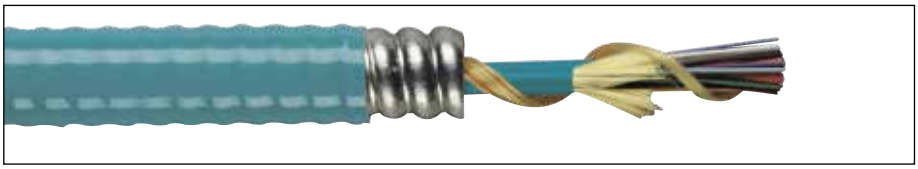
Ordering Part Number Example

BE0241PNR-ILRA or BE0241PNR-ILRA

50 µm multimode, 24 fibers, tight buffer distribution interlock armor riser
Please see pages 4 and 5 for a complete guide on part number selection and ordering information.

Tight Buffer Distribution Interlock Armored Plenum Cable

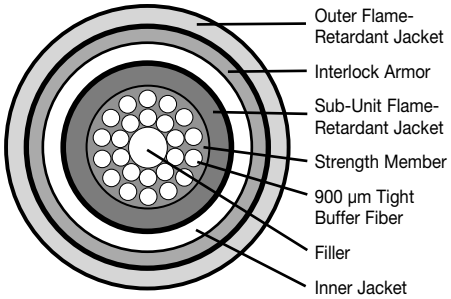
Type OFCP, CSA FT6



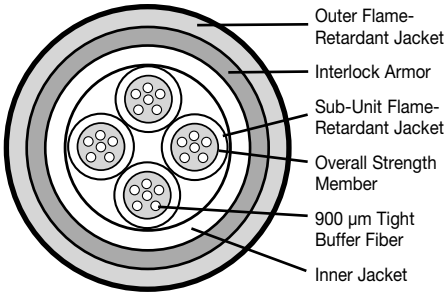
CATALOG NUMBER	FIBER COUNT	NO. OF SUB-UNITS	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
							INSTALLATION		IN-SERVICE	
			IN	mm	LBS/1000'	kg/km	LBS	N	LBS	N
XX0021PNU-ILPA	2	—	0.42	11	76	114	550	2447	165	734
XX0041PNU-ILPA	4	—	0.42	11	78	117	550	2447	165	734
XX0061PNU-ILPA	6	—	0.42	11	80	120	550	2447	165	734
XX0121PNU-ILPA	12	—	0.47	12	100	149	550	2447	165	734
XX0241PNU-ILPA	24	—	0.61	16	130	194	550	2447	165	734
XX0241PNU-ILPAS	24	4	0.70	18	136	202	1000	4448	300	1334
XX0361PNU-ILPAS	36	6	0.73	19	158	235	1000	4448	300	1334
XX0481PNU-ILPAS	48	4	0.80	20	209	311	1000	4448	300	1334
XX0601PNU-ILPAS	60	5	0.85	22	187	278	1000	4448	300	1334
XX0721PNU-ILPAS	72	6	0.95	24	273	406	1000	4448	300	1334
XX0961PNU-ILPAS	96	8	1.05	27	328	488	1000	4448	335	1490
XX1201PNU-ILPAS	120	10	1.10	28	372	554	1000	4448	335	1490
XX1441PNU-ILPAS	144	12	1.20	31	386	574	1000	4448	335	1490

XX Denotes glass type.
A complete listing of NextGen® Brand glass types is specified on page 3 of this catalog.

Typical Cross-Sections



PNU-ILPA ≤ 24 Fiber



PNU-ILPAS ≥ 24 Fiber

Hybrid designs (containing singlemode and multimode fiber) and composite designs (containing copper conductors) are also available.

Ordering Part Number Example

BE0241PNU-ILPA or BE0241PNU-ILPAS

50 µm multimode, 24 fibers, tight buffer distribution interlock armor plenum
Please see pages 4 and 5 for a complete guide on part number selection and ordering information.

Product Construction:

Fiber:
- 4–144 fibers
- 900 µm tight buffer
- Color-coding per TIA/EIA 598 B

Overall Strength Member:
- Aramid fiber yarn

Inner Jacket:
- Flame-retardant compound

Armor:
- Interlock aluminum (-ILPA)

Outer Jacket:
- Flame-retardant compound
- Sequential footage markings*
- Orange jacket—multimode fibers (except 10 Gbps)
- Aqua jacket—10 Gbps multimode fibers
- Yellow jacket—singlemode fibers

Features:
- Interlock armor provides outstanding mechanical protection
- Interlock armor is flexible and easy to use
- Tight buffer provides individual fiber protection
- Sub-units are numbered for identification

Performance:
- Temperature:
  Storage -40˚C (-40˚F) to +70˚C (+158˚F)
  Installation 0˚C (+32˚F) to +50˚C (+122˚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:
  1,500 lbs/in (2,627 N/cm)

Applications:
- Harsh premises environments requiring heavy-duty protection
- ETL Type OFCP for installation in any premises location when installed in accordance with NEC article 770.154 and 770.179

Compliances:
- ETL Listed Type OFCP
- CSA FT6
- TIA 568 C.3
- ICEA S-83-596
- GR-409
- RoHS Compliant Directive 2011/65/EU

Note:
Armored cable without an outer jacket available upon request (-IL)

*Sequential meter markings available upon request

NEXTGEN® BRAND · Intertek · TIA 568 C.3 · RoHS Compliant Directive 2011/65/EU · General Cable

Ribbon Distribution Plenum Cable

Type OFNP, CSA FT6

Product Construction:

Fiber:

- 4–12 fibers
- Inked fiber with acrylate coating

Overall Strength Member:

- Aramid fiber yarn

Jacket:

- Flame-retardant compound
- Sequential footage markings*
- Orange jacket—multimode fibers (except 10 Gbps)
- Aqua jacket—10 Gbps multimode fibers
- Yellow jacket—singlemode fibers

Features:

- Compatible with MPO/MTP connectors
- Lightweight, flexible design simplifies installation

Performance:

- Temperature:
  Storage -40˚C (-40˚F) to +70˚C (+158˚F)
  Installation 0˚C (+32˚F) to +50˚C (+122˚F)
  In-Service -20˚C (-4˚F) to +70˚C (+158˚F)
- Minimum Bend Radius:
  20 X OD—Installation
  10 X OD—In-Service

Applications:

- ETL listed type OFNP for installation in ducts, plenum and other spaces used as environmental air returns when installed in accordance with NEC article 770.154 and 770.179

Compliances:

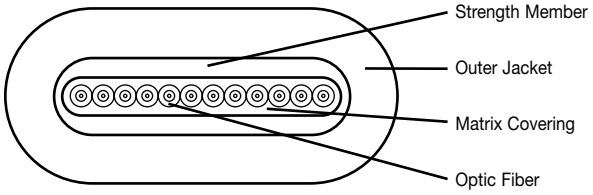
- ETL Listed Type OFNP
- CSA FT6
- TIA 568 C.3
- GR-409
- RoHS Compliant Directive 2011/65/EU

*Sequential meter markings available upon request

CATALOG NUMBER	FIBER COUNT	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
						INSTALLATION		IN-SERVICE	
		IN	mm	LBS/1000'	kg/km	LBS	N	LBS	N
XX0041RNP	4	0.195 x 0.095	4.95 x 2.41	8	12	110	490	65	290
XX0061RNP	6	0.195 x 0.095	4.95 x 2.41	8	12	110	490	65	290
XX0081RNP	8	0.195 x 0.095	4.95 x 2.41	8	12	110	490	65	290
XX0121RNP	12	0.195 x 0.095	4.95 x 2.41	8	12	110	490	65	290

XX denotes glass type.
A complete listing of NextGen® Brand glass types is specified on page 3 of this catalog.

Typical Cross-Section

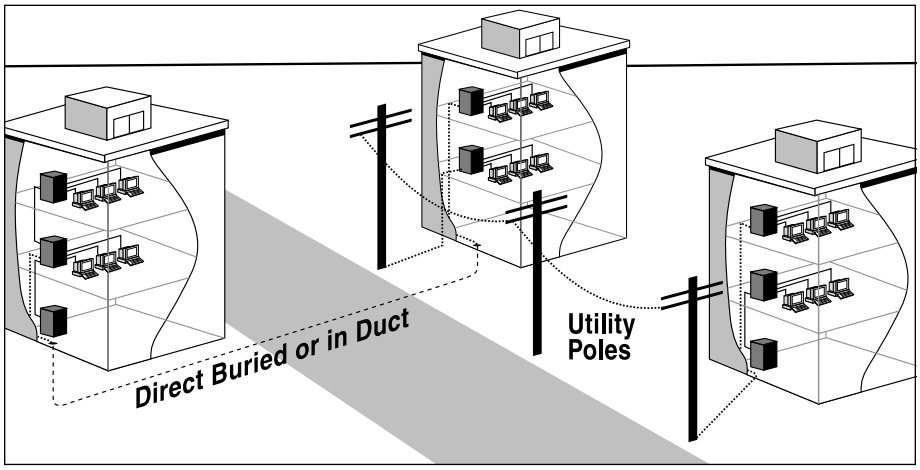


Ordering Part Number Example

BE0121RNP

50 µm multimode, 12 fibers, tight buffer distribution ribbon plenum cable.
Please see pages 4 and 5 for a complete guide on part number selection and ordering information.

NextGen® Brand Indoor/Outdoor Cables 5



The concept, production and application of indoor/outdoor fiber optic cables has been a big part of the NextGen® Brand product line for more than 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, we have 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 (dry or gel-filled) and tight buffer (900 µm) 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 intrabuilding applications.

Features: These products reduce the system cost by eliminating 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. 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.

Loose Tube Single Jacket Low-Smoke, Zero-Halogen (LSZH) Cable Type OFN/LS

Product Construction:

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

Central Strength Member:
- Epoxy/glass rod

Overall Strength Member:
- Aramid fiber yarn

Jacket:
- Black UV-, moisture-resistant and flame-retardant LSZH polymer
- Other colors available upon request
- Sequential footage 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)
  Installation 0˚C (+32˚F) to +50˚C (+122˚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 OFN/LS for installation in cable trays and general horizontal applications when installed in accordance with NEC article 770.154 and 770.179

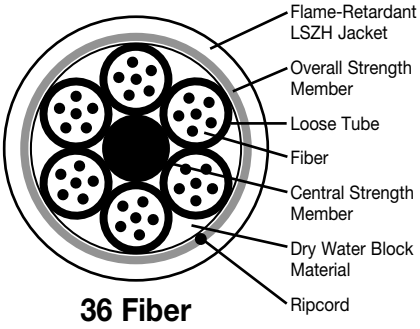
Compliances:
- ETL Listed Type OFN/LS
- ICEA S-104-696
- RoHS Compliant Directive 2011/65/EU

*Sequential meter markings available upon request

CATALOG NUMBER	FIBER COUNT	NO. 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	0.36	9	59	89	600	2670	200	890
XX0044M1Z	4	1	0.36	9	59	89	600	2670	200	890
XX0064M1Z	6	1	0.36	9	59	89	600	2670	200	890
XX0084M1Z	8	2	0.36	9	59	89	600	2670	200	890
XX0124M1Z	12	2	0.36	9	60	89	600	2670	200	890
XX0184M1Z	18	3	0.36	9	60	89	600	2670	200	890
XX0244M1Z	24	4	0.36	9	61	90	600	2670	200	890
XX0364M1Z	36	6	0.38	10	66	98	600	2670	200	890
XX0484M1Z	48	4	0.41	10	74	110	600	2670	200	890
XX0604M1Z	60	5	0.41	10	74	110	600	2670	200	890
XX0724M1Z	72	6	0.44	11	83	123	600	2670	200	890
XX0964M1Z	96	8	0.51	13	100	148	600	2670	200	890
XX1204M1Z	120	10	0.57	15	127	189	600	2670	200	890
XX1444M1Z	144	12	0.63	16	151	225	600	2670	200	890

XX denotes glass type.
A complete listing of NextGen® Brand glass types is specified on page 3 of this catalog.

Typical Cross-Section



36 Fiber

Hybrid designs (containing singlemode and multimode fiber) and composite designs (containing copper conductors) are also available.

Ordering Part Number Example

AQ0244M1Z

Singlemode, 24 fibers, loose tube SJ LSZH
Please see pages 4 and 5 for a complete guide on part number selection and ordering information.

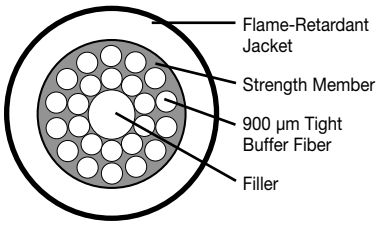
Tight Buffer Distribution Riser Cable

Type OFNR, CSA FT4

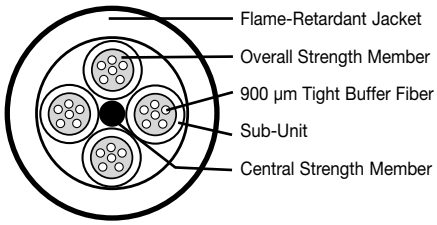
CATALOG NUMBER	FIBER COUNT	NO. OF SUB-UNITS	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
							INSTALLATION		IN-SERVICE	
			IN	mm	LBS/1000'	kg/km	LBS	N	LBS	N
XX0021ANR.BK	2	—	0.19	5	14	20	300	1334	90	400
XX0041ANR.BK	4	—	0.20	5	16	24	320	1423	96	427
XX0061ANR.BK	6	—	0.20	6	18	27	320	1423	96	427
XX0081ANR.BK	8	—	0.22	6	20	30	320	1423	96	427
XX0101ANR.BK	10	—	0.24	6	23	34	400	1780	120	534
XX0121ANR.BK	12	—	0.25	6	24	36	400	1780	120	534
XX0181A1R.BK	18	3	0.47	12	79	118	750	3336	250	1112
XX0181ANR.BK	18	—	0.33	8	45	67	320	1425	112	500
XX0241A1R.BK	24	4	0.53	13	86	128	1000	4448	300	1334
XX0241ANR.BK	24	—	0.34	9	47	70	320	1425	112	500
XX0361A1R.BK	36	6	0.66	17	147	219	1300	5783	390	1735
XX0481A1R.BK	48	4	0.64	16	137	204	1300	5783	390	1735
XX0601A1R.BK	60	5	0.70	18	168	250	1500	6672	450	2002
XX0721A1R.BK	72	6	0.77	20	207	308	1900	8452	570	2535
XX0961A1R.BK	96	8	0.91	23	289	430	2000	8896	670	2980
XX1201A1R.BK	120	10	1.02	26	313	466	3000	13345	1000	4448
XX1441A1R.BK	144	12	1.02	26	314	467	3000	13345	1000	4448

XX denotes glass type.
A complete listing of NextGen® Brand glass types is specified on page 3 of this catalog.

Typical Cross-Sections



ANR ≤ 24 Fiber



A1R ≥ 18 Fiber

Hybrid designs (containing singlemode and multimode fiber) and composite designs (containing copper conductors) are also available.

Ordering Part Number Example

BE0241ANR.BK or BE0241A1R.BK

50 µm multimode, 24 fibers, tight buffer distribution riser
Please see pages 4 and 5 for a complete guide on part number selection and ordering information.

Product Construction:

Fiber:

- 2–144 fibers
- 900 µm tight buffer
- Color-coding per TIA/EIA 598 B

Central Strength Member:

- Epoxy/glass rod (A1R)

Overall Strength Member:

- Aramid fiber yarn

Jacket:

- UV-resistant black jacket
- Flame-retardant compound
- Sequential footage markings*

Features:

- Dry Water Block cable core for fiber protection
- Direct termination of connectors on tight buffer
- Sub-units are numbered for identification

Performance:

- Temperature:
  Storage -40°C (-40°F) to +70°C (+158°F)
  Installation 0°C (+32°F) to +50°C (+122°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:
  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 ducts and underground conduits
- ETL Listed Type OFNR for installation in vertical riser and general horizontal applications when installed in accordance with NEC article 770.154 and 770.179

Compliances:

- ETL Listed Type OFNR
- CSA FT4
- TIA 568 C.3
- ICEA S-104-696
- GR-409
- RoHS Compliant Directive 2011/65/EU

*Sequential meter markings available upon request

NEXTGEN® BRAND · Intertek · TIA 568 C.3 · RoHS Compliant Directive 2011/65/EU · General Cable

Tight Buffer Distribution Plenum Cable

Indoor/Outdoor Dry Water Block, Type OFNP, CSA FT6

Product Construction:

Fiber:
- 2–144 fibers
- 900 µm tight buffer
- Color-coding per TIA/IEIA 598 B

Central Strength Member:
- Epoxy/glass rod (above 12 fibers)

Overall Strength Member:
- Aramid fiber yarn

Jacket:
- UV-resistant black jacket
- Flame-retardant compound
- Sequential footage markings*

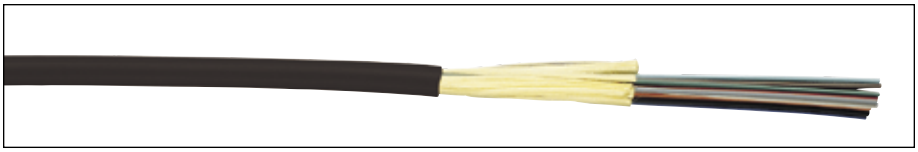
Features:
- Dry Water Block cable core for fiber protection
- Direct termination of connectors on tight buffer
- Sub-units are numbered for identification

Performance:
- Temperature:
  Storage -40˚C (-40˚F) to +70˚C (+158˚F)
  Installation 0˚C (+32˚F) to +50˚C (+122˚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:
  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 ducts and underground conduits
- ETL Listed Type OFNP for installation in vertical riser and general horizontal applications when installed in accordance with NEC article 770.154 and 770.179

Compliances:
- ETL Listed Type OFNP
- CSA FT6
- TIA 568 C.3
- ICEA S-104-696
- GR-409
- RoHS Compliant Directive 2011/65/EU

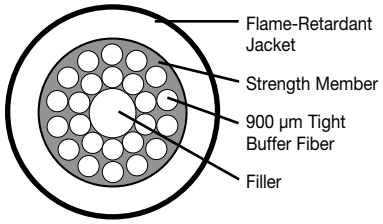
*Sequential meter markings available upon request



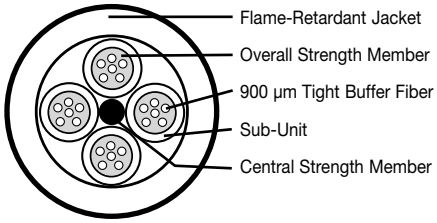
CATALOG NUMBER	FIBER COUNT	NO. OF SUB-UNITS	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
							INSTALLATION		IN-SERVICE	
			IN	mm	LBS/1000'	kg/km	LBS	N	LBS	N
XX0021ANU.BK	2	—	0.17	4	11.7	17.4	300	1334	90	400
XX0041ANU.BK	4	—	0.18	5	13.7	20.4	320	1423	96	427
XX0061ANU.BK	6	—	0.18	5	16.0	23.8	320	1423	96	427
XX0081ANU.BK	8	—	0.19	5	18.0	26.8	320	1423	96	427
XX0101ANU.BK	10	—	0.22	6	20.7	30.8	400	1780	120	534
XX0121ANU.BK	12	—	0.22	6	22.7	33.8	400	1780	120	534
XX0181ANU.BK	18	—	0.31	8	42.0	63	320	1423	112	500
XX0241ANU.BK	24	—	0.32	8	45.0	67	320	1423	112	500
XX0361A1D.BK	36	6	0.61	16	151	225	1300	5783	390	1735
XX0481A1D.BK	48	4	0.58	15	135	200	1300	5783	390	1735
XX0601A1D.BK	60	5	0.67	17	186	277	1500	6672	450	2002
XX0721A1D.BK	72	6	0.73	19	217	323	1900	8452	570	2535
XX0961A1D.BK	96	8	0.86	22	312	464	2000	8896	670	2980
XX1201A1D.BK	120	10	0.96	24	374	556	2000	8896	670	2535
XX1441A1D.BK	144	12	0.96	24	394	586	2000	8896	670	2980

XX denotes glass type.
A complete listing of NextGen® Brand glass types is specified on page 3 of this catalog.
* Double jacket design

Typical Cross-Sections



ANU.BK ≤ 24 Fiber



A1D.BK ≥ 36 Fiber

Hybrid designs (containing singlemode and multimode fiber) and composite designs (containing copper conductors) are also available.

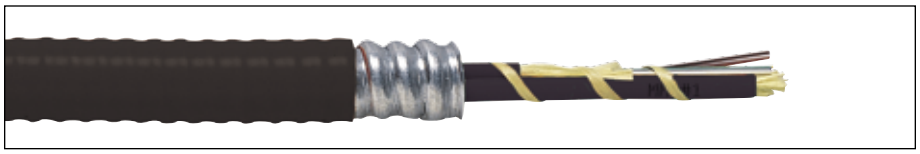
Ordering Part Number Example

BE0241ANU.BK or BE0361A1D.BK

50 µm multimode, 24 or 36 fibers, tight buffer distribution plenum
Please see pages 4 and 5 for a complete guide on part number selection and ordering information.

Tight Buffer Distribution Interlock Armored Riser Cable

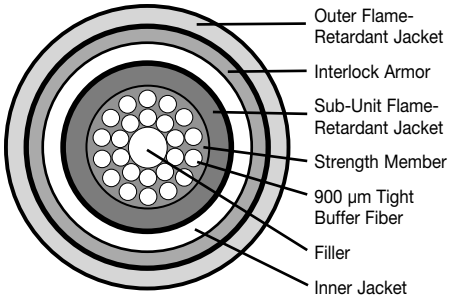
Type OFCR, CSA FT4



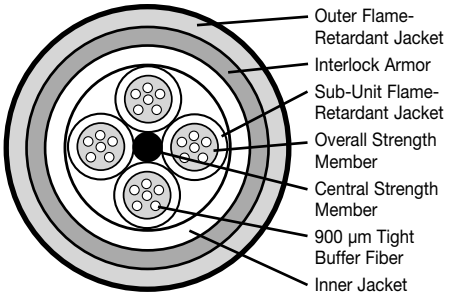
CATALOG NUMBER	FIBER COUNT	NO. OF SUB-UNITS	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
							INSTALLATION		IN-SERVICE	
			IN	mm	LBS/1000'	kg/km	LBS	N	LBS	N
XX0021ANR-ILRA	2	—	0.52	13	85	126	550	2447	165	734
XX0041ANR-ILRA	4	—	0.53	14	91	136	550	2447	165	734
XX0061ANR-ILRA	6	—	0.53	14	94	140	550	2447	165	734
XX0121ANR-ILRA	12	—	0.53	14	100	149	550	2447	165	734
XX0241ANR-ILRA	24	—	0.67	17	144	214	550	2447	165	734
XX0241A1R-ILRA	24	4	0.87	22	238	354	1000	4448	300	1334
XX0361A1R-ILRA	36	6	0.99	25	360	536	1000	4448	300	1334
XX0481A1R-ILRA	48	4	0.99	25	330	491	1000	4448	300	1334
XX0601A1R-ILRA	60	5	1.04	26	364	542	1000	4448	300	1334
XX0721A1R-ILRA	72	6	1.09	28	422	628	1000	4448	300	1334
XX0961A1R-ILRA	96	8	1.24	32	543	808	1000	4448	335	1490
XX1201A1R-ILRA	120	10	1.39	35	584	869	1000	4448	335	1490
XX1441A1R-ILRA	144	12	1.39	35	555	826	1000	4448	335	1490

XX denotes glass type.
A complete listing of NextGen® Brand glass types is specified on page 3 of this catalog.

Typical Cross-Sections



ANR-ILRA ≤ 24 Fiber



A1R-ILRA ≥ 24 Fiber

Hybrid designs (containing singlemode and multimode fiber) and composite designs (containing copper conductors) are also available.

Ordering Part Number Example

BE0241ANR-ILRA or BE0241A1R-ILRA

50 µm multimode, 24 fibers, tight buffer distribution interlock armor riser
Please see pages 4 and 5 for a complete guide on part number selection and ordering information.

Product Construction:

Fiber:
- 2–144 fibers
- 900 µm tight buffer
- Color-coding per TIA/EIA 598 B

Overall Strength Member:
- Water-swellable aramid fiber yarn

Inner Jacket:
- Flame-retardant compound

Armor:
- Interlock aluminum

Outer Jacket:
- UV-resistant black jacket
- Flame-retardant compound
- Sequential footage markings*

Features:
- Interlock armor provides outstanding mechanical protection
- Interlock armor is flexible and easy to use
- Tight buffer provides individual fiber protection
- Sub-units are numbered for identification

Performance:
- Temperature:
  Storage -40˚C (-40˚F) to +70˚C (+158˚F)
  Installation 0˚C (+32˚F) to +50˚C (+122˚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:
  1,500 lbs/in (2,627 N/cm)

Applications:
- Harsh premises environments requiring heavy-duty protection
- Outdoor use in ducts and underground conduits
- ETL Type OFCR for installation in any premises location when installed in accordance with NEC article 770.154 and 770.179

Compliances:
- ETL Listed Type OFCR
- CSA FT4
- TIA 568 C.3
- ICEA S-104-696
- GR-409
- RoHS Compliant Directive 2011/65/EU

Note:
Armored cable without an outer jacket available upon request (-IL)

*Sequential meter markings available upon request

NEXTGEN® BRAND Intertek TIA 568 C.3 RoHS Compliant Directive 2011/65/EU General Cable

Tight Buffer Distribution Interlock Armored Plenum Cable

Type OFCP, CSA FT6

Product Construction:

Fiber:

- 4–144 fibers
- 900 µm tight buffer
- Color-coding per TIA/EIA 598 B

Overall Strength Member:

- Water-swellable aramid fiber yarn

Inner Jacket:

- Flame-retardant compound

Armor:

- Interlock aluminum

Outer Jacket:

- Flame-retardant compound
- UV-resistant black jacket
- Sequential footage markings*

Features:

- Interlock armor provides outstanding mechanical protection
- Interlock armor is flexible and easy to use
- Tight buffer provides individual fiber protection
- Sub-units are numbered for identification

Performance:

- Temperature:
  Storage -40˚C (-40˚F) to +70˚C (+158˚F)
  Installation 0˚C (+32˚F) to +50˚C (+122˚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:
  1,500 lbs/in (2,627 N/cm)

Applications:

- Harsh premises environments requiring heavy-duty protection
- Outdoor use in ducts and underground conduits
- ETL Type OFCP for installation in any premises location when installed in accordance with NEC article 770.154 and 770.179

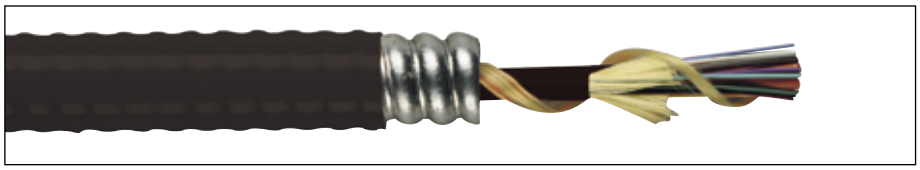
Compliances:

- ETL Listed Type OFCP
- CSA FT6
- TIA 568 C.3
- ICEA S-104-696
- GR-409
- RoHS Compliant Directive 2011/65/EU

Note:

Armored cable without an outer jacket available upon request (-IL)

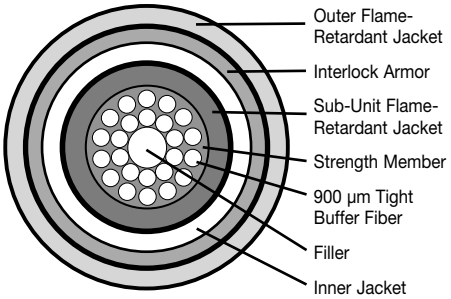
*Sequential meter markings available upon request



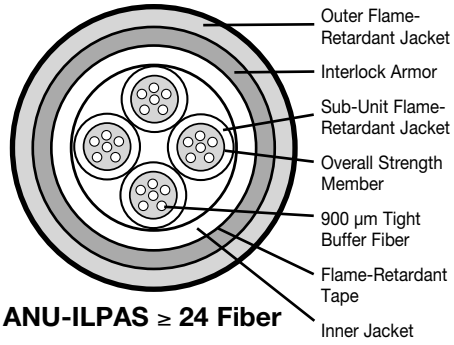
CATALOG NUMBER	FIBER COUNT	NO. OF SUB-UNITS	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
							INSTALLATION		IN-SERVICE	
			IN	mm	LBS/1000'	kg/km	LBS	N	LBS	N
XX0021ANU-ILPA	2	—	0.42	11	76	114	550	2447	165	734
XX0041ANU-ILPA	4	—	0.42	11	78	117	550	2447	165	734
XX0061ANU-ILPA	6	—	0.42	11	80	120	550	2447	165	734
XX0121ANU-ILPA	12	—	0.47	12	100	149	550	2447	165	734
XX0241ANU-ILPA	24	—	0.61	16	130	194	550	2447	165	734
XX0241ANU-ILPAS	24	2	0.70	18	136	202	1000	4448	300	1334
XX0361ANU-ILPAS	36	3	0.73	19	158	235	1000	4448	300	1334
XX0481ANU-ILPAS	48	4	0.80	20	209	311	1000	4448	300	1334
XX0601ANU-ILPAS	60	5	0.85	22	187	278	1000	4448	300	1334
XX0721ANU-ILPAS	72	6	0.95	24	273	406	1000	4448	300	1334
XX0961ANU-ILPAS	96	8	1.05	27	328	488	1000	4448	335	1490
XX1201ANU-ILPAS	120	10	1.10	28	372	554	1000	4448	335	1490
XX1441ANU-ILPAS	144	12	1.20	31	386	574	1000	4448	335	1490

XX denotes glass type.
A complete listing of NextGen® Brand glass types is specified on page 3 of this catalog.

Typical Cross-Sections



ANU-ILPA ≤ 24 Fiber



ANU-ILPAS ≥ 24 Fiber

Hybrid designs (containing singlemode and multimode fiber) and composite designs (containing copper conductors) are also available.

Ordering Part Number Example

BE0241ANU-ILPA or BE0241A1D-ILPAS

50 µm multimode, 24 fibers, tight buffer distribution interlock armor plenum
Please see pages 4 and 5 for a complete guide on part number selection and ordering information.

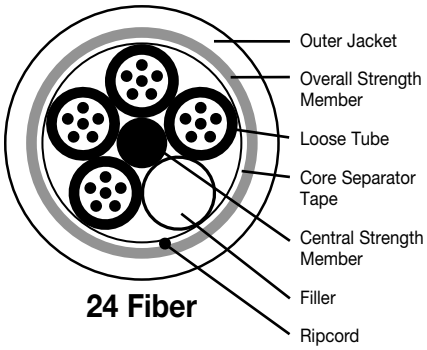
Loose Tube Single Jacket Riser Cable

Type OFNR, CSA

CATALOG NUMBER	FIBER COUNT	NO. 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-DT	2	2	0.36	9	52	78	600	2670	200	890
XX0044M1M-DT	4	1	0.36	9	53	79	600	2670	200	890
XX0064M1M-DT	6	1	0.36	9	53	80	600	2670	200	890
XX0084M1M-DT	8	2	0.36	9	52	78	600	2670	200	890
XX0124M1M-DT	12	2	0.36	9	52	78	600	2670	200	890
XX0184M1M-DT	18	3	0.36	9	52	77	600	2670	200	890
XX0244M1M-DT	24	4	0.36	9	51	76	600	2670	200	890
XX0364M1M-DT	36	6	0.38	9	58	86	600	2670	200	890
XX0484M1M-DT	48	4	0.42	11	64	96	600	2670	200	890
XX0604M1M-DT	60	5	0.42	11	62	92	600	2670	200	890
XX0724M1M-DT	72	6	0.45	11	75	112	600	2670	200	890
XX0964M1M-DT	96	8	0.57	15	109	162	600	2670	200	890
XX1444M1M-DT	144	12	0.69	18	169	251	600	2670	200	890

XX denotes glass type.
A complete listing of NextGen® Brand glass types is specified on page 3 of this catalog.

Typical Cross-Section



Hybrid designs (containing singlemode and multimode fiber) and composite designs (containing copper conductors) are also available.

For complete listing of all fiber counts offered, please contact your General Cable sales representative.

Ordering Part Number Example

AQ0124M1M-DT

Singlemode, 12 fibers, loose tube riser
Please see pages 4 and 5 for a complete guide on part number selection and ordering information.

Product Construction:

Fiber:

- 2–144 fibers
- Dry loose tube with super-absorbent polymer
- Color-coding per TIA/EIA 598 B

Central Strength Member:

- Epoxy/glass rod

Overall Strength Member:

- Aramid fiber yarn

Jacket:

- UV-resistant black jacket
- Flame-retardant compound
- Sequential footage markings*

Options:

- Interlock steel or aluminum (-ILR or -ILRA)
- Dry Water Block cable core for ease of handling (gel tubes)

Features:

- Dry loose tube for ease of termination
- Riser rated for indoor applications

Performance:

- Temperature:
  Storage -40˚C (-40˚F) to +70˚C (+158˚F)
  Installation 0˚C (+32˚F) to +50˚C (+122˚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—1,640 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 770.154 and 770.179

Compliances:

- ETL Listed Type OFNR
- CSA FT4
- ICEA S-104-696
- RoHS Compliant Directive 2011/65/EU

*Sequential meter markings available upon request

NEXTGEN® BRAND

Intertek

RoHS Compliant Directive 2011/65/EU

General Cable

Loose Tube Single Jacket Plenum Cable

Type OFNP, CSA FT6

Product Construction:

Fiber:

- 2–144 fibers
- Dry loose tube with super-absorbent polymer
- Color-coding per TIA/EIA 598 B

Central Strength Member:

- Epoxy/glass rod

Overall Strength Member:

- Aramid fiber yarn

Jacket:

- Sequential footage markings*

Options:

- Interlock steel or aluminum (-ILP or -ILPA)
- Dry Water Block cable core for ease of handling (gel tubes)

Features:

- Loose tube plenum design provides maximum cable route flexibility
- Dry loose tube for ease of termination
- Excellent chemical-resistant cable for harsh industrial environments

Performance:

- Temperature:
  Storage -40˚C (-40˚F) to +70˚C (+158˚F)
  Installation 0˚C (+32˚F) to +50˚C (+122˚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)

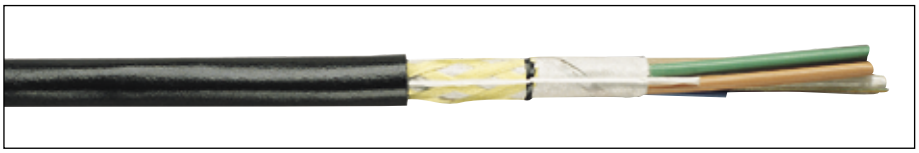
Applications:

- 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 770.154 and 770.179

Compliances:

- ETL Listed Type OFNP
- CSA FT6
- ICEA S-104-696
- RoHS Compliant Directive 2011/65/EU

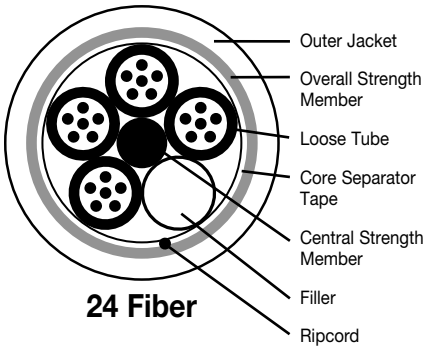
*Sequential meter markings available upon request



CATALOG NUMBER	FIBER COUNT	NO. 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-DT	2	2	0.31	8	46	69	300	1334	100	445
XX0044M1D-DT	4	1	0.31	8	47	70	300	1334	100	445
XX0064M1D-DT	6	1	0.31	8	48	71	300	1334	100	445
XX0084M1D-DT	8	2	0.31	8	46	69	300	1334	100	445
XX0124M1D-DT	12	2	0.31	8	47	69	300	1334	100	445
XX0184M1D-DT	18	3	0.31	8	45	67	300	1334	100	445
XX0244M1D-DT	24	4	0.31	8	44	65	300	1334	100	445
XX0364M1D-DT	36	6	0.34	9	50	75	300	1334	100	445
XX0484M1D-DT	48	4	0.38	10	57	85	300	1334	100	445
XX0604M1D-DT	60	5	0.38	10	54	80	300	1334	100	445
XX0724M1D-DT	72	6	0.41	10	65	97	300	1334	100	445
XX0964M1D-DT	96	8	0.48	12	98	146	300	1334	100	445
XX1444H1D-DT*	144	12	0.69	18	179	266	300	1334	100	445

XX denotes glass type.
A complete listing of NextGen® Brand glass types is specified on page 3 of this catalog.
* Double jacket design

Typical Cross-Section



Hybrid designs (containing singlemode and multimode fiber) and composite designs (containing copper conductors) are also available.

Ordering Part Number Example

AQ0124M1D-DT

Singlemode, 12 fibers, loose tube plenum
Please see pages 4 and 5 for a complete guide on part number selection and ordering information.

NextGen® Brand Interconnect Cables 6

Interconnect cables are used in a variety of Fiber-To-The-Desk (FTTD) and network connection schemes. These cables are constructed to easily terminate with industry-standard connectors such as the SC and ST. To serve the new market evolution into high-density cabling and terminations, we offer an extended cable product line that is compatible with all of the new connection systems, such as MT-RJ, MTP, LC and other Small Form Factor (SFF) components.

Applications: Interconnect cables are generally one- or two-fiber cable constructions for use in horizontal runs (Fiber-To-The-Desk), as patchcords in communication closets and for OEM assemblies. These cables are constructed to easily terminate with industry-standard connectors such as the SC and the ST, as well as the new generation of Small Form Factor (SFF) connector designs.

Range of Products: Low fiber count (≤2) cables with riser (OFNR) or plenum (OFNP) listings comprise this family of cables.

Features: The interconnect cables are constructed to have the proper geometry to mate with industry-standard terminations. Generally, no breakout or splitter kits are required. The cables are very small and flexible so that they may be incorporated into high-density cable management systems.

Index	Page

Tight Buffer 3.0 mm Simplex/Duplex Riser and Plenum Cable

Type OFNR, CSA FT4 and Type OFNP, CSA FT6

Product Construction:

Fiber:

- 1 or 2 fibers
- 900 µm tight buffer

Overall Strength Member:

- Aramid fiber yarn

Jacket:

- 3.0 mm unit diameters
- Flame-retardant compound
- Sequential footage markings*
- Orange jacket—multimode fibers (except 10 Gbps)
- Aqua jacket—10 Gbps multimode fibers
- Yellow jacket—singlemode fibers

Features:

- Industry-standard design
- Ideal for interconnect and Fiber-To-The-Desk (FTTD)

Performance:

- Temperature:
  Storage -40˚C (-40˚F) to +70˚C (+158˚F)
  Installation 0˚C (+32˚F) to +50˚C (+122˚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:
  500 lbs/in (875 N/cm)

Applications:

- Interconnect design compatible with connectors requiring 3.0 mm jacket diameter
- Fiber-To-The-Desk (FTTD)
- ETL Listed Type OFNR for installation in vertical riser and general horizontal applications when installed in accordance with NEC article 770.154 and 770.179
- ETL Listed Type OFNP for installation in ducts, plenums and other spaces used as environmental air returns when installed in accordance with NEC article 770.154 and 770.179

Compliances:

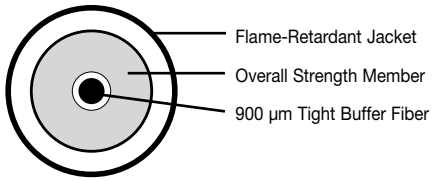
- ETL Listed Type OFNR/OFNP
- CSA FT4, CSA FT6
- TIA 568 C.3
- GR-409
- RoHS Compliant Directive 2011/65/EU

*Sequential meter markings available upon request

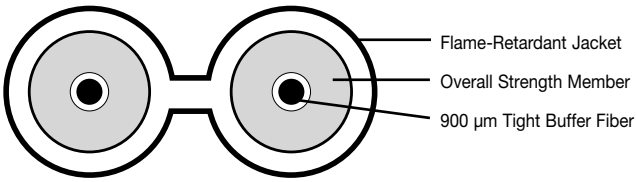
CATALOG NUMBER	FIBER COUNT	NO. OF SUB-UNITS	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
							INSTALLATION		IN-SERVICE	
			IN	mm	LBS/1000'	kg/km	LBS	N	LBS	N
Riser										
XX0011SNR3.0	1	—	0.118	3.0	5.5	8.2	110	490	65	290
XX0021ZNR3.0	2	—	0.114 x 0.247	2.9 x 6.0	10.5	15.6	220	980	160	580
Plenum										
XX0011SNU3.0	1	—	0.118	3.0	6.5	9.7	110	490	65	290
XX0021ZNU3.0	2	—	0.114 x 0.247	2.9 x 6.0	12.1	18.0	220	980	160	580

XX denotes glass type.
A complete listing of NextGen® Brand glass types is specified on page 3 of this catalog.

Typical Cross-Section



Simplex



Duplex

Zipcord

Hybrid designs (containing singlemode and multimode fiber) and composite designs (containing copper conductors) are also available.

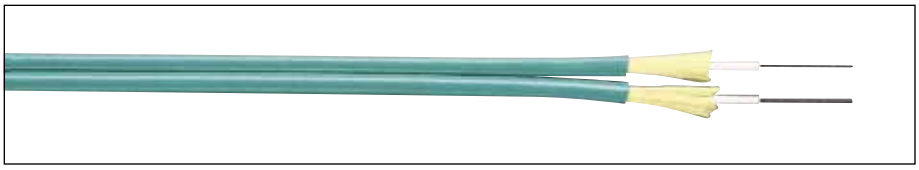
Ordering Part Number Example

BE0011SNU3.0 or BE0021ZNU3.0

50 µm multimode, one or two fibers
Please see pages 4 and 5 for a complete guide on part number selection and ordering information.

Tight Buffer 1.6 mm Simplex/Duplex Riser Cable

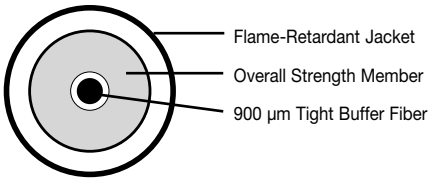
Type OFNR, CSA FT4



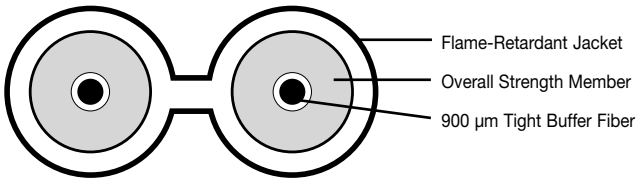
CATALOG NUMBER	FIBER COUNT	NO. OF SUB-UNITS	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
							INSTALLATION		IN-SERVICE	
			IN	mm	LBS/1000'	kg/km	LBS	N	LBS	N
XX0011SNR1.6	1	—	0.063	1.6	1.7	2.5	25	111	7.5	33
XX0021ZNR1.6	2	—	0.063 x 0.136	1.6 x 3.5	3.5	5.2	50	222	15.0	67

XX denotes glass type.
A complete listing of NextGen® Brand glass types is specified on page 3 of this catalog.

Typical Cross-Section



Simplex



Duplex

Zipcord

Hybrid designs (containing singlemode and multimode fiber) and composite designs (containing copper conductors) are also available.

Ordering Part Number Example

BE0011SNR1.6 or BE0021ZNR1.6

50 µm multimode, one or two fibers
Please see pages 4 and 5 for a complete guide on part number selection and ordering information.

Product Construction:

Fiber:
- 1 or 2 fibers
- 900 µm tight buffer

Overall Strength Member:
- Aramid fiber yarn

Jacket:
- 1.6 mm unit diameters
- Flame-retardant compound
- Sequential footage markings*
- Orange jacket—multimode fibers (except 10 Gbps)
- Aqua jacket—10 Gbps multimode fibers
- Yellow jacket—singlemode fibers

Features:
- Compatible with LC connectors
- Ideal for interconnect and Fiber-To-The-Desk (FTTD)

Performance:
- Temperature:
  Storage -40˚C (-40˚F) to +70˚C (+158˚F)
  Installation 0˚C (+32˚F) to +50˚C (+122˚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:
- Interconnect design compatible with LC and other connectors requiring 1.6mm jacket diameter
- Fiber-To-The-Desk (FTTD)
- ETL Listed Type OFNR for installation in vertical riser and general horizontal applications when installed in accordance with NEC article 770.154 and 770.179

Compliances:
- ETL Listed Type OFNR
- CSA FT4
- RoHS Compliant Directive 2011/65/EU

*Sequential meter markings available upon request

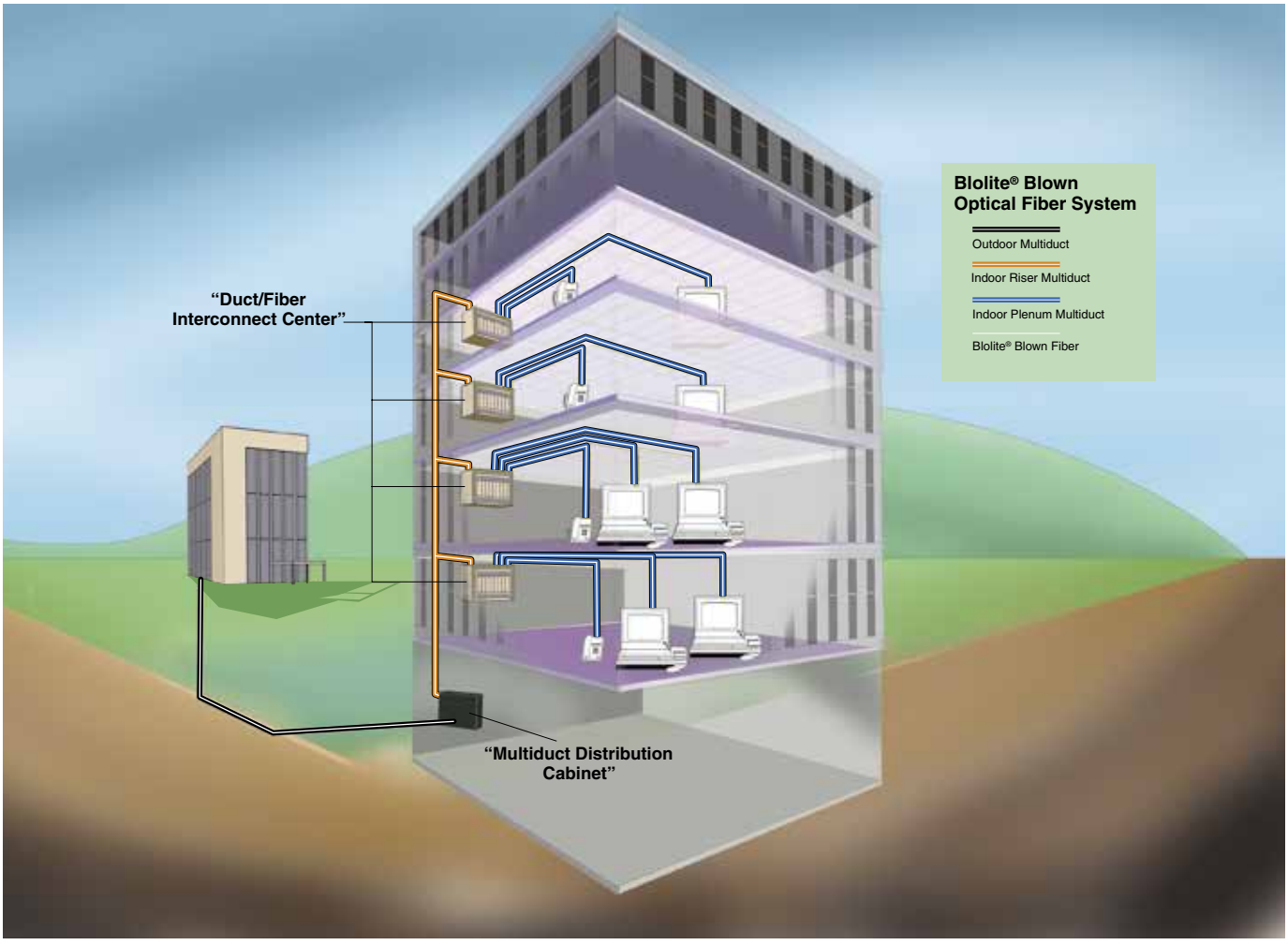
Blolite® Blown Fiber Technology– Revolutionizing Fiber Networks

7

Blown Fiber Technology
Blolite® Blown Fiber technology provides unparalleled flexibility in network design—anticipating and facilitating future changes as the network evolves. The Blolite® System delivers the ultimate fiber solution for backbone and Fiber-To-The-X (FTTX) applications. The best long-term choice for your business, our Blown Fiber technology will continue to provide significant and measurable time, cost and service benefits to the network throughout its life cycle.

How Does It Work?
Small, flexible, empty Microduct tubes are initially installed, and compressed air is then used to blow the optical fiber through the Microducts. As a result of our material and design technology, our blown fiber system offers the opportunity to install fiber through difficult runs and further distances where installation of traditional optical fiber would be challenging and expensive. This enhanced feature sets our system apart from others available in today's market. Microduct eliminates potential damage to fibers during installation since empty Microducts are installed initially, and fiber is blown in later.

Because the Blolite® System is based upon simultaneously blowing individual fibers into each Microduct, designers have maximum flexibility regarding the number and type of fibers per Microduct. Color-coded fibers are typically supplied on master spools and cut to length during the blowing process. If necessary, routes can even be reconfigured on the fly during the installation process.



The Blolite® Blown Fiber System Advantage

"Pay as you grow" Deferred Investment
Future-proof your network by installing only the fiber you need today, reserving Microduct capacity for tomorrow's requirements. Design tactically to meet present needs, but build strategically for the long term. Pay as you grow.

Extraordinary Design Flexibility
The Blolite Blown Fiber System can adapt to any network architecture or topology changes over the life of your network. Quickly and economically add new destinations, relocate routes, change fiber types and counts, reconfigure LANs and add new services and technologies, as required. New sections of Microduct can be spliced to existing Microduct with a simple push-fit connector.

Adaptable to Any Environment
Our Blolite technology is compatible with any network topology and nearly every local area network installation environment. Moves, Adds and Changes (MACs) can be accomplished with minimal workplace disruption as your network evolves and changes.

Installation Ease
Microduct tubing and simple push-fit connectors make building a network infrastructure simple. Blolite eliminates potential damage from pulling and overstressing fiber optic cables, as well as resulting costs, delays or latent failures. Point-to-point links, easily achieved with Blolite for situations in which conventional fiber optic cable would require splices, mean lower attenuation, higher performance and increased system integrity.

Capability for Quick Recovery
Disaster recovery from physical damage to the cabling infrastructure with the Blolite System means days versus weeks, resulting in minimal downtime and labor costs. Only the damaged section of Microduct is removed and replaced, then within minutes, new optical fiber is blown in, then terminated. Much faster and a far less costly disaster recovery is one of the many obvious benefits of the Blolite Blown Fiber System.

Improved Reliability
Because Microduct is installed empty, there is no risk of fiber damage during installation. Optical fibers are blown into place, rather than pulled, with zero tensile stress on the fiber during the installation process. Because point-to-point links are easily accommodated, fiber splice points can be eliminated, lowering attenuation and increasing system performance and integrity.

Installation Cost Savings
Only two people are needed to blow in the optical fiber. Fiber terminations are typically quicker than with conventional cable, since no time needs to be devoted to cable preparation. Additionally, termination and testing is simplified with no dark fiber to contend with.

Blolite® Blown Fiber Maximum Blowing Distance Capability

AIR VOLUME	100 LPM (3.5 CFM)			150 LPM (5.3 CFM)		
NO. OF FIBERS	4	8	12	4	8	12
DUCT SIZE	5 mm	5 mm	5 mm	5 mm	5 mm	5 mm
Semi-Tortuous	400	400	300	400	400	300
Non-Tortuous	500	500	400	500	500	400

DUCT SIZE	8 mm	8 mm	8 mm	8 mm	8 mm	8 mm
Semi-Tortuous	600	600	0	1000	1000	500
Non-Tortuous	1000	750	100	1000	1000	500

Note: The maximum distances stated above must not be exceeded.

NEXTGEN® BRAND BLOWABLE FIBER MAXIMUM BLOWING DISTANCE CAPABILITY
This technology is best suited to non-tortuous applications. Talk to your General Cable representative for more details.

The fiber blowing performance will be reduced for air sources with a lower flow capability. The minimum flow rate recommended is 100 LPM (3.5 CFM). The table at left reflects the reduced performance achievable with a reduction in air source capability.

DEFINITIONS

SEMI-TORTUOUS: Up to 50 90° bends of the minimum bend radius for the specified diameter tube cable over the maximum installation distance in the table.

NON-TORTUOUS: Up to 20 90° bends of the minimum bend radius for the specified diameter tube cable over the maximum installation distance in the table.

AIR SOURCE REQUIREMENTS: General Cable recommends the use of an air source capable of producing a constant pressure of 10 BarG (145 PSI) with a minimum flow capacity of 150 LPM (5.3 CFM) to achieve the maximum distances detailed in the performance table at left.

Blown Fiber Products

The Blolite® Blown Fiber System offers the highest quality of optical fiber from Corning® in standard types of multimode 62.5/125 micron, 50/125 (1 Gb/s) or 50/125 (10 Gb/s), and singlemode 9/125, all with a special 485 micron blowabl coating and available in 12 colors. The fibers are stripped and terminated with standard tools and compatible with standard fiber optic connectors.

Blowable Fiber

CATALOG NUMBER	DESCRIPTION: BL – 50 μm OM4
708210	MULTIMODE 50/125 (10 Gb/s, 550 meters) BLUE
708230	MULTIMODE 50/125 (10 Gb/s, 550 meters) ORANGE
708250	MULTIMODE 50/125 (10 Gb/s, 550 meters) GREEN
708270	MULTIMODE 50/125 (10 Gb/s, 550 meters) BROWN
708290	MULTIMODE 50/125 (10 Gb/s, 550 meters) SLATE
708310	MULTIMODE 50/125 (10 Gb/s, 550 meters) YELLOW
708330	MULTIMODE 50/125 (10 Gb/s, 550 meters) RED
708350	MULTIMODE 50/125 (10 Gb/s, 550 meters) VIOLET
708370	MULTIMODE 50/125 (10 Gb/s, 550 meters) WHITE
708390	MULTIMODE 50/125 (10 Gb/s, 550 meters) BLACK
708410	MULTIMODE 50/125 (10 Gb/s, 550 meters) ROSE
708430	MULTIMODE 50/125 (10 Gb/s, 550 meters) AQUA

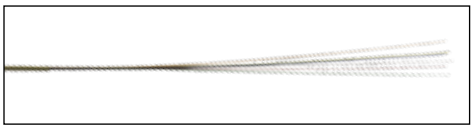
CATALOG NUMBER	DESCRIPTION: BE – 10 Gig – 50 μm OM3
707610	MULTIMODE 50/125 (10 Gb/s, 300 meters) BLUE
707620	MULTIMODE 50/125 (10 Gb/s, 300 meters) ORANGE
707630	MULTIMODE 50/125 (10 Gb/s, 300 meters) GREEN
707640	MULTIMODE 50/125 (10 Gb/s, 300 meters) BROWN
707650	MULTIMODE 50/125 (10 Gb/s, 300 meters) SLATE
707660	MULTIMODE 50/125 (10 Gb/s, 300 meters) YELLOW
707670	MULTIMODE 50/125 (10 Gb/s, 300 meters) RED
707680	MULTIMODE 50/125 (10 Gb/s, 300 meters) VIOLET
707690	MULTIMODE 50/125 (10 Gb/s, 300 meters) WHITE
707700	MULTIMODE 50/125 (10 Gb/s, 300 meters) BLACK
707710	MULTIMODE 50/125 (10 Gb/s, 300 meters) ROSE
707720	MULTIMODE 50/125 (10 Gb/s, 300 meters) AQUA

CATALOG NUMBER	DESCRIPTION: CG – 62.5 μm OM1
705820	MULTIMODE 62.5/125 BLUE
705830	MULTIMODE 62.5/125 ORANGE
705840	MULTIMODE 62.5/125 GREEN
705850	MULTIMODE 62.5/125 BROWN
705860	MULTIMODE 62.5/125 SLATE
705870	MULTIMODE 62.5/125 YELLOW
705880	MULTIMODE 62.5/125 RED
705890	MULTIMODE 62.5/125 VIOLET
707400	MULTIMODE 62.5/125 WHITE
707410	MULTIMODE 62.5/125 BLACK
707420	MULTIMODE 62.5/125 ROSE
707430	MULTIMODE 62.5/125 AQUA

CATALOG NUMBER	DESCRIPTION: AQ – SM OS2
705900	SINGLEMODE BLUE
705910	SINGLEMODE ORANGE
705920	SINGLEMODE GREEN
705930	SINGLEMODE BROWN
705940	SINGLEMODE SLATE
705950	SINGLEMODE YELLOW
705960	SINGLEMODE RED
705970	SINGLEMODE VIOLET
707440	SINGLEMODE WHITE
707450	SINGLEMODE BLACK
707460	SINGLEMODE ROSE
707470	SINGLEMODE AQUA

NextGen® Brand Blowable 6 Fiber Bundles

CATALOG NUMBER	DESCRIPTION
CG0006ABOF-BUN	OM1 62.5μ 6 Fiber Bundle
AP00064BOF-BUN	SM 6 Fiber Bundle
BE00064BOF-BUN	OM3 50μ 6 Fiber Bundle
BL00064BOF-BUN	OM4 50μ 6 Fiber Bundle



Blown Fiber Microduct and Multiduct

Blown Fiber Microduct

Microducts are empty plenum and non-plenum tubes that provide a pathway/ conduit for blowing the fiber through the network. Up to 12 fibers or 3 bundles can be installed simultaneously into each Microduct using our installation technique.

Microduct	
CATALOG NUMBER	DESCRIPTION
FC9700006	OC-5mm-OFNP
FC9700008	OC-5mm-OFNR
FC9700014	OC-8mm-OFNP
FC9700007	OC-8mm-OFNR

Blown Fiber Multiduct

Multiduct is a jacketed bundle of Microduct tubing available in 2-, 4-, 7- or 19-way configurations. Multiduct cable is offered in plenum and non-plenum for indoor and dry duct outdoor installations or in an armored direct buried configuration.

Multiduct

Plenum Rated Duct

CATALOG NUMBER	DESCRIPTION
FC9700005	OC-2x5mm-OFNP
FC9700003	OC-4x5mm-OFNP
FC9700004	OC-7x5mm-OFNP
FC9700435	OC-2x8mm-OFNP
FC9700161	OC-4x8mm-OFNP
FC9700160	OC-7x8mm-OFNP
FC9700436	OC-5mm-OFNP-ILPA
FC9700437	OC-2x5mm-OFNP-ILPA
FC9700438	OC-4x5mm-OFNP-ILPA
FC9700439	OC-7x5mm-OFNP-ILPA
FC9700440	OC-8mm-OFNP-ILPA
FC9700441	OC-2x8mm-OFNP-ILPA
FC9700442	OC-4x8mm-OFNP-ILPA
FC9700443	OC-7x8mm-OFNP-ILPA

Riser Rated Duct

CATALOG NUMBER	DESCRIPTION
FC9700009	OC-2x5mm-OFNR
FC9700010	OC-4x5mm-OFNR
FC9700011	OC-7x5mm-OFNR
FC9700013	OC-2x8mm-OFNR
FC9700012	OC-4x8mm-OFNR
FC9700015	OC-7x8mm-OFNR
FC9700444	OC-5mm-OFNR-ILRA
FC9700445	OC-2x5mm-OFNR-ILRA
FC9700446	OC-4x5mm-OFNR-ILRA
FC9700447	OC-7x5mm-OFNR-ILRA
FC9700448	OC-8mm-OFNR-ILRA
FC9700449	OC-2x8mm-OFNR-ILRA
FC9700450	OC-4x8mm-OFNR-ILRA
FC9700451	OC-7x8mm-OFNR-ILRA

Outdoor Duct

CATALOG NUMBER	DESCRIPTION
FC9700016	OC-2x5mm-OSP
FC9700017	OC-4x5mm-OSP
FC9700018	OC-7x5mm-OSP
FC9700113	OC-19x5mm-OSP
FC9700019	OC-2x8mm-OSP
FC9700020	OC-4x8mm-OSP
FC9700021	OC-7x8mm-OSP
FC9700047	OC-19x8mm-OSP

Outdoor Direct Buried

CATALOG NUMBER	DESCRIPTION
FC9700463	OC-4x8mm-OSP-DBS
FC9700464	OC-7x8mm-OSP-DBS
FC9700112	OC-19x8mm-DBS

Blown Fiber Connectors and Accessories

Blolite® Blown Fiber Connectors and Accessories
Simple push-fit connectors join the Microduct sections and extend the Microduct network to each destination. A transparent center section of the connectors permits visual inspection to verify if the path is empty or populated with optical fiber.

Microduct Accessories	
CATALOG NUMBER	**DESCRIPTION**
77-7222	END CAPS 8MM
77-7223	END CAPS 5MM
77-7224	STRAIGHT CONN 5MM
77-7225	STRAIGHT CONN 8MM
77-7259	BULKHEAD CONN 5MM
77-7227	8MM>5MM REDUCER
77-7228	TEE CONN 5MM
77-7229	TEE CONN 8MM
77-7230	CONN PLUG 5MM
77-7231	CONN PLUG 8MM
707050	TUBE CUTTER
707060	TUBE CUTTER BLADES
706810	4-FIBER SPLITTER KIT
707600	12-FIBER SPLITTER KIT

Straight Connector

Installation Equipment

Blolite® Blown Fiber Installation Equipment
The Blolite® Blown Fiber installation equipment kit (rental only) consists of an Air Supply Conditioning Unit (ACU)—complete with filtration and air-drying units, and the Installation Module—a blowing head utilizing a mechanically driven system to feed the fibers into the Microduct. A lightweight Tripod is the third component used to support the Installation Module. The equipment operates on standard compressed air at safe, low pressures.

NextGen® Brand Fiber Installation Equipment
The NextGen® Brand fiber installation equipment is a revolutionary new unit capable of blowing both Blolite® Blown Fiber or NextGen Blowable Fiber Bundles. This unique piece of equipment gives the installer the ability to use the Blown Optical Fiber product best suited to the application: Blolite Blown Fiber for premise enterprise applications that contain many bends and turns, or NextGen Blowable Fiber Bundles for applications that contain longer, straighter paths. The convenience to use either Blown Optical Fiber technology with one machine allows the installer unparalleled flexibility.

Tactical Cable Fiber Specification and Combat Series 8

Reliability for Your Toughest Applications
General Cable's tactical fiber optic cables are designed, engineered, and manufactured to specification for an extensive range of markets in military, marine/oil rig, transit, utility, industrial, TV camera, and other diverse applications.

Advance Performance
General Cable's tactical fiber optic cables are lightweight and rugged to withstand repeated flexing. The compact design allows for ease of deployment and re-configuration. The UV- and flame-resistant polyurethane jackets withstand even the harshest conditions, resulting in mechanical, chemical, and weather resistance.

OPTICAL FIBER CODE GUIDE

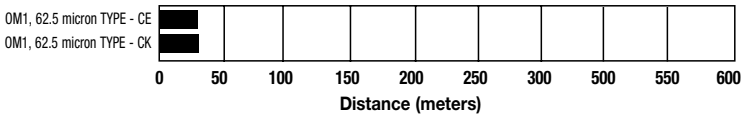
Fiber Type	General Cable	Description
500 µm Coated SM	AE	ITU-T G.652.D
500 µm Coated SM, QPL	AK	ITU-T G.652.D
500 µm Coated, 62.5 MM	CE	1 Gb/s ≤ 300 m at 850 nm, OM1 1 Gb/s ≤ 550 m at 1300 nm
500 µm Coated, 62.5 MM, QPL	CK	1 Gb/s ≤ 300 m at 850 nm, OM1 1 Gb/s ≤ 550 m at 1300 nm

MULTIMODE FIBER SELECTION GUIDE

Characteristics:		62.5/125 PRODUCT FAMILY		UNITS
		OM1 Type-CE	OM1 Type-CK	
Maximum Finished Cable Attenuation Coefficient	@850 nm	3.5	3.5	dB/km
	@1300 nm	1.0	1.0	dB/km
Overfill Launch Bandwidth	@850 nm	200	200	MHz.km
	@1300 nm	500	500	MHz.km
Laser Bandwidth	@850 nm	220	200	MHz.km
Gigabit Ethernet Link Length (1 Gbps)	1000 BASE-SX (850 nm)	300	300	meters
	1000 BASE-LX (1300 nm)	550	550	meters
10 Gigabit Ethernet Length (10 Gbps)	10G BASE-SR (850 nm)	33	33	meters
Coating	—	500	500	microns
QPL	—	No	Yes	—

1 Gbps Link Lengths @ 850 nm

10 Gbps Link Lengths @ 850 nm



NOTE: Use the code in the "Fiber Type" column to replace the XX notation in the catalog number shown on the catalog page. This identifies the fiber that will be provided with the cable choice.

The fibers in all completed cables are tested 100% at the factory for attenuation, and each fiber must meet the minimum requirements specified by the customer.

SINGLEMODE FIBER SELECTION GUIDE

FIBER DESCRIPTION	FIBER TYPE	TYPICAL ATTENUATION (dB/km)				GIGABIT ETHERNET DISTANCE (METERS)	10 GIGABIT ETHERNET DISTANCE (METERS)		COATING	QPL
		1310 nm	1383 nm	1550 nm	1625 nm	1310 nm	1310 nm	1550 nm	microns	
Singlemode - Tight Buffer										
500 µm SM	AE	1.00	–	1.00	–	10,000	5,000	30,000	500	No
500 µm SM QPL	AK	1.00	–	1.00	–	10,000	5,000	30,000	500	Yes

General Cable

Tactical Breakout Cable

Product Construction:

Fiber:
- 2–12 fibers
- 900 µm tight buffer
- Color-coding per TIA/EIA 598B
- 2.0 mm jacketed sub-units

Central Strength Member:
- Aramid yarn

Overall Strength Member:
- Aramid yarn

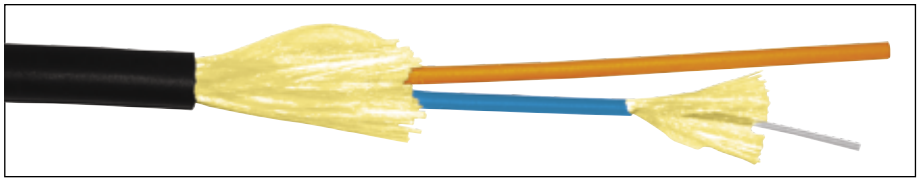
Jacket:
- Black polyurethane
- Sequential footage markings*
- Optional matte finish

Features:
- Rugged individual fiber protection
- Easy-to-terminate sub-units
- Heavy-duty field applications
- Designed to military standards
- Color-coded units for identification

Performance:
- Temperature:
  Storage -70˚C (-94˚F) to +85˚C (+185˚F)
  Operating -55˚C (-67˚F) to +85˚C (+185˚F)
- Minimum Bend Radius:
  16 X OD—Installation
  8 X OD—In-Service
- Maximum Crush Resistance:
  251 lbs/in (440 N/cm)
  EIA/TIA-455-41
- Impact Resistance:
  200 impacts
  EIA/TIA-455-25
- Flex Resistance:
  2000 cycles
  EIA/TIA-455-104

Applications:
- Military tactical field use and commercial applications in re-deployable communication systems
- TV camera applications
- Mining and harsh environments needing mechanical and chemical resistance

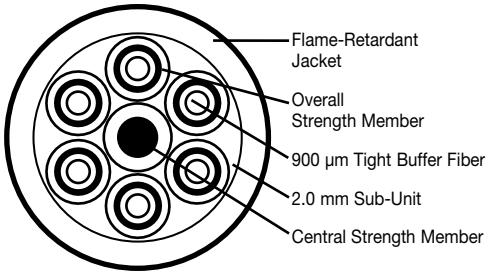
*Sequential meter markings available upon request



CATALOG NUMBER	FIBER COUNT	NO. 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
XX0021B3C	2	2	0.260	6.6	20	29	450	2002	149	663
XX0041B3C	4	4	0.290	7.4	24	36	450	2002	149	663
XX0061B3C	6	6	0.340	8.6	29	43	450	2002	149	663
XX0081B3C	8	8	0.390	10.0	36	54	700	3114	231	1028
XX0101B3C	10	10	0.450	11.4	46	68	900	4003	300	1334
XX0121B3C	12	12	0.480	12.2	52	78	1100	4893	360	1601

XX denotes glass type.
A complete listing of NextGen® Brand glass types is specified on page 3 of this catalog.

Typical Cross-Section



6 Fibers

Ordering Part Number Example

AP0041B3C

Singlemode, 4 fibers, tactical breakout
Please see pages 4 and 5 for a complete guide on part number selection and ordering information.

Combat Series™ *Military Tactical Distribution Cable TFOCA & TFOCA-II®*

Reliability For Your Toughest Applications

NextGen® Brand's Combat Series™ tactical fiber optic cables are designed, engineered and manufactured to specification for military applications.

Advanced Performance

Combat Series tactical fiber optic cables are lightweight and rugged to withstand repeated flexing. The compact design allows for ease of deployment and re-configuration. The UV- and flame-resistant polyurethane jackets withstand even the harshest conditions, resulting in mechanical, chemical and weather resistance.

General Cable's NextGen Brand Combat Series contains a jacketing compound, HydroGuard™, which is fully water-resistant for ultimate protection.

General Cable also offers a broad range of fiber optic cable constructions for every application. NextGen Brand fiber optic cables meet today's performance expectations while setting the standards for tomorrow.

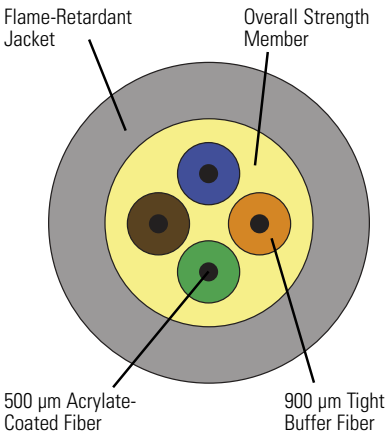
General Cable

NEXTGEN® BRAND

CATALOG NUMBER	FIBER COUNT	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
						INSTALLATION		IN-SERVICE	
		IN	mm	LBS/1000'	kg/km	LBS	N	LBS	N
XX0021GNC	2	0.228	5.8	20	30	400	1800	130	578
XX0041GNC	4	0.228	5.8	20	30	400	1800	130	578

XX denotes glass type.
A complete listing of NextGen® Brand glass types is specified on page 3 of the Fiber Optics catalog.

Typical Cross-Section



4 Fibers

PRODUCT CONSTRUCTION:

Fiber:
- 2 or 4 fibers
- 900 µm tight buffer, overlaid on a 500 µm acrylate-coated fiber
- Color-coding per TIA/EIA 598B
- Type CK includes QPL-certified glass

Overall Strength Member:
- Aramid yarn

Jacket:
- Black matte flame-retardant polyurethane
- Black UV- and moisture-resistant HydroGuard™
- Sequential footage markings
- Sequential meter markings available upon request

FEATURES:

- Patent-pending HydroGuard™ jacket
- Lightweight, rugged
- Withstands repeated flexing
- Compact design for ease of deployment
- Excellent mechanical protection for the fibers
- Designed to military standards

PERFORMANCE:

- Temperature:
  Storage -55˚C (-67˚F) to +85˚C (+185˚F)
  Operating -46˚C (-51˚F) to +71˚C (+140˚F)
- Minimum Bend Radius:
  16 X OD—Installation
  8 X OD—In-Service

COMPLIANCES:

- Tested to CECOM A3159879 Revision D Standard

APPLICATIONS:

- Military tactical field applications in re-deployable communication systems

ORDERING

Part Number Example:

CE0041GNC

62.5 mm multimode, 4 fibers, tactical distribution

Please see pages 4 and 5 of the Fiber Optics catalog for a complete guide on part number selection and ordering information.

Technical Information 9

The complexity of today's telecommunications, voice and data transmissions has generated an increasing demand for more technical information. In the current business world, customer service representatives, engineers, distributors and end-users do not have the time to search for answers to their technical questions.

We have included a limited technical section to help simplify these decisions and enable our customers to more expeditiously locate the products needed and answer product-specific questions.

For additional technical information, please contact your sales representative or our customer service department.

Glossary

Absorption: Physical phenomenon that attenuates light traveling in fibers by converting it into heat, thereby raising the fiber's temperature. Absorption results from impurities and defects in the glass structure.

Acceptance Angle: The half-angle of the cone within which all incident light is totally internally reflected by the fiber core. For graded index fibers, acceptance angle is a function of position on the entrance face of the core.

Adapter: A mechanical media termination device designed to align and join fiber optic connectors. Often referred to as a coupling, bulkhead, or interconnect sleeve.

Amplitude: Height of a waveform that represents signal strength.

Analog: A format that uses continuous physical variables such as voltage amplitude or frequency variations to transmit information.

Angle of Incidence: The angle between an incident ray and the normal to a reflecting surface.

Angle of Refraction: Angle formed between a refracted ray and the normal to the surface. This angle lies in a common plane with the angle of incidence.

Aramid Yarn: Strength elements that provide tensile strength, support and additional protection of fiber bundles. It is commonly referred to as Kevlar (a DuPont trademark).

Armor: Protective covering, usually metal, used underneath plastic jackets to provide additional environmental protection in harsh environments.

Attenuation: Loss of signal strength between points. Usually measured in decibels per a unit length (e.g., dB/km).

Backbone: The main portion of network cabling connecting equipment rooms or communications closets. These cables often have the largest number of fibers and/or the longest continuous cable runs.

Backscattering: The scattering of light in a direction opposite to the original one.

Bandwidth: A characterization of the information-carrying capacity of a multimode optical fiber. It is expressed in terms of frequency and is often normalized to a unit length (e.g., MHz-km).

Bend Loss: A form of increased attenuation in a fiber that results from bending a fiber around a restrictive curvature (a macrobend) or from minute distortions in the fiber (microbends).

Bend Radius: Radius of curvature that a fiber can bend without breaking.

Breakout: Multifiber cable constructed in the tight buffered design with individually jacketed fibers. Designed for ease of connectorization and rugged applications for intra- or interbuilding requirements.

Buffer: Coating used to protect optical fiber from physical damage. Types include tight buffer (indoor) or loose tube (outdoor).

Bundle: Several individual fibers contained within a single jacket or buffer tube. Also a group of buffered fibers distinguished in some fashion from another group in the same cable core.

Cable Assembly: Optical fiber cable that has connectors installed on one or both ends.

Cable Bend Radius: The radius that a fiber can be bent before risking increased attenuation or fiber breaks.

Central Member: A material located in the middle of a cable that provides extra strength and anti-buckling properties.

Chromatic Dispersion: Spreading of a light pulse caused by the difference in refractive indices at different lengths.

Cladding: Dielectric material surrounding the core of an optical fiber.

Coating: Material put on a fiber during the drawing process for mechanical protection.

Conduit: Pipe or tubing through which cables can be pulled and housed.

Connector: A passive device attached at the end of a fiber to couple light from a transmitter to a receiver or between two fibers.

Connector Return Loss: Amount of power reflected from the connector to connector interface, typically expressed in decibels.

Core: Central region of an optical fiber through which light is transmitted.

Core Eccentricity: Measure of the displacement of the center of the core relative to the cladding center.

Core Ellipticity: Measure of the non-roundness of the core.

Coupling Efficiency: Efficiency of optical power transfer between two components.

Coupling Loss: Power loss suffered when coupling light from one optical device to another.

Critical Angle: Smallest angle at which a meridional ray may be totally reflected within a fiber at the core-cladding interface.

Crosstalk: Phenomenon of unwanted light transfer between fibers.

CSA: Abbreviation for Canadian Standards Association.

Decibel (dB): Standard unit used to express the magnitude of signal gain or loss.

Dielectric: Any non-metallic, non-conductive material.

Diffraction: Phenomenon that results when light passes by an opaque edge or through an opening, generating weaker secondary wavefronts. These secondary wavefronts interfere with the primary wavefronts, as well as with each other, to form various patterns.

Digital: Data format that uses two physical levels, ones and zeros, to transmit information.

Glossary

Dispersion: Spread of the signal delay in an optical waveguide. It consists of various components: modal dispersion, material dispersion and waveguide dispersion. As a result of the dispersion, an optical waveguide acts as a low-pass filter for the transmitted signals.

Duplex: Referring to a type of data transmission, either half or full. Half duplex permits only one-way communication. Full duplex allows simultaneous two-way transmission.

Electromagnetic Interference (EMI): Flowing currents generate magnetic fields. Depending on the strength and proximity, these magnetic fields can induce unwanted current in nearby conductive media, negatively affecting signal transfer.

End Finish: Quality of the surface at an optical fiber's end, commonly described as mirror, mist, hackle, chipped, cracked or specified by final grit size used in polishing.

ETL: Abbreviation for Edison Testing Laboratory, which is a division of Intertek Group plc. ETL specializes in electrical product testing, EMC testing and benchmark performance testing.

FDDI (Fiber Distributed Data Interface): A standard for a 100 Mbs fiber optic area network.

Fiber: Any filament or fiber made of dielectric materials that guides light.

Fiber Channel: A high speed point-to-point, ANSI Optical Communications Standard that supports data transfer rates up to 1,062.5 Mbs (1 Gps).

Fiber Cleaving: Controlled fracture of an optical fiber along a crystalline plane which results in a smooth surface.

Fiber Optics: Branch of optical technology dealing with the transmission of radiant power through fibers made of transparent materials such as glass, fused silica or plastic.

FOTP: Abbreviation for fiber optic test procedures, which are defined in TIA/EIA Publication Series 455.

Frequency: Number of cycles per unit of time, measured in Hertz (Hz).

Fusion Splice: Splice accomplished by the application of localized heat sufficient to fuse or melt the ends of two lengths of optical fiber, forming a continuous single fiber.

Gigabit: One billion bits of information.

Gigahertz (GHz): One billion Hertz.

Graded-Index Fiber: An optical fiber core that has a nonuniform index of refraction. The core is composed of concentric rings of glass, which have refractive indices that decrease from the center axis. The refractive index is changed in a systematic way from the center to the edges in order to decrease modal dispersion.

Hertz: Measurement unit of frequency.

Hybrid Cable: A fiber optic cable containing two or more different types of fiber (e.g., multimode and singlemode).

Index of Refraction: The ratio of light velocity in a vacuum to its velocity in a given transmission medium.

Infrared (IR): The range of electromagnetic wavelengths between the visible part of the spectrum (750nm) and microwaves (30µm).

Insertion Loss: The attenuation caused by insertion of an optical component such as a connector, splice or coupler.

Intensity: Irradiance.

Interbuilding: Between buildings.

Intrabuilding: Within a building.

Jumper: Fiber optic cable that has connectors terminated on both ends.

KPSI: Abbreviation used to denote a measurement unit of thousands of pounds per square inch. Commonly used in the fiber proof test tensile strength measurement.

Kevlar: DuPont trade name for aramid material (see *Aramid Yarn*).

Kilometer: Unit of measure for length equal to 1000 meters and about 3,281 feet.

Laser: A device which produces a narrow band of light and is used as a transmitting device for light signals traveling along optical fibers. Laser is an acronym for Light Amplification by Stimulated Emission of Radiation.

Launch Angle: Angle between the propagation direction of the incident light and the optical axis of an optical waveguide.

LED: Acronym for Light Emitting Diode. It is a semiconductor device that emits incoherent light from a p-n junction (when biased with an electrical current).

Light: In the laser and optical communications fields, the portion of the electromagnetic spectrum that can be handled by the basic optical techniques used for the visible spectrum extending from the near ultraviolet region of approximately 0.3 micron, through the visible region and into the mid-infrared region of about 30 microns.

Light Diffusion: Scattering of light by reflection or transmission. Diffuse reflection results when light strikes an irregular surface such as a frosted window or coated light bulb.

Light Emitting Diode: See *LED.*

Lightwaves: Electromagnetic waves in the region of optical frequencies. The term "light" was originally restricted to radiation visible to the human eye, with wavelengths between 400 and 700nm. However, it has become customary to refer to radiation in the speed regions adjacent to visible light as "light" to emphasize the physical and technical characteristics they have in common with visible light.

Loose Tube: Type of cable design in which coated fibers are encased in buffer tubes offering excellent fiber protection and segregation. Mainly used in outdoor cable types.

MDPE: Acronym for Medium Density Polyethylene. MDPE is a form of polyethylene commonly used as a jacketing material for outdoor fiber optic cables (see *PE*).

Glossary

Macrobending: Macroscopic axial deviations of a fiber from a straight line.

MegaHertz: One million Hertz.

Microbending: Curvatures of the fiber which involve axial displacements a few micrometers and spatial wavelengths of a few millimeters. Microbends cause loss of light and consequently increase the attenuation of the fiber.

Micrometer (µm): One millionth of a meter or a micron. Conventional unit of measurement for optical fibers.

Micron: See *Micrometer.*

Modal Dispersion: Pulse spreading due to multiple light rays traveling different distances and speeds through an optical fiber.

Mode: A term used to describe an independent light path through a fiber, as in multimode or singlemode.

Mode Field Diameter (MFD): The diameter of optical energy in a singlemode fiber. Because the MFD is greater than the core diameter, MFD replaces core diameter as a practical parameter.

Monochromatic: Consisting of a single wavelength. In practice, radiation is never perfectly monochromatic but, at best, displays a narrow band of wavelengths.

Multimode Fiber: An optical waveguide in which light travels in several modes. Typical core and cladding sizes are 50 µm/125 µm and 62.5 µm/125 µm.

Multiplex: Combining two or more signals into a single bit stream that can be individually recovered.

Nanometer: One billionth of a meter (nm).

National Electric Code (NEC): Defines building flammability requirements for indoor cables.

Numerical Aperture (NA): Measure of the range of angles of incident light transmitted through a fiber. Depends on the differences in index of refraction between the core and the cladding. (The number that expresses the light-gathering ability of a fiber.)

Optical Return Loss (ORL): The ratio, expressed in decibels, of optical power reflected by a component or an assembly to the optical power incident on a component or assembly that is induced into a link or system.

Optical Time Domain Reflectometer (OTDR): An instrument used to measure the transmission performance of optical fibers.

Optical Transmitter: See *Transmitter.*

Optical Waveguide: Dielectric waveguide with a core consisting of optically transparent material of low attenuation (usually silica glass) and with cladding consisting of optically transparent material of lower refractive index than that of the core. It is used for the transmission of signals with lightwaves and is frequently referred to as a fiber. In addition, there are some optical components, such as laser diodes, which are referred to as optical waveguides.

PE: Abbreviation used for polyethylene. Polyethylene is a type of plastic, commonly used as a jacketing material for outside plant cables, that possesses good mechanical properties including good moisture resistance. However, it is very flammable and not suitable for indoor jacketing applications.

PVC: Abbreviation used for polyvinyl chloride. Polyvinyl chloride is a plastic material that is widely used as a jacketing material in indoor cables.

PVDF: Abbreviation denoting polyvinylidene fluoride, a fluoropolymer plastic material often used as a jacket in plenum cables, especially in larger fiber count cables.

Pigtail: A fiber optic connector that is terminated to one end of an optical fiber cable. A short length of optical fiber, permanently fixed to a component, used to couple power between the component and a transmission fiber.

Plenum: The air handling space such as that found above drop-ceiling tiles or in raised floors. It is also the most stringent fire code rating for indoor cables.

Plenum Cable: A cable that meets the most stringent flammability and smoke-generating test and is suitable for installation in a plenum area without a conduit.

Power: The rate at which energy is transferred.

Preform: A glass structure from which an optical fiber waveguide can be drawn.

Primary Coating: The plastic coating applied directly to the cladding surface of the fiber during manufacture to preserve the integrity of the surface.

Receiver: A detector and electronic circuitry to change optical signals into electrical signals.

Reflection: The abrupt change in direction of a light beam at an interface between two dissimilar media so that the light beam returns into the media from which it originated.

Refraction: The bending of a beam of light at an interface between two dissimilar media or in a medium whose refractive index is a continuous function of position (graded index medium).

Refractive Index: The ratio of the velocity of light in a vacuum to that in an optically dense medium.

Repeater: In an optical-fiber communication system, an optoelectronic device or module that receives an optical signal, converts it to electrical form, amplifies it (or in the case of a digital signal, reshapes, retimes or otherwise reconstructs it) and retransmits it in optical form.

Riser: Pathways for indoor cables that pass between floors. It is normally a vertical shaft or space. A riser cable rating indicates good flammability characteristics, but not necessarily low smoke as in a plenum type.

Glossary

Scattering: Property of glass that causes light to deflect from the fiber and contributes to optical attenuation.

Simplex: Transmission in only one direction. Generally a communications system or device capable of transmission in one direction only.

Singlemode Fiber: Optical fiber with a small core diameter (typically 9 µm) in which only a singlemode, the fundamental mode, is capable of propagation. This type of fiber is particularly suitable for wideband transmission over large distances, since its bandwidth is limited only by chromatic dispersion.

Source: A light emitter, either an LED or laser diode, in a fiber optic link; a device that when properly driven will produce information-carrying optical signals.

Spectral Bandwidth: The difference between wavelengths at which the radiant intensity of illumination is half its peak intensity.

Speed of Light: 186,000 miles per second.

Splice: A permanent joint between two optical waveguides.

ST® Connector: Type of connector used on fiber optic cable utilizing a spring-loaded twist-and-lock coupling similar to the BNC connectors used with coaxial cabling.

Step Index Fiber: A fiber having a uniform refractive index within the core and a sharp decrease in refractive index at the core/cladding interface.

Strength Member: Part of a fiber optic cable composed of aramid yarn, steel strands or fiberglass filaments that increase the tensile strength of the cable.

Tight Buffer: Type of cable construction whereby each glass fiber is tightly buffered by a protective thermoplastic coating to a diameter of 900 µm. Increased buffering provides ease of handling and connectorization.

Time-Division Multiplex (TDM): The process or device by which more than one signal can be sent over a single channel by using different time intervals for the different signals. This may be done by varying the pulse duration, pulse amplitude and pulse position.

Total Internal Reflection: The total reflection that occurs when light strikes an interface at angles of incidence greater than the critical angle.

Transmitter: A driver and a source used to change electrical signals into optical signals.

UL: Abbreviation for Underwriters Laboratories, Inc., a non-profit organization that rates fiber optic cables according to their flammability characteristics. (See *Plenum* and *Riser.*)

VCSEL (Vertical Cavity Surface Emitting Laser): A specialized laser diode used in fiber optic communications to improve efficiency and increase data speeds. These devices emit energy at 850 nm and 1300 nm. The VCSEL emits a narrow, more nearly circular beam than traditional light emitting diodes (LEDs) or laser diodes, which makes it easier to get the energy from the device into an optical fiber.

Wavelength: The distance, measured in the direction of propagation, of a repetitive electrical pulse or waveform between two successive points that are characterized by the same phase of vibration.

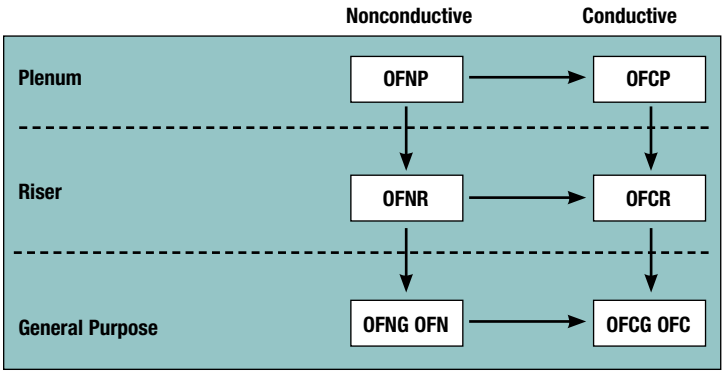
Zero-Dispersion Wavelength: Wavelength at which the chromatic dispersion of an optical fiber is zero. Occurs when waveguide dispersion cancels out material dispersion.

NEC and CSA Fire Resistance Levels

Communications wire and cable for premise installations are in accordance with Article 770, and other applicable parts of the National Electrical Code (NEC), latest issue. Communications wire and cables for Canada are in accordance with the harmonized Canadian Standard Association C22.2 No. 214, Underwriters Laboratories UL 444, latest issue.

FIRE RESISTANCE LEVEL	TEST REQUIREMENT	NEC ARTICLE 770
(Highest) Plenum Cables	NFPA-262 (Steiner tunnel) CSA-FT6 (Steiner tunnel)	OFNP OFCP
Riser Cables Multiple Floors	UL-1666 (Vertical Shaft) CSA-FT4 (Vertical Tray)	OFNR OFCR
General Purpose Cables	UL-1581 (Vertical Tray) CSA-FT4 (Vertical Tray)	OFNG OFN OFCG OFC

Notes
1. Cables with a higher fire resistance level may be substituted for those with a lower fire resistance level.
2. Non-fire rated outside plant telephone cables may not run outside of a rigid metal conduit more than 50 feet from the point of entrance into a building.
3. Per the latest NEC issue, listed optical fiber cables are permitted in trays.



CABLE MARKING	TYPE
OFNP	Nonconductive optical fiber plenum cable
OFCP	Conductive optical fiber plenum cable
OFNR	Nonconductive optical fiber riser cable
OFCR	Conductive optical fiber riser cable
OFNG	Nonconductive optical fiber general-purpose cable
OFCG	Conductive optical fiber general-purpose cable
OFN	Nonconductive optical fiber general-purpose cable
OFC	Conductive optical fiber general-purpose cable

Color Coding Charts

Color coding in compliance with TIA/EIA 598 C.3

LOOSE TUBE BUFFER COLOR CODING

POSITION NUMBER	BASE COLOR AND TRACER	ABBREVIATION
1	Blue	BL
2	Orange	OR
3	Green	GR
4	Brown	BR
5	Slate	SL
6	White	WH
7	Red	RD
8	Black	BK
9	Yellow	YL
10	Violet	VI
11	Rose	RS
12	Aqua	AQ
13	Blue with Black Tracer	D/BL[1]
14	Orange with Black Tracer	D/OR
15	Green with Black Tracer	D/GR
16	Brown with Black Tracer	D/BR
17	Slate with Black Tracer	D/SL
18	White with Black Tracer	D/WH
19	Red with Black Tracer	D/RD
20	Black with Yellow Tracer	D/BK
21	Yellow with Black Tracer	D/YL
22	Violet with Black Tracer	D/VI
23	Rose with Black Tracer	D/RS
24	Aqua with Black Tracer	D/AQ

1) "D/" denotes a dashed mark or tracer. That is, D/BL is Dash-Blue, meaning blue with a tracer.

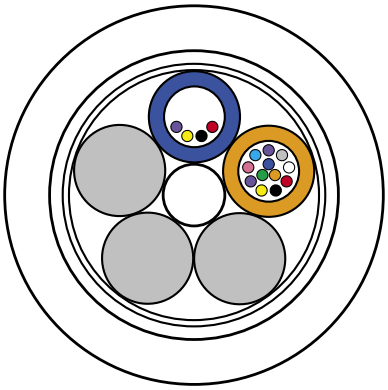
TIGHT BUFFER COLOR CODING

POSITION NUMBER	BASE COLOR AND TRACER	ABBREVIATION
1	Blue	BL
2	Orange	OR
3	Green	GR
4	Brown	BR
5	Slate	SL
6	White	WH
7	Red	RD
8	Black	BK
9	Yellow	YL
10	Violet	VI
11	Pink	PK
12	Aqua	AQ
13	Blue with Black Tracer	D/BL[1]
14	Orange with Black Tracer	D/OR
15	Green with Black Tracer	D/GR
16	Brown with Black Tracer	D/BR
17	Slate with Black Tracer	D/SL
18	White with Black Tracer	D/WH
19	Red with Black Tracer	D/RD
20*	Black with Black Tracer	D/BK
21	Yellow with Black Tracer	D/YL
22	Violet with Black Tracer	D/VI
23	Rose with Black Tracer	D/RS
24	Aqua with Black Tracer	D/AQ

1) "D/" denotes a dashed mark or tracer. That is, D/BL is Dash-Blue, meaning blue with a tracer.
* Black tracer is visible on black buffer tube.

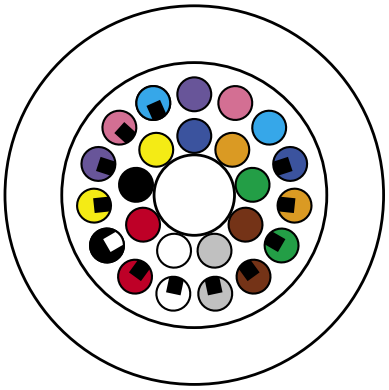
JACKET COLOR CODING

CONSTRUCTION	FIBER TYPE	JACKET COLOR
TIGHT BUFFER	Multimode	Orange
	10 G Multimode	Aqua
	Singlemode	Yellow
	Hybrid	Black
LOOSE TUBE	Multimode	Black
	10 G Multimode	
	Singlemode	
	Hybrid	



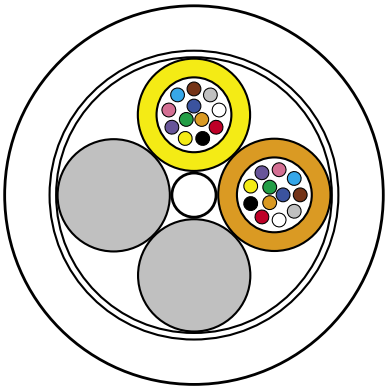
For loose tube hybrid cable constructions, cables containing both singlemode (SM) and multimode (MM), the first tubes in the TIA/EIA 598 color-coded tubes will contain singlemode, and the remaining tubes will contain multimode.

Ordering Part Number Example
AQ012/BE0124M1A-DWB



For tight buffered single pass hybrid cable constructions (≤ 24 fibers), cables containing both singlemode and multimode, the first buffers in the TIA/EIA 598 color-coded tubes will contain singlemode, and the remaining buffers will contain multimode.

Ordering Part Number Example
AP012/BE0121PNU



For tight buffered subunit hybrid cable constructions (≥ 24 fibers), cables containing both singlemode and multimode, the singlemode subunit tubes will be yellow and numerically marked, 62.5 µ multimode subunit tubes will be orange and numerically marked, and 50 µ multimode subunit tubes will be aqua and numerically marked.

Ordering Part Number Example
AP012/BE0121P1R

Conversion Table and Reel Dimensions

CONVERSION TABLE

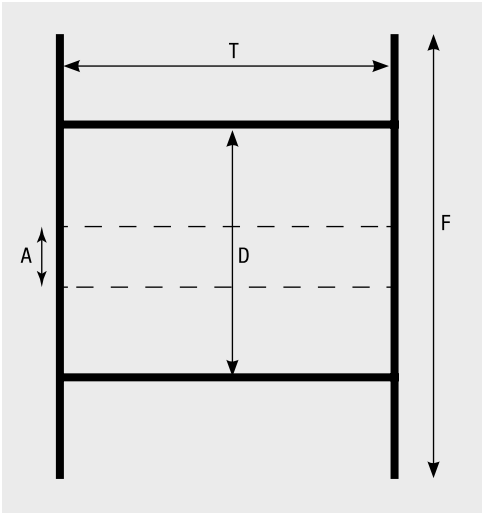
SYMBOL	WHEN YOU KNOW	MULTIPLY BY	TO FIND	SYMBOL
		LENGTH		
in	inches	25.4	millimeters	mm
ft	feet	0.305	meters	m
yd	yards	0.914	meters	m
mi	miles	1.61	kilometers	km

STANDARD WOODEN REEL DIMENSIONS

Flange	inches meters	36 (0.9)	48 (1.2)	60 (1.5)	72 (1.8)	84 (2.1)	96 (2.4)
Traverse	inches meters	26 (0.7)	22 (0.6)	31 (0.8)	36 (0.9)	47 (1.2)	42 (1.1)
Drum	inches meters	18 (0.5)	24 (0.6)	30 (0.8)	36 (0.9)	44 (1.1)	48 (1.2)
Tare Weight	lbs kg	104 (47)	178 (81)	324 (147)	616 (279)	834 (378)	1,146 (520)

Please contact your General Cable representative if a certain reel size is required.

REEL DIMENSIONS



F = Flange Diameter
T = Traverse Width
D = Drum Diameter
A = Arbor Hole

Catalog Number Index

Catalog Number Index

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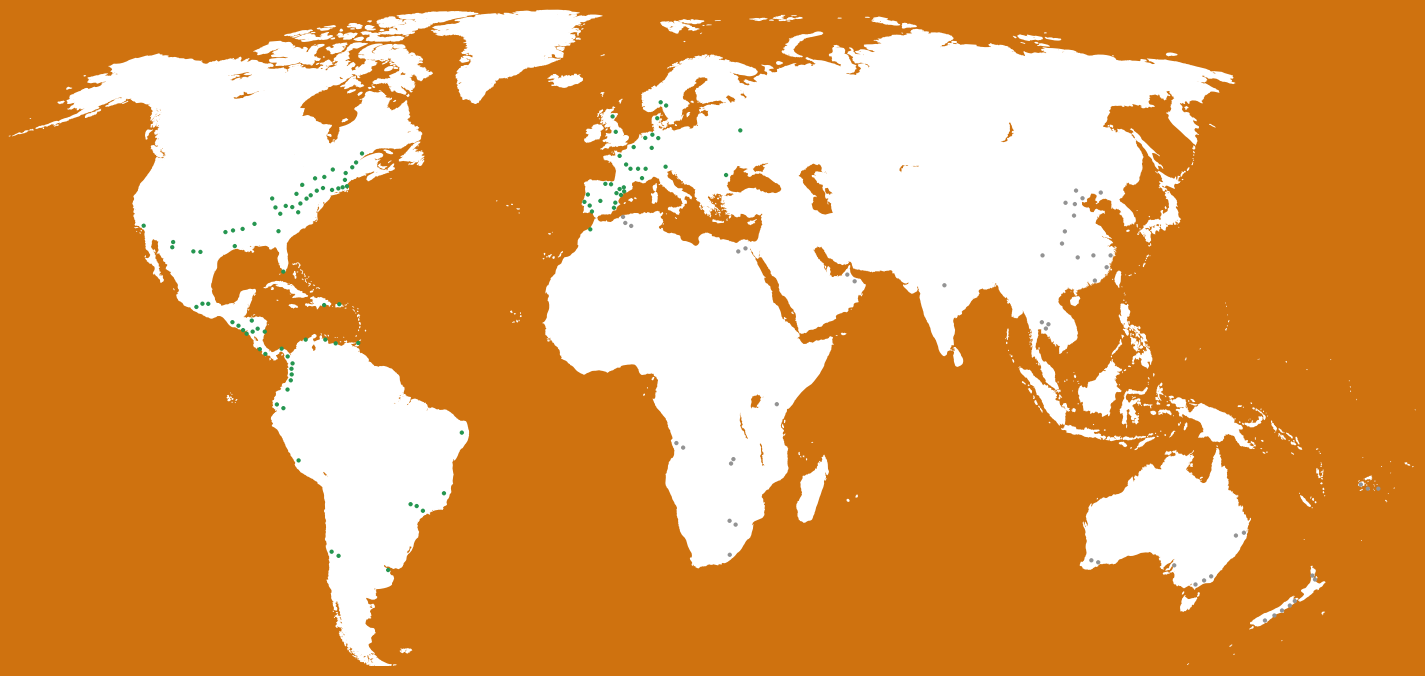

General Cable, a leading wire and cable innovator for over 170 years, serves customers through a network of 38 manufacturing facilities in our core markets and has worldwide sales representation and distribution. The Company is dedicated to the production of high-quality aluminum, copper and fiber optic wire and cable and systems solutions for the energy, construction, industrial, specialty and communications sectors. In addition to our strong brand recognition and strengths in technology and manufacturing, General Cable is also competitive in such areas as distribution and logistics, marketing, sales and customer service. This combination enables General Cable to better serve its customers as they expand into new geographic markets.

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