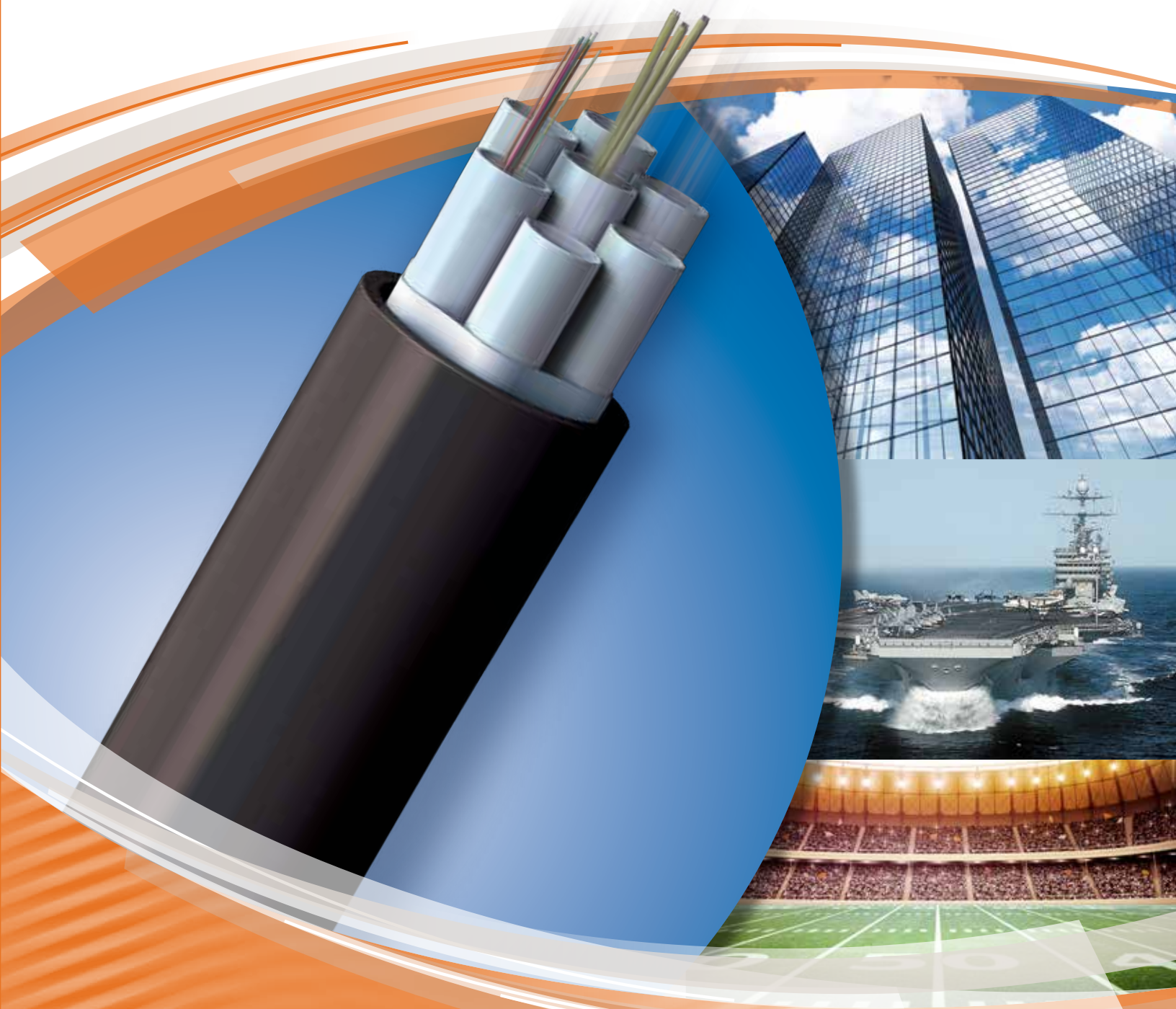
GENLITE™

INDIVIDUAL & BUNDLED

Blown Optical Fiber Systems



NEXTGEN® BRAND

General Cable

NEXTGEN® BRAND

Fiber Optic Cable

for the 21ST Century

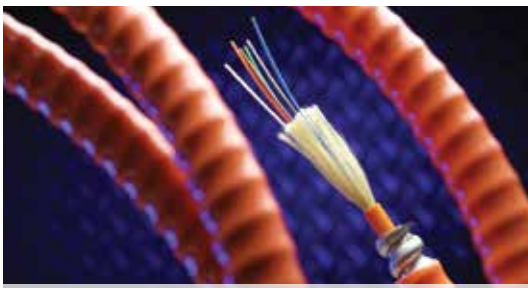
Not the new kid on the block. General Cable's NextGen® Brand fiber optic solutions, including GenLite™ Blown Optical Fiber, derive from over 25 years of technical expertise and manufacturing excellence. Long recognized as a leader in copper cabling systems, General Cable offers a broad range of fiber optic cables for every application. NextGen Brand fiber cables meet today's performance expectations while setting the standards for tomorrow.

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

Contact General Cable for information on these other fiber solutions:

Tight-Buffer Cable

Indoor/Outdoor Cable



Interlock Armor Cable

Check out General Cable's Calculation & Catalogs Apps and other mobile tools

General Cable

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Blown Optical Fiber Systems

Blown Optical Fiber technology provides flexibility in network design, while anticipating and facilitating future changes as the network evolves. It delivers the best fiber solution for backbone, specialty, Fiber-To-The-Desk (FTTD) and Fiber-To-The-Home (FTTH) applications. NextGen® Brand's GenLite™ Blown Optical Fiber (BOF) System from General Cable provides numerous advantages over conventional fiber optic systems, including increased flexibility for the designers of fiber optic networks as well as significant and measurable time, cost and service benefits to the network throughout its life cycle. Offered as 1-12 single fibers per microduct or as 1-3 bundles of 6 fibers per microduct, the GenLite BOF System accommodates Moves, Adds and Changes (MACs) easily and quickly with minimal disruption.

IDEAL APPLICATIONS

- Industrial Complex
- Education Establishments
- Campuses
- Healthcare Facilities
- Government Buildings
- Commercial and Military Shipboard
- Stadiums and Sport Arenas
- Military Structures
- Telecommunications
- Broadcasting
- Transportation
- Fiber-To-The-Home

How Does the GenLite™ BOF System Work?

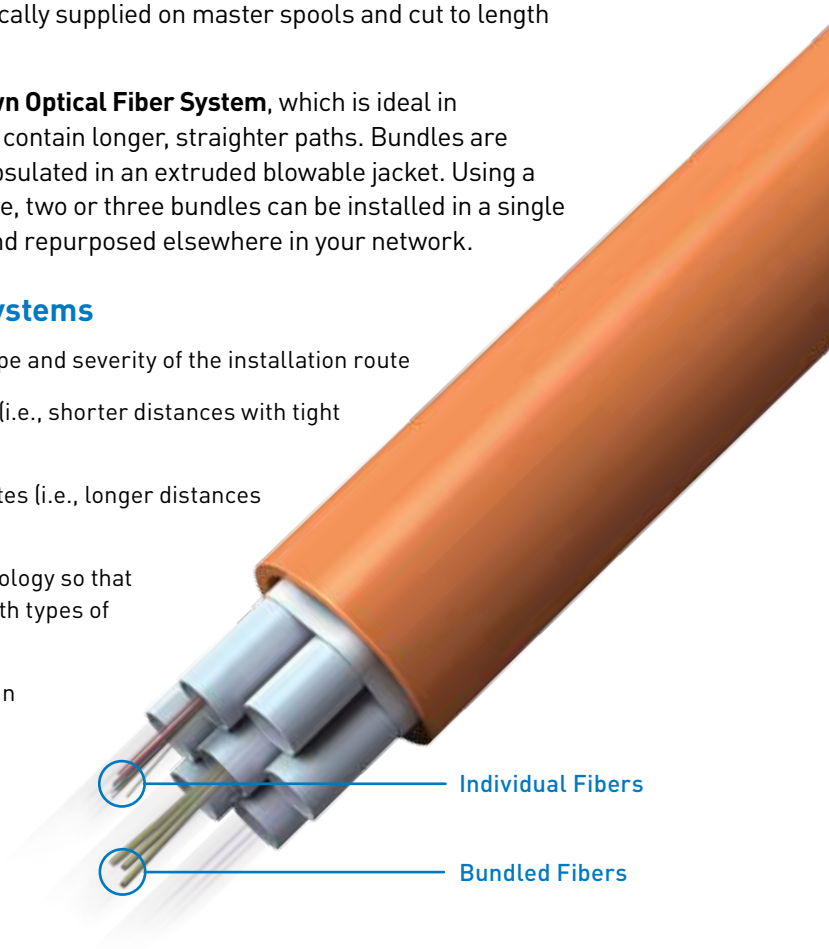
NextGen® Brand's GenLite BOF System from General Cable provides the right system for the right application with its **Individual & Bundled Blown Optical Fiber Systems**. The first and only blown fiber system on the market to feature dual blowing technologies within a single installation machine, the GenLite BOF System allows the user to match the technology to the type and severity of the installation route.

The **GenLite Individual Blown Optical Fiber System** is best suited for premise enterprise applications with *tortuous routes*, routes of shorter distances that may contain tight bends and turns. This system employs a series of empty microduct tubes between cable routing points; compressed air is then used to blow the optical fiber into the microducts, which eliminates potential damage to fibers during installation. 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.

The second offering is the **GenLite Bundled Blown Optical Fiber System**, which is ideal in applications with *non-tortuous routes,* routes that contain longer, straighter paths. Bundles are comprised of six color-coded optical fibers encapsulated in an extruded blowable jacket. Using a similar process as the Individual BOF System, one, two or three bundles can be installed in a single run. Additionally, bundles can be "uninstalled" and repurposed elsewhere in your network.

Advantages Over Other Blown Fiber Systems

- Allows the user to match the technology to the type and severity of the installation route
- Individual fibers can be blown in tortuous routes (i.e., shorter distances with tight bends and turns)
- Bundled fibers can be blown in non-tortuous routes (i.e., longer distances with straight paths)
- Installation machine features dual blowing technology so that only one machine is required to accommodate both types of installations
- The same fiber (individual and bundled) can be run outdoor to indoor without splicing
- Compressed air is used instead of nitrogen for safe installation in any environment



GENLITE™

BOF System Advantages

Main Advantages vs. Traditional Fiber

- Expand, upgrade, reconfigure or relocate network cabling at minimal cost and effort.
- Install empty microduct so there is no risk of fiber damage during installation. Optical fibers are then blown into place, rather than pulled, with zero tensile stress on the fiber during the process. Because point-to-point links are easily accommodated, fiber splice points can be eliminated, lowering attenuation and increasing system performance and integrity.
- Once the microduct highway is in place, a two-person crew (one at each end) can install Blown Optical Fiber on an as-needed basis.
- Change fiber types and counts by blowing out old optical fibers and blowing in new ones.
- Install the fiber type you need today and easily upgrade to new grades of fiber when technology changes.
- With the GenLite™ BOF System, physical damage to the cabling infrastructure from disaster means days versus weeks for recovery, resulting in minimal downtime and labor costs. Only the damaged section of microduct is removed and replaced; within minutes, new optical fiber is blown in and terminated.

Advantages Impacting First Installed Cost

- GenLite's BOF Individual and Bundled Systems let you install only the fiber you need for today's requirements. New fiber can easily be added in the future based upon actual requirements. No dark fiber needs to be installed. In addition to fiber cost savings, the testing and termination costs associated with dark fiber are also eliminated.
- The BOF System microduct can be pulled in sections that can be easily joined together to create continuous bundles, blowing routes up to 3,280 ft. (1000 m). Even for extremely tortuous routes with hundreds of small bends, the Individual BOF System uses fiber that can be blown in continuous runs of nearly 1,969 ft. (600 m).
- Multiduct that is designed to meet outside plant cable requirements can easily be mechanically joined to multiduct that is designed to meet indoor building requirements. Fiber can then be continuously blown through a duct route that includes both indoor and outdoor portions, saving attenuation loss associated with an extra splice point and the expense of performing the splice.
- System multiduct cables are offered in riser and plenum for indoor installations as well as outside plant for dry-duct outdoor installations.
- BOF System microduct can be installed more easily than conventional fiber optic cable, so disruptions to the workplace are kept to a minimum. Optical fiber can be blown in without disturbing the existing cable plant and without disrupting network services.

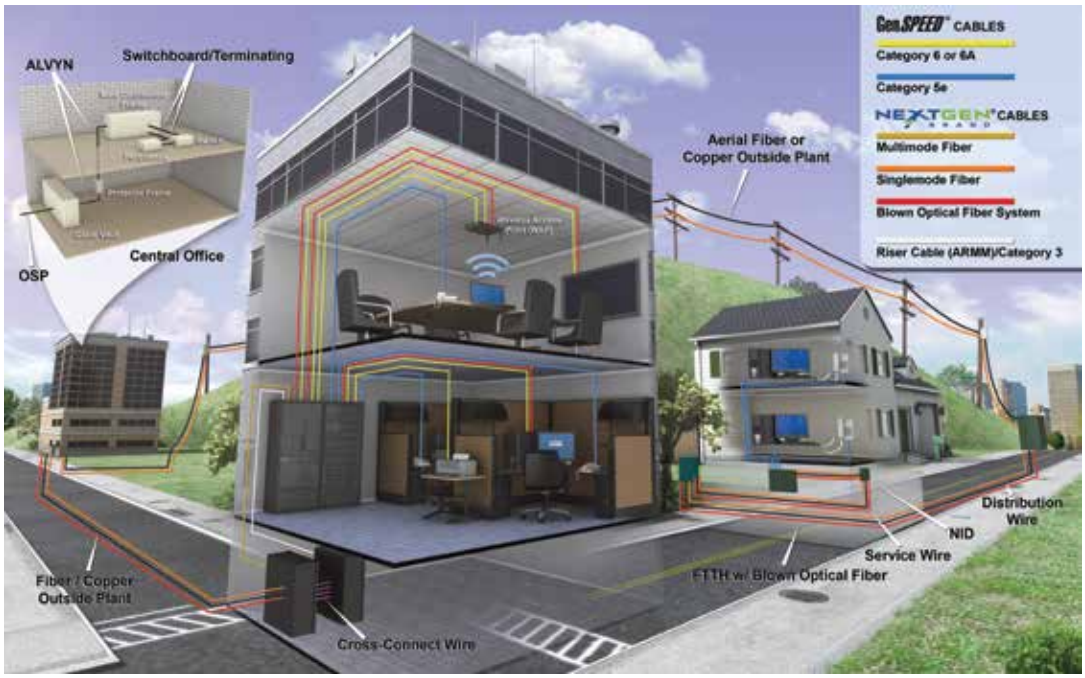
Advantages Impacting Lifetime System Cost

- Fiber performance specifications have changed rapidly in the past few years. With the GenLite BOF System, fiber can be installed to meet today's standard and then economically replaced or new fiber added as fiber performance improves in the future.
- Save on the cost of installing completely new fiber optic cables to react to network reconfigurations. Instead, pay only for new sections of microduct required to meet the new network topology and add additional Blown Optical Fiber only as needed.
- Restoration to GenLite's BOF System ductwork can be accomplished by replacing the small damaged section of microduct; network performance is not degraded with any additional splice points.
- The flexibility of blown fiber ensures installed microduct will never need to be abandoned. Future changes in fiber requirements can be easily dealt with by blowing out the existing fiber and blowing in new fiber. Future network topology changes can be addressed by joining new sections of microduct to configure new route paths as needed.

BOF System Installation

Steps for GenLite™ BOF System Installation:

1. First, a small empty tube, GenLite's BOF microduct, is installed instead of conventional fiber optic or copper cable.
2. The GenLite BOF blowing head delivers compressed air to propel the optical fiber through the microduct tube.
3. The optical fiber catches the flow of air, floating the fiber through the microduct.
4. In turning tight corners, individual optical fiber can follow the curve around tight bends (to a 1" radius), an advantage of the GenLite BOF System.
5. For straight pathways, the fiber optic bundle option allows high-density fiber packing and long-distance blowing.
6. Push-fit pneumatic connectors extend length of microduct highways and byways to each destination.
7. Transparent center section of connector permits visual inspection to verify if path is empty or populated with optical fiber(s).
8. Conventional fiber optic termination methods can be used for both individual and bundled fibers.



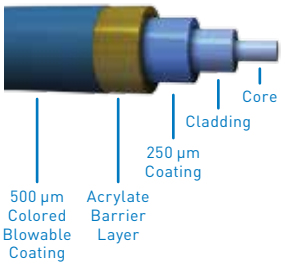
Installation Environments: Indoor and Outdoor

The GenLite BOF System offers a solution for any installation environment. Any fiber cable installed indoors must be in accordance with local fire and electrical codes. For blown optical fiber systems, the multiduct cables are required to pass fire tests whether they are empty or filled with optical fibers. Indoor multiduct cables are typically categorized into one of three types based on the level of flame retardancy: General Purpose (OFN), Riser (OFNR) and Plenum (OFNP). General purpose (OFN) cables can be used in non-Riser or non-Plenum indoor spaces. Riser (OFNR) multiduct cables are designed to resist flame spread for vertical installations. Plenum (OFNP) multiduct cables can be installed in air-handling areas that require the cable to be highly flame-retardant and also emit a low amount of smoke if exposed to flame.

Multiduct cables used for Outdoor (OSP) installations do not have the same type of flame resistance as indoor cables but are designed for exposure to the elements. Abrasion-, moisture- and sunlight-resistant Polyethylene (PE) jackets are typically used, and armor can be added for direct burial applications and for protection against rodents. Note that Outdoor multiduct cables can only enter a building up to 50 feet because they do not carry necessary flame ratings to meet National Electrical Code requirements. GenLite's Outdoor and Indoor-rated multiduct cables can be connected directly to one another, and either individual or bundled GenLite fibers can be blown in from outdoor to indoor stations.

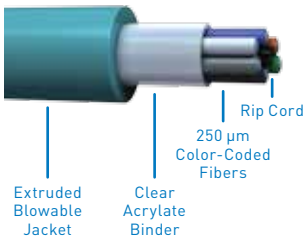
GenLite™ BOF System Components

Blowable Fiber



GenLite's Individual BOF System offers the highest quality of Corning® optical fiber in Clearcurve® multimode 62.5/125 and 50/125 (1, 40 & 100 GB), as well as Ultra singlemode 9/125, all with a state-of-the-art blowable coating and available in 12 colors. The fibers are stripped and terminated with standard tools and compatible with standard fiber optic connectors.

Blowable Bundle



GenLite's Bundled BOF System is constructed in a compact 6-fiber arrangement with an overall lightweight, blowable jacket. Bundled fiber also uses any type of Corning® optical fibers which are color-coded for easy identification. Up to three 6-fiber bundles can be simultaneously installed in a single, double or triple run, providing 6, 12 or 18 fibers per microduct. Bundles can be stripped and terminated using the same standard tools and techniques as traditional cable.

Fiber Available In All Grades	
62.5/125	OM1/OM2
50/125	OM1/OM2
50/125	OM3
50/125	OM4
9/125	OS1 (G652)
9/125	OS1 (G657)

Fiber Available In All Colors: White, Black, Blue, Orange, Green, Red, Grey, Yellow, Brown, Violet, Turquoise, Pink

- Individual and bundled fiber is available in bulk payoff packaging and is cut to length following install.
- Up to 12 individual fibers or 18 bundled fibers can be installed in a single microduct simultaneously.
- As technology changes, bundled fiber can be safely removed from the microduct and reused elsewhere in the network.
- Individual or bundled fiber is fully compatible. Install bundled fiber for longer cable runs and use individual fibers to complete shorter or more complicated cable runs.

Microduct

Microduct is constructed with a low-friction, static-dissipating inner liner and an extruded jacket. Multiple microducts are assembled to create multiduct cables, which are the infrastructure for the BOF System. Microduct is available in two standard sizes:

- 5mm OD/3mm ID microduct
- 8mm OD/6mm ID microduct

Microduct Termination Accessories

Simple push-fit connectors join the microduct sections and extend the microduct network to each destination. A clear center section of the connectors permits visual inspection to verify if the path is empty or populated with optical fiber. GenLite's BOF System connectors come in straight or T configurations. Duct connector plugs and end caps provide a method of sealing unused tubes during shipment, storage and installation. See page 16 for a complete listing of microduct termination accessories.

Multiduct

Multiduct is a jacketed bundle of microduct tubing, available in 2-, 4-, 7-, 19- or 24-way configurations and in different installation types such as indoor riser and plenum, indoor riser and plenum interlock armored, outdoor and outdoor armored. See below for a complete list of configurations available.

Indoor Multiduct	# of Microducts Available
Riser with 5 mm Microduct	2, 4 or 7
Riser with 8 mm Microduct	2, 4 or 7
Plenum with 5 mm Microduct	2, 4 or 7
Plenum with 8 mm Microduct	2, 4 or 7
Interlock Armored Riser with 5 mm Microduct	2, 4 or 7
Interlock Armored Riser with 8 mm Microduct	2, 4 or 7
Interlock Armored Plenum with 5 mm Microduct	2, 4 or 7
Interlock Armored Plenum with 8 mm Microduct	2, 4 or 7

Outdoor Multiduct	# of Microducts Available
Outdoor with 5 mm Microducts	2, 4, 7, 19 or 24
Outdoor with 8.5 mm Microducts	2, 4, 7, 19 or 24
Armored Outdoor with 8.5 mm Microducts	4, 7 or 19

Microduct tubing comes standard in white color, but colored microduct is available upon request. Consult Sales for options.

Indoor

Indoor Interlock Armored

Outdoor

Outdoor Armored

With Colored Microduct

Blowing Installation Equipment

GenLite™ BOF System installation equipment is capable of blowing both its **Blown Single Fibers** and **Blowable Fiber Bundles**. The convenience of using either BOF technology with one machine allows the installer unparalleled flexibility. The equipment kit consists of an air conditioning unit (ACU) complete with filtration and air-drying units; the installation module, a blowing head utilizing a mechanically driven system to feed the fibers onto payoff trays and into the microduct; and a lightweight tripod which is used to support the installation module. This equipment operates on standard compressed air at safe, low pressures.

GENLITE™

Blowable Fiber

The **GenLite™ Individual BOF System** offers the highest quality of Corning® optical fiber with a state-of-the-art blowable coating in Clearcurve® multimode 62.5/125 and 50/125 (1, 40 & 100 GB), as well as Ultra singlemode 9/125. Designed to be stripped and terminated with standard tools, the BOF System optical fibers are compatible with standard fiber optic connectors and available in 12 standard colors.

Part Number	Description
BL – 50 µm – OM4	
708210	Multimode 50/125 Blue
708230	Multimode 50/125 Orange
708250	Multimode 50/125 Green
708270	Multimode 50/125 Brown
708290	Multimode 50/125 Slate
708310	Multimode 50/125 Yellow
708330	Multimode 50/125 Red
708350	Multimode 50/125 Violet
708370	Multimode 50/125 White
708390	Multimode 50/125 Black
708410	Multimode 50/125 Pink
708430	Multimode 50/125 Aqua

MULTIMODE	ATTENUATION	LASER BANDWIDTH
50/125 (10 Gb/s)		
850 nm	3.0 dB/km Max.	4700 MHz • km Min.
1300 nm	1.0 dB/km Max.	

Part Number	Description
BE – 50 µm – OM3	
707610	Multimode 50/125 Blue
707620	Multimode 50/125 Orange
707630	Multimode 50/125 Green
707640	Multimode 50/125 Brown
707650	Multimode 50/125 Slate
707660	Multimode 50/125 Yellow
707670	Multimode 50/125 Red
707680	Multimode 50/125 Violet
707690	Multimode 50/125 White
707700	Multimode 50/125 Black
707710	Multimode 50/125 Pink
707720	Multimode 50/125 Aqua

MULTIMODE	ATTENUATION	LASER BANDWIDTH
50/125 (10 Gb/s)		
850 nm	3.0 dB/km Max.	2000 MHz • km Min.
1300 nm	1.0 dB/km Max.	

Part 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 Pink
707430	Multimode 62.5/125 Aqua

MULTIMODE	ATTENUATION	OFL BANDWIDTH
62.5/125		
850 nm	3.5 dB/km Max.	200 MHz • km Min.
1300 nm	1.0 dB/km Max.	500 MHz • km Min.

Part Number	Description
AQ – SM OS2	
705900	Singlemode 9/125 Blue
705910	Singlemode 9/125 Orange
705920	Singlemode 9/125 Green
705930	Singlemode 9/125 Brown
705940	Singlemode 9/125 Slate
705950	Singlemode 9/125 Yellow
705960	Singlemode 9/125 Red
705970	Singlemode 9/125 Violet
707440	Singlemode 9/125 White
707450	Singlemode 9/125 Black
707460	Singlemode 9/125 Pink
707470	Singlemode 9/125 Aqua

SINGLEMODE	ATTENUATION
9/125	
850 nm	0.5 dB/km Max.
1300 nm	0.5 dB/km Max.

TEMPERATURE RANGE:
Storage -30˚C to +80˚C
Operating -20˚C to +70˚C

NOTES:
1. Fiber is supplied on standard plastic fiber optic spools up to 4 km. Alternative fiber specifications and reel lengths may be available on request.
2. Other optical characteristics are determined by the actual fiber type specified.

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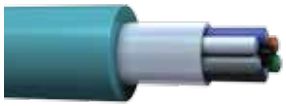
Blowable Bundles



The **GenLite™ Bundled BOF System** offers bundled fiber constructed in a 6-fiber arrangement with an overall lightweight, blowable jacket. Bundled fiber can use any type of Corning® optical fibers which are color-coded for easy identification. Up to three 6-fiber bundles can be simultaneously installed in a single, double or triple run, providing 6, 12 or 18 fibers per microduct. Bundles can be stripped and terminated using the same standard tools and techniques as traditional cable. Fibers are color coded per TIA/EIA 598 D.

Part Number/Ordering Information			Description
6 Fibers/Duct	12 Fibers/Duct	18 Fibers/Duct	
BL00064BOF-B1	BL00064BOF-B1 BL00064BOF-B2	BL00064BOF-B1 BL00064BOF-B2 BL00064BOF-B3	OM4 50 µm 6-Fiber Bundle
BE00064BOF-B1	BE00064BOF-B1 BE00064BOF-B2	BE00064BOF-B1 BE00064BOF-B2 BE00064BOF-B3	OM3 50 µm 6-Fiber Bundle
CG0006ABOF-B1	CG0006ABOF-B1 CG0006ABOF-B2	CG0006ABOF-B1 CG0006ABOF-B2 CG0006ABOF-B3	OM1 62.5 µm 6-Fiber Bundle
AP00064BOF-B1	AP00064BOF-B1 AP00064BOF-B2	AP00064BOF-B1 AP00064BOF-B2 AP00064BOF-B3	SM 6-Fiber Bundle

Blowing Distances

Installation capability is a function of the following:

- Compressed air pressure and volume
- Size and length of microduct
- Number of fibers
- Number of bends in the duct route

GenLite™ Individual Blown Optical Fiber System
For tortuous routes of shorter distances that may contain tight bends and turns.

# of Individual Fibers	Distance for 5 mm Microduct	Distance for 8 mm Microduct
4	400 m	600 m
8	300 m	450 m
12	200 m	300 m

GenLite™ Bundled Blown Optical Fiber System
For routes that contain longer, straighter paths.

# of Bundles	Distance for 5 mm Microduct	Distance for 8 mm Microduct
1	750 m	1.5 km
2	500 m	1.3 km
3	NA	1.0 km

Blowing distances above are achieved with compressed air at 6 bar (90 PSI) and 8 SCFM.

Indoor Multiduct

Indoor 2-Way

Indoor 4-Way

Indoor 7-Way

Riser- or Plenum-Rated, 5 mm or 8 mm

Indoor-rated multiduct, available in riser or plenum, consists of a number of 5 mm OD/3.5 mm ID or 8 mm OD/6 mm ID microducts covered by a flame-retardant tape and an outer jacket. Available in 2-, 4- and 7-way constructions, all indoor-rated microducts are white PVDF and are printed with a unique number at regular intervals. The overall jacket, an orange flame-retardant PVC for riser products or an orange flame-retardant PVDF for plenum products, features product identification printing and sequential length marking at two-foot intervals.

Part Number	Description
Riser-Rated Duct	
FC9700009	2-Way 5 mm OFNR
FC9700010	4-Way 5 mm OFNR
FC9700011	7-Way 5 mm OFNR
FC9700013	2-Way 8 mm OFNR
FC9700012	4-Way 8 mm OFNR
FC9700015	7-Way 8 mm OFNR

See page 14 for indoor multiduct configurations and dimensions.

Part Number	Description
Plenum-Rated Duct	
FC9700005	2-Way 5 mm OFNP
FC9700003	4-Way 5 mm OFNP
FC9700004	7-Way 5 mm OFNP
FC9700080	2-Way 8 mm OFNP
FC9700075	4-Way 8 mm OFNP
FC9700076	7-Way 8 mm OFNP

See page 14 for indoor multiduct configurations and dimensions.

Indoor Multiduct

		5 mm Multiduct		8 mm Multiduct	
MATERIALS	**Microduct** **Jacket (Riser)** **Jacket (Plenum)**	White PVDF Orange Flame-Retardant PVC Orange Flame-Retardant PVDF		White PVDF Orange Flame-Retardant PVC Orange Flame-Retardant PVDF	
INSTALLATION TENSION		**Newtons**	**lbs**	**Newtons**	**lbs**
	2-way	592	133	1677	377
	4-way	1499	337	2784	626
	7-way	2300	517	4702	1057
TEMPERATURE RANGE	**Storage** **Installation** **Operating**	-40˚C to +90˚C 0˚C to +70˚C -20˚C to +90˚C		-40˚C to +90˚C 0˚C to +70˚C -20˚C to +90˚C	
MINIMUM BEND RADIUS		**Installed**	**Installation**	**Installed**	**Installation**
	2-way	4"	5"	7"	8"
	4-way	5"	5"	8"	8"
	7-way	6"	7"	10"	11"
MAX. INTERNAL PRESSURE		150 PSI		150 PSI	
COMPLIANCE	**Riser** **Plenum**	(UL) OFNR (UL) OFNP		(UL) OFNR (UL) OFNP	
OVERALL DIAMETER		**mm**	**Inches**	**mm**	**Inches**
	2-way *(tolerance)*	12.65 x 7.65 *(±0.46)*	0.498 x 0.301 *(±0.018)*	18.14 x 10.13 *(±0.46)*	0.714 x 0.399 *(±0.018)*
	4-way *(tolerance)*	14.71 *(±0.51)*	0.579 *(±0.020)*	21.92 *(±0.51)*	0.863 *(±0.020)*
	7-way *(tolerance)*	17.65 *(±0.56)*	0.695 *(±0.022)*	26.64 *(±0.56)*	1.049 *(±0.022)*
NOMINAL WEIGHT (RISER)		**kg/km**	**lbs/1000'**	**kg/km**	**lbs/1000'**
	2-way	49	33	76	51
	4-way	79	53	118	79
	7-way	100	67	149	100
NOMINAL WEIGHT (PLENUM)		**kg/km**	**lbs/1000'**	**kg/km**	**lbs/1000'**
	2-way	54	36	82	55
	4-way	85	57	129	87
	7-way	107	72	162	109

NOTES:
1. Standard lengths are 500 and 1000 feet, supplied on nonreturnable reels. Ends are sealed to prevent the penetration of moisture prior to shipping.

Interlock Armored, Indoor Multiduct

Riser- or Plenum-Rated, 5 mm or 8 mm

Interlock armored, indoor-rated multiduct, available in riser or plenum, consists of a number of 5 mm OD/3.5 mm ID or 8 mm OD/6 mm ID microducts covered by a flame-retardant tape, inner jacket, interlocked metal armor and an outer jacket. Available in 2-, 4- and 7-way constructions, all indoor-rated microducts are white PVDF and are printed with a unique number at regular intervals. The interlock armor provides additional mechanical protection from crush or impact as well as resistance to rodents, but it is still flexible enough for ease of installation. The inner and overall jackets, an orange flame-retardant PVC for riser products or an orange flame-retardant PVDF for plenum products, feature product identification printing and sequential length marking at two-foot intervals.

Interlock Armored, Indoor 2-Way

Interlock Armored, Indoor 4-Way

Interlock Armored, Indoor 7-Way

Part Number	Description
Interlock Armored, Riser-Rated Duct	
FC9700445	2-Way 5 mm OFNR
FC9700446	4-Way 5 mm OFNR
FC9700447	7-Way 5 mm OFNR
FC9700449	2-Way 8 mm OFNR
FC9700450	4-Way 8 mm OFNR
FC9700451	7-Way 8 mm OFNR

See page 14 for indoor multiduct configurations and dimensions.

Part Number	Description
Interlock Armored, Plenum-Rated Duct	
FC9700437	2-Way 5 mm OFNP
FC9700438	4-Way 5 mm OFNP
FC9700439	7-Way 5 mm OFNP
FC9700441	2-Way 8 mm OFNP
FC9700442	4-Way 8 mm OFNP
FC9700443	7-Way 8 mm OFNP

See page 14 for indoor multiduct configurations and dimensions.

Interlock Armored, Indoor Multiduct

		5 mm Multiduct		8 mm Multiduct	
MATERIALS	**Microduct** **Jackets (Riser)** **Jackets (Plenum)**	White PVDF Orange Flame-Retardant PVC Orange Flame-Retardant PVDF		White PVDF Orange Flame-Retardant PVC Orange Flame-Retardant PVDF	
INSTALLATION TENSION		**Newtons**	**lbs**	**Newtons**	**lbs**
	2-way	1005	226	2851	641
	4-way	2549	573	4733	1064
	7-way	3932	884	7993	1797
TEMPERATURE RANGE	**Storage** **Installation** **Operating**	-40°C to +90°C 0°C to +70°C -20°C to +90°C		-40°C to +90°C 0°C to +70°C -20°C to +90°C	
MINIMUM BEND RADIUS		**Installed**	**Installation**	**Installed**	**Installation**
	2-way	4"	5"	7"	8"
	4-way	5"	5"	8"	8"
	7-way	6"	7"	10"	11"
MAX. INTERNAL PRESSURE		150 PSI		150 PSI	
COMPLIANCE	**Riser** **Plenum**	(UL) OFNR-ILRA (UL) OFNP-ILPA		(UL) OFNR-ILRA (UL) OFNP-ILPA	
OVERALL DIAMETER		**mm**	**Inches**	**mm**	**Inches**
	2-way *(tolerance)*	18.64 *(±0.97)*	0.734 *(±0.038)*	28.04 *(±0.97)*	1.104 *(±0.038)*
	4-way *(tolerance)*	22.71 *(±1.02)*	0.894 *(±0.040)*	30.84 *(±1.02)*	1.214 *(±0.040)*
	7-way *(tolerance)*	25.76 *(±1.07)*	1.014 *(±0.042)*	35.92 *(±1.07)*	1.414 *(±0.042)*
NOMINAL WEIGHT (RISER)		**kg/km**	**lbs/1000'**	**kg/km**	**lbs/1000'**
	2-way	216	145	226	152
	4-way	262	176	278	187
	7-way	360	242	381	256
NOMINAL WEIGHT (PLENUM)		**kg/km**	**lbs/1000'**	**kg/km**	**lbs/1000'**
	2-way	342	230	359	241
	4-way	424	285	448	301
	7-way	513	345	543	365

NOTES:
1. Standard lengths are 500 and 1000 feet, supplied on nonreturnable reels. Ends are sealed to prevent the penetration of moisture prior to shipping.

Outdoor Multiduct

Outdoor 2-Way

Outdoor 4-Way

Outdoor 7-Way

Outdoor 19-Way

Outdoor 24-Way

5 mm or 8.5 mm

Outdoor-rated multiduct consists of a number of 5 mm OD/3.5 mm ID or 8.5 mm OD/6 mm ID microducts covered by an outer jacket. Available in 2-, 4-, 7-, 19- and 24-way constructions, all outdoor-rated microducts are white high-density polyethylene and are printed with a unique number at regular intervals. The overall jacket is a black, high-density polyethylene and features product identification printing and sequential length marking at two-foot intervals.

Part Number	Description
Outdoor-Rated Duct	
FC9700016	2-Way 5 mm GR-3155-CORE
FC9700017	4-Way 5 mm GR-3155-CORE
FC9700018	7-Way 5 mm GR-3155-CORE
FC9700113	19-Way 5 mm GR-3155-CORE
FC9700102	24-Way 5 mm GR-3155-CORE
FC9700019	2-Way 8.5 mm GR-3155-CORE
FC9700020	4-Way 8.5 mm GR-3155-CORE
FC9700021	7-Way 8.5 mm GR-3155-CORE
FC9700047	19-Way 8.5 mm GR-3155-CORE
FC9700103	24-Way 8.5 mm GR-3155-CORE

See page 15 for indoor multiduct configurations and dimensions.

Outdoor Multiduct

		5 mm Multiduct		8.5 mm Multiduct	
MATERIALS	**Microduct** **Jacket**	White High-Density Polyethylene Black High-Density Polyethylene		White High-Density Polyethylene Black High-Density Polyethylene	
INSTALLATION TENSION		**Newtons**	**lbs**	**Newtons**	**lbs**
	2-way	636	143	1797	404
	4-way	1228	276	3260	733
	7-way	1819	409	4946	1112
	19-way	4092	920	11245	2528
	24-way	4982	1120	13785	3099
TEMPERATURE RANGE	**Storage** **Installation** **Operating**	-40˚C to +82˚C -10˚C to +65˚C -40˚C to +82˚C		-40˚C to +82˚C -10˚C to +65˚C -40˚C to +82˚C	
MINIMUM BEND RADIUS		**Installed**	**Installation**	**Installed**	**Installation**
	2-way	3"	5"	5"	8"
	4-way	5"	6"	8"	10"
	7-way	6"	7"	11"	12"
	19-way	10"	11"	16"	18"
	24-way	10"	13"	16"	22"
MAX. INTERNAL PRESSURE		150 PSI		150 PSI	
COMPLIANCE		GR-3155-CORE		GR-3155-CORE	
OVERALL DIAMETER		**mm**	**Inches**	**mm**	**Inches**
	2-way *(tolerance)*	11.53 x 6.53 *(±0.71)*	0.454 x 0.257 *(±0.028)*	19.56 x 11.05 *(±0.71)*	0.770 x 0.435 *(±0.028)*
	4-way *(tolerance)*	12.04 x 12.04 *(±0.71)*	0.474 x .0.474 *(±0.028)*	20.07 x 20.07 *(±0.71)*	0.790 x 0.790 *(±0.028)*
	7-way *(tolerance)*	17.04 x 15.70 *(±0.81)*	0.671 x 0.618 *(±0.032)*	28.58 x 26.29 *(±0.81)*	1.125 x 1.035 *(±0.032)*
	19-way *(tolerance)*	27.10 x 24.41 *(±1.02)*	1.067 x 0.961 *(±0.040)*	46.10 x 41.53 *(±1.02)*	1.815 x 1.635 *(±0.040)*
	24-way *(tolerance)*	32.08 x 24.41 *(±1.12)*	1.263 x 0.961 *(±0.044)*	54.10 x 41.02 *(±1.12)*	2.130 x 1.615 *(±0.044)*
NOMINAL WEIGHT		**kg/km**	**lbs/1000'**	**kg/km**	**lbs/1000'**
	2-way	39	26	112	75
	4-way	74	50	202	136
	7-way	112	75	308	207
	19-way	250	168	702	472
	24-way	301	202	862	579

NOTES:
1. Standard lengths are 500 and 1000 feet, supplied on nonreturnable reels. Ends are sealed to prevent the penetration of moisture prior to shipping.

Armored, Outdoor Multiduct

8.5 mm

Armored, outdoor-rated multiduct consists of a number of 8.5 mm OD/6 mm ID microducts covered by an inner jacket, a steel armor and an outer jacket. Available in 4-, 7- and 19-way constructions, all outdoor-rated microducts are white high-density polyethylene and are printed with a unique number at regular intervals. The steel armor with corrosion-resistant coating provides crush resistance for direct burial applications, as well as some protection against moisture penetration and rodents. The inner and overall jackets are a black, high-density polyethylene, and the overall jacket features product identification printing and sequential length marking at two-foot intervals.

Armored, Outdoor 4-Way

Armored, Outdoor 7-Way

Armored, Outdoor 19-Way

Part Number	Description
Armored, Outdoor-Rated Duct	
FC9700463	4-Way 8.5 mm GR-3155-CORE
FC9700464	7-Way 8.5 mm GR-3155-CORE
FC9700112	19-Way 8.5 mm GR-3155-CORE

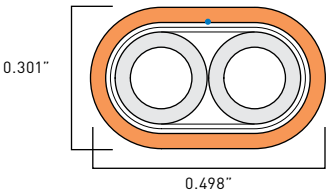
See page 15 for outdoor multiduct configurations and dimensions.

Armored, Outdoor Multiduct			
		8.5 mm Multiduct	
MATERIALS	**Microduct** **Jackets**	White High-Density Polyethylene Black High-Density Polyethylene	
INSTALLATION TENSION		**Newtons**	**lbs**
	4-way **7-way** **19-way**	5542 7669 15449	1246 1724 3473
TEMPERATURE RANGE	**Storage** **Installation** **Operating**	-40˚C to +82˚C -10˚C to +65˚C -40˚C to +82˚C	
MINIMUM BEND RADIUS		**Installed**	**Installation**
	4-way **7-way** **19-way**	11" 14" 20"	11" 14" 20"
MAX. INTERNAL PRESSURE		150 PSI	
COMPLIANCE		GR-3155-CORE	
OVERALL DIAMETER		**mm**	**Inches**
	4-way *(tolerance)* **7-way *(tolerance)*** **19-way *(tolerance)***	28.19 x 20.07 *(±1.22)* 28.58 x 33.27 *(±1.32)* 46.10 x 50.29 *(±1.52)*	1.110 x 0.790 *(±0.048)* 1.125 x 1.310 *(±0.052)* 1.815 x 1.980 *(±0.060)*
NOMINAL WEIGHT		**kg/km**	**lbs/1000'**
	4-way **7-way** **19-way**	473 624 1195	318 419 803

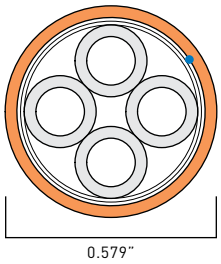
NOTES:
1. Standard lengths are 500 and 1000 feet, supplied on nonreturnable reels. Ends are sealed to prevent the penetration of moisture prior to shipping.

Indoor Multiduct Configurations
(Plenum & Riser)

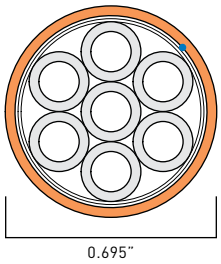
Indoor 2-Way 5 mm



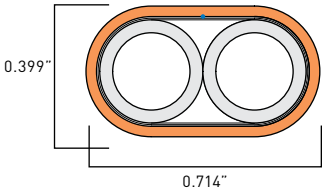
Indoor 4-Way 5 mm



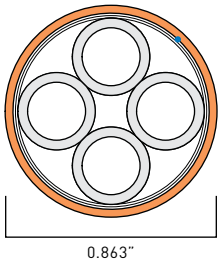
Indoor 7-Way 5 mm



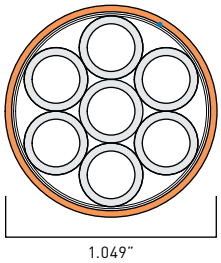
Indoor 2-Way 8 mm



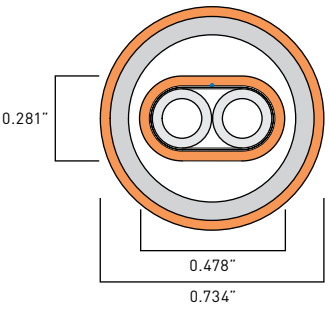
Indoor 4-Way 8 mm



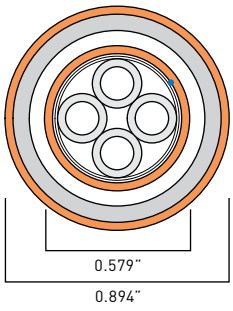
Indoor 7-Way 8 mm



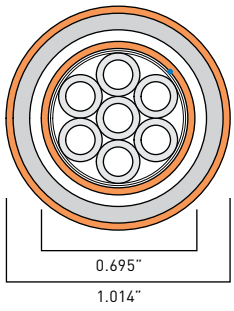
Interlock Armored, Indoor 2-Way 5 mm



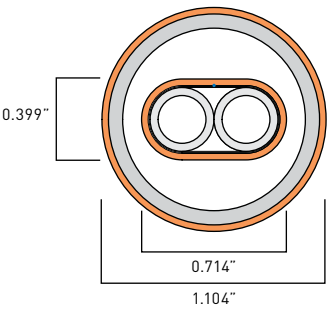
Interlock Armored, Indoor 4-Way 5 mm



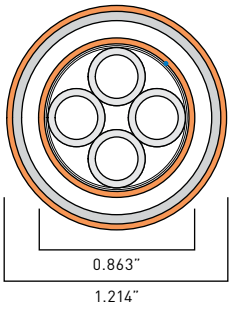
Interlock Armored, Indoor 7-Way 5 mm



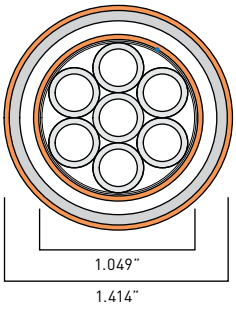
Interlock Armored, Indoor 2-Way 8 mm



Interlock Armored, Indoor 4-Way 8 mm

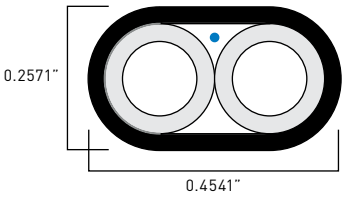


Interlock Armored, Indoor 7-Way 8 mm

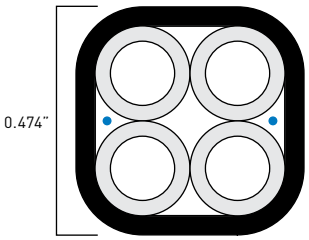


Outdoor Multiduct Configurations

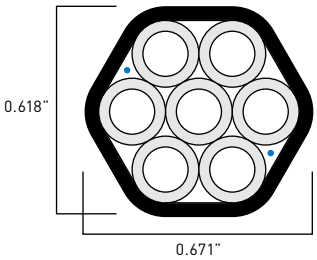
Outdoor 2-Way 5 mm



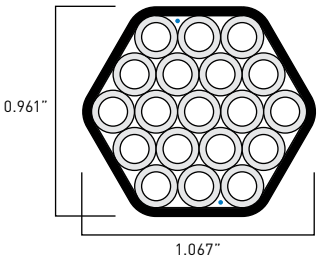
Outdoor 4-Way 5 mm



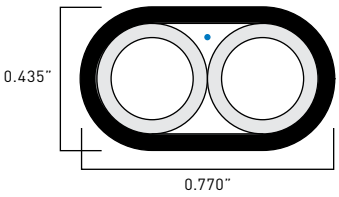
Outdoor 7-Way 5 mm



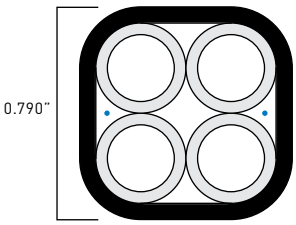
Outdoor 19-Way 5 mm



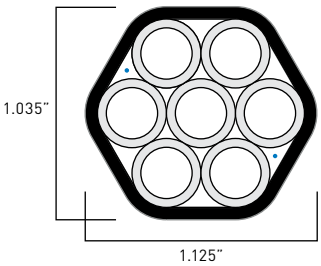
Outdoor 2-Way 8.5 mm



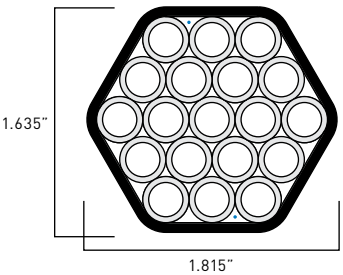
Outdoor 4-Way 8.5 mm



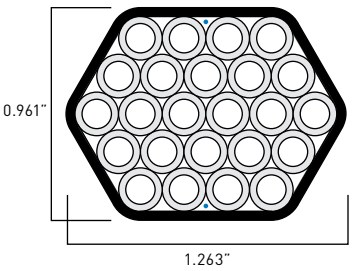
Outdoor 7-Way 8.5 mm



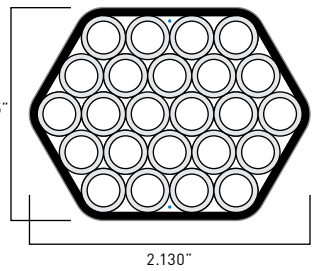
Outdoor 19-Way 8.5 mm



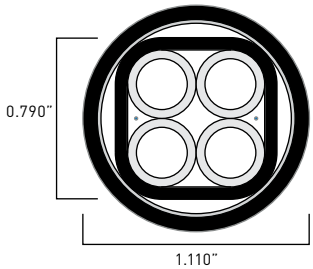
Outdoor 24-Way 5 mm



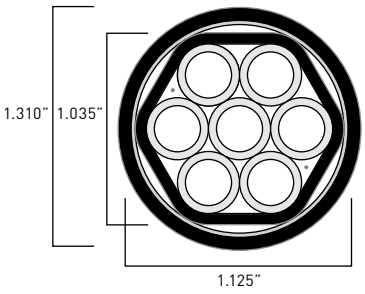
Outdoor 24-Way 8.5 mm



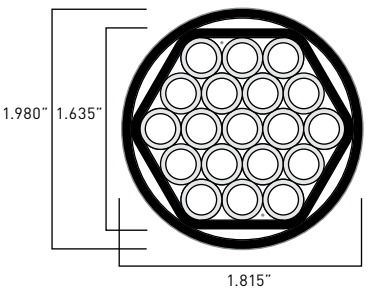
Armored, Outdoor 4-Way 8.5 mm



Armored, Outdoor 7-Way 8.5 mm



Armored, Outdoor 19-Way 8.5 mm



GENLITE™

BOF System Connectors & 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. GenLite™ BOF System connectors come in straight or T configurations as well as a reducer configuration for joining ducts of different size. Duct connector plugs and end caps provide a method of sealing unused tubes during shipment, storage and installation.

Duct Connectors

Duct Connector (Straight)

Duct Reducer

Duct Connector (T)

These plastic-bodied pneumatic connectors are suitable for joining indoor or outdoor microduct. Maximum operating pressure is 140 PSI. The connectors are constructed of a transparent plastic material permitting a visual verification of fiber population. They are installed onto the microduct with a simple push-pull technique.

NOTES:

1. When purchasing these connectors for installing on the ends of tubes that will not be immediately connected, it is recommended that a duct connector plug be installed to prevent the penetration of moisture or contamination.
2. To ensure correct sealing, a purpose-built duct cutter should be used.

Part Number	Description
Duct Connector (Straight)	
77-7224	5 mm Duct Connector (Straight)
77-7225	8 mm Duct Connector (Straight)
77-7226	8.5 mm Duct Connector (Straight)
Duct Connector (T)	
77-7228	5 mm Duct Connector (T)
77-7229	8 mm Duct Connector (T)
Duct Reducer	
77-7227	8 mm to 5 mm Reducer
77-7234	8.5 mm to 5 mm Reducer
77-7233	8.5 mm to 8.0 mm Reducer

Accessories & Tools

Fitting Plug Tapered Plug

End Cap

Duct Cutter

Plastic duct connector plugs fit snugly into duct connectors, and together, these components provide a semi-permanent method of sealing installed, unused tubes. Using a simple push-pull technique, plugs can be easily installed or removed from duct connectors as needed over the lifetime of the installation.

Plastic end caps fit directly onto individual microducts to provide a temporary means of sealing microducts during shipment, storage and installation. All empty microducts should be sealed with the appropriate-sized duct connectors or end caps at all times to prevent the penetration of moisture or contamination, maintaining microduct integrity prior to, during and after installation.

Horseshoe clips slide over the connectors to lock the push-fit mechanism. A purpose-built duct cutter should be used to ensure correct sealing of connectors and microducts.

Part Number	Description
Duct Connector Fitting Plug	
77-7230	Fitting Plug for 5 mm
77-7231	Fitting Plug for 8 mm or 8.5 mm
Duct Connector Tapered Plug	
706920	Tapered Plug (2-6 fiber) for 8 mm or 8.5 mm
706930	Tapered Plug (8-12 fiber) for 8 mm or 8.5 mm
Duct End Cap	
705630	5 mm Duct End Cap
705620	8 mm Duct End Cap
77-7235	8.5 mm Duct End Cap
Clips	
77-7232	Horseshoe Clips 8 mm
Cutter	
707050	Duct Cutter

Part Number Index

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Markets:
Commercial, Residential, Institutional

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ENERGY

Markets:
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Products:
Underground Cable, Substation Cable, Overhead Conductor & Cable

ENTERPRISE & COMMUNICATIONS

Markets:
Commercial/Residential Buildings, Data Centers, Education, Finance, Federal/Government, Healthcare, AV, Manufacturing

Products:
Datacom Cable, Fiber Optic Cable, Electronics Cable, Telecommunications Cable

INDUSTRIAL

Markets:
Petrochemical, Food & Beverage, Automation, Water/Wastewater, Power Generation, Pulp & Paper

Products:
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MILITARY

Markets:
On Land, At Sea, In the Air

Products:
Communications Wire & Cable (Cu & Fiber), Shore to Ship Power Cable, Wire Harnesses & Assemblies

MINING

Markets:
Surface, Underground

Products:
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Markets:
Solar, Hydro, Wind

Products:
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Markets:
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TELCO

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Products:
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