

**Construction Products Regulation (CPR)
Certified Cables**

CPR – Construction Product Regulation

This brochure explains the CPR and how it applies to fiber optic cables.

The Construction Product Regulation (CPR) (EU No.305/2011) provides regulatory rules by using a harmonized standard (EN 50575:2014/A1:2016) for the “reaction to fire” of cables permanently incorporated into buildings and construction works. Published in the Official Journal of the European Union (OJEU) C209 in June 2016 and mandatory from 1st July 2017.

Reaction to Fire: What happens to a cable when it burns?

Heat and Flames:

- How much heat is generated/how far does the flame spread?
- Does the burning cable cause other items nearby to start burning?
- Does the cable jacket material self-extinguish in a small fire?

Smoke:

- How much smoke is the burning cable generating?
- Can I see the fire escape signs through the smoke?

Flaming Droplets:

- Are there flaming droplets or particles?
- Does the burning cable in the ceiling spread the fire to the floor or harm escapees or fire fighters with flaming droplets?

Acid Gas:

- Are there acidic chemicals in the smoke that could damage my lungs?

Reaction to Fire: How is it measured and classified?

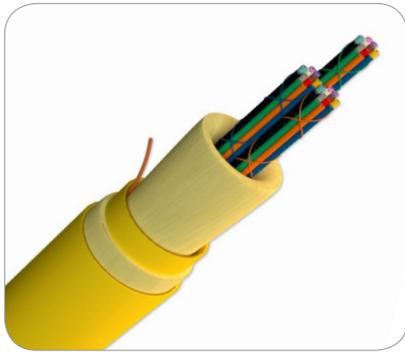
A set of test methods are identified in the specification EN 50575 for determining the “reaction to fire” combined with the requirements for classification and CE marking of the product. The EU has approved New Approach Notified and Designated Organisations (NANDO) test laboratories which must be used to provide the classification of the “reaction to fire” of the cable using fire test methods specified in EN 50399, classification methods specified in EN 13501-6 and manufacturer auditing for Assessment and Verification of Constancy of Performance (AVCP) System 1+. The table on the next to last page shows how the “reaction to fire” Euroclass is constructed, AVCP systems, types of “reaction to fire”, relevance to data/optical cables and notes for further explanation. An example of a EuroClass is Cca s1b d2 a1 – where “ca” refers to cable.

Cable

The CPR applies to all cables which are permanently incorporated in a building or construction works. The supplied cable will have a CE label on the drum flange, on the box or in the packaging. This label identifies the Declaration of Performance (DoP) number, unique product name, manufacturer, NANDO Lab number and “reaction to fire” classification. The DoP is the Declaration of Performance from the manufacturer indicating the “reaction to fire” performance of the cable. Every cable design is tested for “reaction to fire” unless there are “extended application” (EXAP) rules set up” in TS 50576.

Buildings

The CPR does not specify which Euroclass is required for the cable to be permanently incorporated inside the building or construction works. The building owner is required to specify the correct Euroclass given by the national regulation; however, not all countries have a national regulation for CPR. Countries may have a local standard which can be used to specify Euroclass in a commercial contract alternatively the insurer of a building may have Euroclass requirements. In the absence of any national regulation or standard, the building owner may have to seek local guidance. The map on the final page shows the status, during 2018, of countries which have a national regulation, national standard or local survey.



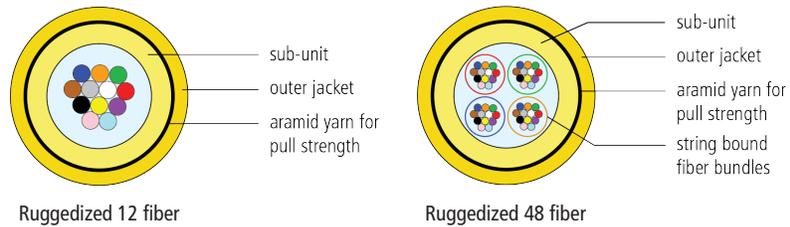
Ruggedized MicroCore® Cable

AFL Ruggedized MicroCore is the next generation of maximizing fiber density in AFL's line of high density data center cables. Ruggedized MicroCore is an industry leading alternative to a traditional inside plant central loose tube ribbon cable. Both standard 250 µm based fiber and AFL revolutionary Spiderweb Ribbon® Technology designs are available. Ruggedized MicroCore with bare fiber eliminates concerns associated with edge fiber stresses due to preferential bend of encapsulated ribbons. These cables consist of a LSZH (including ONFR-LS/FT4) flame-rated outer jacket with an installation tension rating of 150 lbs. qualified to meet and exceed the requirements of the latest Telcordia GR-409-CORE inside plant cabling requirements.

Standards Compliance

- LSZH/ONFR-LS (IEC 60332, 60754, 61034) / CE CPR B2ca
- Tested to meet or exceed EIA/TIA 568/ GR-409-CORE
- Compliant to REACH & RoHS Directives
- All aramid tensile strength members around core cable for ease of attaching pulling-eye; aramid within core for use with MT termination

Cable Components



Technical Information

FIBER COUNT	NOMINAL DIAMETER INCHES (MM)	NOMINAL SUBUNIT INCHES (MM)	WEIGHT LBS/1000 FT (KG/KM)	TENSION LBS (N)		BENDING RADIUS INCHES (CM)	
				INSTALL	LONGTERM	INSTALL	LONGTERM
12	0.19 (4.8)	0.12 (3.0)	15 (22)	150 (660)	45 (200)	2.9 (7.2)	1.9 (4.8)
24	0.19 (4.8)	0.12 (3.0)	15 (22)	150 (660)	45 (200)	2.9 (7.2)	1.9 (4.8)
36	0.22 (5.6)	0.15 (3.8)	21 (31)	150 (660)	45 (200)	3.3 (8.4)	2.2 (5.6)
48	0.22 (5.6)	0.15 (3.8)	22 (32)	150 (660)	45 (200)	3.3 (8.4)	2.2 (5.6)
72	0.25 (6.4)	0.19 (4.8)	30 (45)	150 (660)	45 (200)	3.8 (9.6)	2.5 (6.4)

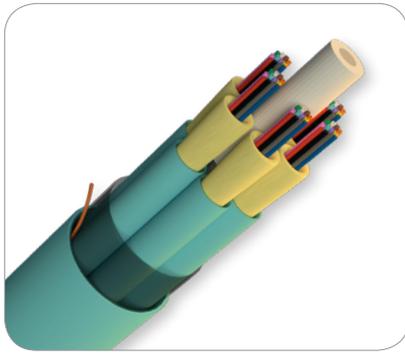
Ordering Information—Ruggedized MicroCore with 250 µm Bare Fiber

FIBER COUNT	AFL NO.				CPR CERTIFICATION
	SINGLE-MODE	OM3 50 µm	OM4 50 µm	OM5 50 µm	
12	RE012930199B-B2CA	RE012L301CCB-BIF-B2CA	RE012C301CCB-BIF-B2CA	RE012C301LLB-BIF-B2CA	B2ca - s1a,d0,a1
16	RE016930199B-B2CA	RE016L301CCB-BIF-B2CA	RE016C301CCB-BIF-B2CA	RE016C301LLB-BIF-B2CA	B2ca - s1a,d0,a1
24	RE024930199B-B2CA	RE024L301CCB-BIF-B2CA	RE024C301CCB-BIF-B2CA	RE024C301LLB-BIF-B2CA	B2ca - s1a,d0,a1
32	RE032938199B-B2CA	RE032L381CCB-BIF-B2CA	RE032C381CCB-BIF-B2CA	RE032C381LLB-BIF-B2CA	B2ca - s1a,d1,a1
36	RE036938199B-B2CA	RE036L381CCB-BIF-B2CA	RE036C381CCB-BIF-B2CA	RE036C381LLB-BIF-B2CA	B2ca - s1a,d1,a1
48	RE048940199B-B2CA	RE048L401CCB-BIF-B2CA	RE048C401CCB-BIF-B2CA	RE048C401LLB-BIF-B2CA	B2ca - s1a,d1,a1
72	RE072948199B-B2CA	RE072L481CCB-BIF-B2CA	RE072C481CCB-BIF-B2CA	RE072C481LLB-BIF-B2CA	B2ca - s1a,d1,a1

Ordering Information—Ruggedized MicroCore with SpiderWeb Ribbon® (SWR®)

FIBER COUNT	AFL NO.				CPR CERTIFICATION
	SINGLE-MODE	OM3	OM4	OM5	
12	RE012P30199R-B2CA	RE012L301CCS-BIF-B2CA	RE012C301CCS-BIF-B2CA	N/A	B2ca - s1a,d0,a1
24	RE024P30199R-B2CA	RE024L301CCS-BIF-B2CA	RE024C301CCS-BIF-B2CA	N/A	B2ca - s1a,d0,a1
36	RE036P38199R-B2CA	RE036L381CCS-BIF-B2CA	RE036C381CCS-BIF-B2CA	N/A	B2ca - s1a,d0,a1
48	RE048P40199R-B2CA	RE048L401CCS-BIF-B2CA	RE048C401CCS-BIF-B2CA	N/A	B2ca - s1a,d1,a1
72	RE072P48199R-B2CA	RE072L481CCS-BIF-B2CA	RE072C481CCS-BIF-B2CA	N/A	B2ca - s1a,d1,a1

*Item numbers are built with AFL Standard Fiber, AFL Standard Print with industry standard colors: SMF - Yellow, 50 µm OM3 and OM4 – Aqua, 50 µm OM5 – Lime. Additional Fiber, Print and Color options available, please contact AFL for options.



Sub-unitized Premise MicroCore® 2.0 Base-8

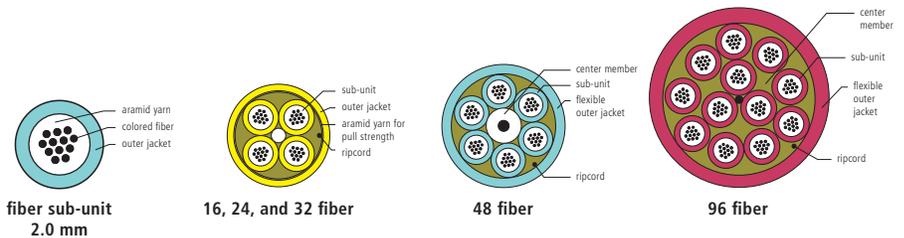
AFL Sub-unitized MicroCore 2.0 Base-8 cables continue to push evolution of high performance premise cabling. Base-8 cable configurations are available in fiber counts up to 144 fibers, utilizing 250 µm fiber. MicroCore 2.0 can support all of your high-density network needs, offering the highest density 2.0 mm fiber cables available.

Constructed of the highest quality materials to exacting industry standards, these small-diameter cables provide the solution sought out by today's structured cabling professionals. Each sub-cable is independently qualified and is suitable for individual routing paths within the rack/panel architecture. This enables a flexibility of design and deployment not available in comparable high-density designs. Designed for direct termination and supportive of both single-fiber and multifiber architectures, this cable family should serve as the backbone to any deployed system. Cables are constructed with AFL MicroCore technology consistent with a long line of market leading designs.

Standards Compliance

- LSZH/ONFR-LS (IEC 60332, 60745, 61034) / CE CPR B2ca
- Tested to meet or exceed EIA/TIA 568/GR-409-CORE
- Compliant to REACH & RoHS Directives
- All aramid tensile strength members around core cable for ease of attaching pulling-eye; aramid within subunits for use with MT termination

Cable Components



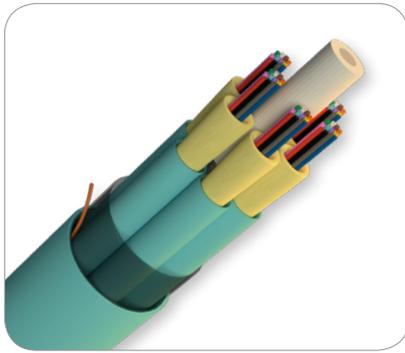
Technical Information

TYPE	FIBER COUNT	NOMINAL DIAMETER INCHES (MM)	WEIGHT LBS/1000 FT (KG/KM)	TENSION LBS (N)		BENDING RADIUS INCHES (CM)	
				INSTALL	LONGTERM	INSTALL	LONGTERM
8-FIBER SUBUNITS	16	0.27 (7.0)	32 (47)	150 (660)	45 (198)	4.1 (10.5)	2.7 (7.0)
	24	0.27 (7.0)	33 (49)	150 (660)	45 (198)	4.1 (10.5)	2.7 (7.0)
	32	0.27 (7.0)	33 (49)	150 (660)	45 (198)	4.1 (10.5)	2.7 (7.0)
	48	0.32 (8.2)	42 (63)	150 (660)	45 (198)	4.8 (12.3)	3.2 (8.2)
	64	0.33 (8.5)	81 (120)	150 (660)	45 (198)	5.0 (12.8)	3.3 (8.5)
	72	0.40 (10.3)	77 (115)	150 (660)	45 (198)	6.0 (15.5)	4.0 (10.3)
	96	0.40 (10.3)	65 (97)	150 (660)	45 (198)	6.0 (15.5)	4.0 (10.3)
	144	0.50 (12.9)	104 (155)	150 (660)	45 (198)	7.5 (19.4)	5.0 (12.9)

Ordering Information—MicroCore 2.0

8-FIBER SUBUNITS	FIBER COUNT	AFL NO.				CPR CERTIFICATION
		SINGLE-MODE	OM3 50 µm	OM4 50 µm	OM5 50 µm	
	16	GE016920199B:848-B2CA	GE016L201CCB:848-BIF-B2CA	GE016C201CCB:848-BIF-B2CA	GE016W201LLB:848-BIF-B2CA	B2ca - s1a,d0,a1
	24	GE024920199B:848-B2CA	GE024L201CCB:848-BIF-B2CA	GE024C201CCB:848-BIF-B2CA	GE024W201LLB:848-BIF-B2CA	B2ca - s1a,d0,a1
	32	GE032920199B:848-B2CA	GE032L201CCB:848-BIF-B2CA	GE032C201CCB:848-BIF-B2CA	GE032W201LLB:848-BIF-B2CA	B2ca - s1a,d0,a1
	48	GE048920199B:868-B2CA	GE048L201CCB:868-BIF-B2CA	GE048C201CCB:868-BIF-B2CA	GE048W201LLB:868-BIF-B2CA	B2ca - s1a,d0,a1
	64	GE064920199B:888-B2CA	GE064L201CCB:888-BIF-B2CA	GE064C201CCB:888-BIF-B2CA	GE064W201LLB:888-BIF-B2CA	B2ca - s1a,d0,a1
	72	GE072920199B:898-B2CA	GE072L201CCB:898-BIF-B2CA	GE072C201CCB:898-BIF-B2CA	GE072W201LLB:898-BIF-B2CA	B2ca - s1a,d0,a1
	96	GE096920199B:8C8-B2CA	GE096L201CCB:8C8-BIF-B2CA	GE096C201CCB:8C8-BIF-B2CA	GE096W201LLB:8C8-BIF-B2CA	B2ca - s1a,d0,a1
	144	GE144920199B:8I8-B2CA	GE144L201CCB:8I8-BIF-B2CA	GE144C201CCB:8I8-BIF-B2CA	GE144W201LLB:8I8-BIF-B2CA	B2ca - s1a,d0,a1

*Item numbers are built with AFL Standard Fiber, AFL Standard Print with industry standard colors: SMF - Yellow, 50 µm OM3 and OM4 - Aqua, 50 µm OM5 - Lime. Additional Fiber, Print and Color options available, please contact AFL for options.



Sub-unitized Premise MicroCore® 2.0 Base-12

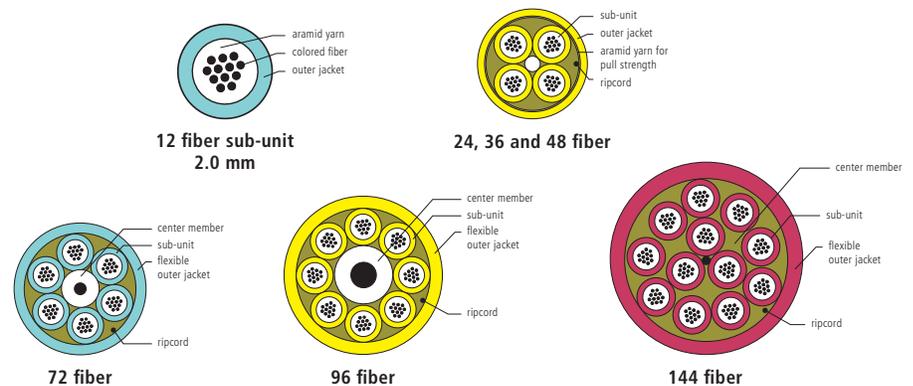
AFL Sub-unitized MicroCore 2.0 Base-12 cables continue to push evolution of high performance premise cabling. Base-12 cable configurations are available in fiber counts up to 216 fibers, utilizing 250 µm fiber. MicroCore 2.0 can support all of your high-density network needs, offering the highest density 2.0 mm fiber cables available.

Constructed of the highest quality materials to exacting industry standards, these small-diameter cables provide the solution sought out by today's structured cabling professionals. Each sub-cable is independently qualified and is suitable for individual routing paths within the rack/panel architecture. This enables a flexibility of design and deployment not available in comparable high-density designs. Designed for direct termination and supportive of both single-fiber and multifiber architectures, this cable family should serve as the backbone to any deployed system. Cables are constructed with AFL MicroCore technology consistent with a long line of market leading designs.

Standards Compliance

- LSZH/ONFR-LS (IEC 60332, 60745, 61034) / CE CPR Cca & B2ca
- Tested to meet or exceed EIA/TIA 568/GR-409-CORE
- Compliant to REACH & RoHS Directives
- All aramid tensile strength members around core cable for ease of attaching pulling-eye; aramid within subunits for use with MT termination

Cable Components



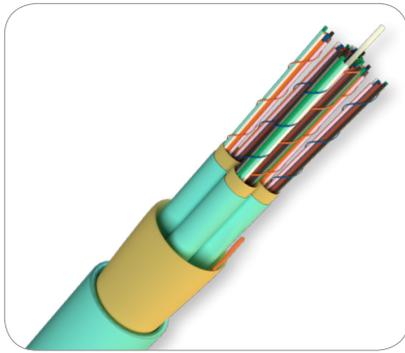
Technical Information

TYPE	FIBER COUNT	NOMINAL DIAMETER INCHES (MM)	WEIGHT LBS/1000 FT (KG/KM)	TENSION LBS (N)		BENDING RADIUS INCHES (CM)	
				INSTALL	LONGTERM	INSTALL	LONGTERM
12-FIBER SUBUNITS	24	0.27 (7.0)	33 (49)	150 (660)	45 (198)	4.1 (10.5)	2.7 (7.0)
	36	0.27 (7.0)	33 (49)	150 (660)	45 (198)	4.1 (10.5)	2.7 (7.0)
	48	0.27 (7.0)	33 (49)	150 (660)	45 (198)	4.1 (10.5)	2.7 (7.0)
	60	0.27 (7.0)	44 (66)	150 (660)	45 (198)	4.8 (12.3)	3.2 (8.2)
	72	0.32 (8.2)	44 (66)	150 (660)	45 (198)	4.8 (12.3)	3.2 (8.2)
	96	0.41 (10.5)	84 (125)	150 (660)	45 (198)	6.2 (15.8)	4.1 (10.5)
	144	0.40 (10.3)	67 (100)	150 (660)	45 (198)	6.0 (15.5)	4.0 (10.3)
	168	0.50 (12.9)	108 (160)	150 (660)	45 (198)	7.5 (19.4)	5.0 (12.9)
	192	0.50 (12.9)	108 (160)	150 (660)	45 (198)	7.5 (19.4)	5.0 (12.9)
	216	0.50 (12.9)	108 (160)	150 (660)	45 (198)	7.5 (19.4)	5.0 (12.9)

Ordering Information—MicroCore 2.0

FIBER COUNT	AFL NO.				CPR CERTIFICATION
	SINGLE-MODE	OM3 50 µm	OM4 50 µm	OM5 50 µm	
24	GE024920199B:C4C-CCA	GE024L201CCB:C4C-BIF-CCA	GE024C201CCB:C4C-BIF-CCA	GE024W201LLB:C4C-BIF-CCA	Cca - s1a,d0,a1
36	GE036920199B:C4C-CCA	GE036L201CCB:C4C-BIF-CCA	GE036C201CCB:C4C-BIF-CCA	GE036W201LLB:C4C-BIF-CCA	Cca - s1a,d0,a1
48	GE048920199B:C4C-B2CA	GE048L201CCB:C4C-BIF-B2CA	GE048C201CCB:C4C-BIF-B2CA	GE048W201LLB:C4C-BIF-B2CA	B2ca - s1a,d0,a1
60	GE060920199B:C6C-B2CA	GE060L201CCB:C6C-BIF-B2CA	GE060C201CCB:C6C-BIF-B2CA	GE060W201LLB:C6C-BIF-B2CA	B2ca - s1a,d0,a1
72	GE072920199B:C6C-B2CA	GE072L201CCB:C6C-BIF-B2CA	GE072C201CCB:C6C-BIF-B2CA	GE072W201LLB:C6C-BIF-B2CA	B2ca - s1a,d0,a1
96	GE096920199B:C8C-B2CA	GE096L201CCB:C8C-BIF-B2CA	GE096C201CCB:C8C-BIF-B2CA	GE096W201LLB:C8C-BIF-B2CA	B2ca - s1a,d0,a1
144	GE144920199B:CCC-B2CA	GE144L201CCB:CCC-BIF-B2CA	GE144C201CCB:CCC-BIF-B2CA	GE144W201LLB:CCC-BIF-B2CA	B2ca - s1a,d0,a1
168	GE168920199B:CIC-B2CA	GE168L201CCB:CIC-BIF-B2CA	GE168C201CCB:CIC-BIF-B2CA	GE168W201LLB:CIC-BIF-B2CA	B2ca - s1a,d0,a1
192	GE192920199B:CIC-B2CA	GE192L201CCB:CIC-BIF-B2CA	GE192C201CCB:CIC-BIF-B2CA	GE192W201LLB:CIC-BIF-B2CA	B2ca - s1a,d0,a1
216	GE216920199B:CIC-B2CA	GE216L201CCB:CIC-BIF-B2CA	GE216C201CCB:CIC-BIF-B2CA	GE216W201LLB:CIC-BIF-B2CA	B2ca - s1a,d0,a1

*Item numbers are built with AFL Standard Fiber, AFL Standard Print with industry standard colors: SMF - Yellow, 50 µm OM3 and OM4 - Aqua, 50 µm OM5 - Lime. Additional Fiber, Print and Color options available, please contact AFL for options.



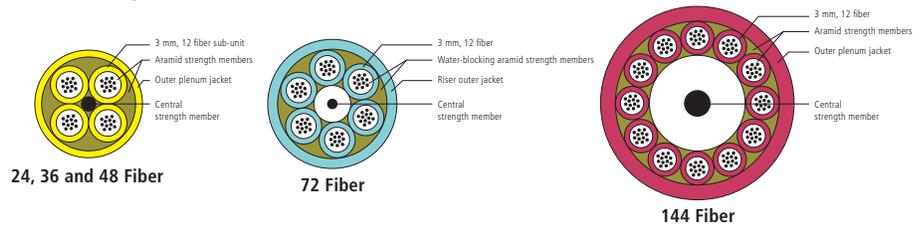
Sub-unitized Premise MicroCore® 3.0 Base-12

AFL's Sub-Unitized Premise MicroCore 3.0 Base-12 cables represent the foundation for AFL's MicroCore portfolio, designs are available up to 144 fibers. Both standard 250um based fiber and AFL revolutionary Spiderweb Ribbon® Technology designs are available. Combining the highest quality materials with rigorous testing to industry standards, this generation builds on the same quality of construction as the previous versions of our Sub-Unitized Premise MicroCore cables. Each stand-alone sub cable is independently qualified and is suitable for individual routing paths within the rack/panel architecture. This flexibility of design and deployment is not available in comparable high density designs. Designed for direct termination, and supportive of both single-fiber and multi-fiber architectures, this cable family is capable of serving as the backbone in any deployed system.

Standards Compliance

- LSZH/ONFR-LS (IEC 60332, 60745, 61034) / CE CPR B2ca
- Tested to meet or exceed EIA/TIA 568/GR-409-CORE
- Compliant to REACH & RoHS Directives

Cable Components



Technical Information—MicroCore 3.0—12 Fiber SubUnits

TYPE	FIBER COUNT	NOMINAL DIAMETER INCHES (MM)	WEIGHT LBS/1000 FT (KG/KM)	TENSION LBS (N)		BENDING RADIUS INCHES (CM)	
				INSTALL	LONGTERM	INSTALL	LONGTERM
12-FIBER SUBUNITS	24	0.40 (10.2)	60 (90)	150 (670)	45 (200)	6.0 (15.3)	4.0 (10.2)
	36	0.40 (10.2)	60 (90)	150 (670)	45 (200)	6.0 (15.3)	4.0 (10.2)
	48	0.40 (10.2)	60 (90)	150 (670)	45 (200)	6.0 (15.3)	4.0 (10.2)
	60	0.40 (10.2)	60 (90)	150 (670)	45 (200)	6.0 (15.3)	4.0 (10.2)
	72	0.44 (11.1)	77 (115)	150 (670)	45 (200)	6.0 (15.3)	4.0 (10.2)
	96	0.52 (13.3)	120 (175)	150 (670)	45 (200)	6.0 (15.3)	4.0 (10.2)
	144	0.59 (14.9)	125 (185)	150 (670)	45 (200)	7.5 (19.1)	5.0 (12.7)

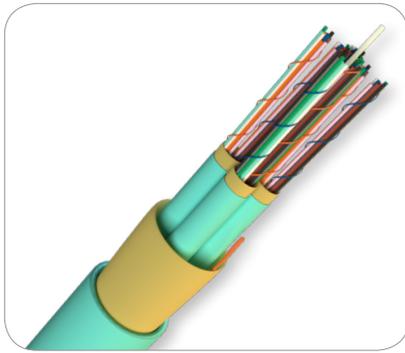
Ordering Information—MicroCore 3.0—12-Fiber SubUnits with Standard Bare 250 µm Fiber

FIBER COUNT	AFL NO.				CPR CERTIFICATION
	SINGLE-MODE	OM3 50 µm	OM4 50 µm	OM5 50 µm	
24	GE024930199B:C4C-B2CA	GE024L301CCB:C4C-BIF-B2CA	GE024C301CCB:C4C-BIF-B2CA	GE024W301LLB:C4C-BIF-B2CA	B2ca - s2,d1,a1
36	GE036930199B:C4C-B2CA	GE036L301CCB:C4C-BIF-B2CA	GE036C301CCB:C4C-BIF-B2CA	GE036W301LLB:C4C-BIF-B2CA	B2ca - s2,d1,a1
48	GE048930199B:C4C-B2CA	GE048L301CCB:C4C-BIF-B2CA	GE048C301CCB:C4C-BIF-B2CA	GE048W301LLB:C4C-BIF-B2CA	B2ca - s2,d1,a1
60	GE060930199B:C6C-B2CA	GE060L301CCB:C6C-BIF-B2CA	GE060C301CCB:C6C-BIF-B2CA	GE060W301LLB:C6C-BIF-B2CA	B2ca - s2,d1,a1
72	GE072930199B:C6C-B2CA	GE072L301CCB:C6C-BIF-B2CA	GE072C301CCB:C6C-BIF-B2CA	GE072W301LLB:C6C-BIF-B2CA	B2ca - s2,d1,a1
96	GE096930199B:C8C-B2CA	GE096L301CCB:C8C-BIF-B2CA	GE096C301CCB:C8C-BIF-B2CA	GE096W301LLB:C8C-BIF-B2CA	B2ca - s2,d1,a1
144	GE144930199B:CCC-B2CA	GE144L301CCB:CCC-BIF-B2CA	GE144C301CCB:CCC-BIF-B2CA	GE144W301LLB:CCC-BIF-B2CA	B2ca - s2,d1,a1

Ordering Information—MicroCore 3.0—12-Fiber SubUnits with SpiderWeb Ribbon® (SWR®)

FIBER COUNT	AFL NO.				CPR CERTIFICATION
	SINGLE-MODE	OM3 50 µm	OM4 50 µm	OM5 50 µm	
24	GE024P30199R:C4C-B2CA	GE024L301CCS:C4C-BIF-B2CA	GE024C301CCS:C4C-BIF-B2CA	N/A	B2ca - s2,d1,a1
36	GE036P30199R:C4C-B2CA	GE036L301CCS:C4C-BIF-B2CA	GE036C301CCS:C4C-BIF-B2CA	N/A	B2ca - s2,d1,a1
48	GE048P30199R:C4C-B2CA	GE048L301CCS:C4C-BIF-B2CA	GE048C301CCS:C4C-BIF-B2CA	N/A	B2ca - s2,d1,a1
60	GE060P30199R:C6C-B2CA	GE060L301CCS:C6C-BIF-B2CA	GE060C301CCS:C6C-BIF-B2CA	N/A	B2ca - s2,d1,a1
72	GE072P30199R:C6C-B2CA	GE072L301CCS:C6C-BIF-B2CA	GE072C301CCS:C6C-BIF-B2CA	N/A	B2ca - s2,d1,a1
96	GE096P30199R:C8C-B2CA	GE096L301CCS:C8C-BIF-B2CA	GE096C301CCS:C8C-BIF-B2CA	N/A	B2ca - s2,d1,a1
144	GE144P30199R:CCC-B2CA	GE144L301CCS:CCC-BIF-B2CA	GE144C301CCS:CCC-BIF-B2CA	N/A	B2ca - s2,d1,a1

*Item numbers are built with AFL Standard Fiber, AFL Standard Print with industry standard colors: SMF - Yellow, 50 µm OM3 and OM4 – Aqua, 50 µm OM5 – Lime. Additional Fiber, Print and Color options available, please contact AFL for options.



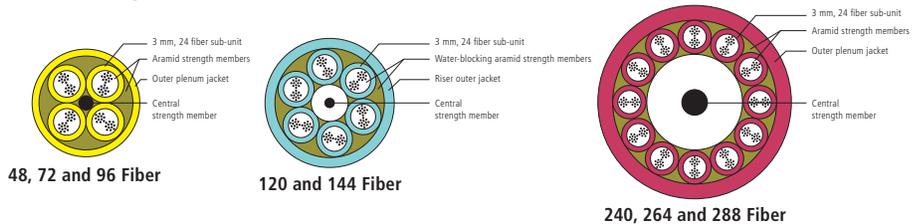
Sub-unitized Premise MicroCore® 3.0 Base-24

The third generation of AFL's Sub-Unitized Premise MicroCore Cable is another astounding evolution of high performance premise cabling. Enabling even greater pathway density than our 2.0 version, the 3.0 Base-24 revolutionizes cable deployment and allows the end user to realize savings in space, routing infrastructures and fiber management with fiber counts up to 288 fibers available. Combining the highest quality materials with rigorous testing to industry standards, this generation builds on the same quality of construction as the previous versions of our Sub-Unitized Premise MicroCore cables. Each stand-alone sub cable is independently qualified and is suitable for individual routing paths within the rack/panel architecture. This flexibility of design and deployment is not available in comparable high density designs. Designed for direct termination, and supportive of both single-fiber and multi-fiber architectures, this cable family is capable of serving as the backbone in any deployed system.

Standards Compliance

- LSZH/ONFR-LS (IEC 60332, 60745, 61034) / CE CPR B2ca
- Tested to meet or exceed EIA/TIA 568/GR-409-CORE
- Compliant to REACH & RoHS Directives

Cable Components



Technical Information—MicroCore 3.0—24 Fiber SubUnits

TYPE	FIBER COUNT	NOMINAL DIAMETER INCHES (MM)	WEIGHT LBS/1000 FT (KG/KM)	TENSION LBS (N)		BENDING RADIUS INCHES (CM)	
				INSTALL	LONGTERM	INSTALL	LONGTERM
24-FIBER SUBUNITS	48	0.40 (10.2)	60 (90)	150 (670)	45 (200)	6.0 (15.3)	4.0 (10.2)
	72	0.40 (10.2)	60 (90)	150 (670)	45 (200)	6.0 (15.3)	4.0 (10.2)
	96	0.40 (10.2)	60 (90)	150 (670)	45 (200)	6.0 (15.3)	4.0 (10.2)
	144	0.50 (12.7)	107 (160)	150 (670)	45 (200)	7.5 (19.1)	5.0 (12.7)
	168	0.61 (15.5)	171 (255)	150 (670)	45 (200)	9.2 (23.5)	6.1 (15.5)
	192	0.61 (15.5)	171 (255)	150 (670)	45 (200)	9.2 (23.5)	6.1 (15.5)
	216	0.61 (15.5)	171 (255)	150 (670)	45 (200)	9.2 (23.5)	6.1 (15.5)
	288	0.72 (18.4)	218 (325)	150 (670)	45 (200)	11.0 (27.6)	7.2 (18.4)

Ordering Information—MicroCore 3.0—24-Fiber SubUnits with Standard Bare 250um Fiber

24-FIBER SUBUNITS	FIBER COUNT	AFL NO.				CPR CERTIFICATION
		SINGLE-MODE	OM3 50 µm	OM4 50 µm	OM5 50 µm	
	48	GE048930199B:O4C-B2CA	GE048L301CCB:O4C-BIF-B2CA	GE048C301CCB:O4C-BIF-B2CA	GE048W301LLB:O4C-BIF-B2CA	B2ca - s1a,d0,a1
	72	GE072930199B:O4C-B2CA	GE072L301CCB:O4C-BIF-B2CA	GE072C301CCB:O4C-BIF-B2CA	GE072W301LLB:O4C-BIF-B2CA	B2ca - s1,d1,a1
	96	GE096930199B:O4C-B2CA	GE096L301CCB:O4C-BIF-B2CA	GE096C301CCB:O4C-BIF-B2CA	GE096W301LLB:O4C-BIF-B2CA	B2ca - s1,d1,a1
	144	GE0144930199B:O6C-B2CA	GE0144L301CCB:O6C-BIF-B2CA	GE0144C301CCB:O6C-BIF-B2CA	GE0144W301LLB:O6C-BIF-B2CA	B2ca - s1,d1,a1
	168	GE168930199B:O9C-B2CA	GE168L301CCB:O9C-BIF-B2CA	GE168C301CCB:O9C-BIF-B2CA	GE168W301LLB:O9C-BIF-B2CA	B2ca - s1,d1,a1
	192	GE192930199B:O9C-B2CA	GE192L301CCB:O9C-BIF-B2CA	GE192C301CCB:O9C-BIF-B2CA	GE192W301LLB:O9C-BIF-B2CA	B2ca - s1,d1,a1
	216	GE216930199B:OCC-B2CA	GE216L301CCB:OCC-BIF-B2CA	GE216C301CCB:OCC-BIF-B2CA	GE216W301LLB:OCC-BIF-B2CA	B2ca - s1,d1,a1
	288	GE288930199B:OCC-B2CA	GE288L301CCB:OCC-BIF-B2CA	GE288C301CCB:OCC-BIF-B2CA	GE288W301LLB:OCC-BIF-B2CA	B2ca - s1a,d0,a1

Ordering Information—MicroCore 3.0—24-Fiber SubUnits with SpiderWeb Ribbon® (SWR®)

24-FIBER SUBUNITS	FIBER COUNT	AFL NO.				CPR CERTIFICATION
		SINGLE-MODE	OM3 50 µm	OM4 50 µm	OM5 50 µm	
	48	GE048P30199R:O4C-B2CA	GE048L301CCS:O4C-BIF-B2CA	GE048C301CCS:O4C-BIF-B2CA	N/A	B2ca - s1a,d0,a1
	72	GE072P30199R:O4C-B2CA	GE072L301CCS:O4C-BIF-B2CA	GE072C301CCS:O4C-BIF-B2CA	N/A	B2ca - s1,d1,a1
	96	GE096P30199R:O4C-B2CA	GE096L301CCS:O4C-BIF-B2CA	GE096C301CCS:O4C-BIF-B2CA	N/A	B2ca - s1,d1,a1
	144	GE0144P30199R:O6C-B2CA	GE0144L301CCS:O6C-BIF-B2CA	GE0144C301CCS:O6C-BIF-B2CA	N/A	B2ca - s1,d1,a1
	168	GE168P30199R:O9C-B2CA	GE168L301CCS:O9C-BIF-B2CA	GE168C301CCS:O9C-BIF-B2CA	N/A	B2ca - s1,d1,a1
	192	GE192P30199R:O9C-B2CA	GE192L301CCS:O9C-BIF-B2CA	GE192C301CCS:O9C-BIF-B2CA	N/A	B2ca - s1,d1,a1
	216	GE216P30199R:OCC-B2CA	GE216L301CCS:OCC-BIF-B2CA	GE216C301CCS:OCC-BIF-B2CA	N/A	B2ca - s1,d1,a1
	288	GE288P30199R:OCC-B2CA	GE288L301CCS:OCC-BIF-B2CA	GE288C301CCS:OCC-BIF-B2CA	N/A	B2ca - s1a,d0,a1

*Item numbers are built with AFL Standard Fiber, AFL Standard Print with industry standard colors: SMF - Yellow, 50 µm OM3 and OM4 - Aqua, 50 µm OM5 - Lime. Additional Fiber, Print and Color options available, please contact AFL for options.

Additional Specifications

Loose Fiber Specifications

CORE SIZE/FIBER TYPE	ISO/IEC	MAXIMUM ATTENUATION (DB/KM)			OVERFILL LAUNCH MIN. BANDWIDTH (MHZ•KM)		EMB _c (MHZ•KM)	GIGABIT ETHERNET MIN. LINK DISTANCE (METERS)		10 GIGABIT ETHERNET MIN. LINK DISTANCE (METERS)	
		850 NM	1300 NM	1550 NM	850 NM	1300 NM		850 NM	1300 NM	850 NM	1300 NM
(6) 62.5 Giga-Link™ 300	OM1	3.5	1.2	N/A	200	600	N/A	300	550	32	—
(5) 50 Giga-Link™ 600	OM2	3.5	1.5	N/A	500	500	N/A	600	600	82	—
(L) 50 Laser-Link 300	OM3	3.0	1.2	N/A	1,500	500	2,000	1,000	550	300	—
(C) 50 Laser-Link 550	OM4	3.0	1.2	N/A	3,500	500	4,700	1,040	550	550	—
(W) AFL Wideband Multimode	OM5	3.0	1.2	N/A	3,500	500	4,700	1,040	550	550	—
(9) Single-mode (ITU G.652.D/G657.A1)	OS2	N/A	0.5	0.5	N/A	N/A	N/A	N/A	5,000	N/A	10,000

*Other grades of single-mode fiber available.

SpiderWeb Ribbon® (SWR®) Fiber Specifications

CORE SIZE/FIBER TYPE	ISO/IEC	MAXIMUM ATTENUATION (DB/KM)			OVERFILL LAUNCH MIN. BANDWIDTH (MHZ•KM)		EMB _c (MHZ•KM)	GIGABIT ETHERNET MIN. LINK DISTANCE (METERS)		10 GIGABIT ETHERNET MIN. LINK DISTANCE (METERS)	
		850 NM	1300 NM	1550 NM	850 NM	1300 NM		850 NM	1300 NM	850 NM	1300 NM
(L) AFL Bend-Insensitive OM3 50 μm	OM3	3	1.2	N/A	1,500	500	2,000	1,000	550	300	—
(C) AFL Bend-Insensitive OM4 50 μm	OM4	3	1.2	N/A	3,500	500	4,700	1,040	550	550	—
(P) AFL Bend-Insensitive Single-mode (ITU G.652.D/G.657.A1)	OS2	N/A	0.5	0.5	N/A	N/A	N/A	N/A	5,000	N/A	10,000

Reaction to Fire Classification (EuroClass)

Heat Release/Flame spread	Aca	B1ca	B2ca	Cca	Dca	Eca	Fca
Reaction to fire	No contribution to fire growth and no smoke hazard	Combustible but has very little burning	Limited fire growth rate and show a limited heat release rate		Similar to wood, continuous flame spread, a moderate fire growth rate, and a moderate heat release rate.	Small flame attack, is not causing a large flame spread	Cables that fail Eca
Additional categories	None	Additional categories			Additional categories	None	None
Smoke¹		s1a, s1b, s1, s2 or s3	s1a, s1b, s1, s2 or s3	s1a, s1b, s1, s2 or s3	s1a, s1b, s1, s2 or s3		
Flaming droplet particle²		d0, d1 or d2	d0, d1 or d2	d0, d1 or d2	d0, d1 or d2		
Acid gas³		a1,a2 or a3	a1,a2 or a3	a1,a2 or a3	a1,a2 or a3		
AVCP	System 1+ (factory audit, regular test of product and repeat factory audits by NANDO)				System 3 (test of product by NANDO)		System 4 (test by manufacturer)
Relevant to fiber optic cables	No	No	Indoor or indoor/outdoor cables			Outdoor cables used in "works"	

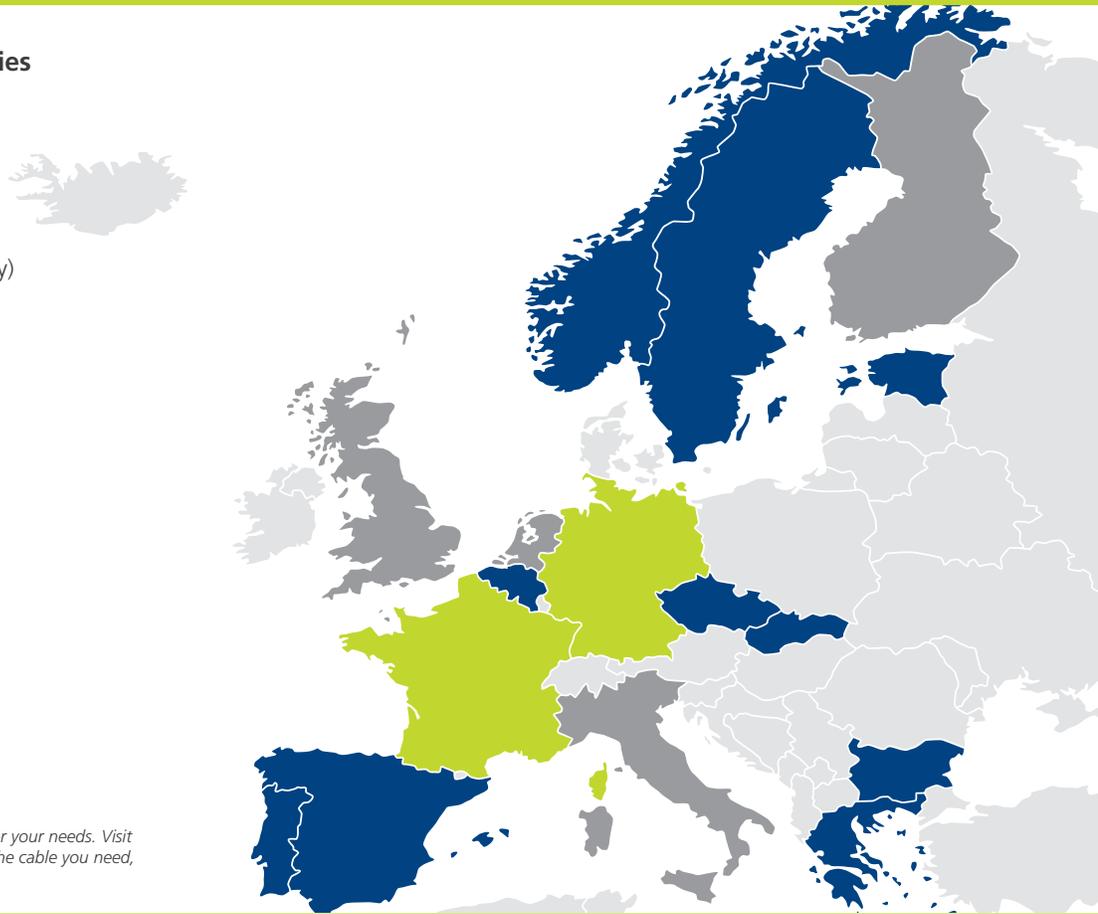
1: s1a 80%, s1b 60% transmittance; s1, s2 smoke production (lower/higher), s3 – no classification or requirement

2: d0 none within 1200s, d1 none lasting more than 10s within 1200s, d2- no classification or requirement

3: a1 conductivity < 2.5 μS/mm and pH > 4.3, a2 conductivity < 10 μS/mm and pH > 4.3, a3 - no classification or requirement

CPR Applies to EU + EAA Countries

-  Regulation—Country Defined
-  Standard (optional)
-  Local Survey (for information only)



At AFL, we provide CPR classified, CE marked cables for your needs. Visit our website for our cable selection. If you do not see the cable you need, please ask us as we are always adding new cables.



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