

SpiderWeb Ribbon® Solution Guide



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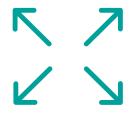
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SpiderWeb Ribbon® Solutions

AFL Hyperscale, in collaboration with our parent company, Fujikura, has created a range of data center inside plant and outside plant fiber cables utilizing game-changing SpiderWeb Ribbon (SWR®) technology. SWR technology eliminates many of the challenges that data center networks face today and will face in the future, and works to maximize fiber counts, minimize space utilized in ducts and raceways, and simplify high-fiber count installations.



Maximize fiber counts

SWR cables from 12 to 10.368 fibers



Minimize space utilized

44% smaller cable diameter compared to similar cables



Simplify highfiber-count installations

40% faster installation time

What is SWR®?

SpiderWeb Ribbon® is made up of 12 single fibers, intermittently bonded to create a collapsible ribbon construction that can move flexibly in any direction.

SWR allows for highly efficient ribbon termination for mass-fusion splicing with the ability to be broken out into single fibers for individual splicing and connectorization.

SWR technology significantly reduces cable diameter and weight and is used in ultra-high fiber count indoor and outdoor cable types, resulting in lower installation costs and major improvements in utilization of cable pathways and duct space.



High fiber packing density

Collapsible ribbon allows for up to 10,368 fibers



Single-fiber splicing still an option

Easily split into individual fibers for single-fiber splicing or connectorizing



Faster, easier installation

Easily identified individual bundles and optical fibers optimized for easy mass-fusion splicing, including Dry Core Technology with a longitudinally-applied water blocking tape that eliminates the need for messy hand tools



Improved storage and easier installation

Small-diameter and lighter-weight cable compared to conventional ribbon or single-fiber cables



Low-risk solution

Easy mid-span access functionality should the cable be damaged



Cost-effective cable solution

Smaller and lighter-weight cables mean easier installation practices and lower transportation costs



Fewer connection points

Up to twice the amount of cable can be wound on a drum, longer cable reduces the number of connection points, improving network latency

Inside Plant Cabling (ISP) Overview

Our range of inside plant cables utilize SpiderWeb Ribbon® (SWR®) technology meaning that, across the data hall, operators can go from very high fiber count cables and break down to small fiber counts very easily. AFL Hyperscale have a range of ISP cables with a variety of jackets including LSZH, plenum, and CPR-rated so networks can be designed with a global mindset for a local deployment.



Flame-Retardant Wrapping Tube Cable (WTC) with SpiderWeb Ribbon (SWR)



Sub-Unitized
Premise MicroCore
3.0 BASE-24 with
SWR

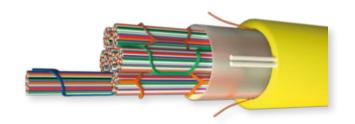


Sub-Unitized Premise MicroCore 3.0 BASE-12 with SWR



Ruggedized MicroCore Cable with SWR

Flame-Retardant Wrapping Tube Cable (WTC) with SpiderWeb Ribbon® (SWR®)



Flame-Retardant (FR) Wrapping Tube Cable (WTC) with SpiderWeb Ribbon (SWR) is a high-density fiber optic ribbon cable intended for inside plant and indoor/outdoor network applications where riser-rated products are required.

The FR-WTC-SWR incorporates the leading-edge SpiderWeb Ribbon technology in a robust, flame-retardant cable package that can be used within buildings and, thanks to its core water-blocking feature, can also be routed outside provided the cable is housed within covered pathway spaces including duct-banks and cable trays.

The FR-WTC-SWR product set is available in LSZH, nonarmored 250µm ACE fiber (288F), 250µm SR15E fiber (288F, 864F, and 1,728F), and 200µm SR15E fiber (864F and 1728F) constructions.

SWR technology eliminates many of the challenges that data center networks face today and will face in the future, and works to maximize fiber counts, minimize space utilized in ducts and raceways, and simplify high-fiber count installations.

Technical Specifications



Operating temperature

-20°C to +70°C



Storage temperature

-40°C to +70°C



Installation temperature

-10°C to +60°C

Mechanical Data-Non-Armored

Fiber	Binder	Nominal Diameter	Weight	Weight Short Term/Installation		Long Term/Installation	
Count Unit		Inches (MM)	LBS/1,000 FT (KG/KM)	Max tensile load LBS (N)	Min bend radius inches (MM)	Max tensile load LBS (N)	Min bend radius inches (MM)
288	4 X 72F	0.49 (12.5)	108 (160)	297 (1320)	10 (250)	89 (396)	8 (188)
288	4 x 72f	0.49 (12.5)	108 (160)	297 (1320)	10 (250)	89 (396)	8 (188)
864	12 x 72f	0.71 (18.0)	208 (310)	297 (1320)	14 (250)	89 (396)	11 (270)
1728	12 x 144f	0.93 (23.5)	329 (490)	297 (1320)	19 (470)	89 (396)	14 (353)
864	12 x 72f	0.65 (16.5)	181 (270)	297 (1320)	13 (330)	89 (396)	10 (248)
1728	12 x 144f	0.87 (22.0)	276 (410)	297 (1320)	18 (440)	89 (396)	13 (330)

Optical Fiber

Fiber Count	Fiber Buffer	Optical Fiber Standard	MFD	Maximum Attenuation (Cabled) dB/km			
Fiber Count	Fiber buller	Optical Fiber Standard	IVIFD	1310 NM	1383 NM	1550 NM	
288	250µm	9 (ITU-T G.652D/G.657.A1)	$9.2 \pm 0.4 \mu m$	0.4 dB/km	0.4 dB/km	0.3 dB/km	
288, 864, 1728	250µm	4K (ITU-T G.652D/G.657.A1)	$8.6 \pm 0.4 \mu m$	0.4 dB/km	0.4 dB/km	0.3 dB/km	
864, 1728	200µm	BE (ITU-T G.652.D AND G.657.A1)	8.6 ± 0.4µm	0.4 dB/km	0.4 dB/km	0.3 dB/km	

Ordering Information

Contact us for ordering information.



Sub-Unitized Premise MicroCore® 3.0 BASE-24 with SWR®



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.

SWR technology eliminates many of the challenges that data center networks face today and will face in the future, and works to maximize fiber counts, minimize space utilized in ducts and raceways, and simplify high-fiber count installations.

Technical Specifications



Jacket Options

NFPA 262 (ONFP) / FT6 LSZH/ONFR-LS (IEC 60332, 60745, 61034) / CE CPR B2ca

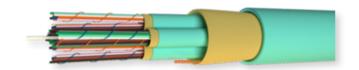


Tuno	Fiber	Nominal Diameter	Weight LBS/1000 FT	Tensior	LBS (N)	Bend Radius Inches (CM)	
Type	Count	Inches (MM)	(KG/KM)	Install	Long-term	Install	Long-term
	48	0.40 (10.2)	60 (90)	150 (670)	45 (200)	6.0 (15.3)	4.0 (10.2)
	72	0.40 (10.2)	60 (90)	150 (670)	45 (200)	6.0 (15.3)	4.0 (10.2)
	98	0.40 (10.2)	60 (90)	150 (670)	45 (200)	6.0 (15.3)	4.0 (10.2)
24-Fiber	144	0.50 (12.7)	107 (160)	150 (670)	45 (200)	7.5 (19.1)	5.0 (12.7)
Sub-Units	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

Contact us for ordering information.

Sub-Unitized Premise MicroCore® 3.0 BASE-12 with SWR®



AFL's Sub-Unitized Premise MicroCore 3.0 BASE-12 cables represent the foundation for AFL's MicroCore portfolio with designs available up to 144 fibers for standard 250µm based fiber and AFL's revolutionary SpiderWeb Ribbon Technology.

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.

SWR technology eliminates many of the challenges that data center networks face today and will face in the future, and works to maximize fiber counts, minimize space utilized in ducts and raceways, and simplify high-fiber count installations.

Technical Specifications



Jacket Options

NFPA 262 (ONFP) / FT6 LSZH/ONFR-LS (IEC 60332, 60745, 61034) / CE CPR B2ca

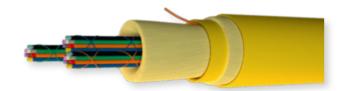


Fiber	Nominal Diameter	Weight LBS/1000 FT	Tensior	LBS (N)	Bend Radius Inches (CM)	
Count	Inches (MM)	(KG/KM)	Install	Long-term	Install	Long-term
24	0.40 (10.2)	60 (90)	150 (670)	45 (200)	6.0 (15.3)	4.0 (10.2)
36	0.40 (10.2)	60 (90)	150 (670)	45 (200)	6.0 (15.3)	4.0 (10.2)
48	0.40 (10.2)	60 (90)	150 (670)	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)
	24 36 48 60 72 96	Count Inches (MM) 24 0.40 (10.2) 36 0.40 (10.2) 48 0.40 (10.2) 60 0.40 (10.2) 72 0.44 (11.1) 96 0.52 (13.3)	Count Inches (MM) (KG/KM) 24 0.40 (10.2) 60 (90) 36 0.40 (10.2) 60 (90) 48 0.40 (10.2) 60 (90) 60 0.40 (10.2) 60 (90) 72 0.44 (11.1) 77 (115) 96 0.52 (13.3 120 (175)	Count Inches (MM) (KG/KM) Install 24 0.40 (10.2) 60 (90) 150 (670) 36 0.40 (10.2) 60 (90) 150 (670) 48 0.40 (10.2) 60 (90) 150 (670) 60 0.40 (10.2) 60 (90) 150 (670) 72 0.44 (11.1) 77 (115) 150 (670) 96 0.52 (13.3) 120 (175) 150 (670)	Count Inches (MM) (KG/KM) Install Long-term 24 0.40 (10.2) 60 (90) 150 (670) 45 (200) 36 0.40 (10.2) 60 (90) 150 (670) 45 (200) 48 0.40 (10.2) 60 (90) 150 (670) 45 (200) 60 0.40 (10.2) 60 (90) 150 (670) 45 (200) 72 0.44 (11.1) 77 (115) 150 (670) 45 (200) 96 0.52 (13.3) 120 (175) 150 (670) 45 (200)	Count Inches (MM) (KG/KM) Install Long-term Install 24 0.40 (10.2) 60 (90) 150 (670) 45 (200) 6.0 (15.3) 36 0.40 (10.2) 60 (90) 150 (670) 45 (200) 6.0 (15.3) 48 0.40 (10.2) 60 (90) 150 (670) 45 (200) 6.0 (15.3) 60 0.40 (10.2) 60 (90) 150 (670) 45 (200) 6.0 (15.3) 72 0.44 (11.1) 77 (115) 150 (670) 45 (200) 6.0 (15.3) 96 0.52 (13.3) 120 (175) 150 (670) 45 (200) 6.0 (15.3)

Ordering Information

Contact us for ordering information.

Ruggedized MicroCore® Cable with SWR®



AFL Ruggedized MicroCore with SWR 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 with both standard 250µm based fiber and AFL revolutionary SpiderWeb Ribbon Technology designs

Ruggedized MicroCore with bare fiber eliminates concerns associated with edge fiber stresses due to preferential bend of encapsulated ribbons.

These cables consist of an 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.

SWR technology eliminates many of the challenges that data center networks face today and will face in the future, and works to maximize fiber counts, minimize space utilized in ducts and raceways, and simplify high-fiber count installations.

Technical Specifications



Jacket Options

NFPA 262 (ONFP) / FT6 LSZH/ONFR-LS (IEC 60332, 60745, 61034) / CE CPR B2ca



Fiber	Nominal	Nominal Sub-	Weight LBS/1000 FT Tension LBS (N)		Bend Radius Inches (CM)		
Count	Diameter Inches (MM)	Unit Inches (MM)	(KG/KM)	Install	Long-term	Install	Long-term
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)	21 (31)	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

Contact us for ordering information.

Outside Plant Cabling (OSP) Overview

Advances in cable technology have led to an increase in fiber density and a decrease in cable diameter, weight, and installation time. Utilizing SpiderWeb Ribbon® (SWR®) technology in your outside plant cabling means your data center's fleets or availability zones can grow at a faster rate, whilst minimizing the impact on already congested duct space.



250µm Wrapping Tube Cable (WTC) with SpiderWeb Ribbon (SWR)

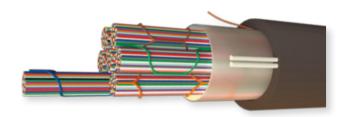


200µm Wrapping Tube Cable (WTC) with SpiderWeb Ribbon (SWR)



Flame-Retardant Wrapping Tube Cable (WTC) with SpiderWeb Ribbon (SWR)

250µm Wrapping Tube Cable (WTC) with SpiderWeb Ribbon® (SWR®)



Wrapping Tube Cable (WTC), with SpiderWeb Ribbon (SWR), is an ultra-high density outside plant cable designed specifically for fiber-to-the-home (FTTH) or access markets and is compliant with the latest issue of the outside plant cable standard, Telcordia GR-20.

Utilizing an ultra-high density ribbon technology called SpiderWeb Ribbon, WTC provides the smallest cable diameter and lowest weight high-fiber count ribbon cable in the industry. WTC with SWR cables are available in fiber counts from 144 to 3,456.

SWR is a bonded fiber ribbon design allowing for either a highly efficient ribbon splicing or an individual fiber breakout splicing process. This flexibility allows for a single cable design to cover a diverse set of applications from access networks to high-fiber count mass-fusion splicing. With the ability to roll and conform, SWR provides ultrahigh-density packaging in the WTC.

SWR technology eliminates many of the challenges that data center networks face today and will face in the future, and works to maximize fiber counts, minimize space utilized in ducts and raceways, and simplify high-fiber count installations.

Technical Specifications

Mechanical Data-Non-Armored

Fiber Binder		Nominal Diameter	Weight Short Term/Installation		Long Tern	Long Term/Installation	
Count	Unit	Inches (MM)	LBS/1,000 FT (KG/KM)	Max tensile load LBS (N)	Min bend radius inches (MM)	Max tensile load LBS (N)	Min bend radius inches (MM)
144	1 x 144f	0.41 (10.5)	57 (85)	607 (2700)	9 (229)	182 (810)	6 (158)
288	4 x 72f	0.47 (12.0)	71 (105)	607 (2700)	10 (254)	182 (810)	7 (180)
432	6 x 72f	0.53 (13.5)	91 (135)	607 (2700)	11 (270)	182 (810)	8 (203)
576	8 x 72f	0.59 (15.0)	111 (165)	607 (2700)	12 (300)	182 (810)	9 (225)
864	12 x 72f	0.69 (17.5)	145 (215)	607 (2700)	14 (350)	182 (810)	11 (279)
1152	8 x 144f	0.73 (18.5)	161 (240)	607 (2700)	15 (370)	182 (810)	11 (279)
1728	12 x 144f	0.91 (23.0)	242 (360)	607 (2700)	18 (460)	182 (810)	14 (345)
3456	24 x 144f	1.20 (30.5)	403 (600)	607 (2700)	24 (610)	182 (810)	18 (458)

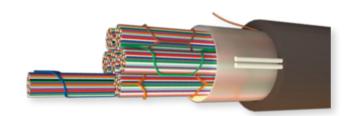
Mechanical Data-OSP Armored

Fiber	Binder	Nominal Diameter	r Weight Short Term/Installation Long Te		Short Term/Installation		n/Installation
Count	Unit	Inches (MM)	LBS/1,000 FT (KG/KM)	Max tensile load LBS (N)	Min bend radius inches (MM)	Max tensile load LBS (N)	Min bend radius inches (MM)
144	1 x 144f	0.63 (16.0)	148 (220)	607 (2700)	13 (320)	182 (810)	10 (254)
288	4 x 72f	0.69 (17.5)	172 (255)	607 (2700)	14 (350)	182 (810)	11 (279)
432	6 x 72f	0.75 (19.0)	202 (300)	607 (2700)	15 (380)	182 (810)	11 (285)
576	8 x 72f	0.81 (20.5)	235 (350)	607 (2700)	16 (410)	182 (810)	12 (308)
864	12 x 72f	0.91 (23.0)	286 (425)	607 (2700)	18 (460)	182 (810)	14 (345)
1728	12 x 144f	1.14 (29.0)	410 (610)	607 (2700)	23 (580)	182 (810)	17 (435)

Ordering Information

Contact us for ordering information.

200µm Wrapping Tube Cable (WTC) with SpiderWeb Ribbon® (SWR®)



Wrapping Tube Cable (WTC), with SpiderWeb Ribbon (SWR), is an ultra-high density outside plant cable designed specifically for fiber-to-the-home (FTTH) or access markets and is compliant with the latest issue of the outside plant cable standard, Telcordia GR-20.

Utilizing an ultra-high density ribbon technology called SpiderWeb Ribbon, WTC provides the smallest cable diameter and lowest weight high-fiber count ribbon cable in the industry. WTC with SWR cables are available in fiber counts from 144 to 3,456.

SWR is a bonded fiber ribbon design allowing for either a highly efficient ribbon splicing or an individual fiber breakout splicing process. This flexibility allows for a single cable design to cover a diverse set of applications from access networks to high-fiber count mass-fusion splicing. With the ability to roll and conform, SWR provides ultrahigh-density packaging in the WTC.

SWR technology eliminates many of the challenges that data center networks face today and will face in the future, and works to maximize fiber counts, minimize space utilized in ducts and raceways, and simplify high-fiber count installations.

Technical Specifications



Operating temperature

-40°C to +70°C



Storage temperature

-40°C to +70°C



Installation temperature

-30°C to +60°C

Mechanical Data-Non-Armored

Fiber B	Binder	Nominal Diameter Weight		Short Ter	Short Term/Installation		Long Term/Installation	
Count	Unit	Inches (MM)	LBS/1,000 FT (KG/KM)	Max tensile load LBS (N)	Min bend radius inches (MM)	Max tensile load LBS (N)	Min bend radius inches (MM)	
1728	12 x 144f	0.85 (21.5)	202 (300)	607 (2700)	17 (432)	182 (810)	13 (330)	
3456	24 x 144f	1.04 (26.5)	292 (435)	607 (2700)	21 (533)	182 (810)	16 (406)	
6912	24 x 288f	1.38 (35.0)	514 (765)	607 (2700)	28 (711)	182 (810)	21 (533)	

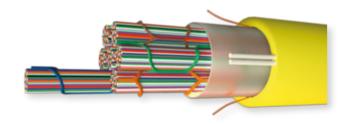
200µm Optical Fiber

Fiber	Fiber Designator	MFD	Maximum Attenuation (Cabled) dB/km			
Count	Fiber Designator	IVIFU	1310 NM	1383 NM	1550 NM	
1728	BE (ITU-T G.652.D and G.657.A1)	$8.6 \pm 0.4 \mu m$	≤0.40	≤0.40	≤0.30	
3456	BE (ITU-T G.652.D and G.657.A1)	$8.6 \pm 0.4 \mu m$	≤0.40	≤0.40	≤0.30	
6912	BE (ITU-T G.652.D and G.657.A1)	8.6 ± 0.4μm	≤0.40	≤0.40	≤0.30	

Ordering Information

Contact us for ordering information.

Flame-Retardant Wrapping Tube Cable (WTC) with SpiderWeb Ribbon® (SWR®)



Flame-Retardant (FR) Wrapping Tube Cable (WTC) with SpiderWeb Ribbon (SWR) is a high-density fiber optic ribbon cable intended for inside plant and indoor/outdoor network applications where riser-rated products are required.

The FR-WTC-SWR incorporates the leading-edge SpiderWeb Ribbon technology in a robust, flame-retardant cable package that can be used within buildings and, thanks to its core water-blocking feature, can also be routed outside provided the cable is housed within covered pathway spaces including duct-banks and cable trays.

The FR-WTC-SWR product set is available in LSZH, nonarmored 250µm ACE fiber (288F), 250µm SR15E fiber (288F, 864F, and 1,728F), and 200µm SR15E fiber (864F and 1728F) constructions.

SWR technology eliminates many of the challenges that data center networks face today and will face in the future, and works to maximize fiber counts, minimize space utilized in ducts and raceways, and simplify high-fiber count installations.

Technical Specifications



Operating temperature

-20°C to +70°C



Storage temperature

-40°C to +70°C



Installation temperature

-10°C to +60°C

Mechanical Data-Non-Armored

Fiber	Binder	Nominal Diameter	Weight	t Short Term/Installation		Long Term/Installation	
Count	Unit	Inches (MM)	LBS/1,000 FT (KG/KM)	Max tensile load LBS (N)	Min bend radius inches (MM)	Max tensile load LBS (N)	Min bend radius inches (MM)
288	4 X 72F	0.49 (12.5)	108 (160)	297 (1320)	10 (250)	89 (396)	8 (188)
288	4 x 72f	0.49 (12.5)	108 (160)	297 (1320)	10 (250)	89 (396)	8 (188)
864	12 x 72f	0.71 (18.0)	208 (310)	297 (1320)	14 (250)	89 (396)	11 (270)
1728	12 x 144f	0.93 (23.5)	329 (490)	297 (1320)	19 (470)	89 (396)	14 (353)
864	12 x 72f	0.65 (16.5)	181 (270)	297 (1320)	13 (330)	89 (396)	10 (248)
1728	12 x 144f	0.87 (22.0)	276 (410)	297 (1320)	18 (440)	89 (396)	13 (330)

Optical Fiber

Fiber Count	Fiber Buffer	Optical Fiber Standard	MFD	Maximum Attenuation (Cabled) dB/km			
Fiber Count	Fiber buller	Optical Fiber Standard	IVIFD	1310 NM	1383 NM	1550 NM	
288	250µm	9 (ITU-T G.652D/G.657.A1)	$9.2 \pm 0.4 \mu m$	0.4 dB/km	0.4 dB/km	0.3 dB/km	
288, 864, 1728	250µm	4K (ITU-T G.652D/G.657.A1)	$8.6 \pm 0.4 \mu m$	0.4 dB/km	0.4 dB/km	0.3 dB/km	
864, 1728	200µm	BE (ITU-T G.652.D AND G.657.A1)	8.6 ± 0.4µm	0.4 dB/km	0.4 dB/km	0.3 dB/km	

Ordering Information

Contact us for ordering information.



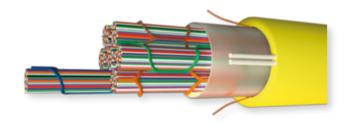
Inside Plant (ISP) / Outside Plant (OSP) Overview

Utilizing leading-edge SpiderWeb Ribbon® (SWR®) technology, this robust, end-toend, flame-retardant cable is suitable for use both within and outside buildings thanks to its core water-blocking feature.



Flame-Retardant Wrapping Tube Cable (WTC) with SpiderWeb Ribbon (SWR)

Flame-Retardant Wrapping Tube Cable (WTC) with SpiderWeb Ribbon® (SWR®)



Flame-Retardant (FR) Wrapping Tube Cable (WTC) with SpiderWeb Ribbon (SWR) is a high-density fiber optic ribbon cable intended for inside plant and indoor/outdoor network applications where riser-rated products are required.

The FR-WTC-SWR incorporates the leading-edge SpiderWeb Ribbon technology in a robust, flame-retardant cable package that can be used within buildings and, thanks to its core water-blocking feature, can also be routed outside provided the cable is housed within covered pathway spaces including duct-banks and cable trays.

The FR-WTC-SWR product set is available in LSZH, nonarmored 250µm ACE fiber (288F), 250µm SR15E fiber (288F, 864F, and 1,728F), and 200µm SR15E fiber (864F and 1728F) constructions.

SWR technology eliminates many of the challenges that data center networks face today and will face in the future, and works to maximize fiber counts, minimize space utilized in ducts and raceways, and simplify high-fiber count installations.

Technical Specifications



Operating temperature

-20°C to +70°C



Storage temperature

-40°C to +70°C



Installation temperature

-10°C to +60°C

Mechanical Data-Non-Armored

Fiber	Binder	Nominal Diameter	Weight	t Short Term/Installation		Long Term/Installation	
Count	Unit	Inches (MM)	LBS/1,000 FT (KG/KM)	Max tensile load LBS (N)	Min bend radius inches (MM)	Max tensile load LBS (N)	Min bend radius inches (MM)
288	4 X 72F	0.49 (12.5)	108 (160)	297 (1320)	10 (250)	89 (396)	8 (188)
288	4 x 72f	0.49 (12.5)	108 (160)	297 (1320)	10 (250)	89 (396)	8 (188)
864	12 x 72f	0.71 (18.0)	208 (310)	297 (1320)	14 (250)	89 (396)	11 (270)
1728	12 x 144f	0.93 (23.5)	329 (490)	297 (1320)	19 (470)	89 (396)	14 (353)
864	12 x 72f	0.65 (16.5)	181 (270)	297 (1320)	13 (330)	89 (396)	10 (248)
1728	12 x 144f	0.87 (22.0)	276 (410)	297 (1320)	18 (440)	89 (396)	13 (330)

Optical Fiber

Fiber Count	Fiber Buffer	Optical Fiber Standard	MFD	Maximum Attenuation (Cabled) dB/km		
				1310 NM	1383 NM	1550 NM
288	250µm	9 (ITU-T G.652D/G.657.A1)	$9.2 \pm 0.4 \mu m$	0.4 dB/km	0.4 dB/km	0.3 dB/km
288, 864, 1728	250µm	4K (ITU-T G.652D/G.657.A1)	$8.6 \pm 0.4 \mu m$	0.4 dB/km	0.4 dB/km	0.3 dB/km
864, 1728	200µm	BE (ITU-T G.652.D AND G.657.A1)	8.6 ± 0.4µm	0.4 dB/km	0.4 dB/km	0.3 dB/km

Ordering Information

Contact us for ordering information.



Accessories

(Test, Inspection & Cleaning)



FOCIS

Flex

- Liquid lens camera technology
- Auto-focus, auto-centering, PASS/FAIL analysis, and save
- A wide range of cross-compatible adapter tips
- Bluetooth pairing to smart device apps and integration with aeRos®

Part Number	Description
FOCIS-FLX-P4XUA	FOCIS Flex Kit with 4 user-selected UPC & APC adapter tips (ferrule and bulkhead)



SMLP5-5

SM/MM Loss Test Kit

- Measure insertion loss at 850/1300 & 1310/1550nm
- Tone generation and detection at 2 kHz
- Set reference storage
- Automatic wavelength detection (Wave ID)
- USB port for transfer of stored results
- TRM Reporting Software
- 5-year product warranty

Part Number	Description
SMLP5-5-SC	SM & MM Test Kit with Data Storage and Reporting (SC Adapter)
SMLP5-5-LC	SM & MM Test Kit with Data Storage and Reporting (LC Adapter)



FlexScan® FS200 OTDR

- High-resolution, dual-wavelength single-mode testing
- Easy-to-understand LinkMap® results with PASS/FAIL
- FleXpress™ mode completes OTDR test in <5 seconds
- 12f MPO testing with optional Multi-Fiber Switch
- Bluetooth, WiFi, and USB enabled
- TRM® Reporting Software

Part Number	Description
FS200-100-BAS-P1-W1	FlexScan® FS200 1310/1550nm OTDR with OPM/OLS/VFI



One-Click® Cleaners

LC/MU/SC/ST/FC/MPO

- One-Click Cleaner D-LC, Duplex LC
- One-Click Cleaner MU/LC
- One-Click Cleaner SC/ST/FC
- One-Click Cleaner MPO

Part Number	Description
8500-05-0008MZ	One-Click® Cleaner D-LC, Duplex LC (2 x 500+ cleans)
8500-05-0002MZ	One-Click® Cleaner MU/LC (500 cleans)
8500-05-0001MZ	One-Click® Cleaner SC/ST/FC (500 cleans)
8500-05-0030MZ	One-Click® Cleaner MPO (500 cleans)











AFL HYPERSCALE.

Data Center Cabling and Connectivity Experts

AFL Hyperscale is the first cabling and connectivity solution provider focused on the ever-evolving needs of data centers.

Hyperscale, colocation, and enterprise data centers are united in their pursuit to connect the unconnected, yet their infrastructure, performance, and operational challenges are totally unique.

We work collaboratively with our customers to create connectivity solutions tailored to their current needs and to the requirements of future networks. We then use our responsive, global operational capabilities and distribution network for fast delivery.

This approach has transformed how many data centers grow worldwide and is built on 70 years' combined experience in the design and manufacture of high-performance optical fiber networks, a global presence, and the backing and innovation sharing of our parent and grandparent companies, AFL and Fujikura, the pioneer in optical technology. AFL Hyperscale is your dependable partner to build a more connected world.

AFL Hyperscale - The World, Connected.

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