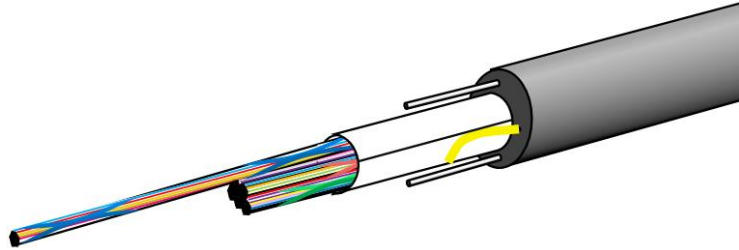
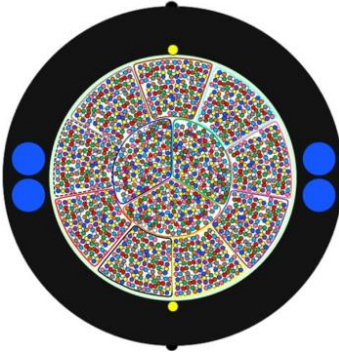


Fiber Optic Cable

Outdoor	Outdoor WTC 144-6912F
	Armored WTC 288-864F
Indoor	Indoor WTC 144-6912F
	Indoor/Outdoor WTC 144-6912F
Microduct	Air Blow WTC 48-864F



**Wrapping Tube Cable (WTC™) with 12 Fiber Spider Web Ribbon (SWR™)
Outdoor WTC™ 144 – 6912F**



The Wrapping Tube Cable (WTC™) with Spider Web Ribbon (SWR™) is an ultra-high density outside plant cable designed for fiber-to-the-home (FTTH), access markets, and data centers. It complies with the latest outside plant cable standard, Telcordia GR-20. WTC™ with SWR™ offers the smallest cable diameter and lowest weight among high-fiber count ribbon cables in the industry. It is available in fiber counts ranging from 144 to 6,912.

SWR™ is an intermittent bonded ribbon fiber design allowing for either a highly efficient ribbon splicing or an individual fiber breakout splicing process. With the ability to roll and conform, the SWR™ provides ultra high density fiber packaging in the WTC™.

Features

- UV Resistant
- Full dry (gel-free) construction
- Fully dielectric
- Mid Span Access

Application

- Duct
- Aerial

Physical & Mechanical Characteristics

		144F	288F	432F	576F	864F	1152F	1728F	3456F	6912F	
Cable diameter (in approx.)	mm	11.0	12.0	13.5	15.0	17.5	18.5	21.5	26.5	29.8	
	(in.)	(0.414)	(0.473)	(0.537)	(0.591)	(0.689)	(0.729)	(0.847)	(1.044)	(1.174)	
Cable weight (in approx.)	kg/km	85	105	135	165	215	240	300	435	640	
	(lbs/1000ft)	(57)	(71)	(91)	(111)	(144)	(161)	(202)	(292)	(463)	
Fiber counts in bundle unit		-			72F			144F		288F	
Number of bundled units		-			6	8	12	8	12	24	
Tensile performance (*1)	Short term(*2)	N									
	Long term	N									
Bending radius(*1)	Cyclic flexing	mm	110	120	135	150	175	185	215	265	300
	Cable bend	mm	110	180	203	225	263	278	332	397	450
Compressive Strength(*1)		N/100mm	2200								
Impact resistance(*1)		N · m	4.4								

*1. Reference standard : Telcordia GR-20

*2. Please follow the appropriate procedure that Fujikura recommends for pulling cable



Contact us

Optical Fiber Characteristics

Fiber Count	Fiber Diameter	Fiber Pitch	Fiber Type	MFD	Maximum Attenuation (Cabled) (dB/km)		
					1310 nm	1383 nm (*3, 4)	1550 nm
144F to 864F	250 μm	250 μm	Ace (ITU-T G.652.D and G.657.A1)	9.2 ± 0.4 μm	≤ 0.40	≤ 0.40	≤ 0.30
144F to 1152F	250 μm	250 μm	SR15E (ITU-T G.652.D and G.657.A1)	8.6 ± 0.4 μm	≤ 0.40	≤ 0.40	≤ 0.30
1728F and 3456F	200 μm	250 μm	SR15E-200 (ITU-T G.652.D and G.657.A1)	8.6 ± 0.4 μm	≤ 0.40	≤ 0.40	≤ 0.30
6912F	200 μm	200 μm	BIS-B-P200 (ITU-T G.652.D and G.657.A2)	8.6 ± 0.4 μm	≤ 0.40	≤ 0.40	≤ 0.30

*3. The value after hydrogen aging in optical fiber in accordance with IEC 60793-2-50 test procedure.

*4. The value before coloring process

Fiber Colors in 12F SWR

No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8	No.9	No.10	No.11	No.12
Blue	Orange	Green	Brown	Grey	White	Red	Black	Yellow	Violet	Pink	Turquoise

Stripe Ring Mark (*5, 6)

SWR No.1	SWR No.2	SWR No.3	SWR No.4	SWR No.5	SWR No.6
SWR No.7	SWR No.8	SWR No.9	SWR No.10	SWR No.11	SWR No.12
SWR No.13	SWR No.14	SWR No.15	SWR No.16	SWR No.17	SWR No.18
SWR No.19	SWR No.20	SWR No.21	SWR No.22	SWR No.23	SWR No.24

*5. Each block denotes "5" and each bar denotes "1".

*6. The order of block and bar for SWR may be reversed in the cable (e.g. No.6 may be ■■ or ■■■)

Environmental Characteristics

Temperature cycling	Installation	-30°C to 60°C (-22°F to +140°F)
	Operation	-40°C to 70°C (-40°F to +158°F)
	Transportation/Storage	-40°C to 70°C (-40°F to +158°F)

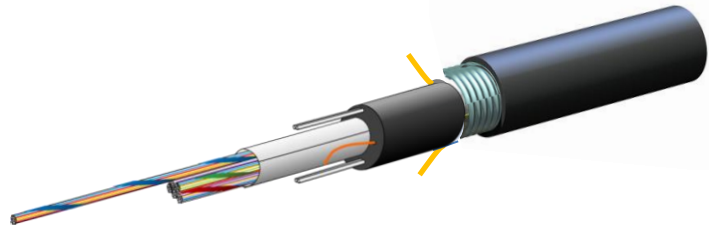
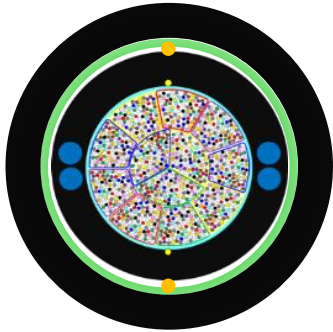
Qualifications

Governing Body	Standard Code
Telcordia	GR-20



Contact us

**Wrapping Tube Cable (WTC™) with 12 Fiber Spider Web Ribbon (SWR™)
Armored Outdoor WTC™ 24 – 864F**



The Wrapping Tube Cable (WTC™) with Spider Web Ribbon (SWR™) is an ultra-high density outside plant cable designed for fiber-to-the-home (FTTH), access markets, and data centers. It complies with the latest outside plant cable standard, Telcordia GR-20. WTC™ with SWR™ offers the smallest cable diameter and lowest weight among high-fiber count ribbon cables in the industry. It is available in fiber counts ranging from 24 to 864.

SWR™ is an intermittent bonded ribbon fiber design allowing for either a highly efficient ribbon splicing or an individual fiber breakout splicing process. With the ability to roll and conform, the SWR™ provides ultra high density fiber packaging in the WTC™.

Armored Outdoor WTC™ provide extra protection and durability in harsh environments. Encased in a robust corrugated steel armor, these cables are resistant to physical damage, moisture, and other external factors. Ideal for industrial settings and outdoor installations, armored cables offer reliable and long-lasting connectivity for critical applications.

Features

- UV Resistant
- Rodent Resistant
- Full dry (gel-free) construction
- Fully dielectric
- Mid Span Access

Application

- Duct
- Direct buried

Physical & Mechanical Characteristics

		24F	48F	72F	96F	144F	288F	432F	576F	864F	
Cable diameter (in approx.)	Mm	14.0	14.5	14.5	15.0	15.5	17.5	19.0	20.5	23.0	
	(in.)	(0.551)	(0.571)	(0.571)	(0.591)	(0.621)	(0.689)	(0.749)	(0.808)	(0.906)	
Cable weight (in approx.)	kg/km	165	180	185	185	215	255	300	350	425	
	(lbs/1000ft)	(111)	(121)	(125)	(125)	(145)	(171)	(202)	(235)	(286)	
Fiber counts in bundled unit		-	-	-	-	-	-	72F			
Number of bundled unit		-	-	-	-	-	-	6	8	12	
Tensile performance (*1)	Short term(*2)	N	1600				2700				
	Long term	N	480				800				
Bending radius(*1)	Cyclic flexing	mm	140	145	145	150	155	175	190	205	230
	Cable bend	mm	140	145	145	150	155	262	285	307	345
Compressive strength(*1)		N/100mm	2200								
Impact resistance(*1)		N · m	4.4								

*1. Reference standard : Telcordia GR-20



Contact us

*2. Please follow the appropriate procedure that Fujikura recommends for pulling cable

Fiber Count	Fiber Diameter	Fiber Pitch	Fiber Type	MFD	Maximum Attenuation (Cabled) (dB/km)		
					1310 nm	1383 nm (*3, 4)	1550 nm
24F to 864F	250 μm	250 μm	SR15E (ITU-T G.652.D and G.657.A1)	8.6 ± 0.4 μm	≤ 0.40	≤ 0.40	≤ 0.30
144F to 864F	250 μm	250 μm	Ace (ITU-T G.652.D and G.657.A1)	9.2 ± 0.4 μm	≤ 0.40	≤ 0.40	≤ 0.30

Optical Fiber Characteristics

























*3. The value after hydrogen aging in optical fiber in accordance with IEC 60793-2-50 test procedure.

*4. The value before coloring process

Fiber Colors in 12F SWR

No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8	No.9	No.10	No.11	No.12
Blue	Orange	Green	Brown	Grey	White	Red	Black	Yellow	Violet	Pink	Turquoise

Stripe Ring Mark (*5, 6)

SWR No.1 	SWR No.2 	SWR No.3 	SWR No.4 	SWR No.5 	SWR No.6 
SWR No.7 	SWR No.8 	SWR No.9 	SWR No.10 	SWR No.11 	SWR No.12 
SWR No.13 	SWR No.14 	SWR No.15 	SWR No.16 	SWR No.17 	SWR No.18 
SWR No.19 	SWR No.20 	SWR No.21 	SWR No.22 	SWR No.23 	SWR No.24 

*5. Each block denotes "5" and each bar denotes "1".

*6. The order of block and bar for SWR may be reversed in the cable (e.g. No.6 may be  or )

Environmental Characteristics

Temperature cycling	Installation	-30°C to 50°C (-22°F to +122°F)
	Operation	-40°C to 60°C (-40°F to +140°F)
	Transportation/Storage	-40°C to 60°C (-40°F to +140°F)

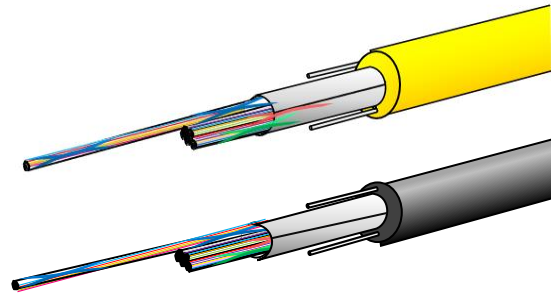
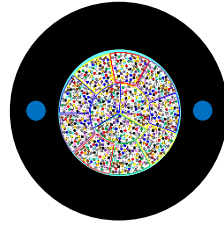
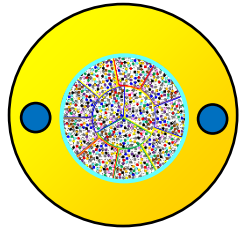
Qualifications

Governing Body	Standard Code
Telcordia	GR-20



Contact us

Wrapping Tube Cable (WTC™) with 12 Fiber Spider Web Ribbon (SWR™)
Indoor, Indoor/Outdoor WTC™ 144 – 6912F



The Wrapping Tube Cable (WTC™) with Spider Web Ribbon (SWR™) is an ultra-high density cable designed for fiber-to-the-home (FTTH), access markets, and data centers. WTC™ with SWR™ offers the smallest cable diameter and lowest weight among high-fiber count ribbon cables in the industry. It is available in fiber counts ranging from 144 to 6,912.

SWR™ is an intermittent bonded fiber ribbon design allowing for either a highly efficient ribbon splicing or an individual fiber breakout splicing process. With the ability to roll and conform, the SWR™ provides ultra high density fiber packaging in the WTC™.

Indoor, Indoor/Outdoor WTC™ are compliant to requirements of both the European construction products regulation (CPR) and the North American standard UL. This incorporates the leading-edge Spider Web Ribbon technology in a robust, flame-retardant cable package that can be used within buildings and, because of the core water-blocking feature, can also be routed outside provided the cable is housed within covered pathway spaces including duct-banks and cable trays.

Features

- UV Resistant (for Indoor/Outdoor)
- Full dry (gel-free) construction
- Mid Span Access
- Fully dielectric
- OFNR-ST1
- CPR Certified
- Splicing compatibility with 250µm Ribbon

Application

- Indoor, Indoor/Outdoor installation
- Riser for vertical use in shafts or from floor to floor

Physical & Mechanical Characteristics

Fiber count		144F	192F	288F	432F	576F	864F	1152F	1728F	2880F	3456F	6912F	
Cable diameter (in approx.)	mm	12.5	13.0	13.0	14.5	15.5	17.0	18.0	21.5	25.0	25.5	34.5	
	(in.)	(0.492)	(0.512)	(0.512)	(0.571)	(0.610)	(0.669)	(0.709)	(0.846)	(0.984)	(1.004)	(1.358)	
Cable weight (in approx.)	kg/km	165	175	190	215	240	290	325	475	615	675	955	
	(lbs/1000ft)	(111)	(118)	(128)	(145)	(161)	(219)	(717)	(320)	(414)	(454)	(642)	
Fibers per bundled unit		-			72F			144F		288F	144F	288F	
Number of bundled units		-			6	8	12	8	12	10	24	24	
Tensile performance (*1)	Short term(*2)	N	1300					2700					
	Long term	N	399					810					
Bending radius(*1)	Cyclic Flexing	mm	125	130	130	145	155	170	180	215	250	270	345
	Cable bend	mm	125	130	130	145	155	170	180	215	250	270	345
Compressive strength(*1)		N/100mm	2200										
Impact resistance(*1)		N · m	4.4										

*1. Reference standard : ANSI/ICEA S-104-696

*2. Please follow the appropriate procedure that Fujikura recommends for pulling cable



Contact us

Optical Fiber Characteristics

Fiber Count	Fiber Diameter	Fiber Pitch	Fiber Type	MFD	Maximum Attenuation (Cabled) (dB/km)		
					1310 nm	1383 nm (*3, 4)	1550 nm
144F to 6912F	200 μm	250 μm	SR15E-200 (ITU-T G.652.D and G.657.A1)	8.6 ± 0.4 μm	≤ 0.40	≤ 0.40	≤ 0.30

*3. The value after hydrogen aging in optical fiber in accordance with IEC 60793-2-50 test procedure.

*4. The value before coloring process

Fiber Colors in 12F SWR

No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8	No.9	No.10	No.11	No.12
Blue	Orange	Green	Brown	Grey	White	Red	Black	Yellow	Violet	Pink	Turquoise

Stripe Ring Mark (*5, 6)

SWR No.1	SWR No.2	SWR No.3	SWR No.4	SWR No.5	SWR No.6
SWR No.7	SWR No.8	SWR No.9	SWR No.10	SWR No.11	SWR No.12
SWR No.13	SWR No.14	SWR No.15	SWR No.16	SWR No.17	SWR No.18
SWR No.19	SWR No.20	SWR No.21	SWR No.22	SWR No.23	SWR No.24

*5. Each block denotes "5" and each bar denotes "1".

*6. The order of block and bar for SWR may be reversed in the cable (e.g. No.6 may be or)

Environmental Characteristics

Temperature cycling	Installation	-30°C to 60°C (-22°F to +140°F)
	Operation	-40°C to 70°C (-40°F to +158°F)
	Transportation/Storage	-40°C to 70°C (-40°F to +158°F)

Reference standard : ANSI/ICEA S-104-696

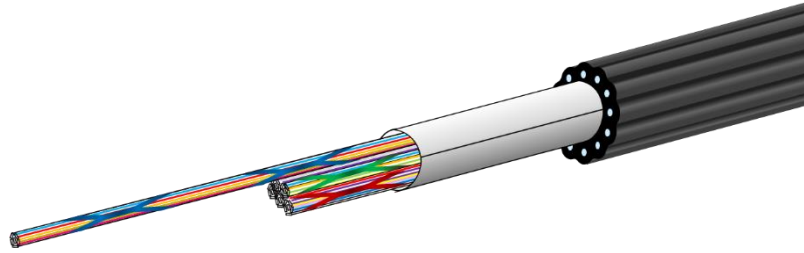
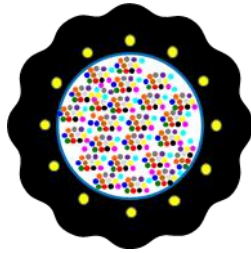
Flame Retardant Characteristics

Fiber count	144, 192, 288, 432, 576, 864, 1152, 1728F	2880, 3456, 6912F
EN13501-6 Classification	Cca-s1b,d1,a1	Cca-s1,d0,a1
Vertical test	UL 1666	
Fire propagation with smoke-release test	UL 1685	



Contact us

**Wrapping Tube Cable (WTC™) with 12 Fiber Spider Web Ribbon (SWR™)
Air Blown WTC™ 48 – 864F**



The Wrapping Tube Cable (WTC™), with Spider Web Ribbon (SWR™), is an ultra-high density outside plant cable designed specifically for fiber-to-the-home (FTTH), access markets, and hyperscale data center. Ultra-high density and a new ribbon technology called Spider Web 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 48 to 864.

SWR™ is a bonded fiber ribbon design allowing for either a highly efficient ribbon splicing or an individual fiber breakout splicing process. With the ability to roll and conform, the SWR™ provides ultra high density fiber packaging in the WTC™.

Air Blown WTC™ is designed for easy installation using air blowing installation method. These cables have a lightweight and flexible construction, allowing them to be blown through pre-installed microducts or tubes. The compressed air creates a pathway for the cable, eliminating the need for traditional cable pulling methods. This technology enables quick and efficient deployment of fiber optic networks, saving time and reducing installation costs.

Features

- Air blown installation
- UV Resistant
- Full dry (gel-free) construction
- Fully dielectric
- Splicing compatibility with 250µm Ribbon
- Mid Span Access

Application

- Microduct

Physical & Mechanical Characteristics

		48F	72F	96F	144F	192F	288F	432F	576F	864F
Cable diameter (in approx.)	mm (in.)	6.1 (0.240)		6.6 (0.260)	7.3 (0.288)	8.1 (0.319)	9.7 (0.382)	10.7 (0.422)	12.3 (0.485)	
Cable weight (in approx.)	kg/km (lbs/1000ft)	25 (17)		30 (21)	36 (25)	45 (31)	65 (44)	80 (54)	105 (71)	
Fiber counts in bundled units		-			48F		72F			
Number of bundled units		-			4		6	8	12	
Tensile performance(*1)	Short term	N	245	294	353	441	637	784	1030	
Bending radius(*1)	Cyclic flexing	mm	122	132	146	162	194	214	246	
	Cable bend	mm	122	132	146	162	194	214	246	
Compressive Strength(*1)		N/100mm	500							
Impact resistance(*1)		N·m	1							

*1. Reference standard : IEC 60794-1-21



Contact us

Optical Fiber Characteristics

Fiber Count	Fiber Diameter	Fiber Pitch	Fiber Type	MFD	Maximum Attenuation (Cabled) (dB/km)		
					1310 nm	1383 nm (*2, 3)	1550 nm
48F to 864F	200 μm	250 μm	SR15E-200 (ITU-T G.652.D and G.657.A1)	8.6 ± 0.4 μm	≤ 0.40	≤ 0.40	≤ 0.30

*2. The value after hydrogen aging in optical fiber in accordance with IEC 60793-2-50 test procedure.

*3. The value before coloring process

Fiber Colors in 12F SWR

No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8	No.9	No.10	No.11	No.12
Blue	Orange	Green	Brown	Grey	White	Red	Black	Yellow	Violet	Pink	Turquoise

Stripe Ring Mark (*4, 5)

SWR No.1	SWR No.2	SWR No.3	SWR No.4	SWR No.5	SWR No.6
█	██	███	████	█	██
SWR No.7	SWR No.8	SWR No.9	SWR No.10	SWR No.11	SWR No.12
███	████	█████	███	███	█████

*4. Each block denotes "5" and each bar denotes "1".

*5. The order of block and bar for SWR may be reversed in the cable (e.g. No.6 may be ███ or ███)

Environmental Characteristics

Temperature cycling(*6)	-30°C to 70°C (-22°F to +158°F)
-------------------------	---------------------------------

*6. Reference: IEC 60794-1-22



Contact us