

Wrapping Tube Cable (WTC) with SpiderWeb Ribbon® (SWR®) – 250 µm Fiber/250 µm Pitch

The 250 µm Fiber/250 µm Pitch 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. It is compliant with the latest issue of the outside plant cable standard, Telcordia GR-20. With an ultra-high density and a new 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 1,728.

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, the SWR® provides for ultra-high density packaging in the WTC.

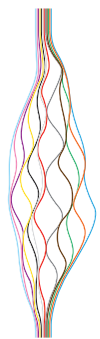
Features

- Collapsible ribbon reduces size of cable compared to other encapsulated or pliable ribbon technologies
- Design optimizes the fiber packing density making WTC-SWR cables the smallest ribbon cables without compromising robustness of the cable
- Small-diameter cable allows more optical fibers to be placed into crowded or limited-space pathways
- Water-blocked core
- Light weight for easy handling in the field compared to traditional cables
- Completely Gel-free for reduced time to access fiber and prep for splicing

Applications

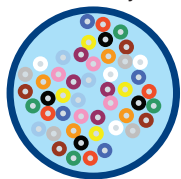
- Data Center Inter-building Connections
- Access Provider Metro Rings
- Service Provider FTTx
- Cable TV Subscriber Networks
- Metro Rail Track-side Network Links
- Suitable for Aerial Lashing, Pulled-in-duct, Air-Jetted-in-Duct
- Campus LAN

SWR Technology

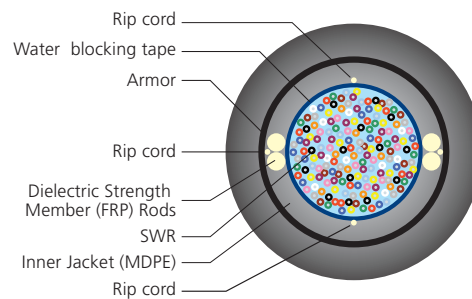


12F SWR®

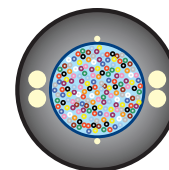
Contra-helical dual binder system



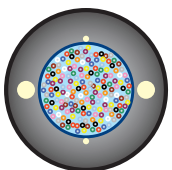
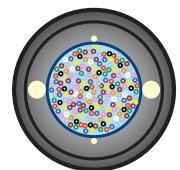
Multiple 12F SWR® Bundle



Armored
4-rod FRP
(288F - 1,728F)



Non-armored
4-rod FRP
(288F - 1,728F)



Non-armored &
Armored
2-rod FRP
(144F)

continued
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Wrapping Tube Cable (WTC) with SpiderWeb Ribbon® (SWR®) – 250 μm Fiber/ 250 μm Pitch

Mechanical Data—Non-Armored

DESCRIPTION	FIBER COUNT	BINDER UNIT	NOMINAL DIAMETER	WEIGHT	SHORT TERM / INSTALLATION		LONG TERM / STORAGE / STATIC	
			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)
ACE FIBER								
LWSE-144-9-C-144-1-00N1D-*	144	1 X 144F	0.43 (11.0)	61 (90)	607 (2700)	8.7 (221)	182 (810)	6.5 (165)
LWSE-288-9-C-288-1-00N1D-*	288	1 X 288F	0.47 (12.0)	71 (105)	607 (2700)	9.5 (242)	182 (810)	7.1 (181)
LWSE-432-9-C-72-6-00N1D-*	432	6 X 72F	0.53 (13.5)	91 (135)	607 (2700)	10.6 (270)	182 (810)	8.0 (203)
LWSE-576-9-C-72-8-00N1D-*	576	8 X 72F	0.59 (15.0)	111 (165)	607 (2700)	11.8 (300)	182 (810)	8.9 (226)
LWSE-864-9-C-72-12-00N1D-*	864	12 X 72F	0.69 (17.5)	145 (215)	607 (2700)	13.8 (351)	182 (810)	10.3 (262)
SR15E FIBER								
LWSE-144-K-C-144-1-00N1D-*	144	1 X 144F	0.43 (11.0)	61 (90)	607 (2700)	8.7 (221)	182 (810)	6.5 (165)
LWSE-288-K-C-288-1-00N1D-*	288	1 X 288F	0.47 (12.0)	71 (105)	607 (2700)	9.5 (242)	182 (810)	7.1 (181)
LWSE-432-K-C-72-6-00N1D-*	432	6 X 72F	0.53 (13.5)	91 (135)	607 (2700)	10.6 (270)	182 (810)	8.0 (203)
LWSE-576-K-C-72-8-00N1D-*	576	8 X 72F	0.59 (15.0)	111 (165)	607 (2700)	11.8 (300)	182 (810)	8.9 (226)
LWSE-864-K-C-72-12-00N1D-*	864	12 X 72F	0.69 (17.5)	145 (215)	607 (2700)	13.8 (351)	182 (810)	10.3 (262)
LWSE-1152-K-C-144-8-00N1D-*	1152	8 X 144F	0.73 (18.5)	161 (240)	607 (2700)	14.6 (371)	182 (810)	10.9 (277)
LWSE-1728-K-C-144-12-00N1D-*	1728	12 X 144F	0.91 (23.0)	242 (360)	607 (2700)	18.1 (460)	182 (810)	13.6 (346)

* NOTE: To designate length markings in AFL No., replace asterisk * with (FT) for Feet or (M) for Meters.

Mechanical Data—Armored

DESCRIPTION	FIBER COUNT	BINDER UNIT	NOMINAL DIAMETER	WEIGHT	SHORT TERM / INSTALLATION		LONG TERM / STORAGE / STATIC	
			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)
LWSE-144-9-C-144-1-10S1D-*	144	1 X 144F	0.63 (16.0)	148 (220)	607 (2700)	12.6 (320)	182 (810)	9.5 (242)
LWSE-288-9-C-288-1-10S1D-*	288	1 X 288F	0.69 (17.5)	172 (255)	607 (2700)	13.8 (351)	182 (810)	10.3 (262)
LWSE-432-9-C-72-6-10S1D-*	432	6 X 72F	0.75 (19.0)	202 (300)	607 (2700)	15.0 (381)	182 (810)	11.2 (285)
LWSE-576-9-C-72-8-10S1D-*	576	8 X 72F	0.81 (20.5)	235 (350)	607 (2700)	16.1 (409)	182 (810)	12.1 (307)
LWSE-864-9-C-72-12-10S1D-*	864	12 X 72F	0.91 (23.0)	286 (425)	607 (2700)	18.1 (460)	182 (810)	13.6 (346)
LWSE-1728-K-C-144-12-10S1D-*	1728**	12 X 144F	1.14 (29.0)	410 (610)	607 (2700)	22.8 (579)	182 (810)	17.1 (435)

NOTES:

* To designate length markings in AFL No., replace asterisk * with (FT) for Feet or (M) for Meters.

** Modified temperature performance

Optical Fiber

FIBER COUNT	FIBER DIAMETER	FIBER PITCH	FIBER DESIGNATOR	MFD	MAXIMUM ATTENUATION (CABLED) dB/km		
					1310 nm	1383 nm	1550 nm
Fujikura ACE (144F to 864F)	250 μm	250 μm	9 (ITU-T G.652.D and G.657.A1)	9.2 ± 0.4 μm	≤ 0.40	≤ 0.40	≤ 0.30
Fujikura SR15E (144F to 1728F)	250 μm	250 μm	K (ITU-T G.652.D and G.657.A1)	8.6 ± 0.4 μm	≤ 0.40	≤ 0.40	≤ 0.30

continued

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Stripe Ring Fiber Identification

R NO.	STRIPE RING MARKING	R NO.	STRIPE RING MARKING	R NO.	STRIPE RING MARKING	R NO.	STRIPE RING MARKING
1	█	7	███	13	██████	19	██████████
2	██	8	████	14	███████	20	███████
3	███	9	█████	15	██████	21	███████
4	████	10	█████	16	██████	22	███████
5	█████	11	██████	17	███████	23	██████████
6	██████	12	███████	18	████████	24	██████████

FIBER COUNT	BINDER UNIT (BU)											RING MARKINGS		
144F	No Binder Unit											1-12 Ring Marking		
288F	No Binder Unit											1-24 Ring Marking		
432F	6 Binder Units	1	2	3	4	5	6							
576F	8 Binder Units	1	2	3	4	5	6	7	8					1-6 Ring Marking
864F	12 Binder Units	1	2	3	4	5	6	7	8	9	10	11	12	
1152F	8 Binder Units	1	2	3	4	5	6	7	8					1-12 Ring Marking
1728F	12 Binder Units	1	2	3	4	5	6	7	8	9	10	11	12	1-12 Ring Marking

Temperature Specifications

TEMPERATURE RANGE	
OPERATION	-40°F to +158°F (-40°C to +70°C)
STORAGE	-40°F to +158°F (-40°C to +70°C)
INSTALLATION	-22°F to +140°F (-30°C to +60°C)

Qualifications

GOVERNING BODY	STANDARD CODE	COMPONENT
Telcordia	GR-20	Fiber Optic Cable

Contact AFL for further details.