

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

Physical & Mechanical Characteristics

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



Application

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



Optical Fiber Characteristics

| Fiber | Fiber | Fiber Pitch | Eiber Tupe | MFD | Maximum Attenuation (Cabled) (dB/km) | | |
|------------------|----------|----------------|---|--------------|---|--------------------|---------|
| Count | Diameter | | Fiber Type | INIFD | 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 **SWR** or **I**)

Environmental Characteristics

| | Installation | -30°C to 60°C (-22°F to +140°F) |
|---------------------|------------------------|---------------------------------|
| Temperature cycling | 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 | | | |

