

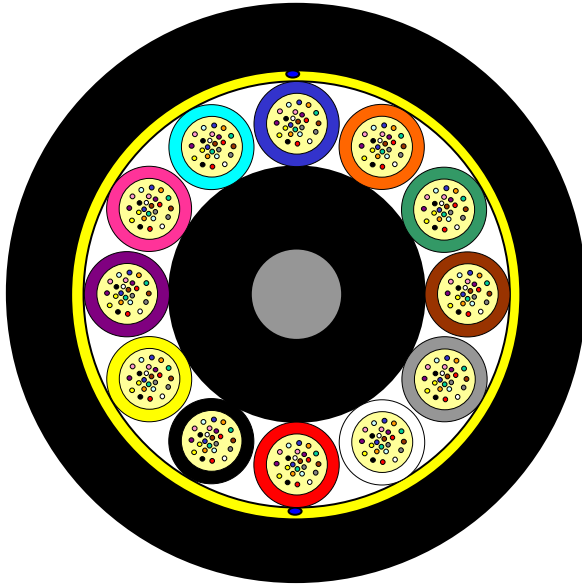
# All-Dielectric, Self Supporting (ADSS) Aerial Loose Tube Fiber Optic Cable

Dry core design

## PowerGuide<sup>®200</sup> SkyLight



Issue August 2021  
according to **OFS Generic Specification**



### Application

Optimized for Aerial- and Duct Installation with fiber counts up to 288 fibers

### Design

- Optical fibers
- Gel-filled buffer tubes
- Non-metallic central member
- Water blocking threads
- Non-metallic aramid strength elements
- Ripcords
- Outer HDPE-jacket

### Benefits

- Excellent, cost- effective option for short aerial cable spans
- Outstanding optical performance, durability and field reliability
- Fast, one-step installation for valuable time and cost savings
- Small cable diameter and bend radius for easy deployment in aerial- to- underground installation
- Easily strippable sheath for quick, convenient cable preparation

Version illustrated is the 288 Fiber 12 Element Cable

| Fibre Count | Tubes    | Core Design      | Outer Diameter [mm] | Cable Weight [kg/km] | AT-Code**                 |
|-------------|----------|------------------|---------------------|----------------------|---------------------------|
| 264         | 11 (24F) | 1+12 (1 Filler*) | 15.0                | 180                  | AT-[ ][ ][ ]17UF-264-CNGA |
| 288         | 12 (24F) | 1+12             | 15.0                | 180                  | AT-[ ][ ][ ]17UF-288-CNGA |

This table shows nominal diameter and weight values which may differ in shipments.

\*Fillers are natural colored      \*\*Please refer to the OFS AT- Code. The blanks specify the fiber type.

## Identification

### Tube Color Code:

|   |      |   |        |   |        |    |        |    |      |    |       |
|---|------|---|--------|---|--------|----|--------|----|------|----|-------|
| 1 | Blue | 2 | Orange | 3 | Green  | 4  | Brown  | 5  | Grey | 6  | White |
| 7 | Red  | 8 | Black  | 9 | Yellow | 10 | Violet | 11 | Rose | 12 | Aqua  |

### Fiber Color Code:

|    |       |    |         |    |         |    |         |    |       |    |        |
|----|-------|----|---------|----|---------|----|---------|----|-------|----|--------|
| 1  | Blue  | 2  | Orange  | 3  | Green   | 4  | Brown   | 5  | Grey  | 6  | White  |
| 7  | Red   | 8  | Black   | 9  | Yellow  | 10 | Violet  | 11 | Rose  | 12 | Aqua   |
| 13 | Blue* | 14 | Orange* | 15 | Green*  | 16 | Brown*  | 17 | Grey* | 18 | White* |
| 19 | Red*  | 20 | Nature  | 21 | Yellow* | 22 | Violet* | 23 | Rose* | 24 | Aqua*  |

\* Black ring

Alternative tube and fiber color code available on request.

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### Sheath Marking:

### OFS OPTICAL ADSS CABLE [ID] [MM/YYYY] [Handset Sign] xxxF [Meter Marking]

Alternative sheath printing available on request.

In case of order the exact sheath printing text will be clarified with the customer.

### Shipping Information

| Cable Length | Drum Dimensions (approx.) |         | Shipping Weight (calc.) |              |
|--------------|---------------------------|---------|-------------------------|--------------|
|              | Diameter(battened)        | Width   | Without lagging         | With lagging |
| 2 Km         | 1450 mm                   | 790 mm  | 470 kg                  | 510 kg       |
| 4 Km         | 1600 mm                   | 1055 mm | 850 kg                  | 910 kg       |
| 6 Km         | 1750 mm                   | 1055 mm | 1230 kg                 | 1290 kg      |
| 8 Km         | 2050 mm                   | 1100 mm | 1620 kg                 | 1700 kg      |

The shipping information are given for one-way reels. Reusable reels are available on request.

### Temperatures

|                   |                  |                |
|-------------------|------------------|----------------|
| IEC 60794-1-22-F1 | Operation        | -40°C to +70°C |
|                   | Installation     | -15°C to +60°C |
|                   | Storage/Shipping | -40°C to +70°C |

### Sag and Tension Calculation AT-[ ][ ]17UF-xxx-CNGA

| Conditions  | NESC Light Loading               | NESC Medium Loading              | NESC Heavy Loading               |
|---|----------------------------------|----------------------------------|----------------------------------|
| Ice Thickness                                     | 0 mm                             | 6.4 mm                           | 12.7 mm                          |
| Wind Pressure                                     | 431 N/m <sup>2</sup> (95.5 km/h) | 192 N/m <sup>2</sup> (63.6 km/h) | 192 N/m <sup>2</sup> (63.6 km/h) |
| Low Temperature                                   | - 1 °C                           | - 9.4 °C                         | - 17.8 °C                        |
| Safety Factor                                     | 0.73 N/m                         | 2.92 N/m                         | 4.38 N/m                         |
| Tension @ Maximum Span for 1,0 % Installation Sag |                                  |                                  |                                  |
| Maximum Span                                      | 150 m                            | 100 m                            | 60 m                             |
| MRCL (Maximum Rated Cable Load)                   | 5600 N                           | 5600 N                           | 5600 N                           |
| MIT (Maximum Installation Tension)                | 3200 N                           | 2250 N                           | 1400 N                           |
| Installation Temperature                          | 23 °C                            | 23 °C                            | 23 °C                            |
| Cable Modulus                                     | 659.4 kg/mm <sup>2</sup>         | 659.4 kg/mm <sup>2</sup>         | 659.4 kg/mm <sup>2</sup>         |
| CTE (C-1)   | 2.00E- 05                        | 2.00E- 05                        | 2.00E- 05                        |

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### Recommended hardware for spans up to 150m

#### PLP:

##### **Dead End Assembly:**

FIBERLIGN<sup>®</sup> Dielectric Dead-end for ADSS, 2872007C1E1, Max. Tension: 2500 lbs. (1135 kg)

##### **Fixed Tangent Support:**

FIBERLIGN<sup>®</sup> Aluminum Support for ADSS, 4450102

##### **Suspended Support:**

FIBERLIGN<sup>®</sup> Aluminum Suspension for ADSS, 4450202

##### **Slack Storage Devices:**

FIBERLIGN<sup>®</sup> In-Span Storage System, FIS12A

##### **Down Lead Cushion:**

FIBERLIGN<sup>®</sup> Downlead Cushion for ADSS, 8003043

##### **Vibration Dampers:**

FIBERLIGN<sup>®</sup> Dielectric Damper for ADSS Cable, 50509862

#### Telenco:

##### **Dead End Assembly:**

TELENCO<sup>®</sup> GSDE AR Helical dead-ends with armor rods Model GSDE AR 1420 (PN 7645)

##### **Suspension Support:**

TELENCO<sup>®</sup> DSAL Mobile suspension clamp Model DSAL1450 (PN 09570)

##### **Vibration Dampers:**

TELENCO<sup>®</sup> Vibration damper VIB Model VIB143 (PN 09138)

### Pertinent installation information

**Maximum rated cable load (MRCL)**

**5.6 kN**

**Bending Performance: (IEC 60794-1-21-E11)**

**Handling fixed installed - No attenuation increase\***

**Bend radius: 140 mm**

**During installation (under Load) - No changes in attenuation before versus after load**

**Bend radius: 280 mm**

\*No changes in attenuation means that any changes in measurement value, either positive or negative within the uncertainty of measurement shall be ignored. The total uncertainty of measurement shall be less than or equal to 0.05 dB.

### When to use hardware

#### **Dead End Assembly**

- Used whenever a cable should not slip
  - Cable start and end points
  - Where line angles exceed 20°
  - Road, river, railroad crossings
  - Closure locations
- Different types available dependent upon cable design and application
- Most attachment hardware is used with 5/8" pole line hardware



#### **Tangent and Suspension Supports**

- Typically used in small line angle (<20°, depending on type) situations
- Provides vertical support, not designed to support cable tension
- Multiple types depending span length and application
- Allows cable slippage during imbalanced load situations



#### **Vibration Dampers**

- ADSS cables can experience Aeolian vibration under certain circumstances
- Circumstances conducive to Aeolian vibration
- Laminar wind flow, Wide open spaces, Light winds, High tensions
- Vibration dampers minimize the effects of this vibration



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### Installation document references

**IP 014 PowerGuide<sup>®</sup> Installation**

**IP 014A PowerGuide<sup>®</sup> ADSS CABLE Installation Guideline Distribution Line Applications**

**IP 006 PowerGuide<sup>®</sup> Sheath Removal**

**IP 017 PowerGuide<sup>®</sup> Hardware Installation**

**AN-101 Maximum Rated Cable Loads & Minimum Bending Diameter**

**AN-203 Space Potential Calculation for PowerGuide<sup>®</sup> ADSS Cable**

Installation documents available upon request.

### PowerGuide SkyLight Cable Ordering Information

Example: **AT-8EE17UF-NNN<sup>1</sup>-CNGA**

Fiber<sup>2</sup> Sheath Core Fiber Count Custom<sup>3</sup>

**Part Number: AT-S1 S2 SF S3 S4 S5 S6 - NNN - CNGA**

#### S1= Fiber Selection

8= 1310/1550 nm (AllWave<sup>®</sup>FLEX 200µm ZWP Fiber)

9= 1310/1550 nm (AllWave<sup>®</sup>FLEX + 200µm ZWP Fiber)

#### S2= Fiber Transmission Performance

E= 0.36/0.31/0.27/0.25/0.27 dB/km @

1310/1385/1490/1550/1625 nm

(AllWave<sup>®</sup>FLEX 200µm ZWP Fiber)

(AllWave<sup>®</sup>FLEX + 200µm ZWP Fiber)

#### SF= Fiber Type

E= AllWave<sup>®</sup> ZWP Single Mode

#### S3= Sheath Construction

1= All-Dielectric single jacket

#### S4= Tensile Load

7= ADSS

#### S5= Core Type

U= Dry Core Loose Tube

#### S6= Fibers per Tube

F= 24 Fibers

#### NNN= Fiber Count

<sup>1</sup> Part Number shown is for PowerGuide ADSS Cable with 200 µm Single Mode AllWave<sup>®</sup>FLEX 200µm ZWP Fiber with maximum attenuation: 0.36/0.31/0.27/0.25/0.27 dB/km @ 1310/1385/1490/1550/1625 nm .

<sup>2</sup> Contact OFS sales representative for information on other cable variations, including additional fiber types, composite cables and attenuation.

<sup>3</sup> Consult with us regarding your application, span lengths and loading conditions to complete the custom design and part number of your complete sheath strengths system.

The information is believed to be accurate at time of issue.

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For additional information please contact your sales representative.

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