

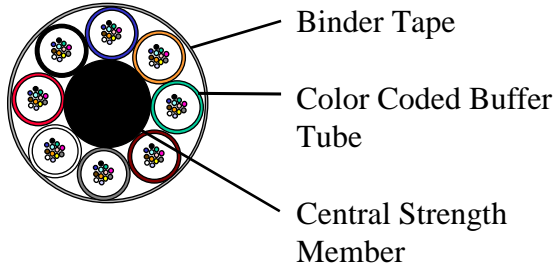


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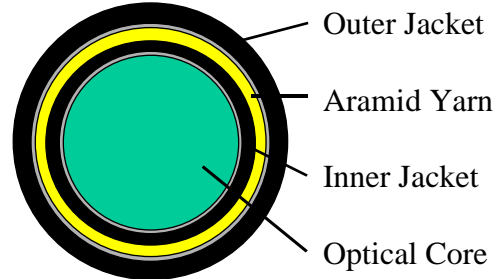
# Specification DNA-26874

## AFL-ADSS Fiber Optic Cable

Representative 8 unit Fiber Optic Core



Representative AFL-ADSS® Fiber Optic Cable



### AE048AZ6811BA5

#### 48 Corning® Singlemode

#### Sag / Tension Performance

Span Length (ft)    775										
Condition	Wind (mi/hr)	Radial Ice (inches)	Add'l Load (lbs/ft)	Input Data			Resultant Data			
				Vert. (ft)	Horiz. (ft)	Vector (ft)	Vert. (ft)	Horiz. (ft)	Vector (ft)	Tension (lbs)
Installation	---	---	---	7.8	---	---	7.75	---	7.7	1,041
Ice Alone	---	---	---	---	---	---	---	---	---	---
Wind Alone	---	---	---	---	---	---	---	---	---	---
Ice and Wind	---	---	---	---	---	---	---	---	---	---
NESC Medium	40.0	0.25	0.2	---	---	---	20.86	21.0	29.6	1,799
Other	---	---	---	---	---	---	---	---	---	---

#### Standards

**Designed and Manufactured in accordance with the following:**

Cable	IEEE 1222
Fiber	IEC 60793, ITU-T G.65x Series
Color Code	ANSI/EIA 359-A, 598-A, IEC 60304

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## Mechanical / Physical Details

Approximate Cable Diameter		14.2 mm	0.559 in
Approximate Cable Weight		160 kg/km	0.108 lbs/ft
Maximum Rated Cable Load (MRCL)		1,038 kg	2,289 lbs
Approximate Cable Breaking Strength		1,779 kg	3,921 lbs
Minimum Bending Radius	Static	15 cm	6 in
	Dynamic	29 cm	12 in
Coefficient of Linear Expansion		1.37E-05 1/°C	7.63E-06 1/°F
Cable Modulus	Initial	5.84 kN/mm <sup>2</sup>	847.7 kpsi
	Final	6.30 kN/mm <sup>2</sup>	914.2 kpsi
	10 Year	4.87 kN/mm <sup>2</sup>	706.4 kpsi
Environmental Temperature Recommendations			
	Storage	-50 to +70 °C	-58 to +158 °F
	Operation	-40 to +70 °C	-40 to +158 °F
	Installation	-30 to +70 °C	-22 to +158 °F

## Optical Details

### Attenuation Characteristics for Corning® Singlemode fibers

#### Max Individual

0.40 dB/km 1310 nm

0.30 dB/km 1550 nm

### 48 Fiber ADSS Core (8 - 6 fiber buffer tubes)

Unit	Fiber Type	Fiber Count
Blue	Corning® Singlemode fibers	6
Orange	Corning® Singlemode fibers	6
Green	Corning® Singlemode fibers	6
Brown	Corning® Singlemode fibers	6
Slate	Corning® Singlemode fibers	6
White	Corning® Singlemode fibers	6
Red	Corning® Singlemode fibers	6
Black	Corning® Singlemode fibers	6
<b>Total Fiber Count</b>		<b>48</b>

### Standard Fiber Color Code

Fiber No.	1	2	3	4	5	6	7	8	9	10	11	12
Color	Blue	Orange	Green	Brown	Slate	White	Red	Black	Yellow	Violet	Rose	Aqua

- 1) Designs with more than 12 fibers per tube will use the standard color code and binders for identification of the fibers.
- 2) Designs with mixed fiber types will have multimode or NZDS fibers in the first tube(s) followed by single-mode fibers in the last tube(s).

### Installation and Handling Recommendations

Installation and cable preparation procedures are outlined in the AFL documents listed below. Contact AFL to request copies.

*Recommended Installation Procedures for All-Dielectric, Self-Supporting (ADSS) Fiber Optic Cable*

*AFL-ADSS® Fiber Optic Cable Installation Video*

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*Installation Instructions for Installing All-Dielectric, Self-Supporting (ADSS) in an AFL Telecommunications Splice Enclosure  
Fiber Optic Cable Receiving, Handling and Storage. Document ACS-WI-809*

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## Quick Reference Installation Notes

Approximate Cable Diameter	14.20 mm	0.559 in
Maximum Stringing Tension (at tensioner)*	356 kg	784 lbs
Minimum Bull Wheel Diameter	100 cm	40 in
Stringing Sheave Diameter**	57 cm	23 in
<b>Minimum Bending Radius</b>		
Cable		
Static (No load)	15 cm	6 in
Dynamic (under tension)	29 cm	12 in
Fiber		
After Installation (Static)	3.8 cm	1.5 in
Plastic Buffer Tube		
After Installation (Static)	8 cm	3 in

\* - The stringing tension is always measured at the tensioner side. In general the maximum stringing tension should be a half of the maximum sagging tension and never should exceed 20% RBS of the ADSS Cable.

\*\* - The value indicated is for the first and last structures of the pull and is based on 40 times the diameter of the ADSS cable. Smaller diameters can be used at tangent structures. Reference AFL's installation instructions for more details.

**Reference AFL's "Recommended Installation Procedures for All-Dielectric, Self-Supporting (ADSS) Fiber Optic Cable" for detailed installation instructions.**

## Shipping Reels

Reel Type	FL	TR	DR	OW	Tare (kgs)	FL	TR	DR	OW	Tare (lbs)	Capacity	
	(cm)					(in)					(meters)	(feet)
Wood	107	81	58	89	60	42	32	23	35	132	1,990	6,520
Wood	147	81	71	97	200	58	32	28	38	441	4,720	15,480
Wood	168	91	91	107	260	66	36	36	42	573	6,310	20,700
Wood	183	91	91	107	300	72	36	36	42	662	7,000	22,960
Wood	213	86	89	104	385	84	34	35	41	849	7,000	22,960
Steel	152	81	81	97	156	60	32	32	38	344	4,640	15,220
Steel	183	91	102	107	245	72	36	40	42	540	7,000	22,960
Steel	213	114	107	130	351	84	45	42	51	774	7,000	22,960

FL - Flange Diameter; TR - Inside Traverse Width; DR - Drum Diameter; OW - Outside Overall Width  
 Arbor Hole Diameter: Wood: 3-1/8in (7.9cm)  
 Steel: 3in (7.6cm)

Maximum lengths shown are the longest lengths that AFL offers. Longer lengths may be possible.

Ordered lengths should include a distribution of lengths, i.e., all reels cannot be ordered at the maximum. A typical reel length distribution is as follows:

- 6000m – 7000m ~ 15% of reels
- 4500m – 6000m ~ 55% of reels
- 2500m – 4500m ~ 25% of reels
- <2500m ~ 5% of reels

Wood reels with flex-wrap covering are standard. Non-returnable steel reels and/or wood lagging are available upon request. Additional reel sizes may be available upon request.

Steel reels are recommended for long term storage. Reference AFL's "Fiber Optic Cable Receiving, Handling and Storage" document for additional information.

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## The Screen Inputs for ADSS cables in PLS Cad

<b>Cable Data</b>			
Name:			
Description:	AFL ADSS DNA-26874 AE048AZ6811BA5		
Cross section area (in <sup>2</sup> )	0.2454	Unit weight (lbs/ft)	0.108
Outside diameter (in)	0.559	Ultimate Tension (lbs)	3,921
Temperature at which data below were obtained	(deg F)		70

Outer strands	Final modulus of elasticity (psi/100)	9,142
	Thermal expansion coeff. (/100 deg F)	7.63E-04

**Generate Coefficients**

Polynomial coefficients (all strain in %)					
	A0	A1 (psi/100)	A2	A3	A4
Stress-strain		8,477			
Creep		7,064			

Core strands	Final modulus of elasticity (psi/100)				
(if different from outer strands)	Thermal expansion coeff. (/100 deg F)				
Polynomial coefficients (all strain in %)					
	A0	A1 (psi/100)	A2	A3	A4
Stress-strain					
Creep					