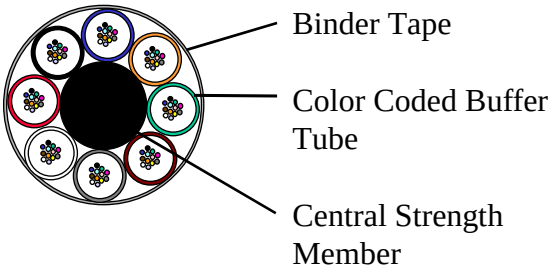
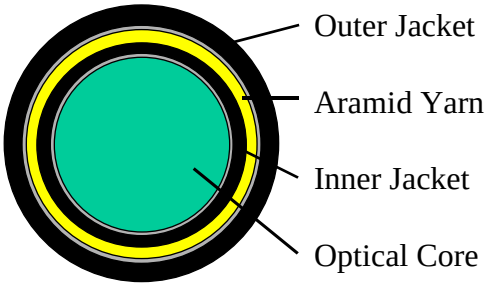
PO Box 3127
Spartanburg, SC 29304
Tel: 1 800 235 3423
Fax: 1 864 433 5560

Specification DNA-31734
Tracking Resistant ADSS Cable

Representative 8 unit Fiber Optic Core



Representative AFL-ADSS® Fiber Optic Cable



AC024AP6821BD0

24 Corning® SMF-28e+™ LL Singlemode

Sag / Tension Performance

Span Length (ft) 1,000

Condition	Wind (mi/hr)	Radial Ice (inches)	Add'l Load (lbs/ft)	Input Data Vert. (ft)	Horiz. (ft)	Vector (ft)	Resultant Data Vert. (ft)	Horiz (ft)	Vector (ft)	Tension (lbs)
Installation	---	---	---	10.0	---	---	10.00	---	10.0	1,580
Ice Alone	---	---	---	---	---	---	---	---	---	---
Wind Alone	93.0	---	---	---	---	---	4.59	39.9	40.1	3,441
Ice and Wind	---	---	---	---	---	---	---	---	---	---
NESC Light	60.0	---	0.1	---	---	---	7.32	26.4	27.4	2,386
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*

Specification DNA-31734

Mechanical / Physical Details

Approximate Cable Diameter		15.1 mm	0.594 in
Approximate Cable Weight		188 kg/km	0.126 lbs/ft
Maximum Rated Cable Load (MRCL)		2,299 kg	5,069 lbs
Approximate Cable Breaking Strength		3,677 kg	8,106 lbs
Minimum Bending Radius	Static	16 cm	6 in
	Dynamic	31 cm	12 in
Coefficient of Linear Expansion		6.24E-06 1/°C	3.47E-06 1/°F
Cable Modulus	Initial	11.45 kN/mm²	1,660.2 kpsi
	Final	12.34 kN/mm²	1,790.4 kpsi
	10 Year	9.54 kN/mm²	1,383.5 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® SMF-28e+™ LL Singlemode fibers

Max Individual

0.35 dB/km 1310 nm
0.25 dB/km 1550 nm

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

Unit	Fiber Type	Fiber Count
Blue	Corning® SMF-28e+™ LL Singlemode fibers	6
Orange	Corning® SMF-28e+™ LL Singlemode fibers	6
Green	Corning® SMF-28e+™ LL Singlemode fibers	6
Brown	Corning® SMF-28e+™ LL Singlemode fibers	6
	Filler	N/A
	Filler	N/A
	Filler	N/A
	Filler	N/A
	Total Fiber Count	24

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

Specification DNA-31734

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

Specification DNA-31734

Quick Reference Installation Notes

Approximate Cable Diameter	15.10	mm	0.594	in
Maximum Stringing Tension (at tensioner)*	735	kg	1,621	lbs
Minimum Bull Wheel Diameter	106	cm	42	in
Stringing Sheave Diameter**	61	cm	24	in
Minimum Bending Radius				
Cable				
Static (No load)	16	cm	6	in
Dynamic (under tension)	31	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*	*FL*	*TR*	*DR*	*OW*	*Tare*	*Capacity*	
	(cm)				*(kgs)*	*(in)*				*(lbs)*	*(meters)*	*(feet)*
Wood	147	81	71	97	200	58	32	28	38	441	4,210	13,810
Wood	168	91	91	107	260	66	36	36	42	573	5,640	18,500
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	345	60	32	32	38	761	4,140	13,580
Steel	183	91	102	107	540	72	36	40	42	1,191	6,690	21,940
Steel	213	114	107	130	773	84	45	42	51	1,704	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.

Specification DNA-31734

The Screen Inputs for ADSS cables in PLS Cad

Cable Data			
Name:			
Description:	AFL ADSS DNA-31734 AC024AP6821BD0		
Cross section area (in^2)	0.2776	Unit weight (lbs/ft)	0.126
Outside diameter (in)	0.594	Ultimate Tension (lbs)	8,106
Temperature at which data below were obtained		(deg F)	70

Outer strands	Final modulus of elasticity (psi/100)	17,904
	Thermal expansion coeff. (/100 deg F)	3.47E-04

Generate Coefficients

Polynomial coefficients (all strain in %)

	A0	A1 (psi/100)	A2	A3	A4
Stress-strain		16,602			
Creep		13,835			

Core strands (if different from outer strands)	Final modulus of elasticity (psi/100)	
	Thermal expansion coeff. (/100 deg F)	

Polynomial coefficients (all strain in %)

	A0	A1 (psi/100)	A2	A3	A4
Stress-strain					
Creep					