

Flex-Span® ADSS Fiber Optic Cable

AFL Flex-Span All-Dielectric Self-Supporting (ADSS) cable is designed for aerial distribution power lines, as well as underground duct applications. As its name indicates, there are no metallic components and the cable does not require a support or messenger wire. Flex-Span ADSS cables are a single jacket design intended for the shorter pole-to-pole span lengths in a distribution environment. A broad combination of fiber counts and spans lengths in this product family provide network designers with flexibility in their cable selection.

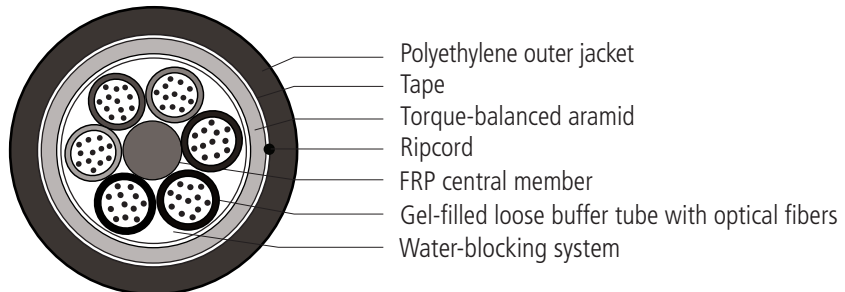
Features

- Gel-filled tubes are reverse-oscillated to allow slack for mid-span access
- Up to 144 fibers in cable
- Pole-to-pole span lengths up to 1100 feet
- Single jacket design decreases the diameter and weight when compared to double jacket ADSS cable
- No separation requirement of ADSS from conductors per National Electric Safety Code (NESC) section 235

Applications

- Electric utility distribution power lines
 - Framed in supply or communications space
- Underground duct
- Enterprise OSP networks
- Fiber-to-the-X networks

Cable Components (Representative)



Optical Information

FIBER TYPE	MAXIMUM ATTENUATION (dB/km)				OVERFILL LAUNCH MIN. BANDWIDTH (MHz•km)		GIGABIT ETHERNET MINIMUM LINK DISTANCE (meters)	
	850 nm	1300 nm	1310 nm	1550 nm	850 nm	1300 nm	850 nm	1300 nm
(6) 62.5/125 GIGA-Link™ 300	3.5	1.2	N/A	N/A	200	600	300	550
(8) 62.5/125 GIGA-Link™ 1000	3.5	1.2	N/A	N/A	350	600	500	1000
(5) 50/125 GIGA-Link™ 600	2.9	0.9	N/A	N/A	500	500	600	600
(7) 50/125 GIGA-Link™ 2000	2.9	0.9	N/A	N/A	500	800	750	2000
(L) 50 Laser-Link™ 300	2.9	0.9	N/A	N/A	1500	500	900	550
(9) Single-mode	N/A	N/A	0.35	0.25	N/A	N/A	N/A	5000
(Q) Non-zero Dispersion-shifted Single-mode	N/A	N/A	N/A	0.25	N/A	N/A	N/A	N/A
(K) SM Futureguide SR-15e Bend Insensitive	N/A	N/A	0.35	0.25	N/A	N/A	N/A	5000

Gigabit Ethernet Minimum Link Distances are based on "bandwidth"/modal dispersion constraints. Actual link distances may be constrained by attenuation, depending on specific loss budget.

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Reel Information

ITEM	REEL A		REEL B		REEL C		REEL D		REEL E	
	INCHES	CM	INCHES	CM	INCHES	CM	INCHES	CM	INCHES	CM
Reel Height	42	106.7	58	147.3	66	167.6	72	167.6	84	213.4
Reel Width Outside	36	91.4	38	96.5	42	106.7	42	106.7	40	101.6
Reel Width Inside	32	81.6	32	81.3	36	91.4	36	91.4	34	86.4
Drum Diameter	23	58.7	28	71.1	36	91.4	36	91.4	35	88.9
Arbor Hole Diameter	3	7.9	3	7.9	3	7.9	3	7.9	3	7.9
Reel Weight with Lagging	180 lbs	82 kg	420 lbs	191 kg	685 lbs	311 kg	710 lbs	311 kg	950 lbs	431 kg

AFL provides ADSS cable on several standard sizes of non-returnable wooden reels. Non-standard reel sizes are available upon request.

Typical Maximum Lengths

CABLE DIAMETER	REEL CAPACITY	
	FEET	METERS
< 0.85" (21.6 mm)	23,000	7,000

NOTE: Longer lengths may be available upon request.

Recommended Products for ADSS Fiber Optic Cable

DESCRIPTION	AFL NO.
Fiber Optic Cable Accessories	
ADSS Formed Wire Deadends	Refer to the ADSS Formed Wire Deadends spec sheet for specific AFL No.
ADSS Suspension Unit	Refer to the ADSS Suspension Unit spec sheet for specific AFL No.
ADSS Trunnion Assemblies	Refer to the ADSS Trunnion Assemblies spec sheet for specific AFL No.
ADSS Temporary Grip	Refer to the ADSS Temporary Grip spec sheet for specific AFL No.
AGC Downlead Clamp for ADSS	Refer to the AGC Downlead Clamp for ADSS spec sheet for specific AFL No.
AVD Series Spiral Vibration Dampers	Refer to the AVD Series Spiral Vibration Dampers spec sheet for specific AFL No.
Coil Brackets	Refer to the Coil Brackets spec sheet for specific AFL No.

Temperature Specifications

TEMPERATURE RANGE	
Operation	-40°C to +70°C
Storage	-50°C to +70°C
Installation	-30°C to +70°C

Qualifications

GOVERNING BODY	STANDARD CODE	COMPONENT
IEEE	1222	Cable
TIA	598-D	Fiber

Contact AFL for your customized ADSS solution.

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Fiber Optic Cable



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Fiber Optic Cable

NESC LIGHT @ 1.5% INSTALLATION SAG														
SPAN FEET METERS		AFL NO.	FIBERS PER TUBE	WEIGHT		DIAMETER		MRCL		INITIAL TENSION ¹				
				LBS/FT	KG/KM	IN.	MM	LBS	N	UNLOADED		LOADED		
										LBS	N	SAG %	LBS	N
12 FIBERS														
525	160	AE012★C520A08	12	0.057	84	0.425	10.8	539	2398	248	1104	0.8	521	2318
600	183	AE012★C520AA0	12	0.057	84	0.425	10.8	598	2661	284	1264	0.8	592	2634
700	213	AE012★C520AA5	12	0.057	84	0.425	10.8	746	3320	333	1482	0.8	702	3124
800	244	AE012★C520E08	12	0.059	88	0.433	11	809	3600	395	1758	0.8	807	3591
925	282	AE012★C520EA1	12	0.059	88	0.433	11	999	4445	457	2034	0.8	947	4214
1050	320	AE012★C520EA2	12	0.059	88	0.433	11	1062	4726	519	2309	0.8	1059	4712
1100	335	AE012★C520EA4	12	0.059	88	0.433	11	1189	5291	544	2421	0.8	1127	5015
24 FIBERS														
525	160	AE024★C520A08	12	0.058	86	0.425	10.8	539	2398	252	1121	0.8	523	2327
600	183	AE024★C520AA0	12	0.058	86	0.425	10.8	598	2661	289	1286	0.8	594	2643
700	213	AE024★C520AA5	12	0.058	86	0.425	10.8	746	3320	338	1504	0.8	705	3137
800	244	AE024★C520EA0	12	0.06	90	0.433	11	936	4165	402	1789	0.8	838	3729
925	282	AE024★C520EA1	12	0.06	90	0.433	11	999	4445	464	2065	0.8	951	4232
1010	308	AE024★C520EA2	12	0.06	90	0.433	11	1062	4726	507	2256	0.8	1032	4592
1100	335	AE024★C520EA4	12	0.06	90	0.433	11	1189	5291	553	2461	0.8	1131	5033
48 FIBERS														
525	160	AE048★C520A08	12	0.06	89	0.425	10.8	539	2398	261	1161	0.9	528	2350
600	183	AE048★C520AA1	12	0.06	89	0.425	10.8	628	2794	298	1326	0.9	606	2697
700	213	AE048★C520AA5	12	0.06	89	0.425	10.8	746	3320	349	1553	0.8	711	3164
800	244	AE048★C520EA0	12	0.062	93	0.433	11	936	4165	414	1842	0.8	845	3760
925	282	AE048★C520EA1	12	0.062	93	0.433	11	999	4445	479	2131	0.9	958	4263
1030	314	AE048★C520EA2	12	0.062	93	0.433	11	1062	4726	534	2376	0.9	1056	4699
1100	335	AE048★C520EA4	12	0.062	93	0.433	11	1189	5291	570	2536	0.9	1140	5073
72 FIBERS														
725	221	AE072★C620A08	12	0.075	112	0.465	11.8	854	3800	454	2020	0.9	832	3702
800	244	AE072★C620AA0	12	0.075	112	0.465	11.8	913	4063	501	2229	0.9	911	4054
875	267	AE072★C620AA3	12	0.075	112	0.465	11.8	1002	4459	548	2438	0.9	998	4441
975	297	AE072★C620AA7	12	0.075	112	0.465	11.8	1120	4984	611	2719	0.9	1113	4953
1075	328	AE072★C620EA0	12	0.075	112	0.465	11.8	1250	5562	674	2999	0.9	1230	5473
96 FIBERS														
400	122	AE096★O520A08	24	0.069	103	0.457	11.6	524	2332	230	1024	0.8	475	2114
500	152	AE096★O520AA1	24	0.069	103	0.457	11.6	598	2661	287	1277	0.8	581	2585
600	183	AE096★O520AA6	24	0.07	104	0.461	11.7	722	3213	351	1562	0.9	705	3137
700	213	AE096★O520EA0	24	0.07	104	0.461	11.7	856	3809	410	1825	0.8	825	3671
800	244	AE096★O520EA2	24	0.071	106	0.465	11.8	963	4285	476	2118	0.9	947	4214
900	274	AE096★O520EA4	24	0.072	107	0.465	11.8	1069	4757	537	2390	0.9	1063	4730
925	282	AE096★C820A08	12	0.1	148	0.528	13.4	1296	5767	769	3422	1	1270	5651
1000	305	AE096★O520EA7	24	0.073	108	0.469	11.9	1228	5465	607	2701	0.9	1200	5340
1000	305	AE096★C820AA1	12	0.1	149	0.528	13.4	1384	6159	832	3702	1	1370	6096
1100	335	AE096★O520EB0	24	0.074	110	0.472	12	1388	6177	679	3022	0.9	1339	5959
144 FIBERS														
725	221	AE144★O620A08	24	0.085	126	0.484	12.3	913	4061	512	2278	1.0	906	4031
850	259	AE144★O620AA4	24	0.086	128	0.488	12.4	1077	4787	609	2709	1.0	1072	4770
1050	320	AE144★O620EA1	24	0.087	130	0.492	12.5	1338	5954	764	3399	1.0	1337	5948

L I G H T

¹ Initial tension indicates tension before 10 year creep.

Note: Diameter and weight subject to change without notice.

* Fiber Types – Replace asterisk (★) in AFL number with number corresponding to desired fiber type below.

- 5 = 50/125 µm multimode GIGA-Link™ 600
- 7 = 50/125 µm multimode GIGA-Link™ 2000
- 6 = 62.5/125 µm multimode GIGA-Link™ 300
- 8 = 62.5/125 µm multimode GIGA-Link™ 1000

- L = 50/125 µm multimode Laser-Link™ 300
- 9 = Single-mode
- K = SM Futureguide SR-15e Bend Insensitive
- Q = Non-zero dispersion-shifted single-mode

continued →

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Fiber Optic Cable

M E D I U M NESC MEDIUM @ 1.5% INSTALLATION SAG														
SPAN		AFL NO.	FIBERS PER TUBE	WEIGHT		DIAMETER		MRCL		INITIAL TENSION ¹				
FEET	METERS			LBS/FT	KG/KM	IN.	MM	LBS	N	UNLOADED		LOADED		
										LBS	N	SAG %	LBS	N
12 FIBERS														
375	114	AE012★C520A08	12	0.057	84	0.425	10.8	539	2398	178	792	3.5	532	2367
400	122	AE012★C520AA0	12	0.057	84	0.425	10.8	598	2661	189	841	3.5	573	2550
500	152	AE012★C520AA5	12	0.057	84	0.425	10.8	746	3320	238	1059	3.5	717	3191
550	168	AE012★C520E08	12	0.059	88	0.433	11	809	3600	272	1210	3.5	793	3529
650	198	AE012★C520EA1	12	0.059	88	0.433	11	999	4445	321	1428	3.4	949	4223
700	213	AE012★C520EA2	12	0.059	88	0.433	11	1062	4726	346	1540	3.5	1018	4530
800	244	AE012★C520EA4	12	0.059	88	0.433	11	1189	5291	396	1762	3.5	1157	5148
24 FIBERS														
375	114	AE024★C520A08	12	0.058	86	0.425	10.8	539	2398	181	805	3.5	533	2372
400	122	AE024★C520AA0	12	0.058	86	0.425	10.8	598	2661	192	854	3.5	575	2559
500	152	AE024★C520AA5	12	0.058	86	0.425	10.8	746	3320	242	1077	3.5	719	3199
625	190	AE024★C520EA0	12	0.06	90	0.433	11	936	4165	314	1397	3.5	908	4040
650	198	AE024★C520EA1	12	0.06	90	0.433	11	999	4445	326	1451	3.4	951	4232
700	213	AE024★C520EA2	12	0.06	90	0.433	11	1062	4726	352	1566	3.5	1021	4543
800	244	AE024★C520EA4	12	0.06	90	0.433	11	1189	5291	402	1789	3.5	1160	5162
48 FIBERS														
375	114	AE048★C520A08	12	0.06	89	0.425	10.8	539	2398	187	832	3.5	536	2385
425	130	AE048★C520AA1	12	0.06	89	0.425	10.8	628	2794	211	939	3.5	612	2723
500	152	AE048★C520AA5	12	0.06	89	0.425	10.8	746	3320	250	1112	3.5	723	3217
625	190	AE048★C520EA0	12	0.062	93	0.433	11	936	4165	324	1442	3.5	913	4063
650	198	AE048★C520EA1	12	0.062	93	0.433	11	999	4445	337	1500	3.4	957	4258
700	213	AE048★C520EA2	12	0.062	93	0.433	11	1062	4726	363	1615	3.5	1027	4570
800	244	AE048★C520EA4	12	0.062	93	0.433	11	1189	5291	415	1847	3.5	1167	5193
72 FIBERS														
525	160	AE072★C620A08	12	0.075	112	0.465	11.8	854	3800	328	1460	3.4	825	3671
575	175	AE072★C620AA0	12	0.075	112	0.465	11.8	913	4063	360	1602	3.4	899	4000
625	190	AE072★C620AA3	12	0.075	112	0.465	11.8	1002	4459	391	1740	3.4	979	4356
710	216	AE072★C620AA7	12	0.075	112	0.465	11.8	1120	4984	445	1980	3.5	1108	4930
800	244	AE072★C620EA0	12	0.075	112	0.465	11.8	1250	5562	501	2229	3.5	1245	5540
96 FIBERS														
300	91	AE096★O520A08	24	0.069	103	0.457	11.6	524	2332	172	765	3.2	493	2194
400	122	AE096★O520AA3	24	0.07	104	0.461	11.7	648	2884	234	1041	3.3	648	2884
500	152	AE096★O520EA0	24	0.07	104	0.461	11.7	856	3809	293	1304	3.2	822	3658
600	183	AE096★O520EA4	24	0.072	107	0.465	11.8	1069	4757	358	1593	3.2	1002	4459
700	213	AE096★O520EA7	24	0.073	108	0.469	11.9	1228	5465	425	1891	3.2	1170	5207
725	221	AE096★C820A08	12	0.1	148	0.528	13.4	1296	5767	603	2683	3.4	1282	5705
775	236	AE096★C820AA1	24	0.1	149	0.528	13.4	1384	6159	645	2870	3.4	1370	6096
800	244	AE096★O520EB0	12	0.074	110	0.472	12	1388	6177	494	2198	3.2	1340	5963
144 FIBERS														
525	160	AE144★O620A08	24	0.085	126	0.484	12.3	913	4061	370	1646	3.3	887	3947
625	190	AE144★O620AA4	24	0.086	128	0.488	12.4	1077	4787	448	1993	3.3	1059	4711
775	236	AE144★O620EA1	24	0.087	130	0.492	12.5	1338	5954	564	2509	3.3	1321	5878

¹ Initial tension indicates tension before 10 year creep.

Note: Diameter and weight subject to change without notice.

★ Fiber Types – Replace asterisk (★) in AFL number with number corresponding to desired fiber type below.

- 5 = 50/125 µm multimode GIGA-Link™ 600
- 7 = 50/125 µm multimode GIGA-Link™ 2000
- 6 = 62.5/125 µm multimode GIGA-Link™ 300
- 8 = 62.5/125 µm multimode GIGA-Link™ 1000

- L = 50/125 µm multimode Laser-Link™ 300
- 9 = Single-mode
- K = SM Futureguide SR-15e Bend Insensitive
- Q = Non-zero dispersion-shifted single-mode

continued



Flex-Span® ADSS Fiber Optic Cable

Fiber Optic Cable

NESC HEAVY @ 1.5% INSTALLATION SAG														
SPAN FEET METERS		AFL NO.	FIBERS PER TUBE	WEIGHT		DIAMETER		MRCL		INITIAL TENSION ¹				
				LBS/FT	KG/KM	IN.	MM	LBS	N	UNLOADED		LOADED		
										LBS	N	SAG %	LBS	N
12 FIBERS														
200	61	AE012★C520A08	12	0.057	84	0.425	10.8	539	2398	95	423	4.5	485	2158
250	76	AE012★C520AA0	12	0.057	84	0.425	10.8	598	2661	118	525	4.6	585	2603
300	91	AE012★C520AA5	12	0.057	84	0.425	10.8	746	3320	143	636	4.6	710	3159
325	99	AE012★C520E08	12	0.059	88	0.433	11	809	3600	160	712	4.6	775	3449
400	122	AE012★C520EA1	12	0.059	88	0.433	11	999	4445	198	881	4.6	955	4250
450	137	AE012★C520EA2	12	0.059	88	0.433	11	1062	4726	222	988	4.7	1057	4703
500	152	AE012★C520EA4	12	0.059	88	0.433	11	1189	5291	247	1099	4.7	1177	5237
24 FIBERS														
200	61	AE024★C520A08	12	0.058	86	0.425	10.8	539	2398	96	427	4.5	485	2158
250	76	AE024★C520AA0	12	0.058	86	0.425	10.8	598	2661	120	534	4.6	586	2608
300	91	AE024★C520AA5	12	0.058	86	0.425	10.8	746	3320	145	645	4.6	712	3168
375	114	AE024★C520EA0	12	0.06	90	0.433	11	936	4165	188	837	4.6	897	3991
400	122	AE024★C520EA1	12	0.06	90	0.433	11	999	4445	201	894	4.6	957	4258
450	137	AE024★C520EA2	12	0.06	90	0.433	11	1062	4726	219	975	4.7	1054	4690
500	152	AE024★C520EA4	12	0.06	90	0.433	11	1189	5291	251	1117	4.7	1179	5246
48 FIBERS														
200	61	AE048★C520A08	12	0.06	89	0.425	10.8	539	2398	99	441	4.5	487	2167
250	76	AE048★C520AA1	12	0.06	89	0.425	10.8	628	2794	124	552	4.6	596	2652
300	91	AE048★C520AA5	12	0.06	89	0.425	10.8	746	3320	150	667	4.6	714	3177
375	114	AE048★C520EA0	12	0.062	93	0.433	11	936	4165	194	863	4.6	900	4005
400	122	AE048★C520EA1	12	0.062	93	0.433	11	999	4445	207	921	4.6	960	4272
450	137	AE048★C520EA2	12	0.062	93	0.433	11	1062	4726	233	1037	4.7	1062	4726
500	152	AE048★C520EA4	12	0.062	93	0.433	11	1189	5291	259	1153	4.7	1183	5264
72 FIBERS														
300	91	AE072★C620A08	12	0.075	112	0.465	11.8	854	3800	188	837	4.4	774	3444
350	107	AE072★C620AA0	12	0.075	112	0.465	11.8	913	4063	219	975	4.6	880	3916
400	122	AE072★C620AA3	12	0.075	112	0.465	11.8	1002	4459	250	1112	4.6	995	4428
450	137	AE072★C620AA7	12	0.075	112	0.465	11.8	1120	4984	282	1255	4.6	1117	4970
500	152	AE072★C620EA0	12	0.075	112	0.465	11.8	1250	5562	313	1393	4.6	1243	5531
96 FIBERS														
200	61	AE096★O520A08	24	0.069	103	0.457	11.6	524	2332	115	512	4.3	523	2327
300	91	AE096★O520EA0	24	0.07	104	0.461	11.7	856	3809	176	783	4.2	807	3591
400	122	AE096★O520EA4	24	0.072	107	0.465	11.8	1069	4757	239	1064	4.3	1060	4717
400	122	AE096★C820A08	12	0.1	148	0.528	13.4	1296	5767	333	1482	4.3	1140	5073
500	152	AE096★O520E0	24	0.074	110	0.472	12	1388	6177	309	1375	4.3	1349	6003
500	152	AE096★C820AA1	12	0.1	149	0.528	13.4	1384	6159	416	1851	4.5	1364	6070
144 FIBERS														
300	91	AE144★O620A08	24	0.085	126	0.484	12.3	913	4061	212	943	4.3	826	3675
400	122	AE144★O620AA4	24	0.086	128	0.488	12.4	1077	4787	287	1277	4.4	1067	4748
500	152	AE144★O620EA1	24	0.087	130	0.492	12.5	1338	5954	364	1619	4.4	1336	5944

¹ Initial tension indicates tension before 10 year creep.

★ Fiber Types – Replace asterisk (★) in AFL number with number corresponding to desired fiber type below.

Note: Diameter and weight subject to change without notice.

- 5 = 50/125 µm multimode GIGA-Link™ 600
- 7 = 50/125 µm multimode GIGA-Link™ 2000
- 6 = 62.5/125 µm multimode GIGA-Link™ 300
- 8 = 62.5/125 µm multimode GIGA-Link™ 1000

- L = 50/125 µm multimode Laser-Link™ 300
- 9 = Single-mode
- K = SM Futureguide SR-15e Bend Insensitive
- Q = Non-zero dispersion-shifted single-mode