

AlumaCore OPGW

The AlumaCore Optical Ground Wire was AFL’s original OPGW design family dating back to 1984. OPGW provides all of the benefits of a traditional shield wire, such as providing short circuits a path to ground and protecting the circuits from lightning strikes, in addition to providing an optical pathway for communication.

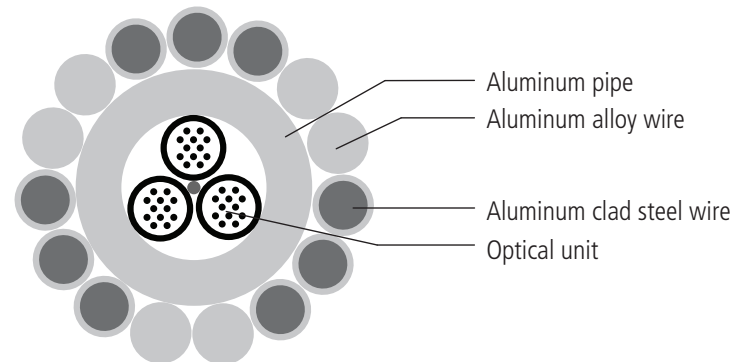
Features

- Fiber counts up to 144
- Fiber bearing units similar to that of other fiber optic cable such as ADSS and underground cable
- Splicer familiarity and less splicing prep time required
- Aluminum pipe provides high crush resistance and good electrical performance
- Ability to be sectionalized

Applications

- Energy Market
- Transmission
- Right-of-Way
- Topmost part of the structure (shield wire position)

Cable Components



Typical Designs

FIBERS (MAX)	OPGW SIZE	FAULT CURRENT	TOTAL CONDUCTOR AREA		OVERALL DIAMETER		WEIGHT		APPROXIMATE RBS		SAG10 CHART #	MAX SHIP LENGTH (PER REEL TYPE)	
		(KA) ² SEC	IN ²	MM ²	IN	MM	LBS/FT	KG/M	LBS	KG		WOOD (M)	STEEL (M)
24	AC-64/528	68	0.1510	97.43	0.528	13.4	0.359	0.535	18,000	8,100	1-1450	6,700	7,000
24	AC-29/34/528	81	0.1510	97.43	0.528	13.4	0.281	0.418	12,000	5,440	1-1439	7,000	7,000
24	AC-74/552	81	0.1666	107.51	0.552	14.0	0.405	0.602	20,500	9,300	1-1453	6,000	7,000
24	AC-37/37/552	98	0.1666	107.51	0.552	14.0	0.306	0.455	13,000	6,000	1-1438	7,000	7,000
36	AC-71/571	95	0.1758	113.39	0.571	14.5	0.411	0.611	20,000	9,050	1-1461	5,900	7,000
36	AC-33/38/571	110	0.1758	113.39	0.571	14.5	0.323	0.478	13,250	6,000	1-1438	7,000	7,000
36	AC-86/607	118	0.2002	129.14	0.607	15.4	0.481	0.713	24,250	11,000	1-1457	5,000	6,900
36	AC-40/47/607	141	0.2002	129.14	0.607	15.4	0.375	0.558	16,000	7,250	1-1439	6,500	7,000
48	AC-86/646	151	0.2208	142.43	0.646	16.4	0.509	0.757	24,500	11,100	1-1461	4,700	6,600
48	AC-34/52/646	172	0.2208	142.43	0.646	16.4	0.417	0.621	17,250	7,800	1-1439	5,800	7,000
48	AC-129/724	239	0.2876	185.57	0.724	18.4	0.703	1.046	34,250	15,500	1-1453	3,400	4,700
48	AC-65/65/724	292	0.2876	185.57	0.724	18.4	0.530	0.789	21,900	9,900	1-1438	4,500	5,500

continued
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Typical Designs (cont.)

FIBERS (MAX)	OPGW SIZE	FAULT CURRENT (KA) ² SEC	TOTAL CONDUCTOR AREA		OVERALL DIAMETER		WEIGHT		APPROXIMATE RBS		SAG10 CHART #	MAX SHIP LENGTH (PER REEL TYPE)	
			IN ²	MM ²	IN	MM	LBS/FT	KG/M	LBS	KG		WOOD (M)	STEEL (M)
72	AC-88/659	154	0.2232	143.98	0.659	16.7	0.516	0.768	25,000	11,250	1-1461	4,700	6,500
72	AC-38/49/659	177	0.2232	143.98	0.659	16.7	0.414	0.615	17,000	7,750	1-1438	5,800	6,800
72	AC-102/691	182	0.2460	158.96	0.691	17.5	0.582	0.866	28,750	13,000	1-1450	4,100	5,700
72	AC-44/58/691	212	0.2460	158.96	0.691	17.5	0.465	0.692	19,900	9,000	1-1439	5,200	6,800
144	AC-82/646	144	0.2147	138.52	0.646	16.4	0.498	0.741	23,250	10,500	1-1461	4,800	6,500
144	AC-39/43/646	166	0.2147	138.52	0.646	16.4	0.395	0.588	15,500	7,000	1-355	6,100	6,500
144	AC-125/726	230	0.2813	181.48	0.726	18.4	0.6919	1.030	34,250	15,000	1-1453	3,500	4,800
144	AC-58/67/726	277	0.2813	181.48	0.726	18.4	0.5378	0.800	22,500	10,250	1-1439	4,500	6,100

This information denotes the input data needed for Sag10™ (sag and tension calculation) software. WIR files of all these catalog designs can be found on PLS-CADD web page.

NOTES:

Data contained in the table are approximations. Please reference the exact cable data sheet for the most up-to-date information.

The designs above are only a sampling of the options available from AFL. Contact customer service for a cable designed to your exact specifications.

Recommended Products for AlumaCore OPGW

DESCRIPTION	AFL NO.
Fiber Optic Cable Accessories	
OPGW Bolted Deadend	Refer to the Fiber Optic Cable Hardware catalog for specific AFL No.
OPGW Mechanical Suspension	Refer to the Fiber Optic Cable Hardware catalog for specific AFL No.
SB01 Splice Enclosure	Refer to the Fiber Optic Cable Hardware catalog for specific AFL No.
Motion Control	
Stockbridge Vibration Damper	Refer to the Transmission & Distribution catalog, Motion Control section , for specific AFL No.

Temperature Specifications

TEMPERATURE RANGE	
Operation	-40°C to +85°C
Storage	-50°C to +85°C
Installation	-30°C to +85°C

Qualifications

GOVERNING BODY	STANDARD CODE	COMPONENT
IEEE	1138	Cable
IEC	60794-4	Cable
TIA	598-D	Fiber
ASTM	B415	Alumium Clad Steel Wire (ACS wire)

Contact AFL for your customized OPGW solution.

Fiber Optic Cable