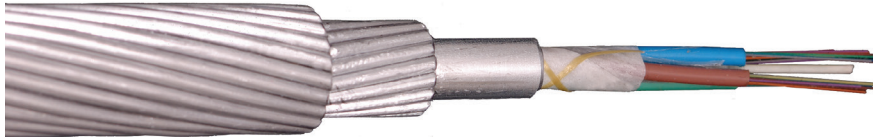


## PureCore™ OPGW

Aluminum central tube cable



### Optical Power Ground Wire for Transmission Applications

#### Overview

Prysmian's PureCore™ OPGW cables are typically custom-designed to best match the optical, electrical, mechanical, quality and cost requirements of each individual project. This includes optimizing diameter, weight, breaking strength and short circuit capacity. However, some "REFERENCE DESIGNS" are presented here. The core consists of optical fibers contained in one or more loose buffer tubes allowing the fibers to be free from strain even at highest designed operating load. In areas where there is high contamination or close proximity to the ocean, Prysmian recommends a grease coating on the outer armor layer.

#### Product Snapshot

<b>Applications</b>	Prysmian's PureCore™ OPGW provides increased conductivity without sacrificing tensile performance, lightning resistance or limiting fiber count. It is best suited to applications with moderate to high electrical, tensile and/or fiber count requirements.
<b>Construction Options</b>	Single or double armor layers, Single or multiple buffer tubes within the core tube, Right or left-hand stranding lay (on single armor)
<b>Fiber Count</b>	Up to 288 fibers in buffer tubes
<b>Fiber Types</b>	Single-mode (ESMF, bend-insensitive), & Corning Optical Fiber
<b>Performance</b>	Meets or exceeds IEEE-1138-2009, tested in accordance with relevant EIA-455 FOTPs for fiber optic cables
<b>Other Versions</b>	StrandCore™, CladCore™
<b>Registered</b>	ISO 9001, ISO 14001, and TL 9000

#### Features and Benefits

##### Extruded Aluminum Core Tube

- Superior combination of crush and kink resistance
- Core tube can safely and easily be routed to closures without armor
- Easy access to optical core

##### Superior Corrosion Resistance

- No exposed stainless steel to induce corrosion of aluminum elements
- Meets IEEE construction guidelines for use in high corrosion sites

##### Superior Electrical Performance

- Aluminum core tube substantially increases conductor cross-section

##### Superior Lightning Resistance

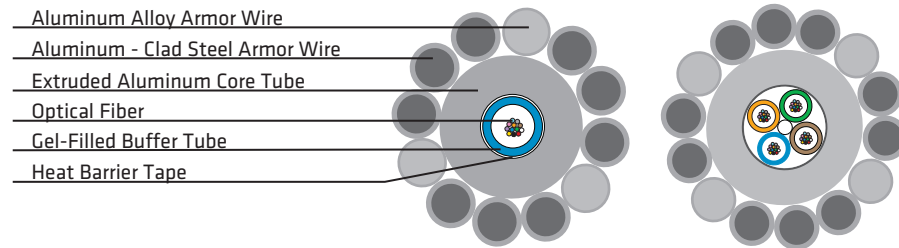
- Fewer aluminum alloy wires are needed to meet electrical specs
- More/heavier duty ACS wires can be used
- AA wires can be completely replaced with ACS in some applications

##### High Performance Even in High Fiber Counts

- All fibers are housed in the core tube
- A core tube is available in a wide range of inside diameters
- Armor wires are not replaced with fiber tubes in high count designs
- Electrical and mechanical properties can be maintained

## PureCore™ OPGW Cable

Optical ground wires with capacity up to 96 optical fibers



Fiber Count (max)	OPGW Reference	Fault Current (kA) <sup>2</sup> sec	Total Conductor Area Inches <sup>2</sup>	Total Conductor Area mm <sup>2</sup>	Overall Diameter Inches	Overall Diameter mm	Weight		RBS		SAG 10 Chart #
							lbs/ft	kg/m	lbs	kg	
12	OPGW 18A46 (7546)	41	0.1232	79.5	0.466	11.8	0.308	0.458	16226	7360	1-1421
12	OPGW 18B34 (7521)	51	0.1232	79.5	0.466	11.8	0.228	0.340	10362	4700	1-1439
12	OPGW 28C56 (7520)	56	0.1468	94.7	0.506	12.8	0.374	0.556	20349	9230	1-1442
12	OPGW 28D43 (7562)	70	0.1468	94.7	0.506	12.8	0.288	0.428	13735	6230	1-917
24	OPGW 34D55 (7522)	68	0.1500	96.5	0.529	13.4	0.367	0.546	18409	8350	1-1450
24	OPGW 34D43 (7772)	81	0.1500	96.5	0.529	13.4	0.287	0.427	12147	5510	1-1439
24	OPGW 40E61 (7557)	81	0.1650	106.6	0.553	14.0	0.410	0.611	21142	9590	1-1453
24	OPGW 40F46 (7523)	98	0.1650	106.6	0.553	14.0	0.311	0.463	13558	6150	1-1438
36	OPGW 45F62 (7524)	95	0.1765	113.9	0.571	14.5	0.415	0.617	20569	9330	1-1461
36	OPGW 45G49 (7525)	110	0.1765	113.9	0.571	14.5	0.327	0.486	13801	6260	1-1438
36	OPGW 54H73 (7526)	118	0.2018	130.2	0.608	15.4	0.487	0.725	24846	11270	1-1457
36	OPGW 54J57 (7527)	141	0.2018	130.2	0.608	15.4	0.381	0.567	16667	7560	1-1439
48	OPGW 64K78 (7540)	151	0.2227	143.7	0.647	16.4	0.519	0.773	25111	11390	1-1461
48	OPGW 64K64 (7541)	172	0.2227	143.7	0.647	16.4	0.425	0.641	18056	8190	1-1439
48	OPGW 83N105 (7543)	239	0.2878	185.7	0.722	18.3	0.707	1.052	35054	15900	1-1453
48	OPGW 83P80 (7552)	292	0.2878	185.7	0.722	18.3	0.537	0.799	22531	10220	1-1438
72	OPGW 67K78 (7995)	154	0.2229	143.8	0.657	16.7	0.531	0.784	25573	11600	1-1461
72	OPGW 67K63 (7996)	177	0.2229	143.8	0.657	16.7	0.426	0.630	17747	8050	1-1438
72	OPGW 73L88 (7999)	182	0.2446	157.8	0.681	17.3	0.595	0.879	29784	13510	1-1450
72	OPGW 73M70 (7997)	212	0.2446	157.8	0.681	17.3	0.476	0.704	20624	9355	1-1439
96	OPGW 62J72 (8000)	138	0.2080	134.2	0.638	16.2	0.489	0.723	23192	10520	1-1166
96	OPGW 62J57 (8001)	159	0.2080	134.2	0.638	16.2	0.384	0.568	15079	6840	1-1441
96	OPGW 84N104 (7994)	230	0.2818	181.8	0.724	18.4	0.701	1.036	35163	15950	1-1453
96	OPGW 84P81 (7632)	277	0.2818	181.8	0.724	18.4	0.547	0.808	23545	10680	1-1439

### Cable Characteristics

- Optical unit composed of 1 to 4 tubes
- Armor Lay direction: left (S) or right (Z)

### Temperature Range

-40° F to +176° F (-40° C to +80° C)

### Routine Tests

100% of optical fibers are measured by OTDR technique before leaving factory.

### Installation Procedure

Prysmian recommends installing the cable described in this specification following the latest version of our "Installation Procedures for OPGW Fiber Optic Cable" reference SIG-07-PE-PA-013.

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