

StrandCore™ OPGW

Stranded tube cable



Optical Power Ground Wire for Transmission Applications

Overview

Prysmian's StrandCore™ 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.

Product Snapshot

Applications	Prysmian's StrandCore™ OPGW allows cable elongation and sag to be increased without inducing fiber strain. It is best suited for applications with modest electrical requirements. Because StrandCore™ OPGW contains exposed elements made of both stainless steel and aluminum, it should not be used in high corrosion areas.
Construction Options	Single or double armor layers, right or left-hand stranding lays (on single armor), aluminum-alloy and aluminum-clad, steel strand wires
Fiber Count	up to 96 fibers in buffer tubes
Fiber Types	Single-mode (ESMF, bend-insensitive), Corning optical fiber
Performance	Meets or exceeds IEEE-1138-2009, tested in accordance with relevant EIA-455 FOTPs for fiber optic cables
Other Versions	CladCore™, PureCore™
Registered	ISO 9001, ISO 14001, and TL 9000

Features and Benefits

Stranded Stainless Steel Tube

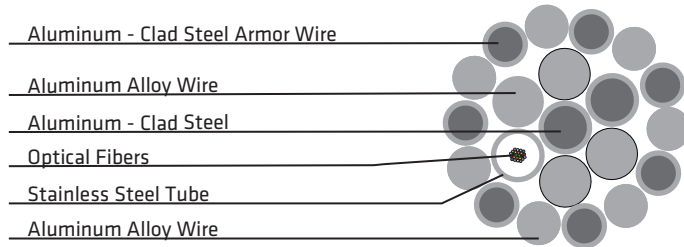
- Wire strands are replaced with fiber-filled stainless steel tubes
- Fiber tubes are helically stranded along side the wires
- Fiber strain margin is increased relative to core tube designs
- Loaded sag can be increased without inducing fiber strain

Compact Design

- Reduced weight
- Increased flexibility
- Smaller minimum bend radius
- Easier to handle and install
- Lower wind and ice loads put less load on structures

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REFERENCE DESIGNS

Fiber Count (max)	OPGW Reference	Fault Current (kA) ² sec	Total Conductor Area		Overall Diameter		Weight		RBS		SAG 10 Chart #
			Inches ²	mm ²	Inches	mm	lbs/ft	kg/m	lbs	kg	
24	20A42Ds (7978)	41	0.1233	79.53	0.472	12.0	0.282	417	14947	6780	1-1461
36	20A37Ds (7979)	41	0.1180	76.12	0.472	12.0	0.251	370	12269	5565	1-350
24	41G47Ds (7975)	96	0.1764	113.81	0.555	14.1	0.320	473	15621	7086	1-1438
24	46H47Ds (7976)	116	0.1896	122.32	0.575	14.6	0.321	474	14782	6705	1-430
96	60J62Ds (7977)	137	0.2140	138.05	0.630	16.0	0.420	620	20091	9113	1-1170
96	64J67Ds (7980)	152	0.2254	145.45	0.646	16.4	0.452	668	22191	10066	1-917
96	70K71Ds (7981)	177	0.2412	155.63	0.669	17.0	0.478	706	23303	10570	1-917

Cable Characteristics

- Optical unit composed of 1 to 3 stranded stainless steel tubes.
- Armor Lay direction: left (S) or right (Z)

Temperature Range

-40° F to +185° F (-40° C to +85° 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.