

CladCore™ OPGW

Aluminum clad stainless steel central tube cable



Optical Power Ground Wire for Transmission Applications

Overview

Prysmian's CladCore™ 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 loose buffer tube allowing the fibers to be free from strain even at highest designed operating load. Where there is high contamination or close proximity to the ocean, Prysmian recommends a grease coating on the outer armor layer.

Product Snapshot

Applications	Prysmian's CladCore™ OPGW provides a compact design without sacrificing corrosion resistance. It is best suited to applications with moderate to low span and electrical requirements.
Construction Options	Single or double armor layers, right or left-hand stranding lays (on single armor)
Fiber Count	up to 48 fibers in a buffer tube
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	StrandCore™, PureCore™
Registered	ISO 9001, ISO 14001, and TL 9000

Features and Benefits

Aluminum-Clad Stainless Steel Core Tube

- High crush resistance in a small form-factor

Superior Corrosion Resistance

- Dissimilar metals are prevented from reacting with one another
- Provides performance similar to stainless steel central tube, without the risk of galvanic corrosion
- Meets IEEE construction guidelines for use in high corrosion sites

Enhanced Electrical Performance

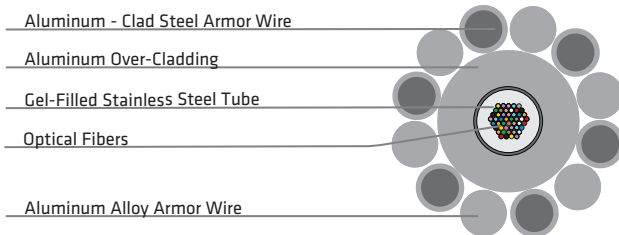
- Use of aluminum alloy wires can be decreased
- Replacement with ACS wires improves lightning resistance

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	
			Inches ²	mm ²	Inches	mm	lbs/ft	kg/m	lbs	kg
48	OPGW 18B47 (8190)	43	0.124	80.52	0.465	11.80	0.314	0.467	16626	7541
48	OPGW 18B35 (8319)	54	0.124	80.52	0.465	11.80	0.238	0.354	10755	4878
48	OPGW 20B47 (8392)	53	0.132	85.40	0.472	12.00	0.316	0.470	16089	7298
48	OPGW 20C36 (8393)	63	0.132	85.40	0.472	12.00	0.244	0.364	10523	4773
48	OPGW 26C53 (8364)	63	0.146	94.10	0.496	12.60	0.355	0.529	18454	8371
48	OPGW 26D42 (8390)	75	0.146	94.10	0.496	12.60	0.279	0.416	12584	5708
48	OPGW 28C57 (8261)	58	0.147	94.90	0.504	12.80	0.381	0.568	20749	9408
48	OPGW 28D44 (8391)	74	0.147	94.90	0.504	12.80	0.295	0.441	14144	6416
48	OPGW 34E61 (8394)	75	0.165	106.60	0.528	13.40	0.410	0.611	21831	9903
48	OPGW 34F46 (8395)	94	0.165	106.60	0.528	13.40	0.310	0.461	14092	6392

Cable Characteristics

- Optical unit composed of a stainless steel tube embedded in an aluminium tube.
- 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.