

OPGW48-core optical cable model and specifications



AI Overview

A 48-core OPGW cable integrates 48 optical fibers within a protective metallic sheath, serving both as a grounding conductor and a high-capacity communication medium for high-voltage transmission lines.

Construction and Design The 48-core OPGW cable typically features a central loose or stainless steel tube containing the optical fibers, which is surrounded by single or double layers of aluminum-clad steel (ACS) wires or a combination of ACS and aluminum alloy wires for mechanical strength and conductivity. The design ensures dual functionality: lightning protection and optical communication. The fibers are protected from environmental hazards such as lightning, short circuits, ice loading, and high winds.

Optical Fiber Specifications

- Fiber Type:** High-purity silica with germanium-doped cores, coated with UV-curable acrylate for primary protection.
- Fiber Count:** 48 cores, customizable in some designs to 24, 36, or 72 fibers.
- Standards Compliance:** Meets international standards such as IEC 60794 and IEEE 1138.
- Protection:** Stainless steel tube or central loose tube filled with water-blocking gel to resist moisture and mechanical stress.

Mechanical and Environmental Properties

- Tensile Strength:** Moderate to high, optimized for overhead installation on high-voltage lines.
- Durability:** Resistant to twisting, lateral pressure, and environmental extremes including lightning strikes, seismic activity, and ice or wind loading.
- Diameter and Weight:** Designed to minimize additional load on towers and poles while maintaining structural integrity.
- Aarmor Options:** Multiple layers of ACS or aluminum alloy wires can be customized to meet specific mechanical and electrical requirements.

Applications

- High-Voltage Transmission Lines:** Suitable for lines above 35 kV, including new installations or replacement of existing ground wires.
- Smart Grid and Communication:** Supports voice, video, and data transmission for grid monitoring...

Article Content

48 Core/24Cores OPGW Fiber Optic Cable

OPGW fiber cable is the short form of Optical Fiber Composite Overhead Ground Wire. OPGW cable is suitable for installation on new power lines with double

Catalogo AlumaCore-OPGW | PDF | Optical Fiber

The document describes AlumaCore OPGW cable which provides fiber protection and is suitable for basic installations and long spans. It lists features of the cable

Utility Power Grid Project OPGW Fiber Optic Ground Wire 24 48 144 Core ...

OPGW (Optical Ground Wire) integrates grounding and fiber optic communication in a single overhead transmission line cable, reducing EPC project installation cost and simplifying power utility

48 Core OPGW Cable_HuaDong Cable & Wire

The Central Tube Optical Ground Wire (OPGW) is surrounded by single or double layers of aluminum clad steel wires (ACS) or mix ACS wires and aluminum alloy

Spe For Opgw 48F India | PDF | Optical Fiber

This document provides technical specifications for an optical ground wire (OPGW) cable manufactured by ZTT India Pvt. Limited. The OPGW cable contains 48

AlumaCore Optical Ground Wire (OPGW) 48 Fiber

Beginning with optical ground wire (OPGW), introduced in 1984 as AFL's flagship product, the line now spans to cabling solutions being used in the world's

FIBRE OPTIC SYSTEMS FOR OHTL

Introducing fibre optic systems for OHTL Overhead optical fibre cable systems have become a key factor in telecommunications networks used by operators and power utilities.

Global Optical Fiber Composite Overhead Ground Wire (OPGW)

The Global Optical Cable Filler (OPGW) Market was valued at USD 78.5 Million in 2025 and is projected to reach USD 112.7 Million by 2032, growing at a CAGR of 5.3%.

Optical Power Ground Wire OPGW Cable Single Mode Fiber Optic Cable ...

AITONG's OPGW cables use good stainless steel tube production technology, the tube is filled with water blocking compounds, which can effectively protect the optical fiber. Good compactness and

AlumaCore Optical Ground Wire (OPGW)

AFL's AlumaCore OPGW (Optical Ground Wire) combines lightweight aluminum construction with integrated fiber optics for overhead transmission lines.

ADSS Fiber Optic Cables Types Prices & Technical Specifications

Related keywords: ADSS cable 48 core datasheet, all-dielectric aerial fiber optic cable, self-supporting optical cable, power line OPGW alternative, AT sheath ADSS cable, long span fiber cable, buy

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Hier sollte eine Beschreibung angezeigt werden, diese Seite lässt dies jedoch nicht zu.

OPGW Specifications and Testing Standards | PDF

This document provides specifications for an optical fiber overhead ground wire (OPGW) cable. It lists general requirements including applicable standards,

OPTICAL GROUND WIRE (OPGW)

The optical fiber shall be made of high pure silica and germanium doped silica. UV curable acrylate material is applied over fiber cladding as optical fiber primary protective coating.

Exploring 48 Core Opgw Optical Fiber Cable: Composition,

With exactly 48 optical fibers, these cables are ideal for medium to high-bandwidth applications in smart grid infrastructure. Available in several specialized variants, 48-core OPGW

OPGW 24 & 48 Core Specifications | PDF | Fibers | Optical Fiber

This document provides specifications for two types of OPGW fiber optic cables: a 24 core cable and a 48 core cable. Both cables use single mode fibers housed within loose buffer tubes made of stainless

Alcatel Cable Guide for Submarine & Power Applications

Explore Alcatel Submarine Networks' cable portfolio: submarine comms, offshore wind power cables, OPGW/ADSS utility solutions, and fiber sensing tech—plus 2026 market trends and sourcing options.

TECHNICAL SPECIFICATION Optical Ground Wire

1.1 SCOPE This specification covers Optical Ground Wire Cables (OPGW) for the installation on high voltage overhead power lines. The cable contains optical fibers for data transmission and telecom

IEEE Std 1138-2021 24 48 Core G.652D Aluminum Clad Steel OPGW Optical ...

IEEE Std 1138-2021 24 48 Core G.652D Aluminum Clad Steel OPGW Optical Ground Wire for High Voltage Overhead Power Grid

CentraCore OPGW F

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.

FIBER OPTIC CABLE

Fiber bearing units similar to that of other fiber optic cable such as ADSS and underground cable

OPGW Optical Fiber Composite Ground Wire

OPGW cable at China Factory Prices Uni-fiber cable provides optical fiber cables for power systems, opgw optical cables and all-dielectric self-supporting optical

Fibre Optic Overhead Ground Wire (OPGW) Standard

1 General 1.1 Purpose To define the technical specifications for the supply of Fibre Optic Overhead Ground Wire (OPGW) for installation on extra high voltage power lines, under the responsibility of

Product Catalog

OPGW cable with stainless Steel and aluminum clad steel tube is available in fiber counts up to 48. The cable can be designed into single or dual layered construction in accordance to the mechanical and

OPGW Cable Specifications Overview | PDF | Wire

The document provides specifications for two types of OPGW cable: 24 core and 48 core. Both types have 24 or 48 fibers, a stainless steel buffer tube, water

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