OpGW48 core optical cable single weight



Overview

OPGW 48 Core Optical Fiber CableIt consists of lightning protection and high-speed optical communication OPTICAL GROUND WIRE (OPGW) The optical fiber shall.

Key Takeaways

The single weight of a 48-core OPGW cable depends on its construction, materials, and armor layers, typically ranging from 1. 0 to 2. 5 kg/m, but exact values require manufacturer specifications.

Cable Construction and Weight Factors

A 48-core OPGW (Optical Ground Wire) cable is a dual-function cable used on high-voltage transmission lines, providing both lightning protection and optical communication capabilities. Its weight is influenced by several key components: Central Loose Tube: The optical fibers are housed in a stainless steel or aluminum-clad steel tube filled with water-blocking gel, which protects fibers from moisture and mechanical stress. Armor Layers: Surrounding the central tube are single or double layers of aluminum-clad steel (ACS) wires or a combination of ACS and aluminum alloy wires.

The number and thickness of these layers significantly affect the cable's weight. Outer Sheath and Coatings: Some designs include an additional aluminum or anti-corrosion coating, which adds to the overall mass. Fiber Count and Type: While the standard is 48 fibers, the type of fiber (e.g., G.

652D, G. 655) and the loose tube design can slightly alter the weight.

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Typical Weight Range

Although exact weight varies by manufacturer and design, 48-core OPGW cables generally weigh between 1. 0 kg/m and 2. 5 kg/m.

Heavier designs are used for longer spans or higher mechanical load requirements, while lighter designs are suitable for shorter spans or lower voltage lines.

Additional Considerations

Tensile Strength: The ACS wires provide a good strength-to-weight ratio, ensuring the cable can withstand wind, ice, and line tension without excessive sag. Customization: Manufacturers can adjust the number of armor layers, wire diameter, and fiber type to meet specific environmental and mechanical requirements, which directly affects the cable weight. Installation Impact: The weight per meter is critical for tower design, installation equipment, and tension calculations during stringing of the cable.

For precise planning, it is recommended to consult the manufacturer's datasheet for the specific 48-core OPGW design, as weight can vary depending on the combination of armor, sheath, and fiber type.

Article Content

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.

48 Core OPGW Cable_HuaDong Cable & Wire

What is 48 Core OPGW Cable ? The Central Tube Optical Ground Wire (OPGW) is surrounded by single or double layers of aluminum clad steel wires (ACS) or mix

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

Product Catalog

This is designed for splicing ADSS, OPGW cables and the normal cables to house the fiber core splices to outdoor intermediate optical cable leading to the patch panel in the control room.

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Hydrogen-absorbent optical core is constructed with required number of optical fibers covered with tubes with loose fiber protection and sealed with moisture-proof gel and whole setup is protected with

Composite Overhead Opgw 48/96 Cores Single Mode Optical Fiber

An OPGW cable combines the functionalities of a traditional ground wire with the capabilities of fiber optic communication, making it an essential component in modern power grid infrastructure.

FIBRE OPTIC SYSTEMS FOR OHTL

ace unit for optical fibres. The fibres are loosely buffered in a tube containing an oval, spiralling, holl channel filled with jelly. The loose tube construction prevents fibre strain at any stage

Optical Fiber Composite Overhead Ground Wire (OPGW)

Two or three stainless steel optical tubes are helically stranded in the inner layer of a multiple-layer cable. The multi loose tube type is designed mostly for very high

CentraCore OPGW Cable | Central Tube Optical

Its small profile offers an exceptional solution to the diameter and weight concerns on many of today''s overloaded transmission towers where an existing shield wire

Product Catalog

Fiberon has developed technical expertise in fiber optic cables and proven its capabilities in manufacture of energy efficient bare overhead power conductors. Fiberon has integrated these core strengths in

OPGW Cable

Find here OPGW Cable, Optical Ground Wire manufacturers, suppliers & exporters in India. Get contact details & address of companies manufacturing

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.

AFC CABLE SYSTEMS DNO5152 Multiplex Overhead | WESCO

Description Fiber Optic Aerial Cable: Type - OPGW Optical Ground Wire; Size - AC-34/52/646; Fibers - 48 Fiber; RBS - lb - 18053 lb RBS; RBS - kg - 8189 kg RBS; Fault Current - 172 (kA)sq-sec; Overall

Fibre Optic Overhead Ground Wire (OPGW) Standard

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The OPGW comprises an inner core containing optical fibres for data transmission, and an outer layer(s) of conductor strands to provide strength and to act as an overhead ground (earth) wire.

Item # OPGW (AL-Tube)-1S 48 (M81/R48-55), OPGW

ITU-T G.652 Characteristics of a single-mode optical fiber cable ITU-T G.655 Characteristics of a non-zero dispersion-shifted single-mode optical fiber and

48 Core OPGW Fiber Optic Cable Composite Ground

High quality 48 Core OPGW Fiber Optic Cable Composite Ground Wire Single Mode from China, China''s leading product market Single Mode OPGW Fiber Optic

CentraCore OPGW Cable | Central Tube Optical

AFL CentraCore OPGW (Optical Ground Wire) is preferred for its compact size and ability to house up to 96 fibers in a diameter starting at only 12mm. Its small

OPGW Optical Ground Wire

IEC 60794-1-2 Optical fiber cables-Part 1-2: Generic specification - Basic optical cable test procedures IEEE1138-2009 IEEE Standard for testing and performance for optical ground wire (OPGW) for use

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