

24-core OPGW optical cable diameter



AI Overview

The typical diameter of a 24-core OPGW cable ranges from approximately 16 mm to 20 mm, depending on design and manufacturer.

Cable Construction and Diameter Factors

A 24-core OPGW (Optical Ground Wire) cable consists of a central tube containing 24 optical fibers, which is usually made of stainless steel or aluminum for mechanical protection. This core is surrounded by single or double layers of aluminum-clad steel (ACS) wires or aluminum alloy wires, which provide both mechanical strength and electrical grounding capability. The overall diameter depends on:

- Number of protective wire layers (single vs. double layer)
- Type of central tube (stainless steel or aluminum)
- Fiber protection method (loose tube, gel-filled, or PBT tube)
- Environmental protection (UV-resistant coatings, moisture-proof gel, and thermal protection)

Typical Diameter Range

Single-layer 24-core OPGW: approximately 16–18 mm

Double-layer 24-core OPGW: approximately 18–20 mm

Some compact designs, like AFL CentraCore, can house up to 96 fibers in a 12 mm diameter, but for a standard 24-core configuration, the diameter is generally larger to accommodate mechanical and environmental protection.

Applications

24-core OPGW cables are used on high-voltage transmission lines to serve dual purposes:

- Grounding and lightning protection
- Telecommunication signal transmission (voice, data, video)

They are suitable for overhead lines above 110 kV, unmanned substation monitoring, and power line protection systems. In summary, when selecting a 24-core OPGW cable, the diameter typically falls between 16 mm and 20 mm, but the exact value should be confirmed with the manufacturer based on the specific design, environmental conditions, and mechanical requirements.

Article Content

[OPGW Cable Specifications and Installation | PDF | Optical Fiber ...](#)

This document provides information on OPGW (Optical Ground Wire) cables. It discusses that OPGW cables serve the dual purpose of acting as both an earthwire and optical fibre cable on transmission

[The Ultimate Fiber Optic Cable Size Reference Chart](#)

How to Use This Chart Understanding fiber optic measurements doesn't have to be overwhelming. Our comprehensive chart simplifies the

[How to Select the Right ADSS Cable for Your Project | ADSS Fiber Cable ...](#)

Learn how to select the right ADSS fiber optic cable based on span length, voltage level, and weather conditions. This technical guide compares common models like ADSS-12J, ADSS-24,

[Global Optical Fiber Composite Overhead Ground Wire \(OPGW\) Market Size ...](#)

Optical Fiber Composite Overhead Ground Wire (OPGW) Market Overview The Optical Fiber Composite Overhead Ground Wire (OPGW) market represents a critical intersection of power

[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

[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

[OPGW Cable With 24 Single Mode Optical Fibers](#)

OPGW 24 Core Cable – Product Overview This OPGW Cable With 24 Single Mode Optical Fibers is designed especially for the purpose of fulfilling the requirements

[FTTH Butterfly Optic Cable Specification | PDF | Optical](#)

The document outlines the specifications for FTTH Butterfly Optic Cable, detailing cable construction, performance parameters, and mechanical and environmental

[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,

Specification_24fiber_OPGW_11

All dimensions are for reference, actual dimension will be given later.

OPTICAL GROUND WIRE (OPGW)

Both ends of OPGW shall be securely fastened to drum and sealed with a shrinkable cap. The required marking shall be printed with a weather-proof material on the outsides of drum according to

Corporate Office:

Currently, the number of Optical fibers that can be readily fitted into an OPGW aerial wire construction can reach up to 144 fibers. The metallic wires have to give the OPGW aerial cable enough

OPGW Specifications and Testing Standards | PDF

This document provides specifications for an optical fiber overhead ground wire (OPGW) cable.

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

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

The 24 core cable has 18 aluminum alloy wires for strength members, while the 48 core cable has 17 strength members. Key specifications include fiber counts, coating materials, attenuation coefficients,

24 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

TECHNICAL SPECIFICATION Optical Ground Wire

OPGW tests shall be in accordance with applicable standards or agreements between purchaser and manufacturer. As a general rule the tests will be performed according IEC 60794-4-10. However, if

CentraCore OPGW Cable | Central Tube Optical

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

OPGW Cable With 24 Single Mode Optical Fibers

With proper adjustments to the cable's diameter, weight, mechanical strength,

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

OPGW Cables: What Are They and Why Power Grids Need Them

Discover what OPGW cable (Optical Ground Wire) is, its technical structure, key benefits for power grids, installation practices, for transmission lines.

Contact Us

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