



High-precision FOB price for long-distance optical cables used in local area networks

Article Overview

FOB prices for long-distance single-mode optical fiber cables typically range from \$0.10 to \$1.50 per meter, depending on fiber type, construction, and environmental rating.

Pricing Overview

For long-distance LAN applications, single-mode fiber (OS2) is generally preferred due to its low attenuation and suitability for distances up to 40-100 km without amplification. Typical FOB pricing per meter is as follows:

- o Single-mode outdoor cable: \$0.10-\$0.50/m for standard loose-tube or tight-buffered constructions .
- o Armored single-mode cable: \$0.30-\$1.00/m, offering protection against crushing, rodents, and harsh environments .
- o Aerial/self-supporting cable: \$0.40-\$1.50/m, designed for long-distance overhead installations . Multimode fiber (OM3/OM4), while more common in short-reach LANs, can be 20-40% more expensive than standard single-mode due to precision grading and higher core tolerances .

Factors Affecting FOB Price

- o Fiber Count: Higher fiber counts (e.g., 24-core or 96-core) increase material and production costs. A 2-core cable is significantly cheaper than a 24-core cable .
- o Cable Construction: Armored, direct-burial, or flame-retardant cables add 20-60% to base costs due to additional materials and testing .
- o Jacket Material: Outdoor-rated PE jackets or UV-resistant coatings are more expensive than indoor PVC or LSZH jackets .
- o Volume and Lead Time: Bulk orders (>10 km) often receive discounts, while custom lengths or urgent orders increase per-meter costs .
- o Compliance and Certification: Cables meeting international standards (IEC, NEC) may cost more but reduce long-term risk .
- o Shipping and Logistics: FOB pricing includes delivery to the port of shipment. Freight costs, especially for overseas shipments, can add 5-15% to the total cost .

Example FOB Calculation

For a 5 km armored single-mode outdoor cable sourced from China:

- o Cable cost: $\$0.80/\text{m} \times 5,000 \text{ m} = \$4,000$



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- o FOB port handling and packaging: ~\$300-\$500
- o Total FOB price: \$4,300-\$4,500 This estimate excludes inland transport, customs duties, and insurance, which are the buyer's responsibility under FOB terms .

Recommendations

- o Select single-mode OS2 for long-distance LAN backbones to minimize attenuation.
 - o Consider armored or PE-jacketed cables for outdoor or harsh environments.
 - o Negotiate bulk orders to reduce per-meter costs.
 - o Clarify FOB terms with the supplier to ensure port handling, packaging, and documentation are included .
- By accounting for fiber type, construction, and shipping logistics, buyers can achieve high-precision FOB pricing suitable for budgeting and procurement planning.

Learn all about fiber optic cable distance and the key factors that affect it. Find out how to

Fiber Optic Cable Types - Multimode and Single Mode Application Fiber Optic connectors

Discover fiber optic cable cost per foot. Get pricing ranging per linear foot, compare

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By addressing the specific requirements of producing 90 km of fiber optic cable per day, we successfully identified key cost drivers

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Optical fiber broadband brings together a culture of innovation, quality, and manufacturing excellence to create life-changing products.

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Fibre optic cable types have revolutionized modern networking, offering high-speed data transmission over



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long distances. When

This guide outlines the major factors that influence fiber optic cable costs and provides practical tips for estimating

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Long-distance signal transmission The low signal loss and superior signal integrity found in optical systems allow much longer

Fiber optic cables offer significant advantages over traditional copper conductor and electrical cable, including higher

Fiber optic cables are often used to transmit data and control signals in environments

Discover the cost of fiber optic cable in this pricing guide. Learn material prices, installation factors, and what impacts

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