Price of fiber optic cable for broadband connection



Overview

Main cost drivers include cable grade (indoor vs outdoor, armoured), distance, and labor for trenching, splicing, and termination.

Key Takeaways

Fiber optic cable prices range from $0. 09 to $6 per foot for materials, with installation costs adding $1 to $50+ per foot depending on method and complexity.

Material Costs

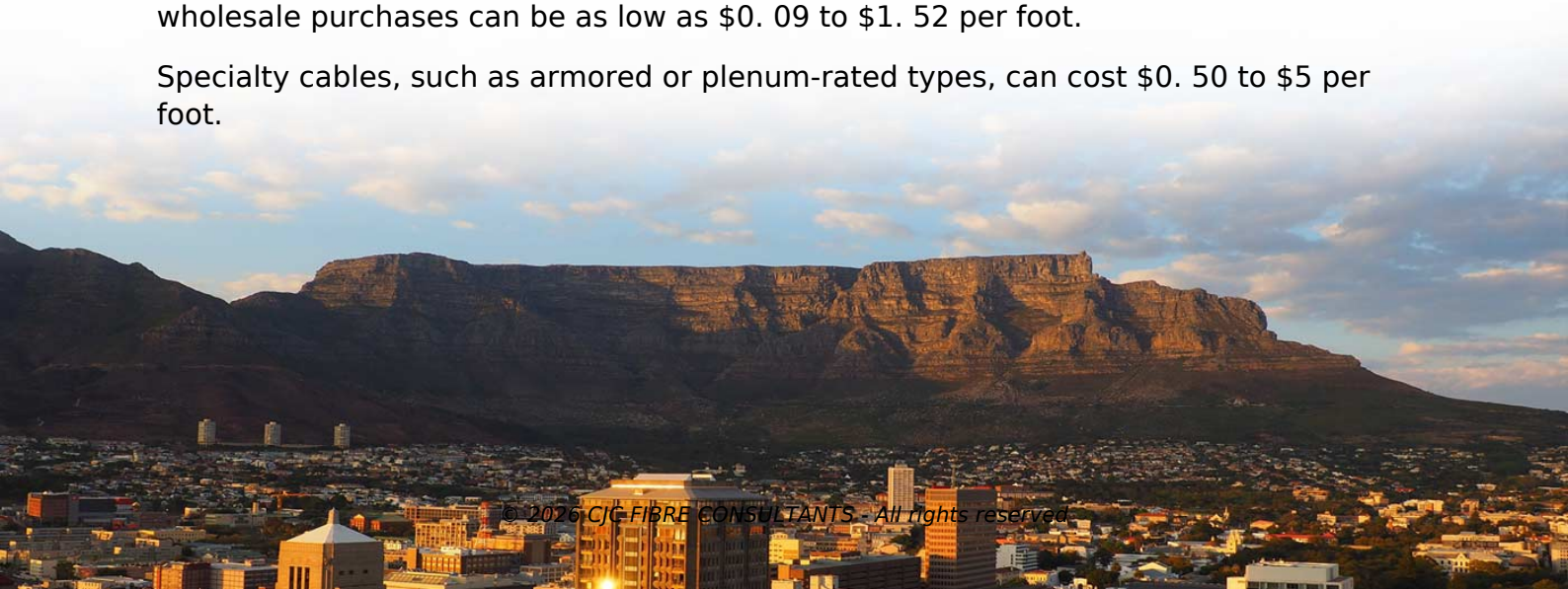
The cost of fiber optic cable materials varies widely based on type, strand count, and application. Single-mode fiber typically costs $0. 10 to $0.

50 per foot, while multimode fiber ranges from $0. 30 to $1. 00 per foot.

Higher strand counts increase costs proportionally; for example, a 12-strand cable may cost around $0. 50 per foot, while a 24-strand cable can reach $1. 00 per foot.

Retail prices are generally higher, ranging from $1 to $6 per foot, while bulk wholesale purchases can be as low as $0. 09 to $1. 52 per foot.

Specialty cables, such as armored or plenum-rated types, can cost $0. 50 to $5 per foot.



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Installation Costs

Installation significantly increases the total cost. Underground installations typically range from $10 to $27 per foot, while aerial installations cost $5 to $14 per foot. More complex methods, including fiber splicing and termination, can push costs up to $50+ per foot.

For large-scale projects, total costs per mile can range from $5,000 to $20,000 for underground fiber and $40,000 to $60,000 for aerial deployments. Labor, permits, and project management account for the majority of installation expenses.

Factors Affecting Price

Fiber Type: Single-mode supports long-distance, high-speed transmission and is more expensive than multimode, which is suitable for shorter distances. Strand Count: More strands increase capacity and cost. Modern cables can have 432, 864, or even 1,728 strands.

Construction: Indoor riser-rated cables are cheaper than plenum-rated or armored cables designed for harsh environments. Location and Terrain: Urban, underground, or difficult terrain installations increase labor and material costs. Pre-terminated Assemblies: Factory-terminated cables and patch cords cost more due to specialized connectors and assembly.

Market Trends

As of early 2026, fiber optic prices have been rising due to supply constraints, particularly in the Chinese market, which often reflects global trends. For example, G. 652D single-mode fiber prices surged from around 18 RMB per kilometer in January 2026 to significantly higher levels by March 2026.

This trend indicates that material costs may continue to fluctuate depending on global supply and demand. In summary, expect fiber optic cable material costs between $0. 09 and $6 per foot, with installation adding $1 to $50+ per foot depending on method, strand count, and project complexity.

For large-scale commercial projects, per-mile costs can reach tens of thousands of dollars, while residential connections are typically much lower.

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