

# Single-Mode Fiber Cable Market Outlook 2025-2034: Market Share, and Growth Analysis By Cable Type (Quartz Optical Fiber Cables, Multicomponent Glass Fiber Cables, Plastic Optical Fiber Cables, Other Cable Types), By Type (G.652, G.653, G.654, G.655, G.656, G.657), By Application

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## Abstracts

The Single-Mode Fiber Cable Market is valued at USD 68.1 billion in 2025 and is projected to grow at a CAGR of 6.7% to reach USD 122 billion by 2034. The single-mode fiber cable market plays a pivotal role in the global telecommunications and data infrastructure landscape, offering high-capacity, long-distance, and low-loss optical connectivity. Unlike multi-mode fibers, single-mode cables transmit data through a single light path, making them ideal for long-haul communication, internet backbones, 5G networks, and cloud data centers. Their superior bandwidth and minimal signal attenuation have made them indispensable in high-performance networks across industries, including telecom, military, healthcare, and industrial automation. As digital transformation accelerates and data demands continue to rise exponentially, the adoption of single-mode fiber is growing rapidly. The shift toward smart cities, IoT integration, and AI-powered operations also underscores the importance of reliable, scalable, and future-proof connectivity—key attributes delivered by single-mode fiber technology. The single-mode fiber cable market experienced robust growth, driven by continued 5G deployment, hyperscale data center expansion, and global broadband infrastructure upgrades. Telecom operators worldwide intensified their fiber-to-the-home (FTTH) and fiber-to-the-premises (FTTP) rollouts, particularly in underserved and rural areas. Governments in North America, Europe, and Asia-Pacific allocated funding for national fiber initiatives, further propelling demand. Cloud service providers invested heavily in inter-data center connectivity using dense wavelength division multiplexing

(DWDM)-enabled single-mode fibers. Manufacturers introduced bend-insensitive and low-latency cables to support high-speed transmission in densely packed network environments. The submarine cable segment also saw renewed investment due to rising transcontinental data traffic. However, inflationary pressures and geopolitical tensions contributed to raw material price fluctuations and impacted logistics, posing short-term procurement and supply chain challenges for some stakeholders. The single-mode fiber cable market is expected to expand significantly as digital economies scale up and ultra-low latency becomes critical for emerging applications. Quantum communication, smart manufacturing, and AI workloads will demand next-generation fiber networks with higher capacity and precision. Technological advancements in hollow-core fibers and multicore designs could redefine long-distance optical transmission, though standard single-mode fibers will remain dominant due to cost and infrastructure compatibility. Urbanization and the proliferation of smart infrastructure—such as traffic systems, surveillance, and connected public services—will drive demand for high-density fiber networks. Furthermore, growing interest in private 5G and edge computing deployments in sectors like logistics, healthcare, and utilities will require robust single-mode fiber backbones. Still, the industry must address challenges related to skilled workforce shortages in fiber installation and splicing, as well as evolving cybersecurity threats targeting physical network infrastructure.

### Key Insights Single-Mode Fiber Cable Market

Expansion of 5G backhaul infrastructure requiring ultra-low latency and high-capacity single-mode fiber deployment across urban and rural networks.

Increased investment in submarine single-mode fiber cables to support transcontinental data flow and cloud service interconnectivity.

Adoption of bend-insensitive and ultra-slim fiber cables in space-constrained environments like data centers and metro networks.

Integration of dense wavelength division multiplexing (DWDM) systems to maximize bandwidth efficiency over single-mode links.

Emergence of smart city infrastructure fueling demand for scalable, high-speed fiber optic connectivity in municipal deployments.

Growing demand for high-speed internet, cloud services, and real-time

applications requiring robust and scalable fiber networks.

National digitalization efforts and government-funded broadband infrastructure programs accelerating fiber deployment worldwide.

Rapid growth in data center construction and hyperscale cloud infrastructure driving long-haul fiber connectivity needs.

Ongoing 5G rollout demanding fiber-optic support for base station connectivity and edge computing integration.

Skilled labor shortages in fiber deployment and splicing continue to delay network rollout timelines, especially in rural and developing regions, making workforce training and automation critical to scaling single-mode fiber infrastructure efficiently.

## Single-Mode Fiber Cable Market Segmentation

### By Cable Type

Quartz Optical Fiber Cables

Multicomponent Glass Fiber Cables

Plastic Optical Fiber Cables

Other Cable Types

### By Type

G.652

G.653

G.654

G.655

G.656

G.657

### By Application

Telecommunication and Networking

Data Centers

Community Antenna Television

Factory Automation and Industrial Networking

Military

Other Applications

### Key Companies Analysed

Corning Incorporated

Fujikura Ltd.

Sumitomo Electric Industries Ltd.

Furukawa Electric Co. Ltd.

Pirelli & C. S.p.A.

Nexans S.A.

Hengtong Cable Group

Futong Group

Tongding Group

CommScope Inc.

LS Cable & System Ltd.

FiberHome Technologies Group

Prysmian Group

Yangtze Optical Fiber and Cable Co. Ltd.

Amphenol Corporation

Molex LLC

OFS Furukawa LLC

Belden Inc.

Aptiv PLC

YOFC (Yangtze Optical Fiber and Cable Joint Stock Limited Company)

HTGD (Hengtong Group Dalian Hengtong Optical Cable Co. Ltd.)

Radiall

Shenzhen Tefa Touchplus Information Corp.

Fasten Fiber Optics Co. Ltd. (FPC)

Alcatel-Lucent (Nokia)

Lynn Electronics Corporation

TE Connectivity Ltd.

3M Company

Sterlite Technologies Ltd.

Huber + Suhner AG

OFS Fitel LLC

AFL

Accelink Technologies Co. Ltd.

Finisar Corporation

ZTT Group

General Cable Corporation

Jiangsu Fasten Advanced Materials Co. Ltd.

The Siemon Company

Shanghai Tarluz Telecom Tech. Co. Ltd.

OptiTek Technology Co. Ltd.

Fiber Instrument Sales Inc.

Telenco Distribution

UNITEK Fiber Optic Systems Inc.

## Single-Mode Fiber Cable Market Analytics

The report employs rigorous tools, including Porter's Five Forces, value chain mapping, and scenario-based modeling, to assess supply–demand dynamics. Cross-sector influences from parent, derived, and substitute markets are evaluated to identify risks and opportunities. Trade and pricing analytics provide an up-to-date view of international flows, including leading exporters, importers, and regional price trends.

Macroeconomic indicators, policy frameworks such as carbon pricing and energy security strategies, and evolving consumer behavior are considered in forecasting scenarios. Recent deal flows, partnerships, and technology innovations are incorporated to assess their impact on future market performance.

### Single-Mode Fiber Cable Market Competitive Intelligence

The competitive landscape is mapped through OG Analysis' proprietary frameworks, profiling leading companies with details on business models, product portfolios, financial performance, and strategic initiatives. Key developments such as mergers & acquisitions, technology collaborations, investment inflows, and regional expansions are analyzed for their competitive impact. The report also identifies emerging players and innovative startups contributing to market disruption.

Regional insights highlight the most promising investment destinations, regulatory landscapes, and evolving partnerships across energy and industrial corridors.

### Countries Covered

North America — Single-Mode Fiber Cable market data and outlook to 2034

United States

Canada

Mexico

Europe — Single-Mode Fiber Cable market data and outlook to 2034

Germany

United Kingdom

France

Italy

Spain

BeNeLux

Russia

Sweden

Asia-Pacific — Single-Mode Fiber Cable market data and outlook to 2034

China

Japan

India

South Korea

Australia

Indonesia

Malaysia

Vietnam

Middle East and Africa — Single-Mode Fiber Cable market data and outlook to 2034

Saudi Arabia

South Africa

Iran

UAE

Egypt

South and Central America — Single-Mode Fiber Cable market data and outlook

to 2034

Brazil

Argentina

Chile

Peru

*\* We can include data and analysis of additional countries on demand.*

## Research Methodology

This study combines primary inputs from industry experts across the Single-Mode Fiber Cable value chain with secondary data from associations, government publications, trade databases, and company disclosures. Proprietary modeling techniques, including data triangulation, statistical correlation, and scenario planning, are applied to deliver reliable market sizing and forecasting.

## Key Questions Addressed

What is the current and forecast market size of the Single-Mode Fiber Cable industry at global, regional, and country levels?

Which types, applications, and technologies present the highest growth potential?

How are supply chains adapting to geopolitical and economic shocks?

What role do policy frameworks, trade flows, and sustainability targets play in shaping demand?

Who are the leading players, and how are their strategies evolving in the face of global uncertainty?

Which regional “hotspots” and customer segments will outpace the market, and what go-to-market and partnership models best support entry and expansion?

Where are the most investable opportunities—across technology roadmaps, sustainability-linked innovation, and M&A—and what is the best segment to invest over the next 3–5 years?

## Your Key Takeaways from the Single-Mode Fiber Cable Market Report

Global Single-Mode Fiber Cable market size and growth projections (CAGR), 2024-2034

Impact of Russia-Ukraine, Israel-Palestine, and Hamas conflicts on Single-Mode Fiber Cable trade, costs, and supply chains

Single-Mode Fiber Cable market size, share, and outlook across 5 regions and 27 countries, 2023-2034

Single-Mode Fiber Cable market size, CAGR, and market share of key products, applications, and end-user verticals, 2023-2034

Short- and long-term Single-Mode Fiber Cable market trends, drivers, restraints, and opportunities

Porter's Five Forces analysis, technological developments, and Single-Mode Fiber Cable supply chain analysis

Single-Mode Fiber Cable trade analysis, Single-Mode Fiber Cable market price analysis, and Single-Mode Fiber Cable supply/demand dynamics

Profiles of 5 leading companies—overview, key strategies, financials, and products

Latest Single-Mode Fiber Cable market news and developments

## Additional Support

With the purchase of this report, you will receive

An updated PDF report and an MS Excel data workbook containing all market tables and figures for easy analysis.

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Complimentary report update to incorporate the latest available data and the impact of recent market developments.

*\* The updated report will be delivered within 3 working days*

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