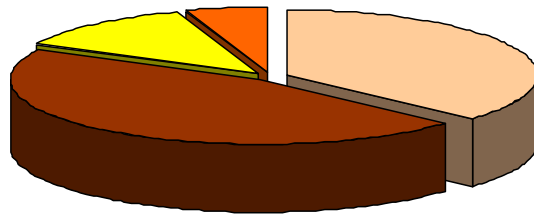


# Field Installable Fiber Optic Mechanical Connector Global Market Forecast & Analysis 2017-2027



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### 10-Year Market Forecast

The global fiber optic connector consumption is driven by a dramatic increase in bandwidth demand beyond the limits of copper. Technological advances in fiber optics are assuring the migration of fiber closer and closer to the end user. This translates into demand for shorter links where connectors represent a substantial share of the total installation cost. The cost concerns are being addressed with the introduction of smaller, lower cost and easier and faster to install connectors.

It is sometimes the case that the required connectors are not attached to the optical fibers at the factory prior to installation in the field. Also, it is sometimes preferable to deliver the optical fiber (cable) to the customer installation location separately than with the connectors since the connectors have a greater diameter than the respective optical fiber cable, and may unnecessarily complicate the packaging and shipping of the optical fiber. Also, often the link length of the cable is not always pre-determined, therefore field-installable connectors are an option.

There are two primary technology solutions to field-install a fiber optic connector:

- Fusion splice-based technology: Splice on Connectors (SOC)
- Mechanical-based technology: Mostly mechanical splice- or crimp-type connectors

This report presents the ElectroniCast market forecast of the use of fiber optic mechanical-type connectors in field installations (inside or outside plant), attaching to an end of one optical fiber.

Covering the years 2017-2027 – In this report, we provide market estimates and forecasts for the following functions: Consumption Value (US\$, million), Quantity (number/of connectors), and Average Selling Prices (ASP \$, each). The consumption data are also segmented into the following geographic regions, plus a Global summary:

- America
- EMEA (Europe, Middle Eastern countries, plus Africa)
- APAC (Asia Pacific)

ElectroniCast reviewed the product offering of over 100 vendors competing for the global fiber optic installation apparatus market, which includes fiber optic connectors, cable assemblies and other components. From the 100 vendors, we selected 28-companies, which offer field-installable fiber optic mechanical connectors, to profile in this report.

Connectors and Applications Covered in this Study This market forecast is built up from specific segments. Product types: connectors used with single-mode optical fiber and connectors used with multimode optical fiber, and further segmented by connector-type, as shown in Table 1. The applications for the selected fiber optic connectors discussed in this study report are itemized in Table 2; there are three main application (end-user) categories.

**Table 1**  
**Field Installable Fiber Optic Mechanical Connector - Product Category List**

Connector for use with Single-mode Optical Fiber

SC Simplex  
LC Simplex  
ST Simplex  
FC Simplex

Connector for use with Multimode Optical Fiber

SC Simplex  
LC Simplex  
ST Simplex  
FC Simplex

Note: In this study, all connectors are counted as simplex (single optical fiber); therefore, connectors joined together in a duplex solution (two optical fibers), are counted as two simplex connectors.
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**Table 2**  
**Field Installable Fiber Optic Mechanical Connector – Application Category List**

Telecommunications  
Cable TV  
Premises Networks (private/customer-owned)/Other Non-Specified

## Market Research Methodology

Market analysis and forecasting are complex tasks. Any predictions of the shape and trends of technology and economic movement start from the notion that the germ of what will be important tomorrow is present, although smaller or larger or in a different form, in our environment today. However, taking as a basis for a prediction the assumptions of current, conventional belief creates a set of preconceived notions that can lead to serious mistakes. ElectroniCast, instead, looks to the basic driving forces. The future market for this particular product category depends on a number of factors, including:

- User equipment demand
- The continuing trend of regarding increasing performance/cost ratio, driving an economics- based expansion
- Current and future use of other competing technologies, based on economic advantage and technology advancement
- Possible displacement of these technologies by other solutions
- Shifts in the types and technologies of products deployed and in their end applications
- Trends in world economies, regional economies and government policies

ElectroniCast analysts perform interviews with authoritative and representative individuals involved with fiber optic installation apparatus, cable, connectors, and component and device (product) development, manufacturing, and distribution/ marketing/sales, from the standpoint of both suppliers and users of pertinent products.

The interviews are conducted principally with:

- Engineers, marketing personnel and management at manufacturers of the pertinent types of products.
- Design group leaders, engineers, marketing personnel and market planners at major users and potential users of the applicable products.
- Other industry experts, including those focused-on standards activities, trade associations, and investments.

The interviews cover issues of technology, R&D support, pricing, contract size, reliability, documentation, installation/maintenance crafts, standards, supplier competition and other topics.

Customers (contractor/installers, telecommunication operators, distributors, and similar) are interviewed, to obtain their estimates of quantities received and average prices paid, as a crosscheck of vendor estimates. Customer estimates of historical and expected near term future growth of their application are obtained. Their views of use of new technology products will be researched.

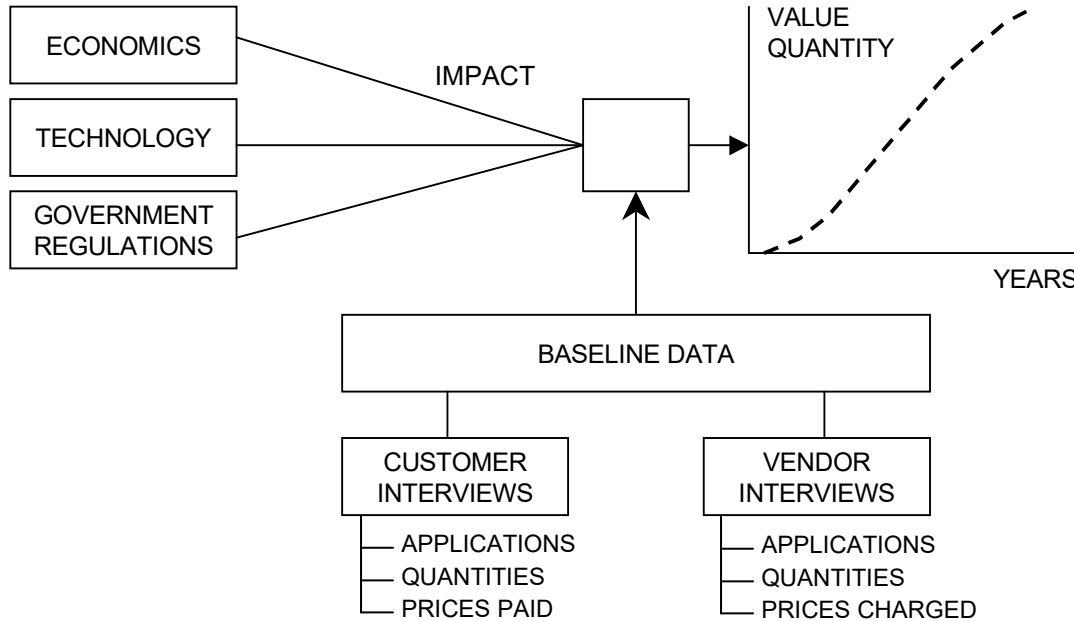
A review of published information was also performed to supplement information obtained through interviews. The following sources are reviewed:

- Professional technical journals and papers
- Trade press articles
- Technical conference proceedings
- Product literature
- Company profile and financial information
- Additional information based on previous ElectroniCast market studies
- Personal knowledge of the research team.

In analyzing the complexities of the marketplace for the selected products, it is essential that the market research team have a good and a deep understanding of the technology and of the industry. ElectroniCast members who participate in this study are qualified.

Bottom-up Methodology The background market research focuses on the volume (quantity) of the selected fiber optic type (multimode or single-mode) and connector by each selected type (SC, LC., ST, FC), used in each application in the base year (2017), and the prices paid at the first transaction from the manufacturer. This forms the base year data. ElectroniCast analysts then forecast the growth rates in component quantity use in each application, along with price trends, based on competitive, economic and technology forecast trends, and apply these to derive long term forecasts at the lowest application levels. The usage growth rate forecasts depend heavily on analysis of overall end user trends toward digital broadband communication equipment usage and economic payback (the methodology is further illustrated by Figure 1).

**Figure 1**  
**ElectroniCast Market Research & Forecasting Methodology**



Cross-Correlation Increases Accuracy The quantities of fiber optic attenuators, DWDM, optical fiber/cable, connectors, transceivers, transport terminals, optical add/drop MUX, couplers/splitters, isolators, photonic switches and other products used in a particular application are interrelated. Since ElectroniCast conducts annual analysis and forecast updates in each fiber optic related product field, accurate current quantity estimates in each application are part of this corporate database. These quantities are cross-correlated as a “sanity check.”

ElectroniCast, each year since 1985, has conducted extensive research and updated their forecasts of each fiber optic component category. As technology and applications have advanced, the number of component subsets covered by the forecasts has expanded impressively.

The calculation and analysis data spreadsheet technique is based upon input/output analysis, leveraging the quantitative consumption quantity, price and value of each item in each application at all levels to achieve reasonable quantitative conclusions; this interactive analysis concept, first applied on a major scale by Leonteff, of the US Department of Commerce, in the mid-1950s, was then adopted successfully by analyst/forecasting firms Quantum Science, Gnostic Concepts and (in 1981) by ElectroniCast.

## **About ElectroniCast**

ElectroniCast, founded in 1981, specializes in forecasting technology and global market trends in fiber optics communication components and devices, as well providing market data on light emitting diodes used in lighting.

As an independent consultancy we offer multi-client and custom market research studies to the world's leading companies based on comprehensive, in-depth analysis of quantitative and qualitative factors. This includes technology forecasting, markets and applications forecasting, strategic planning, competitive analysis, customer-satisfaction surveys and marketing/sales consultation. ElectroniCast, founded as a technology-based independent consulting firm, meets the information needs of the investment community, industry planners and related suppliers.

## **Director of Study**

Stephen Montgomery, MBA in Technology Management, President at ElectroniCast Consultants. He joined ElectroniCast in 1990 and has specialized in fiber optic components market & technology forecasting at ElectroniCast for over 25-years. He has given numerous presentations and published a number of articles on optical communication markets, technology, applications and installations. He is a member of the Editorial Advisory Board of LIGHTWAVE magazine (PennWell Publishing) and writes a monthly article covering the optical communication industry for OPTCOM Magazine in Japan (Kogyo Tsushin Co., Ltd.).

## **Proprietary Statement**

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