

Fiber Optic Cables and Modules



Summary of Content

Fiber optic cables transmit data as light through glass or plastic fibers, offering high-speed, long-distance, and interference-free communication, with modules and connectors enabling versatile network applications.

Fiber Optic Cable Construction

Fiber optic cables consist of three main components: the core, cladding, and buffer coating. The core is the innermost layer, made of glass or plastic, where light signals travel. Surrounding the core is the cladding, which has a lower refractive index to keep light confined within the core via total internal reflection. The buffer coating protects the fiber from moisture, mechanical stress, and environmental damage. Cables may also include strengthening fibers and outer jackets for durability and environmental protection ().

Types of Fiber Optic Cables

- Single-Mode Fiber (SMF): Features a small core (~9 microns) that supports a single light mode, ideal for long-distance, high-speed transmission.
- Multi-Mode Fiber (MMF): Has a larger core (50–62.5 microns) supporting multiple light modes, suitable for shorter distances and local area networks (). Cables can also be simplex (single fiber) or duplex (two fibers for bidirectional communication). The choice depends on network requirements, distance, and bandwidth needs ().

Fiber Optic Modules and Connectors

Fiber optic modules and connectors facilitate network integration and signal conversion. Common types include:

Article Content

Fiber Optic Systems

Our extensive offering of fiber optic cables, connectors, cassettes, enclosures, patch cords, cable assemblies, cable distribution

Fibre Modules & Cables

Buy your modules and cables from a fibre optic transceiver module and cable specialist. Huge range from multi, single mode, SFP

Fiber Optic Cables

Fiber-Mart provides fiber optic cables, patch cords, pigtails and cable assemblies in singlemode & multimode. 15-year manufacturer,

Fiber Optic Cables | Cable Assemblies | DigiKey

Shop DigiKey's large in-stock selection of Fiber Optic Cables. View inventory, pricing and order now for same day shipping!

Small Form-factor Pluggable

SFP modules are commonly available in several different categories. Note that the QSFP, QSFP+, QSFP28 and QSFP56 are

Fibermart

Fibermart provides fiber cables, pigtails, optical components, fiber tools and integrated network solutions worldwide

Fiber Optic Transceiver Modules | Optoelectronics | DigiKey

Shop DigiKey's large in-stock selection of Fiber Optic Transceiver Modules. View inventory, pricing and order now for same day

Fiber Optic Cable Types: A Complete Guide

The plethora of fiber optic cable types can seem overwhelming, but choosing the right cable for the job is important.

10 Best Fiber Optic Manufacturers for 2026

Discover the best fiber optic manufacturers globally, offering cutting-edge multimode and single mode fiber solutions.

Buy Fiber Optic Cables & Accessories at EFB-Elektronik

As an expert in fiber optic cabling, EFB-Elektronik offers a convenient online fiber optic shop where you can find all the necessary

Contact Us

For more information, pricing, or custom solutions, please contact us:

Website: <https://benniedesignstudio.co.za>

Email: sales@benniedesignstudio.co.za

Phone: +27 82 391 4765

Address: The Towers, 1 St Georges Mall, Cape Town, 8001, South Africa

This document is for informational purposes only. Specifications subject to change without notice.

