

# Commonly Used Optical Splitter Specifications and Models



## AI Overview

Optical splitters are available in multiple models including bare, cassette, tray, and rack panel types, with PLC and FBT technologies supporting split ratios from 1x2 up to 1x64 for PON networks.

**Types of Optical Splitters**

- By Technology**
  - PLC (Planar Lightwave Circuit) Splitters:** Single-mode splitters that provide uniform signal distribution, insensitive to wavelength, and support high channel counts (up to 32 or more). Ideal for compact installations and high-density networks, though more expensive and technically complex to manufacture.
  - FBT (Fused Biconical Taper) Splitters:** Typically used for 2- or 3-output fibers. Cost-effective for low-channel applications but less uniform in signal distribution compared to PLC.
- By Packaging**
  - Bare Fiber Splitters:** Fragile, require protective housing, and are suitable for custom installations. Fiber diameter is usually 250  $\mu\text{m}$ , with options for ribbon or dispersion fiber outputs.
  - Cassette Splitters:** Provide full protection for internal components, convenient for PON networks, and compatible with SC/LC/FC connectors.
  - Tray Splitters:** Designed for 19" ODF or cabinets, available in pigtail or adapter types, ensuring proper fiber curvature and channel capacity expansion.
  - Rack Panel Splitters:** Modular design for network cabinets, offering easy installation and reliable protection for optical components.
  - Connectorized Splitters:** Pre-terminated with SC/LC/FC connectors for plug-and-play deployment.

**Split Ratios and Models**

**Standard Split Ratios:** 1x2, 1x4, 1x8, 1x16, 1x32, 1x64.

**Odd Split Ratios:** 1x3, 1x5, 1x6, etc., used in specialized network designs.

**Cascaded Splitters:** Combinations like 1x4 + 1x8 to achieve 1x32 final split ratio, allowing flexible network design.

**Centralized vs Distributed Splitting**

**Centralized Splitters:** Located at a central office or OLT, allowing reconfigurable customer assignments via jumpers. Often used in high-density deplo...

## Article Content

### Fiber Optic Splitters – Selection Guide for FTTH Networks

In any FTTH or FTTX project, getting fiber to every end user efficiently is the goal. One component makes that possible at scale — the fiber

### Optical Splitters in Modern Networks

Classified by Manufacturing Technique There are two main types of optical splitters based on manufacturing techniques: Fused Biconic Taper (FBT)

### Optical Splitters are used in PON (Passive Optical Network ...

PON (Passive Optical Networks) There are two common types of systems that make up fiber networks: Active Optical Networks and Passive Optical Networks. Each offer ways to separate data and route it

### Fiber Optic Couplers Selection Guide: Types, Features

Fiber optic couplers transmit light waves from the far visible region, red (630nm), to the near infrared region (1700nm). Within this region specific frequency bands

### Types of Fiber Optic Splitters and Their Applications

Optical splitter types Bare fiber splitter The bare splitter has no connector at the end of the bare fiber. It is small in size and can be spliced with other optical fibers in pigtail boxes, test

### Optical Splitters Demystified: The Silent Heroes

An Optical Splitter, also known as a beam splitter, is a passive optical device that divides a single input optical signal into two or more output

### Your Go-to Guide to Optical Splitter

The optical splitter is an optical power distribution device that splits one optical signal into multiple optical fiber signals to achieve multichannel

### A Technical Overview of Oem Optical Splitter: Specifications and ...

Types of OEM Optical Splitters An OEM optical splitter is a passive component used in fiber optic networks to divide a single optical signal into multiple output signals. These devices are

### Fundamentals of Optical Splitters » SENKO Advanced

The Future of Optical Splitters As demand for high-speed internet and extensive data connectivity grows, the use of optical splitters in telecommunication

### Planar Light Circuit (PLC) Optical Splitters

Corning's Planar Light Circuit (PLC) splitters are fully passive optical branching devices that exhibit uniform signal-splitting for the most advanced optical networks.

Optical Splitters are used in PON (Passive Optical Network ...

(PON) is a point-to-multi-point fiber to the premise network architecture. This type of network uses unpowered Optical Splitters along with WDM/CWDM/DWDM to enable a single optic office and

Everything You Need to Know About Fiber Optic

Master fiber optic splitter specifications like insertion loss and uniformity. From bare fiber to rack-mount modules, learn how to select the

Fused Optical Splitter: Structure, Specifications, and Common Industry ...

The choice of optical splitter depends on network architecture, signal requirements, and application-specific needs such as redundancy, scalability, and signal replication. Below is a detailed overview of

What is an Optical Splitter? The Ultimate Guide to Fiber

Optical splitters are the unsung heroes of the internet age. They allow us to share high-speed fiber connections affordably. Whether you choose an

Fiber Optic Splitters for PON Networks: 2025 Guide

In this guide, you'll learn how fiber splitters function in PON networks, the difference between PLC and FBT types, and how to choose the best model

Introduction to Passive Optical Network Splitter Architectures

Fiber Broadband Association Technology Committee February 2025 The choice of splitter architecture for a passive optical network (PON) network can impact many aspects of a Fiber to the X (FTTx)

Introduction to Passive Optical Network Splitter Architectures

A fiber broadband provider typically determines and overall split ratio for the network, such as 1x32 or 1x64, and uses combinations of splitters to meet that ratio with each PON port.

Optical Splitters for Central Office/Headend

Passive optical devices, singlemode PLC and FBT devices bare splitters and couplers specification and ordering guide. CommScope offers a portfolio of bare

Optical Splitters for Central Office/Headend

Optical Splitters for Central Office/Headend Optical splitters and couplers split or combine light—distributing signals injected into a single fiber strand to multiple

Optical Splitters: Split Ratios, Splitting Architectures & PON Network ...

This guide focuses on two critical aspects of optical splitters that define FTTH performance: split ratios (how signals are divided) and splitting architectures (how splitters are

Optimize Your Selection: A Guide to Choosing the Right

Choosing the right optical splitter can be confusing with so many options available. This guide will simplify the process and provide valuable

Fiber Optic Splitters

Fiber optic splitters enable a signal on an optical fiber to be distributed among two or more fibers. Since splitters contain no electronics nor require power, they are an integral component and widely used in

Fiber Optic Splitter: How It Works & Types Guide

This guide demystifies fiber optic splitters, explaining their design, operating principles, types, key specifications, and real-world applications.

Top 5 Fiber Optic Splitter Types and Their Applications

8. How to Choose the Right Fiber Optic Splitter? 9. Why Choose MEISU for Fiber Optic Splitters? In today's rapidly evolving optical communication landscape,

Optical Splitter

Optical Splitter The Optical Splitters may be used in applications that require the STM-1 (SDH) optical signal input to be simultaneously connected to an active link, while at the same time connecting it to

Comprehensive Guide to Optical Splitters

An optical splitter is a crucial passive fiber optic device that splits and combines optical signals. It can distribute the optical energy transmitted through a single fiber to two or more fibers in a

Exploring the World of Fiber Optic Splitter Devices

Discover the benefits of fiber optic splitters! Learn how optical splitters enhance signal distribution and explore our range of fiber optic devices today.

Ficha\_Splitters

Cassette splitter is the most commonly used in the PON networks, and it has the complete protection for inner optical components and cable, as well as the convenient installation and easy to use, but its

## Contact Us

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

Website: <https://www.mr-security.co.za>

Email: [info@mr-security.co.za](mailto:info@mr-security.co.za)

Phone: +33 1 45 23 67 81

Address: 10 Rue de la Paix, 75002 Paris, France

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