

What are the different names and prices for optical splitters

Article Overview

Optical splitters are classified by technology, split ratio, packaging, and mode, with prices varying from a few dollars for low-channel FBT splitters to over \$100 for high-channel PLC splitters.

Classifications of Optical Splitters

1. By Technology

- o PLC (Planar Lightwave Circuit) Splitters: Use integrated waveguide technology on a quartz substrate. They provide uniform light distribution, support high split ratios (up to 1x64 or more), and are suitable for large-scale deployments. Advantages include wavelength insensitivity and compact size, but they are more expensive than FBT splitters, especially for low-channel configurations .

- o FBT (Fused Biconic Taper) Splitters: Made by fusing fibers together. They are cost-effective for low-channel splits (1x2, 1x4) but less uniform and sensitive to wavelength variations. FBT splitters are simpler to manufacture and widely used in smaller networks .

2. By Split Ratio

- o 1xN Splitters: One input fiber to N output fibers (e.g., 1x2, 1x4, 1x8, 1x16, 1x32, 1x64). Higher split ratios increase insertion loss and reduce signal strength per output .

- o MxN Splitters: Multiple input fibers to multiple output fibers, used in more complex network topologies .

3. By Packaging

- o Box Type: Common for 2mm or 3mm cables, suitable for indoor installations.

- o Stainless Tube Type: Typically for 0.9mm cables, used in outdoor or rugged environments.

- o Other PLC Packaging: Bare PLC, steel tube, ABS box, LGX box, fanout, and mini plug-in types .

4. By Mode and Wavelength

- o Single-Mode Splitters: Optimized for 1310nm and 1550nm wavelengths.

- o Multimode Splitters: Operate at 850nm and 1310nm.

- o Single Window vs Dual Window: Single window uses one wavelength; dual window supports two wavelengths .

Prices of Optical Splitters

- o FBT Splitters: Typically \$5-\$20 for low-channel splitters (1x2, 1x4). Prices increase slightly with higher split ratios.

- o PLC Splitters: Range from \$20-\$100+, depending on split ratio and packaging. For example, a 1x32 PLC splitter may cost around \$50-\$80, while a 1x64 PLC splitter can exceed \$100 .

- o Market Trends: The global optical splitter market is valued at \$2.5 billion in 2026, projected to grow to \$5.3 billion by 2035, reflecting increasing demand for high-speed fiber networks .

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Summary

Optical splitters are essential for PON and FTTH networks, enabling a single fiber to serve multiple endpoints. PLC splitters are preferred for high-channel, large-scale deployments due to uniformity and wavelength insensitivity, while FBT splitters are cost-effective for small networks. Prices vary by technology, split ratio, and packaging, with PLC splitters generally more expensive than FBT splitters. Choosing the right splitter depends on network size, required split ratio, and budget.

What is a Fiber Optic Splitter? Fiber optic splitter is a passive optical device used to distribute optical signals, which

PLC splitter is based on Semiconductor technology. As its name shows, PLC splitters are manufactured by planar

In specialized industrial and scientific applications, optical splitters distribute light to different sensors, enabling simultaneous

In the world of fiber optic communications, where high-speed data zips across continents in the blink of an eye, there

Multimode optical splitters are optimized for 850nm and 1310nm operation, whereas single-mode optical splitters are

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

This guide focuses on two critical aspects of optical splitters that define FTTH performance: split ratios (how signals

Optical networking has a way of making something incredibly complex look easy. But behind

This post provides an introduction to fiber optic splitters, their types, functions, and several popular Gcabling optical

Learn about different types of fiber optic splitters and their uses. Contact Zoomline for any fiber optic splitter installation.

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Types Types of fiber optic couplers include splitters, combiners, X-couplers, trees, and stars, which all include single window, dual

Hier sollte eine Beschreibung angezeigt werden, diese Seite lässt dies jedoch nicht zu.

What"s an optical splitter? How does the fiber optic splitter work? How many fiber splitter

As the most core passive optical device in the construction of fiber to the home (FTTH), optical splitters are used to

Learn how to choose the right fiber optic splitter for FTTH and FTTX deployments.

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