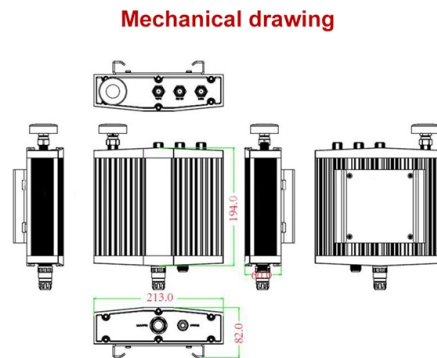


What is the function of an optical splitter



Article Overview

An optical splitter is a passive device that divides a single input optical signal into multiple output signals, enabling efficient distribution of light in fiber optic networks.

Core Function

The primary function of an optical splitter is to split the light power from one input fiber into two or more output fibers, allowing the same optical signal to reach multiple destinations simultaneously without requiring any electrical power. Conversely, it can also combine multiple signals into a single output in some configurations. This makes it a key component in Passive Optical Networks (PONs), such as EPON, GPON, BPON, FTTX, and FTTH, where a single optical line can serve multiple subscribers.

How It Works

Optical splitters operate based on the physics of light propagation in fiber optics. When light travels through a single-mode fiber, some energy spreads into the cladding. By bringing fibers close together or using integrated waveguide technology, the light can be redistributed among multiple fibers. The splitter can divide the signal evenly or unevenly, depending on the split ratio (e.g., 1x2, 1x4, 1x8, 1x32), with each output carrying a portion of the original signal. Key performance metrics include insertion loss, split ratio, and uniformity of output power.

Types of Optical Splitters

- Fused Biconical Taper (FBT) Splitters: Constructed by fusing and tapering fibers together, suitable for smaller split configurations like 1x2 or 1x4, and can provide u...

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Fiber optic splitter is a passive optical device that includes multiple input and output ends. It can divide the input optical

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The greater the return loss, the better, to reduce the impact of reflected light on the light source and system. In addition, uniformity,

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

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Classified by Transmission Medium Based

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4. What are the common types of fiber optic splitters? The common types of fiber optic splitters include the planar waveguide splitter,

Contact Us

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