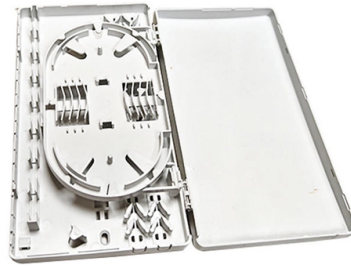


What are the functions of a communication optical splitter



AI Overview

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

Definition and Function

A communication optical splitter, also called a fiber optic splitter or beam splitter, is a passive optical device that can split an incoming light signal from a single fiber into two or more output fibers, or combine multiple signals into one . Its primary role is in Passive Optical Networks (PONs), such as FTTH, GPON, or EPON, where it allows a single optical fiber to serve multiple subscribers, reducing the need for separate fibers for each user .

How It Works

Optical splitters operate without electricity, relying on the physics of light. Light traveling through the core of a fiber can be redistributed by fusing and tapering fibers together or using planar lightwave circuits (PLC). This creates a region where the light is coupled and divided among the output fibers . For example, a 1x4 splitter divides the input signal into four outputs, each carrying a quarter of the original signal power . Key performance metrics include insertion loss, split ratio, and uniformity of output power

Article Content

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