

The splitter uses PLC technology



Article Overview

A PLC splitter uses Planar Lightwave Circuit technology to divide a single optical signal into multiple outputs with high precision and reliability.

What is a PLC Splitter?

A PLC (Planar Lightwave Circuit) splitter is a passive optical device that takes one input optical signal and splits it into multiple output signals, allowing a single fiber connection to serve multiple endpoints in fiber optic networks . Unlike active electronic splitters, PLC splitters require no power, making them highly reliable and cost-effective . They are widely used in Passive Optical Networks (PON), including GPON, EPON, BPON, and FTTx deployments .

How PLC Technology Works

PLC splitters are built using semiconductor-based planar waveguide circuits. Inside a compact silica chip, a network of optical waveguides is etched to guide light from the input to multiple outputs . The design ensures that the optical power is divided evenly or according to a specific ratio, such as 1×2, 1×4, 1×8, 1×16, 1×32, or 1×64 . Light enters the input fiber, travels through the planar waveguide chip, and exits through the output fibers with minimal loss and consistent signal strength .

Advantages of PLC Splitters

- High Reliability: No moving parts and no electrical power required .
- Compact Size: Ideal for space-constrained environments like distribution boxes

Article Content

What Is PLC Splitter?

What Is PLC Splitter? PLC splitter, also called Planar Waveguide Circuit splitter, is a device used to divide one or two

Sourcing PLC Splitter: A Complete Buyer's Guide

PLC Splitters are based on planar waveguide circuit technology. Inside the splitter, a silica glass substrate routes the

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

PLC Splitter: An In-depth Exploration of Planar Lightwave Circuit

This article provides a comprehensive understanding of PLC splitters, including their working principle, types,

An In-depth Look at Production Process and Equipment of Fiber Optic PLC ...

Equipment Used in Fiber Optic PLC Splitter Production The production of fiber optic PLC splitters requires specialized equipment to

Understanding PLC splitters: Types, advantages, and applications

Discover why PLC splitters are a key component of modern fiber optic networks. Learn about their functionality, types,

What is PLC Splitter

PLC Splitter: Planar Waveguide Circuit splitter PLC Splitter uses semiconductor technology (lithography, etching,

PLC Splitter

A PLC Fiber Optic Splitter is a passive optical device based on planar light wave circuit (PLC) technology. Unlike traditional FBT

What Is a PLC Optical Splitter? Guide

A PLC (Planar Lightwave Circuit) optical splitter is a passive optical device that takes one or two incoming optical

The Comparative Analysis of PLC and FBT Optical Splitters

Currently, two principal types of optical splitters have emerged to address the challenges of optical signal distribution:

PLC Splitter: Main Components, Packaging Forms and Advantages

Main Components of PLC Splitter
PLC Chip: Manufactured using semiconductor technology processes (such as photolithography,

PLC Splitters in Optimizing Data Center Performance

A: PLC splitters use integrated planar waveguide technology, providing better uniformity, stability, and higher split ratios

The Role of PLC Splitters in Modern Telecommunication Systems

Explore the critical role of PLC splitters in modern telecommunications. Learn about their functionality in signal

How Does a Fiber Optic Splitter Work

Main Types of Fiber Optical Splitter According to the manufacturing technology of fiber optic splitters, there are mainly

PLC Splitters

PLC splitters are designed using advanced semiconductor technology, which allows for precise control over light distribution. The

PLC Splitter: The Ultimate Guide to Efficient Light Distribution

A PLC splitter is a passive optical device that takes a single input optical signal and divides it into multiple output

WDM Fiber, Wavelength Division Multiplexing | T & S Communication

With over 40 self-developed automatic alignment machines, we ensure high consistency, efficient throughput, and reliable quality

PLC Splitters

PLC Splitter Product Description: Planar lightwave circuit (PLC) splitter is fabricated using silica optical waveguide technology and

Fiber-optic splitter

According to the principle, fiber optic splitters can be divided into Fused Biconical Taper (FBT) splitter and Planar Lightwave Circuit

Fiber Optic Splitters | PLC & FBT Optical Splitters

Key Technologies: PLC vs. FBT Splitters
PLC (Planar Lightwave Circuit) Splitter: This technology uses a micro-optical component

What is a PLC Splitter? Function & Fiber Use Cases

Unlike electrical splitters, PLC splitters manage light transmission within fiber optic cables. They are built using silica

PLC Fiber Splitter: A Critical Component in Fiber Optic Networks

What is a PLC Fiber Splitter? A PLC Fiber Splitter is an optical device that takes a single optical input and divides it

PLC Splitter Guide: Types, Working Principle & Selection

Learn what a PLC splitter is, how it works, and its main types including bare fiber, ABS box, LGX, and rack mount.

How does a PLC Splitter work?

Fused Biconical Taper is the older technology and generally introduces more loss than the newer PLC splitters, though both PLC

Contact Us

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

Website: <https://www.watermanfinance.co.za>

Email: sales@watermanfinance.co.za

Phone: +49-176-8294713

Address: Neue Mainzer Str. 66-68, 60311 Frankfurt am Main, Germany

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