

Production process of optical splitters

Overview

An FBT (Fused Biconical Taper) splitter is made by fusing and tapering two or more optical fibers. By changing the evanescent field coupling between the fibers (coupling degree, coupling length) and the fiber core radius, different branching ratios can be achieved. These unassuming devices enable a single optical signal to be divided into multiple paths, making them indispensable for sharing network resources efficiently—from residential FTTH (Fiber-to-the-Home) connections to large-scale telecom backbones. This guide demystifies fiber optic splitters. A fibre optic splitter like 1x2 Fiber Splitter is manufactured in five steps. Each phase necessitates rigorous control and management of numerous elements such as environment, temperature, and precise assembly and equipment. Step 1: Component Preparation Generally, three components are required. This blog provides a comprehensive introduction to the production process and equipment involved in manufacturing high-quality fiber optic PLC splitters. By understanding these key aspects, professionals within the field can better appreciate their vital role in the deployment of advanced. A Passive Optical Network (PON) is a fiber optic technology utilizing point-to-multipoint topology and optical splitters to deliver data from a single transmission point to multiple user endpoints.



Article Content

Jul 06, 2026

Step-by-Step Manufacturing Process and Quality Testing of a

A fibre optic splitter like 1x2 Fiber Splitter is manufactured in five steps. Each phase necessitates rigorous control and management of numerous elements such as environment, temperature, and ...

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How Does a Fiber Optic Splitter Work

This post provides a introduction to how does a fiber optic splitter work, and optical fiber splitter application in FTTH.

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Comprehensive Guide to Optical Splitters

The manufacturing process of PLC splitters is complex, and photolithography technology is required to form optical waveguides on dielectric or semiconductor substrates to achieve branching.

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PASSIVE OPTICAL SPLITTER

The following section outlines the key steps to manufacturing an optical splitter, where each step requires strict Quality Control of the environment and the equipment used, and detailed precision ...

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

The production process and equipment involved in manufacturing fiber optic PLC splitters play a crucial role in the functionality and effectiveness of these vital components in modern communication systems.

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How Does a PLC Splitter Work? An In-Depth Technical Guide

The working of PLC splitters relies on strategically designed optical waveguides fabricated on a silica substrate using photolithography techniques adapted from semiconductor manufacturing.

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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. Whether you're a network engineer designing a ...

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Production Process Of Fiber Optic Splitter With Advantages And ...

In accordance with the production process, optical splitters are divided into Fused Biconical Taper (FBT Splitter) and Planar Lightwave Circuit (PLC Splitter).

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PLC Splitter Technology and Production Process

There are four main manufacturing processes for optical waveguides: ion exchange, ion implantation, chemical vapor deposition, and flame hydrolysis. 1. Ion-exchange.

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