

Article Overview

PLC beam splitters require precise semi-automatic production, anti-static handling, and can be efficiently tracked using wireless inventory systems.

PLC Beam Splitter Production

PLC (Planar Lightwave Circuit) beam splitters are passive optical devices that divide input light into multiple outputs for fiber optic networks. Semi-automatic production involves placing wafers on a rotating device, coating them with UV-curable glue, and bonding glass sheets on top. The process includes vacuum sealing to remove bubbles, pressing with electric push rods, and curing the glue with UV light, ensuring strong adhesion and high optical performance. Workers inspect the bonding effect to maintain quality and reduce defects. Key components in production include:

- o Supporting mechanism for wafer placement
- o Sealing device for vacuum processing
- o Curing device with UV light sources and push rods
- o Inspection device for quality control

Anti-Electrostatic Handling

PLC beam splitters are sensitive to electrostatic discharge (ESD), which can damage optical coatings or wafers. Anti-static measures include:

- o Using ESD-safe gloves and mats
- o Maintaining controlled humidity in production areas
- o Employing ionizing air blowers to neutralize static charges
- o Packaging in anti-static containers for storage and transport

Inventory Tracking

To manage PLC beam splitter stock efficiently, wireless inventory tracking systems can be integrated. These systems use BLE (Bluetooth Low Energy) beacons or RTLS (Real-Time Location Systems) to monitor inventory in real time, automate cycle counts, and reduce human error. Benefits include:

- o Automated stocktaking and location tracking
- o FIFO management to prevent aging or expired components
- o Integration with production data for just-in-time manufacturing

- o Enhanced accuracy up to 99% in inventory counts

Integration of Production and Inventory

Combining semi-automatic production with inventory tracking allows manufacturers to:

- o Monitor batch quality and yield
 - o Track component usage and replenishment
 - o Reduce downtime due to missing parts
 - o Ensure anti-static compliance throughout storage and handling
- By implementing these practices, PLC beam splitter production can achieve high optical performance, reduced defects, and efficient inventory management, supporting both laboratory and industrial-scale operations .

How to Choose the Right PLC Splitter? Generally speaking, a superior PLC splitter needs to

As a result, PLC splitters offer accurate and even splits with minimal loss in an efficient

Description The Gigalight Planar Lightwave Circuit (PLC) splitter is a type of optical power management device based on silica

PLC splitter, also called Planar Waveguide Circuit splitter, is a device used to divide one or two light beams into

In-Depth Guide: Selecting the Right PLC Splitter for Your Network As network wiring

Using a PLC to Track Data Within Automated Equipment There are a few options when it

WebProcure offers best-in-class functionality, reaching end-to-end from requester to procurement buyer to merchant, and all the way

3MTM Planar Light Circuit (PLC) Optical Splitters that exhibit uniform signal splitting for the most advanced optical networks. These

A fiber-optic splitter, also known as a beam splitter, is based on a quartz substrate of an integrated waveguide optical power

Corning's Planar Light Circuit (PLC) splitters are fully passive optical branching devices that exhibit uniform signal-splitting for the

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

What is PLC Splitter? The Planar Waveguide Circuit splitter (PLC Splitter) divides one or two beams of light evenly

PLC Splitter Work is evenly divide one or two beams of light into multiple beams of light, combine multiple beams of

Fiber splitter solutions from Maxcom featuring PLC technology, low insertion loss, and high reliability. Ideal

FS PLC Fiber Optic Splitters, Bare/Blockless/ABS/LGX Splitter/Rack Mount Types, support 1xN light

To understand how a PLC splitter works, imagine shining a flashlight through a piece of glass that divides the beam

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