

Optical Fiber Splitter

TECHNICAL DATA SHEET

1 x 32 PLC Fiber Splitter, 1U 19" Rack Mount, SC/APC, Singlemode



1 x 32 PLC Fiber Splitter, 1U 19" Rack Mount, SC/APC, Singlemode

Product Description

The 1 × 32 PLC Fiber Splitter (1U 19" Rack Mount Type) is a high-density passive optical device based on Planar Lightwave Circuit (PLC) technology, designed to split one optical input signal into thirty-two output ports with stable and uniform optical performance.

It is integrated into a standard 1U 19-inch rack-mounted chassis, providing organized fiber management, easy installation, and efficient maintenance. The unit is terminated with SC/APC connectors, making it suitable for FTTH, GPON/EPON networks, telecom central offices, ODF systems, and large-scale fiber distribution networks.

Features:

- 1 × 32 optical splitting ratio
- PLC (Planar Lightwave Circuit) technology
- 1U 19" rack mount enclosure
- SC/APC front panel adapters
- High stability and low insertion loss
- Excellent channel uniformity
- Modular internal PLC design for easy maintenance
- Wide operating wavelength range (1260–1650 nm)
- Low polarization dependent loss (PDL)
- High-density rack integration
- RoHS compliant
- Telcordia GR-1209 / GR-1221 qualified

Application:

- FTTH (Fiber to the Home) networks
- GPON / EPON systems
- Telecom central offices (CO)
- Data centers
- CATV distribution networks
- Metro access networks

Optical Specifications

Parameter	Value
Configuration	1 × 32
Operating Wavelength	1260 ~ 1650 nm
Insertion Loss (Max)	≤ 17.0 dB
Uniformity	≤ 1.8 dB
Return Loss	≥ 60 dB
Polarization Dependent Loss (PDL)	≤ 0.5 dB
Directivity	≥ 55 dB
Wavelength Dependent Loss (WDL)	≤ 1.0 dB
Repeatability	≤ 0.1 dB
Stability	≤ 0.2 dB

Mechanical Specifications

Item	Specification
Package Type	1U 19" Rack Mount
Fiber Type	Single Mode OS2
Connector Type	SC/APC
Internal Structure	PLC Splitter Module
Housing Material	Metal (Cold-rolled Steel / Aluminum Alloy)
Dimensions	19" Standard Width, 1U Height
Installation Type	Rack-mounted
Operating Temperature	-40°C ~ +85°C

Environmental Performance

Test Item	Condition	Requirement
High Temperature	+85°C, 96H	$\Delta IL \leq 0.3 \text{ dB}$
Low Temperature	-40°C, 96H	$\Delta IL \leq 0.3 \text{ dB}$
Thermal Cycling	-40°C $\leftrightarrow$ +85°C	$\Delta IL \leq 0.3 \text{ dB}$
Humidity Test	95% RH, 96H	Stable Performance
Long-term Aging	Continuous Operation	No Degradation

Mechanical Reliability

Test Item	Requirement
Tensile Strength	≥ 10 N
Connector Durability	≥ 500 Mating Cycles
Vibration Resistance	Stable
Shock Resistance	Stable
Long-term Stability	Excellent