

Optical Fiber Splitter

TECHNICAL DATA SHEET

1 x 8 PLC Fiber Splitter, 1U 19" Rack Mount, SC/APC, Singlemode



1 x 8 PLC Fiber Splitter, 1U 19" Rack Mount, SC/APC, Singlemode

Product Description

The 1 × 8 PLC Fiber Splitter (1U 19" Rack Mount Type) is a passive optical device based on Planar Lightwave Circuit (PLC) technology, designed to split one optical input signal into eight output ports with stable and uniform optical power distribution.

It is integrated into a standard 1U 19-inch rack mount chassis, providing organized fiber management, high-density installation, and easy maintenance. The unit is terminated with SC/APC connectors, making it suitable for FTTH, GPON/EPON networks, telecom central offices, and data centers.

Features:

- 1 × 8 optical splitting ratio
- PLC (Planar Lightwave Circuit) technology
- 1U 19" rack mount enclosure
- SC/APC connector interface
- High stability and low insertion loss
- Excellent channel uniformity
- Modular and easy maintenance design
- 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
- Optical Distribution Frames (ODF)
- CATV distribution networks
- Fiber aggregation nodes
- Metro access networks

Optical Specifications

Parameter	Value
Configuration	1 × 8
Operating Wavelength	1260 ~ 1650 nm
Insertion Loss (Max)	≤ 10.5 dB
Uniformity	≤ 1.0 dB
Return Loss	≥ 60 dB
Polarization Dependent Loss (PDL)	≤ 0.3 dB
Directivity	≥ 55 dB
Wavelength Dependent Loss (WDL)	≤ 0.5 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	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