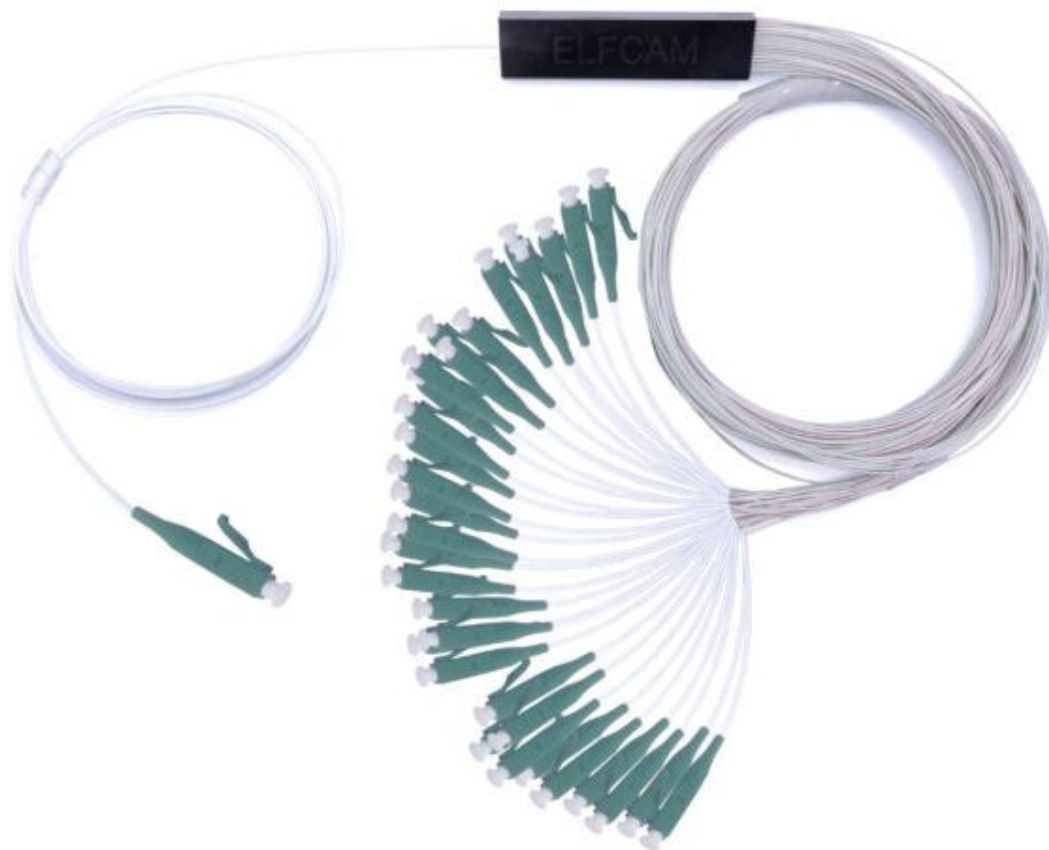


Optical Fiber Splitter

TECHNICAL DATA SHEET

1 x 32 PLC Fiber Splitter, Mini Module, 900µm, LC/APC, Single Mode



1X 32 PLC Fiber Splitter, Mini Module, 900μm, LC/APC, Single Mode

Product Description

The 1 × 32 PLC Fiber Splitter (Mini Module) is a high-density passive optical component based on Planar Lightwave Circuit (PLC) technology, designed to split one optical input signal into thirty-two output ports with stable and uniform optical power distribution.

The device is packaged in a compact Mini Module enclosure using 900μm tight-buffered fibers and terminated with LC/APC connectors, making it suitable for FTTH, FTTx, GPON, EPON, CATV, and large-scale fiber distribution networks requiring high port density and reliable performance.

Features:

- 1 × 32 optical splitting ratio
- PLC (Planar Lightwave Circuit) technology
- Compact mini module design
- 900μm tight-buffered fiber construction
- LC/APC connectorized ends
- Low insertion loss and excellent uniformity
- High reliability and environmental stability
- Wide operating wavelength range (1260–1650 nm)
- Low polarization dependent loss (PDL)
- Plug-and-play installation
- RoHS compliant
- Telcordia GR-1209 / GR-1221 qualified

Application:

- FTTH (Fiber to the Home) networks
- FTTx access networks
- GPON / EPON systems
- Passive Optical Networks (PON)
- Optical Distribution Frames (ODF)
- Fiber Distribution Boxes (FDB)

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	Mini Module
Fiber Type	Single Mode OS2
Fiber Diameter	900μm Tight Buffer
Connector Type	LC/APC
Housing Material	ABS / Metal Mini Module
Input/Output Length	1.0 m (Typical, Customizable)
Operating Temperature	-40°C ~ +85°C

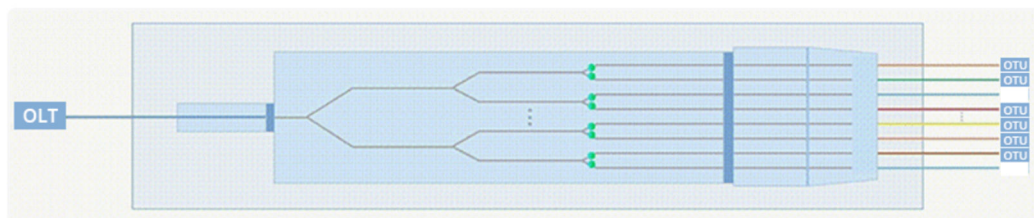
Environmental Performance

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 ↔ +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	$\geq 10 \text{ N}$
Connector Durability	≥ 500 Mating Cycles
Vibration Resistance	Stable
Shock Resistance	Stable
Long-term Stability	Excellent

Uniform distribution of the optical signal



Widely used in FTTX projects and data communication centers

