PLC SPLITTERS

PLC Splitter 1×16

Model PSK-PLC-116 · PROSKY passive network infrastructure

Planar lightwave circuit splitter serving sixteen subscriber drops from a single PON feeder, wavelength-flat across 1260–1650 nm. Higher split density concentrates the ODN into fewer cabinets, in bare, ABS, LGX and rack formats.

Product overview

The PLC Splitter 1×16 uses the same silica-on-silicon planar technology as the 1×8: a lithographically fabricated waveguide chip cascades Y-branch stages to divide one input across sixteen equal outputs, with fiber arrays bonded in V-grooves and the assembly sealed in a compact package. Fully passive and bidirectional, it adds no powered element to the outside plant.

Doubling the split count adds one waveguide stage, so the class insertion loss rises to about 13.5 dB while uniformity, polarization dependence and return loss remain tightly controlled — 0.8 dB, 0.3 dB and 55 dB typical respectively, flat across the full 1260–1650 nm band. The link budget of the PON determines where a 1×16 fits: it spends more of the budget per stage but serves twice the subscribers per feeder fiber, which often removes an entire cabinet layer from the ODN.

Typical deployments place the 1×16 at consolidated distribution points — larger street cabinets, basement distribution terminals in MDUs, or centralized split shelves in the exchange for architectures that favor single-stage splitting. Format options mirror the 1×8: bare-fiber for closures, ABS modules for terminals, LGX cassettes and rack shelves for frames.

Key features

- Sixteen even outputs from one feeder fiber — high split density per cabinet
- Wavelength-flat across 1260–1650 nm, covering all PON bands simultaneously
- Tight uniformity (≤ 0.8 dB typical) and low PDL (≤ 0.3 dB typical)
- Fully passive and bidirectional — no power, no maintenance
- Bare-fiber, ABS module, LGX cassette and 19-inch rack formats
- Bare fiber, 0.9 mm, 2.0 mm or SC/APC- and LC/APC-terminated builds
- Wide −40 °C to +85 °C operating range for outside-plant cabinets
- Design aligned with Telcordia GR-1209/GR-1221 reliability practice

Applications

- Centralized single-stage PON splitting
- MDU basement distribution terminals
- High-density street-cabinet distribution
- GPON / XGS-PON optical distribution networks
- Passive optical LAN distribution

Network types: GPON, XGS-PON, EPON

Technical specifications

Typical values for this product class — request the certified PROSKY datasheet for guaranteed figures.

Optical	
Split ratio	1 × 16, even
Operating wavelength	1260 – 1650 nm
Insertion loss	≤ 13.5 dB
Uniformity	≤ 0.8 dB
Polarization-dependent loss	≤ 0.3 dB
Return loss (APC)	≥ 55 dB
Directivity	≥ 55 dB

Formats & termination	
Package options	Bare fiber / ABS module / LGX cassette / 1U rack
ABS module size	120 × 80 × 18 mm
Fiber options	250 µm bare / 0.9 mm / 2.0 mm
Connector options	SC/APC, LC/APC (or unterminated)

Environmental & reliability	
Operating temperature	−40 °C to +85 °C
Storage temperature	−40 °C to +85 °C
Relative humidity	5 – 95 % non-condensing
Reliability design	Telcordia GR-1209 / GR-1221 alignment

Standards alignment

- Designed to align with ITU-T G.671 (passive optical components)
- Designed to align with Telcordia GR-1209-CORE (passive components)
- Designed to align with Telcordia GR-1221-CORE (reliability assurance)
- Designed to align with IEC 61753 (performance classes)

Standards are named as design-alignment references for this product class, not as certifications held.

Packaging

Typical export packaging: each splitter in a protective polybag with port-map label, foam-slotted inner cartons by format (modules/cassettes), consolidated in export master cartons. Kitting per cabinet configuration on request.

Ordering & contact

Specify model PSK-PLC-116 with your required configuration (fiber count, length, termination or format options as applicable). For project engineering support, certified figures and commercial terms, contact PROSKY via proskytele.com.