

PLC SPLITTERS

PLC Splitter 1×8

Model [PSK-PLC-108](#) · PROSKY passive network infrastructure

Planar lightwave circuit splitter dividing one optical input evenly across eight outputs, wavelength-flat over the full 1260–1650 nm PON band. Supplied bare, in ABS module, LGX cassette or rack-mount formats to suit any point in the ODN.

Product overview

The PLC Splitter 1×8 is built on a silica-on-silicon planar lightwave circuit: a chip of lithographically formed waveguides that split one input into eight equal outputs through a cascade of Y-branches. Input and output fiber arrays are aligned and bonded to the chip in V-groove assemblies, and the whole optical path is packaged in a compact stainless tube or module housing. There are no moving parts and no power — the device is fully passive in both directions.

Because the split happens in a manufactured waveguide rather than fused fiber, the division is inherently uniform and wavelength-flat: insertion loss stays consistent across 1260–1650 nm, covering every GPON, XGS-PON and RF-overlay wavelength simultaneously, with low polarization dependence and tight port-to-port uniformity. Typical class figures are 10.5 dB maximum insertion loss, 0.6 dB uniformity and return loss of 55 dB or better with APC terminations.

In a PON, the 1×8 sits at the distribution point of the optical distribution network — a street cabinet, fiber distribution terminal or building box — splitting the feeder from the OLT toward subscriber drops, alone or cascaded with a second stage. Format options match the location: bare-fiber packages for splice closures, ABS modules for wall and pole boxes, LGX cassettes and 19-inch rack shelves for frames.

Key features

- › Wavelength-flat splitting across 1260–1650 nm — one device covers all PON bands
- › Tight port-to-port uniformity (≤ 0.6 dB typical) from lithographic waveguide fabrication
- › Low polarization-dependent loss (≤ 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

- › FTTH distribution-point splitting
- › GPON / XGS-PON optical distribution networks
- › Cabinet and closure-based split stages
- › Passive optical LAN distribution
- › RF-overlay video 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 × 8, even
Operating wavelength	1260 – 1650 nm
Insertion loss	≤ 10.5 dB
Uniformity	≤ 0.6 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	100 × 80 × 10 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-108 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.