

Product Description:

PLANET ABS Box PLC splitters are passive optical power-distribution devices for splitting or combining single-mode optical signals in PON, ODN and FTTx networks. The compact ABS module protects the PLC chip and fiber routing while supporting high channel uniformity, low PDL and wideband operation from 1260 to 1650 nm.



Premium Features:

- Planar Lightwave Circuit (PLC) technology for stable, repeatable optical power distribution.
- Low insertion loss, low polarization-dependent loss and strong channel-to-channel uniformity.
- Wide operating wavelength: 1260–1650 nm; suitable for GPON, EPON, XG-PON and general ODN use.
- 1×N configurations from 1×2 to 1×64; 2×N configurations from 2×2 to 2×64.
- G.657.A1 bend-insensitive single-mode fiber lead for compact routing and FTTH environments.
- SC/APC or SC/UPC connector options; 1.5 m lead length standard.
- ABS cassette enclosure with compact footprint and protected internal fiber routing.
- Designed for Telcordia GR-1209-CORE / GR-1221-CORE environmental and reliability requirements.
- Operating temperature range: -40°C to +85°C.

Applications:

FTTx / FTTH • PON / ODN • Optical signal distribution • CATV links • Telecom access networks • Fiber distribution boxes and cabinets

Configuration Note: 900 μ m fiber leads are standard in the supplied PLANET source sheet. Other cable-jacket options may be offered only after factory confirmation.

General Optical Specifications:

Parameter	Specification
Splitter Technology	Planar Lightwave Circuit (PLC), ABS box module
Operating Wavelength	1260–1650 nm
Optical Fiber	ITU-T G.657.A1 bend-insensitive single-mode fiber
Fiber Lead Length	1.5 m standard
Connector Options	SC/APC or SC/UPC
Fiber Lead Construction	900 μ m standard
Directivity	≥ 55 dB
Return Loss	≥ 60 dB (SC/APC); ≥ 50 dB (SC/UPC)
Maximum Optical Power	300 mW
Operating Temperature	-40°C to +85°C
Storage Temperature	-40°C to +85°C
Relative Humidity	$\leq 93\%$ RH

1×N Optical Performance (Published PLANET Limits):

Parameter	1×2	1×4	1×8	1×16	1×32	1×64
Insertion Loss with Connector (Max), dB	4.1 / 4.4	7.4 / 7.9	10.5 / 11.0	13.8 / 14.1	17.1 / 17.4	20.4 / 21.0
Insertion Loss without Connector (Max), dB	3.8 / 4.1	7.1 / 7.6	10.2 / 10.7	13.5 / 13.8	16.8 / 17.1	20.1 / 20.7
Uniformity (Max), dB	0.6	0.7	0.8	1.0	1.5	2.0
PDL (Max), dB	0.2	0.2	0.2	0.3	0.3	0.3

2×N Optical Performance (Published PLANET Limits):

Parameter	2×2	2×4	2×8	2×16	2×32	2×64
Insertion Loss with Connector (Max), dB	4.4 / 4.6	7.7 / 8.1	10.8 / 11.3	14.1 / 14.4	17.4 / 17.7	20.6 / 21.3
Insertion Loss without Connector (Max), dB	4.1 / 4.3	7.4 / 7.8	10.5 / 11.0	13.8 / 14.1	17.1 / 17.4	20.3 / 21.0
Uniformity (Max), dB	0.6	0.7	0.8	1.0	1.5	2.0
PDL (Max), dB	0.2	0.2	0.2	0.3	0.3	0.5

Cassette Dimensions (mm):

Configuration	1×2 / 1×4 / 1×8	1×16 / 1×32	1×64
ABS Cassette Size	100 × 80 × 10	120 × 80 × 18	140 × 114 × 18

2×N series: the supplied PLANET sheet lists the same cassette size groups for 2×2 through 2×64.

Ordering Information — SC/APC:

Part Number	Description
PL-FSPSCSA21	PLC Splitter 1×2, ABS Box, 1.5 m SC/APC Pigtailes
PL-FSPSCSA41	PLC Splitter 1×4, ABS Box, 1.5 m SC/APC Pigtailes
PL-FSPSCSA81	PLC Splitter 1×8, ABS Box, 1.5 m SC/APC Pigtailes
PL-FSPSCSA161	PLC Splitter 1×16, ABS Box, 1.5 m SC/APC Pigtailes
PL-FSPSCSA321	PLC Splitter 1×32, ABS Box, 1.5 m SC/APC Pigtailes
PL-FSPSCSA641	PLC Splitter 1×64, ABS Box, 1.5 m SC/APC Pigtailes

Ordering Information — SC/UPC:

Part Number	Description
PL-FSPSCSU21	PLC Splitter 1×2, ABS Box, 1.5 m SC/UPC Pigtailes
PL-FSPSCSU41	PLC Splitter 1×4, ABS Box, 1.5 m SC/UPC Pigtailes
PL-FSPSCSU81	PLC Splitter 1×8, ABS Box, 1.5 m SC/UPC Pigtailes
PL-FSPSCSU161	PLC Splitter 1×16, ABS Box, 1.5 m SC/UPC Pigtailes
PL-FSPSCSU321	PLC Splitter 1×32, ABS Box, 1.5 m SC/UPC Pigtailes
PL-FSPSCSU641	PLC Splitter 1×64, ABS Box, 1.5 m SC/UPC Pigtailes

2×N Ordering: 2×2 to 2×64 are technically listed in the supplied PLANET series, but specific ordering part numbers are not provided in the source sheet; therefore they are shown as available on request pending factory confirmation.

Compliance & Quality References:

- Telcordia GR-1209-CORE — passive optical component reliability/environmental reference.
- Telcordia GR-1221-CORE — reliability assurance reference for passive optical components.
- RoHS and CE as stated in the supplied PLANET datasheet.
- Quality management reference: ISO 9001 (quality-system certification, not a product performance standard).

25-Year System Warranty: Subject to proper installation and certified components usage.

Technical note: *This premium revision preserves PLANET's published product family, dimensions and optical limits while correcting wording and clarifying connector / return-loss information. Final production values should be verified against the approved supplier test report and sample before mass production.*