

General Description

The PDR Planar Lightwave Circuit (PLC) Splitter provides passive optical power splitting for fiber optic networks using a precision planar waveguide chip. Available in 1×N configurations (1×2 through 1×64) and 2×N configurations (2×2 through 2×64), the splitter covers the full 1260–1650 nm wavelength range and is designed for long-term reliability in FTTx, PON, LAN, CATV, and test equipment applications. Packaging options include bare fan-out, compact module, LGX cassette, and rack-mountable formats. All units are tested to Telcordia GR-1209 and GR-1221 standards and offer low insertion loss, low polarization-dependent loss, high channel uniformity, and excellent environmental and mechanical stability across –40°C to +85°C.



Key Features

- Planar waveguide chip technology for low insertion loss, high uniformity, and excellent long-term stability
- 1×N configurations: 1×2, 1×4, 1×8, 1×16, 1×32, 1×64
- 2×N configurations: 2×2, 2×4, 2×8, 2×16, 2×32, 2×64
- Wide operating wavelength: 1260–1650 nm — covers all standard PON and WDM bands
- Low polarization-dependent loss (PDL): ≤0.2 dB (1×2) to ≤0.4 dB (1×64)
- High directivity ≥55 dB and return loss ≥55 dB (1×N) / ≥50 dB (2×N)
- Compliant with Telcordia GR-1209 and GR-1221 reliability standards
- Four packaging formats: bare fan-out, module, LGX cassette, and rack-mountable
- Fiber type: SMF-28e (default) or customer-specified; connectors FC, SC, LC, ST, or adapter
- Operating and storage temperature: –40°C to +85°C; humidity ≤93% RH

PDR VIDEOTRONICS (INDIA) PRIVATE LIMITED

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Technical Specifications

Parameter	1×N Specification (excludes connector loss)
Port Configurations	1×2 1×4 1×8 1×16 1×32 1×64
Fiber Type	SMF-28e (default) customer specified
Operating Wavelength	1260–1650 nm
Insertion Loss — 1×2 / 1×4 / 1×8	4.0 dB / 7.4 dB / 10.5 dB
Insertion Loss — 1×16 / 1×32 / 1×64	13.6 dB / 16.9 dB / 21.0 dB
Loss Uniformity (max) — 1×2 / 1×4 / 1×8	0.5 dB / 0.7 dB / 1.0 dB
Loss Uniformity (max) — 1×16 / 1×32 / 1×64	1.4 dB / 1.8 dB / 2.0 dB
Return Loss (min) — 1×N	≥55 dB
PDL (max) — 1×2–1×8 / 1×16–1×64	≤0.2–0.3 dB / ≤0.3–0.4 dB
Directivity (min)	≥55 dB
Wavelength-Dependent Loss (WDL, max)	0.3–0.8 dB (varies by port count)
Temperature-Dependent Loss (TDL, max)	0.5–1.0 dB (varies by port count)
2×N Return Loss (min)	≥50 dB
Operating Temperature	–40°C to +85°C
Storage Temperature	–40°C to +85°C
Operating / Storage Humidity	≤93% RH
Compliance	Telcordia GR-1209 Telcordia GR-1221

* IL values are for splitter without connectors. Add 0.2 dB per connector end for terminated versions; add 0.2 dB for LGX PLC splitters with adapters. 2×N insertion loss is ~0.4 dB higher than 1×N equivalents.

Applications

- FTTx (FTTP, FTTH, FTTN, FTTC) passive optical network (PON) power splitting at distribution points
- GPON, XGS-PON, and EPON access network subscriber branching and signal distribution
- Local Area Network (LAN) fiber distribution in enterprise, campus, and data centre environments
- CATV hybrid fiber-coax (HFC) network signal splitting and distribution
- Analog and digital passive optical network monitoring and test equipment signal injection
- Telecommunications backbone and metro network passive branching requiring wide wavelength coverage

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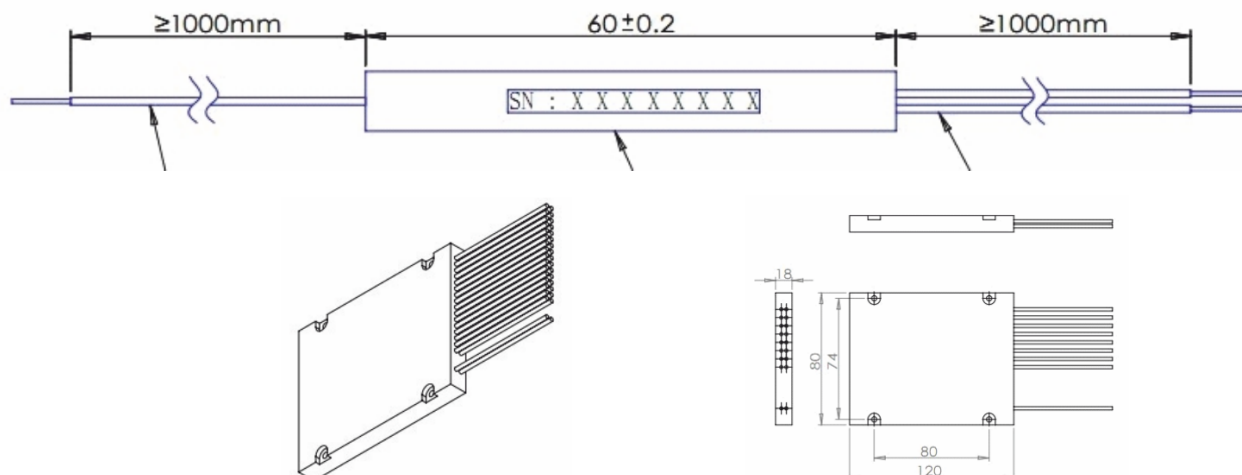
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Technical Drawing



Ordering Information

PLC	Wavelength	Port	Fiber Type	Input Pigtail	Fiber Length	In/Out Connector
	35=1310/1550nm 13=1310nm 15=1550nm	0102=1x2 0104=1x4 0108=1x8 0116=1x16 0132=1x32 0164=1x64 0216=2x16 0232=2x32 0264=2x64	1=G652D 2=G657A C=Customize	1=bare fiber 2=900μm jacket fiber	1=1m 2=1.2m 3=1.5m C=Customize	0=Adapter 1=FC/APC 2=FC/PC 3=SC/APC 4=SC/PC 5=ST 6=LC C=Customize

Order Code Example:

PLC-35-0108-1-2-3-3

(1310/1550 nm — 1x8 — G.652D — 900 μm loose tube — 1.5 m pigtail — SC/APC)

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