# Insertion Module Type PLC Splitter

Figure 1: 1*4 PLC Splitter

Figure 2: 1*8 PLC Splitter

Figure 3: 1*16 PLC Splitter

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Fiber Optic PLC Splitters (Planar Lightwave Circuit) adopt silica optical waveguide technology, and are used for optical signal coupling of fiber transmission and optical power re-allocation. PLC Splitter offers a cost effective and space saving networking solution in optical transmission system. They are key components in FTTX and FTTH networks and are responsible to distribute the signal from central office to numbers of premises.

PLC Splitters are available in a variety of port configurations, package sizes, etc., allowing high flexibility in tailoring the product to suit your precise requirements and application.

All PLC Splitters are fully compliant with Telcordia GR-1209 and GR-1221 standards for network applications requiring superior performance and long-term reliability.

Insertion Module Type PLC Splitter can connect with optical fiber connectors and patchcords and enable quicker connection and disconnection flexibly. Insertion Module Type PLC Splitters are widely used in ODF, cabinet and box for telecommunication, CATV, FTTX, FTTH, etc.

**Features:**

1. Uniform power splitting
2. Compact package dimension
3. Low polarization dependent loss
4. Good channel-to-channel uniformity
5. Low Insertion Loss and high Return Loss
6. Environmentally and mechanically stable
7. Wide operating wavelength range from1260nm to 1650nm

**Applications:**

1. CATV
2. LAN & WAN
3. Telecommunication networks
4. PON (Passive Optical Network)
5. FTTX, FTTH (Fiber to the Home)

**Standards:**

1. Telcordia GR-1209 and GR-1221

**Specifications:**

Table 1: Performance for 1×N PLC Splitter

Note: All measurements are done at room temperature without connectors.

| Port Configuration | | 1×2 | 1×4 | 1×8 | 1×16 | 1×32 | 1×64 |
|---|---|---|---|---|---|---|---|
| Operating Wavelength (nm) | | 1260~1650 | | | | | |
| Insertion Loss (dB) | Typ. | 3.6 | 6.8 | 10.0 | 13.0 | 16.0 | 19.5 |
| | Max. | 4.0 | 7.3 | 10.5 | 13.7 | 16.9 | 21.0 |
| Loss Uniformity (dB) | Typ. | 0.4 | 0.5 | 0.5 | 1.0 | 1.0 | 1.5 |
| | Max. | 0.6 | 0.6 | 0.8 | 1.2 | 1.5 | 2.5 |
| Return Loss (dB) | | 55 | 55 | 55 | 55 | 55 | 55 |
| PDL (dB) | Typ. | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 |
| | Max. | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 | 0.4 |
| Directivity (dB) | | 55 | 55 | 55 | 55 | 55 | 55 |
| Fiber Length (m) | | 1.0 or customized | | | | | |
| Fiber Type | | Corning SMF-28e or customized | | | | | |
| Wavelength Dependent Loss (dB) | Typ. | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 |
| | Max. | 0.3 | 0.3 | 0.3 | 0.5 | 0.5 | 0.5 |
| Temperature Stability (-40~+85°C) (dB) | Typ. | 0.3 | 0.3 | 0.3 | 0.4 | 0.4 | 0.4 |
| | Max. | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Operating Temperature (°C) | | -40~+85 | | | | | |
| Storage Temperature (°C) | | -40~+85 | | | | | |

Table 2: Performance for 1×N PLC Splitter

Note: All measurements are done at room temperature with connectors.

| Port Configuration | | 1×2 | 1×4 | 1×8 | 1×16 | 1×32 | 1×64 |
|---|---|---|---|---|---|---|---|
| Operating Wavelength (nm) | | 1260~1650 | | | | | |
| Insertion Loss (dB) | Typ. | 4.0 | 7.0 | 10.3 | 13.5 | 16.5 | 20.0 |
| | Max. | 4.5 | 7.7 | 11.0 | 14.2 | 17.5 | 21.5 |
| Loss Uniformity (dB) | Typ. | 0.4 | 0.5 | 0.5 | 1.0 | 1.0 | 1.5 |
| | Max. | 0.6 | 0.6 | 0.8 | 1.2 | 1.5 | 2.5 |
| Return Loss (dB) | | 55 | 55 | 55 | 55 | 55 | 55 |
| PDL (dB) | Typ. | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 |
| | Max. | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 | 0.4 |
| Directivity (dB) | | 55 | 55 | 55 | 55 | 55 | 55 |
| Fiber Length (m) | | 1.0 or customized | | | | | |
| Fiber Type | | Corning SMF-28e or customized | | | | | |
| Wavelength Dependent Loss (dB) | Typ. | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 |
| | Max. | 0.3 | 0.3 | 0.3 | 0.5 | 0.5 | 0.5 |
| Temperature Stability (-40~+85°C) (dB) | Typ. | 0.3 | 0.3 | 0.3 | 0.4 | 0.4 | 0.4 |
| | Max. | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Operating Temperature (°C) | | -40~+85 | | | | | |
| Storage Temperature (°C) | | -40~+85 | | | | | |

| Part No. | Name | Applied Slot No. |
|---|---|---|
| PLC-14-I-SU | 1*4 PLC Splitter | 1 |
| PLC-18-I-SU | 1*8 PLC Splitter | 1 |
| PLC-116-I-SU | 1*16 PLC Splitter | 2 |

**Ordering Information:**

| Name | PLC=PLC Splitter |
|---|---|
| Port | 14=1×4; 18=1×8; 116=1×16; |
| Package | I=Insertion Module Type |
| Type | None=Vertical; H=Horizontal |
| Input Connector & Adapter | SU=SC/UPC; SA=SC/APC;<br>FU=FC/UPC; FA=FC/APC;<br>TU=ST/UPC; TA=ST/APC;<br>LU=LC/UPC; LA=LC/APC; etc |
| Output Connector & Adapter | SU=SC/UPC; SA=SC/APC;<br>FU=FC/UPC; FA=FC/APC;<br>TU=ST/UPC; TA=ST/APC;<br>LU=LC/UPC; LA=LC/APC; etc<br>None=the same as Input Connector |
| Fiber Type | None=SM G.657A1; 2D=SM G.652D |