# Standard LGX Cassette PLC Splitter Data Sheet

# Contents

## Overview

Planar Lightwave Circuit (PLC) Splitter is a type of passive optical component using silica optical waveguide technology to distribute optical signals from the Central Office (CO) to multiple premise locations, allowing for efficient communication.

FS LGX Cassette Splitters are engineered for high-density networks, offering exceptional scalability and reliability. FS PLC splitters come in a full range of 1xN and 2xN models, with a variety of connector options including LC, SC, FC, and ST, as well as customizable split ratios to meet the specific needs of different applications. Additionally, we provide multiple packaging formats and other tailored solutions, ensuring flexibility and seamless integration into diverse network designs. FS is committed to providing high-quality, customizable solutions to meet the evolving needs of modern telecommunications.

## Features and Benefits

- ≤ 4.1dB Low Insertion Loss and ≤ 0.2dB Low Polarization Dependent Loss
- Split Single or Dual Optical Inputs Evenly into Multiple Optical Outputs
- Compact Housing Fits Racks, Wall-mounted Boxes, Optical Distribution Boxes, etc
- Wide Operating Wavelength: 1260nm to 1650nm
- Wide Operating Temperature: -40° C to 85° C

## Quality Certification

- CE: Free of hazardous substances according to RoHS2015/863/EU
- Design and Test Criteria: Compliant with Telcordia GR-1209-CORE and GR-1221-CORE

## Application

- FTTX Systems
- LAN, WAN and Metro Networks
- CATV / MSOs
- Telecommunications networks

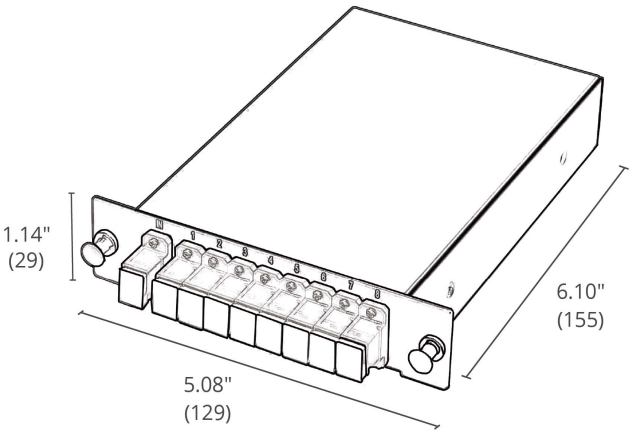
## Optical Specifications

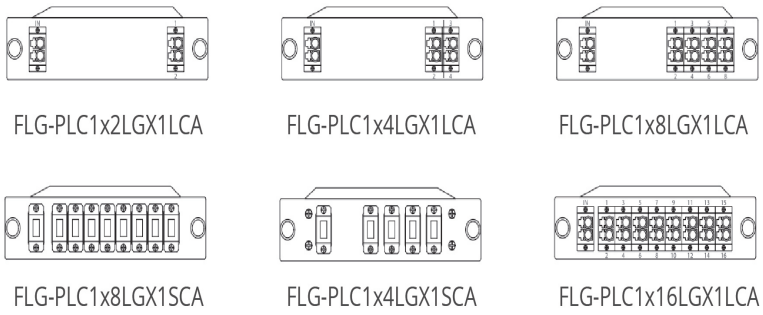
| Parameters | 1 x 2 | 1 x 4 | 1 x 8 | 1 x 16 | 1 x 32 | 2 x 2 | 2 x 4 | 2 x 8 | 2 x 16 | 2 x 32 |
|---|---|---|---|---|---|---|---|---|---|---|
| Split Ratio | Symmetrical | | | | | | | | | |
| Operating Wavelength (nm) | 1260～1650 | | | | | | | | | |
| Insertion Loss (dB) | ≤4.1 | ≤7.4 | ≤10.5 | ≤13.8 | ≤17.0 | ≤4.4 | ≤7.7 | ≤11.1 | ≤14.3 | ≤17.5 |
| Loss Uniformity (dB) | ≤0.4 | ≤0.6 | ≤0.8 | ≤1.2 | ≤1.5 | ≤0.8 | ≤0.8 | ≤1.0 | ≤1.2 | ≤1.8 |
| Polarization Dependent Loss (dB) | ≤0.2 | ≤0.2 | ≤0.2 | ≤0.3 | ≤0.3 | ≤0.3 | ≤0.3 | ≤0.3 | ≤0.3 | ≤0.3 |
| Return Loss (dB) | ≥55 (APC); ≥50 (UPC) | | | | | | | | | |
| Directivity (dB) | ≥55 | ≥55 | ≥55 | ≥55 | ≥55 | ≥55 | ≥55 | ≥55 | ≥55 | ≥55 |
| Wavelength Dependent Loss (dB) | ≤0.3 | ≤0.3 | ≤0.3 | ≤0.5 | ≤0.5 | ≤0.3 | ≤0.3 | ≤0.3 | ≤0.5 | ≤0.5 |
| Temperature Dependent Loss (dB) | ≤0.5 | ≤0.5 | ≤0.5 | ≤0.5 | ≤0.5 | ≤0.5 | ≤0.5 | ≤0.5 | ≤0.5 | ≤0.5 |
| Maximum Input Power (mW) | 500mW | 500mW | 500mW | 500mW | 500mW | 500mW | 500mW | 500mW | 500mW | 500mW |
| Connector Type | SC/LC/Customized | | | | | | | | | |

## General Specifications

| Parameters | LGX Cassette PLC Splitter |
|---|---|
| Operating Temperature | -40 to 85° C(-40 to 185° F) |
| Storage Temperature | -40 to 85° C(-40 to 185° F) |
| Relative Humidity | 5% - 95% |
| Dimensions (HxWxD) | 1.14"x5.08"x6.10" (29x129x155mm)<br>2.28"x5.08"x6.10" (58x129x155mm)<br>3.42"x5.08"x6.10" (87x129x155mm) |

## Mechanical Drawing

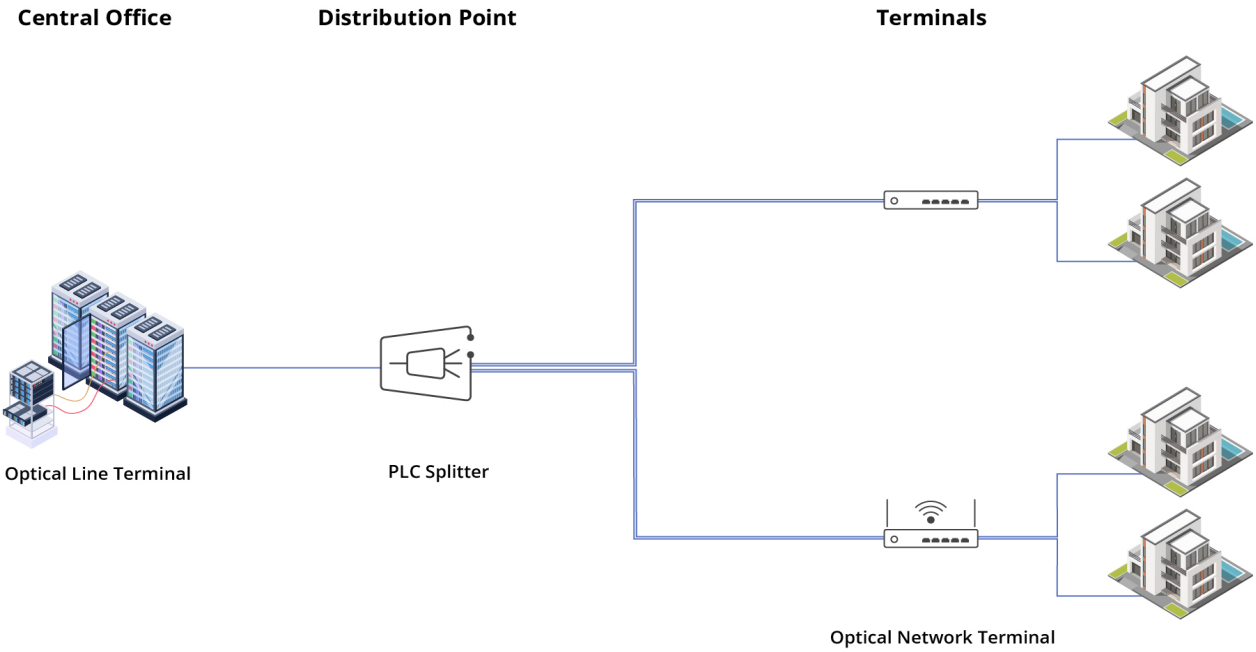



## Split Architectures in PON

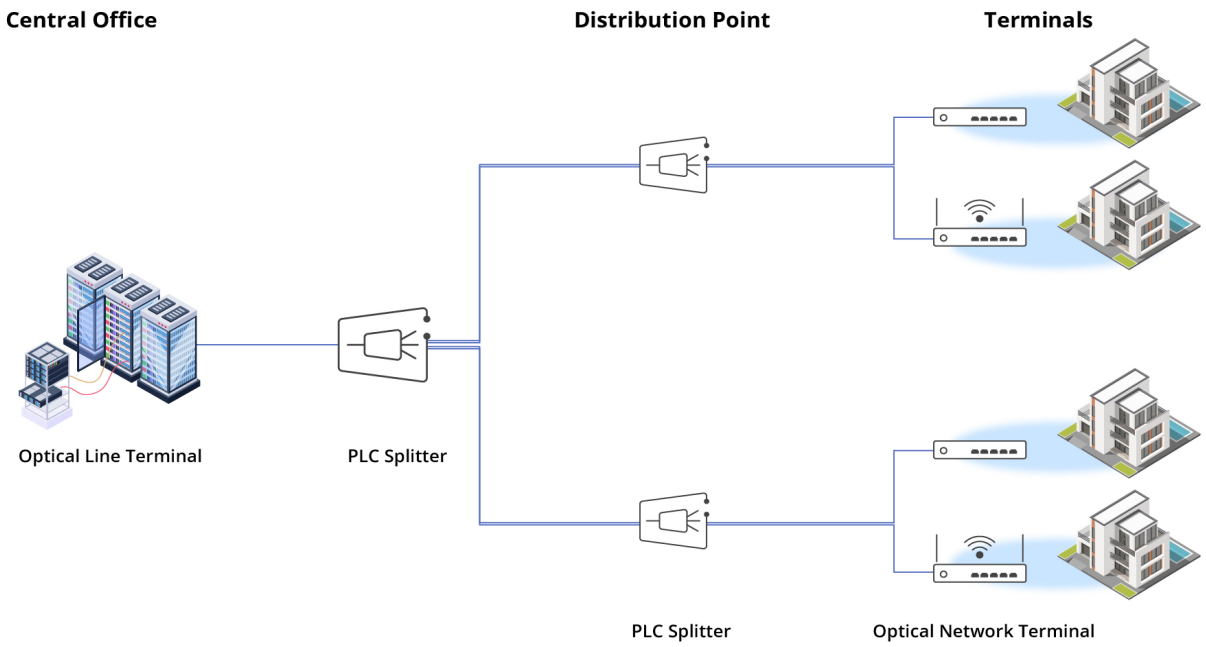
### Centralized Split Architecture

- Centralized Fiber Configuration: All splitters are housed in one location for easier management.
- Maximum Network Flexibility: Facilitates simple network upgrades and scaling.
- Consolidated Splice Locations: Reduces the number of splice points for easier maintenance.



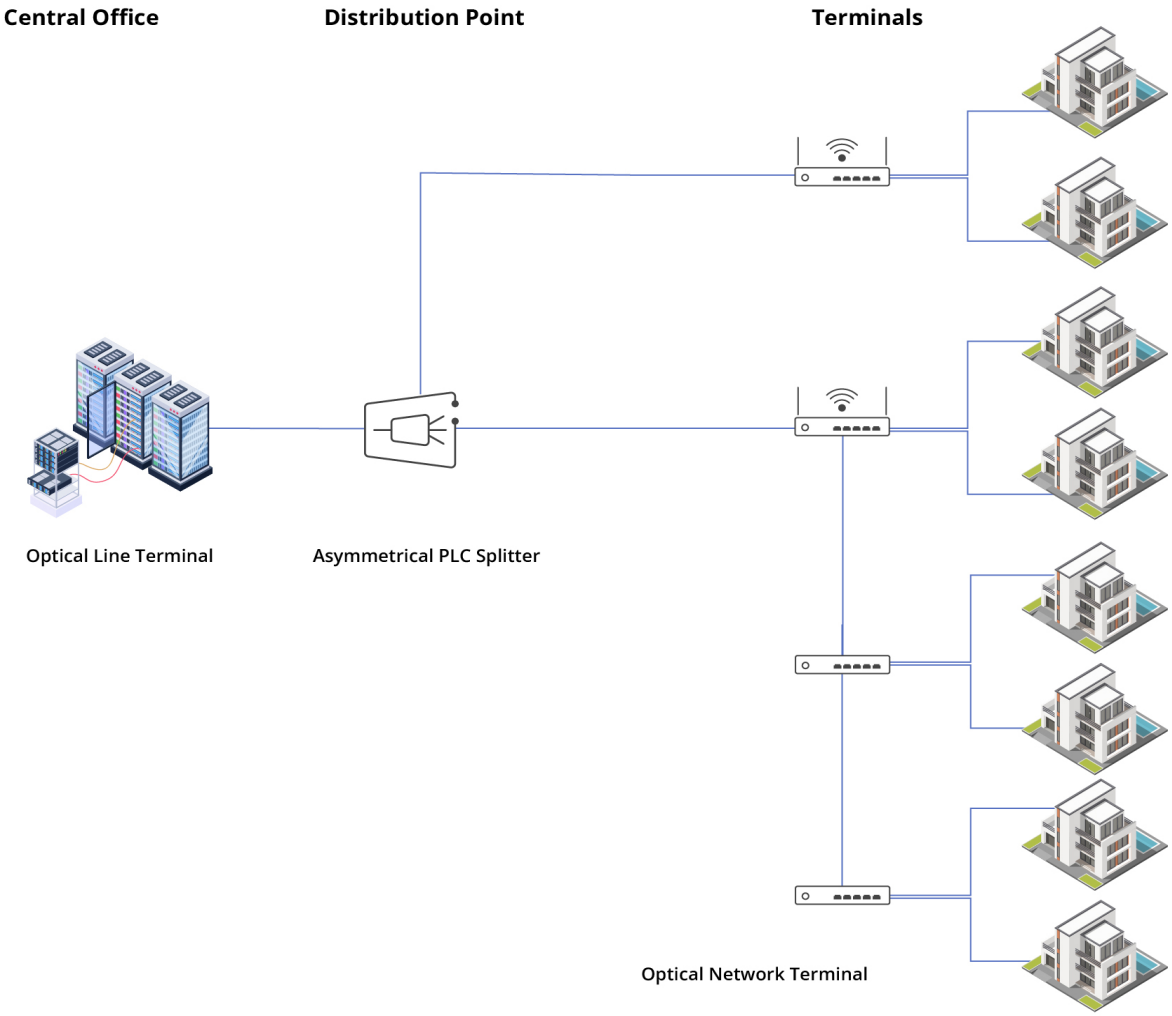
## Distributed Split Architecture

- Good Network Flexibility: Offers flexibility in network design and scalability.
- Reduced Fiber Count: Minimizes the use of high fiber count cables, reusing fibers for cost efficiency.




## Optical Tap Architecture

- Efficient Fiber and Power Utilization: Minimizes fiber usage and optimizes OLT optical power efficiency, ideal for cost-effective, low-density areas.
- Simplified Network Design: Fewer splices are needed, reducing complexity and streamlining the installation process.
- Optimized Signal Distribution: Asymmetrical PLC splitters are used to ensure balanced signal strength across varying network lengths and locations.




## LGX Rack Mounting Solutions

### 1U Rack Mount Enclosure

Features：

Holds up to 3 x LGX Cassettes

Tool-less removable top cover simplifies the operation

Dimensions (HxWxD): 1.73"x17.13"x9.02" (44x435x229.1mm)

FS P/N: #51608 FLG-1UFMX-N

**Description:** 1U Slide-Out Rack Mount LGX Fiber Enclosure Unloaded, Holds up to 3 LGX Cassette PLC Splitter

## Ordering information

| FS P/N | Product description |
|---|---|
| FLG-PLC1x2LGX1SCA | 1 x 2 PLC Fiber Splitter, Standard LGX Cassette, SC/APC, Singlemode |
| FLG-PLC1x4LGX1SCA | 1 x 4 PLC Fiber Splitter, Standard LGX Cassette, SC/APC, Singlemode |
| FLG-PLC1x8LGX1SCA | 1 x 8 PLC Fiber Splitter, Standard LGX Cassette, SC/APC, Singlemode |
| FLG-PLC1×2LGX1LCA | 1 x 2 PLC Fiber Splitter, Standard LGX Cassette, LC/APC, Singlemode |
| FLG-PLC1×4LGX1LCA | 1 x 4 PLC Fiber Splitter, Standard LGX Cassette, LC/APC, Singlemode |
| FLG-PLC1×8LGX1LCA | 1 x 8 PLC Fiber Splitter, Standard LGX Cassette, LC/APC, Singlemode |
| FLG-PLC1×16LGX1LCA | 1 x 16 PLC Fiber Splitter, Standard LGX Cassette, LC/APC, Singlemode |

## Customization Capability

FS provides a whole series of 1xN and 2xN PLC splitter products available in a wide range of package types, connectors, and split ratios, tailored for specific applications. With its compact structure, stable optical characteristics, robust peformance and reliable certification, FS PLC splitter solutions strengthen your network infrastructure and facilitate smooth communication across multiple fibers, improving both efficiency and reliability.

| Series | | Customized Options | | | | | |
|---|---|---|---|---|---|---|---|
| | | Split Ratio | Configuration Type | Input Connector | Output Connector | Cable Diameter | Fiber Length |
| Bare Fiber |  | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Mini Module |  | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| ABS Module |  | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| LGX Cassette |  | ✓ | ✓ | ✓ | ✓ | – | – |
| FHD Cassette |  | ✓ | ✓ | ✓ | ✓ | – | – |
| 1U Rack Mount |  | ✓ | ✓ | ✓ | ✓ | – | – |

**Delaware, United States**
Address：Delaware: 380 Centerpoint Blvd, New Castle, DE 19720, United States
Email：US@fs.com
Tel：+1 (888) 468-9910

**California, United States**
Address：California: 15241 Don Julian Rd, City of Industry, CA 91745, United States
Email：US@fs.com
Tel：+1 (888) 468-9910

**Germany**
Address：Röntgenstraße 18, 85757 Karlsfeld, Germany
Email：DE@fs.com
Tel：+49 (0) 8131 377 3008

**United Kingdom**
Address：Unit 8, Urban Express Park, Union Way, Aston, Birmingham B6 7FH, United Kingdom
Email：UK@fs.com
Tel：+44 (0) 121 726 4775

**Australia**
Address：57-59 Edison Rd, Dandenong South, VIC 3175, Australia
Email：AU@fs.com
Tel：+61 3 5909 9990

**Singapore**
Address：7002 ANG MO KIO AVENUE 5 #05-02 Singapore 569914
Email：SG@fs.com
Tel：+65 31381992

**Japan**
Address：JS Progress Building 5F, 4-1-23, Heiwajima, Ota Ku, Tokyo, 143-0006, Japan
Email：JP@fs.com
Tel：+81-3-6897-9438

**Shenzhen（China）**
Address：Room 1903-1904, Block C, China Resources Tower, Dachong Community, Yuehai Subdistrict, Nanshan District
Email：sales@feisu.com
Tel：+86(400)865 2852

**Wuhan（China）**
Address：Building A1-A4, Chuangxin Tiandi, No. 88 Guanggu Sixth Road, Hongshan District
Email：sales@feisu.com
Tel：+86(400)865 2852

**Shanghai（China）**
Address：Unit 1201, Lee Gardens Shanghai Office Tower, No. 668 Xinzha Road, Jing'an District
Email：sales@feisu.com
Tel：+86(400)865 2852

FS has several offices around the world. Addresses, phone numbers are listed on the FS Website at https://www.fs.com/contact_us.html. FS and FS logo are trademarks or registered trademarks of FS in the U.S. and other countries.