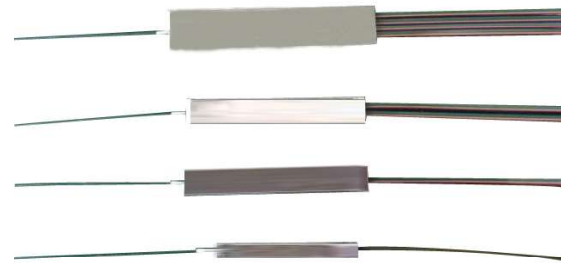


Splitters

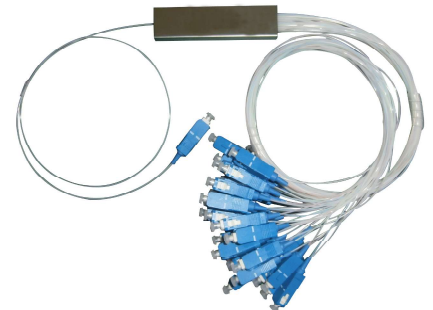
Bare & Mini Module Type PLC Splitters

PLC Splitters are used for telcom network and also used for high speed metropolitan and access network. This document describes optical, structural and environmental specifications of PLC splitter produced by Alfafonet.



Guideline of Reliability Requirements

- ✓ GR-1209 Generic Requirements for Passive Optical Components.
- ✓ GR-1221 Generic Reliability Assurance Requirements for Passive Optical Components
- ✓ GR-326 Generic Requirements for Single mode Optical Connectors and Jumper Assemblies
- ✓ YD/T 2000.1-2014 Integrated optical path devices based on Planar light-wave circuits
Part I : Optical power splitter based on PLC Technology



Main Specification for PLC

Splitter Mechanical Specification

- ✓ A schematic of the splitter configuration is shown in Figure 1 and Figure 2.
The devices will have one or two input ports depending on the application

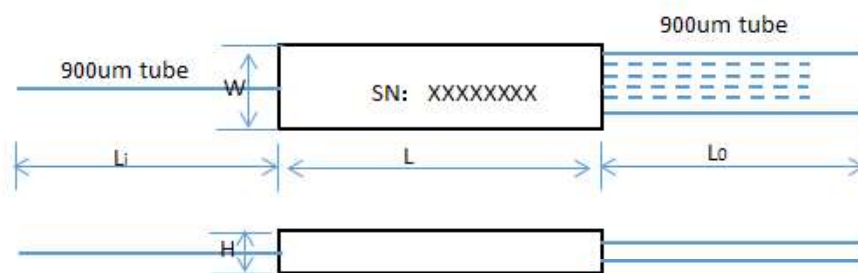


Figure 1 Definition of ports on a mini-module PLC splitter without connector

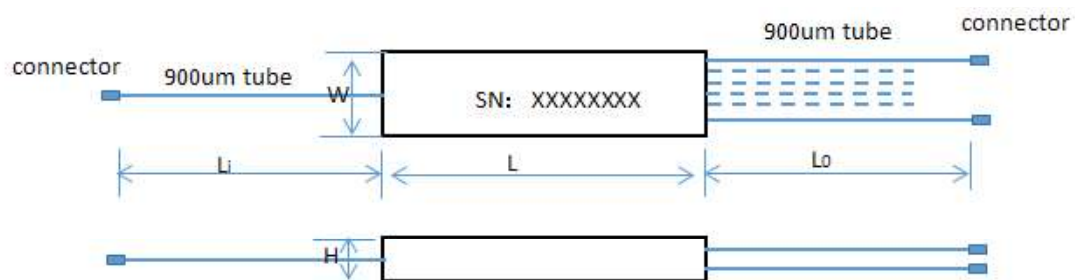


Figure 2 Definition of ports on a mini-module PLC splitter with connector

Splitter Housing Dimensions

Please refer to Table 1 for housing dimensions of optical splitter.

Housing size	1X2	1X4	1X8	1X16	1X32	1X64	2X2	2X4	2X8	2X16	2X32	2X64
L (mm)	60			60	80	100	60	60	70	70	80	100
W (mm)	7			12	20	40	7	7	7	12	20	40
H (mm)	4			4	6	6	4	4	4	4	6	6

Table 1 Housing dimensions of optical splitter.

Input / Output Fiber Specification

- ✓ Pigtail for Input fiber: 900um white tube, Li is the length of input tube without connector
- ✓ Pigtail for Output fiber: 900um white tube or 900um color tube
blue, orange, green, brown, gray, white, red, black; Lo is the length of output tube without connector
- ✓ Remark : The unit of Li and Lo is centimeter, and the tolerance of Li and Lo is -0/+5cm

Optical Specification for PLC Splitter

- ✓ Please refer to Table 2 for optical performance of PLC Splitter.

Parameter	Unit		1×2	1×4	1×8	1×16	1×32	1×64	2×2	2×4	2×8	2×16	2×32	2×64
P Grade														
Insertion Loss	Typ.	dB	3.6	6.9	10.0	13.2	16.5	20.0	4.0	7.2	10.6	13.8	17.0	21.0
	Max	dB	3.8	7.1	10.4	13.5	17.0	20.5	4.2	7.5	11.0	14.3	17.5	21.5
Channel Uniformity	Max	dB	0.6	0.6	1.0	1.1	1.5	1.8	1.2	1.3	1.6	1.8	2.3	2.5
PDL	Max	dB	0.2	0.2	0.2	0.2	0.3	0.4	0.3	0.3	0.3	0.4	0.4	0.4
S Grade														
Insertion Loss	Typ.	dB	3.8	7.1	10.4	13.6	17	20.5	4.2	7.5	11	14.3	17.4	21.5
	Max	dB	4.1	7.4	10.8	14	17.4	21	4.5	7.9	11.4	14.7	17.9	22
Channel Uniformity	Max	dB	0.6	0.8	1	1.3	1.5	1.8	1.2	1.5	1.6	2	2.5	3
PDL	Max	dB	0.2	0.2	0.2	0.2	0.3	0.4	0.3	0.3	0.3	0.4	0.4	0.4
Return Loss	Min	dB	50											
Directivity	Min	dB	55											
Operating Wavelength	nm		1260 ~ 1650											
Operating Temperature			-40~85											
Storage Temperature			-40~85											
Fiber Type			ITU. G657A or other											

Table 2 Optical performance of PLC Splitter

Remark:

- ✓ The IL are tested without connector loss
- ✓ Insertion loss increases 0.3dB/pair if connectors included
- ✓ The RL requirement : RL≥55dB for with APC connectors and RL≥50dB for with UPC connectors