



PLC Optical Splitter (Micro-splitter) Material Description

Version 1.0

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1. Overview

PLC splitter is a key component in FTTX network. It provides uniform division of an optical signal from one or two input fiber ports to multiple output ports. FiberHome PLC splitter adopts a unique patented low loss technology, it's quality and reliability is compliant with the Telcordia GR-1209-CORE and GR-1221-CORE standards. Due to the excellent low loss, higher split ratio could be used, and longer transmission distance would be reachable in FTTx-PON network.



Figure 1: fan-out pigtail type

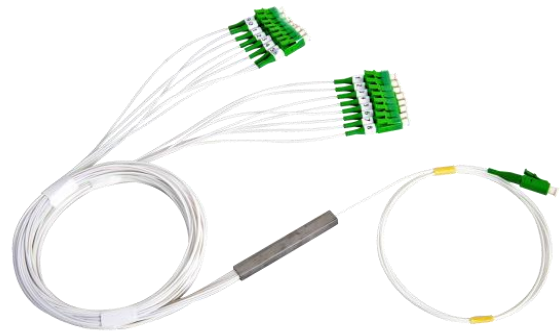


Figure 2: loose tube pigtail type

2. Features

- 1) Loose tube pigtail type: with 0.9mm loose tube pigtail, saving the installation and storage space.
- 2) Fan-out pigtail type: with 0.9mm pigtail for input, fan-out pigtail for output.
- 3) Adopts G.657A2 optical fiber, low bending loss.
- 4) Used in Fiber Distribution Box, closure or other small termination box.
- 5) Could provide high split ratio, e.g. $N \times 64$.

3. Structure

3.1 Fan-out pigtail type

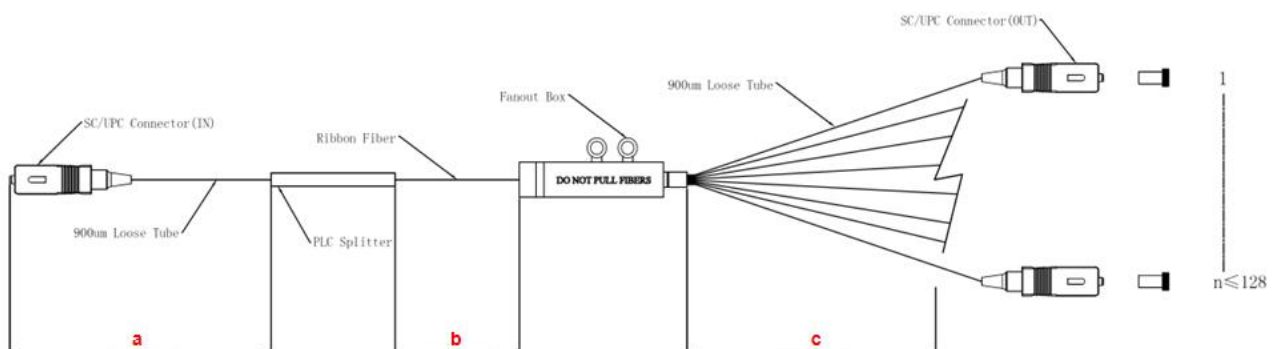


Figure 3: Structure of fan-out pigtail type micro splitter

3.2 Loose tube pigtail type

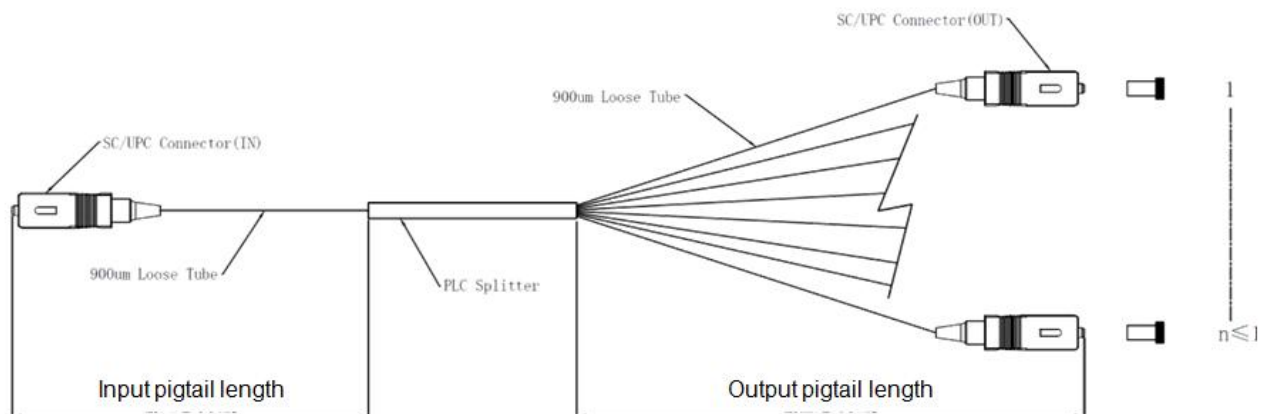


Figure 4: Structure of loose tube pigtail type micro splitter

4. Splitter Specifications

Table 1: Fan-out pigtail type

Inlet Quantity	1 or 2						
Outlet Quantity	2	4	8	16	32	64	128
*Dimension(mm)	40×4×4		45×5×4	55×7×4 (1:32) 60×11×4 (2:32)		60×11×4	75×19×4
Material	Manganin-alloy						
Connector type	SC, LC; UPC,APC						
*Ports description	With Φ0.9mm pigtail for input, fan-out pigtail for output						

*Note: Different dimension and cable length is available by customization.

Table 2: loose tube pigtail type

Inlet Quantity	1 or 2			
Outlet Quantity	2	4	8	16
*Dimension(mm)	40×4×4		55×7×4	
Material	Manganin-alloy			
Connector type	SC, LC; UPC,APC			
*Ports description	Φ0.9mm, 0.7 meter loose tube pigtail			

*Note: Different dimension and cable length is available by customization.

Table 3: General parameter of splitter

Module Split Ratio	Dimension (mm)	IL(Typical) (dB)	IL(Max) (dB)	Uniformity (dB)	PDL (dB)
1×2	40×4×4	3.6	3.8	<0.4	<0.3

Micro-splitter		Material Description			
1×4	40×4×4	6.9	7.1	<0.5	<0.3
1×8	40×4×4	9.9	10.5	<0.6	<0.3
1×16	45×5×4	13.2	13.8	<1.2	<0.3
1×32	55×7×4	16.3	17.0	<1.2	<0.3
1×64	60×11×4	19.2	20.1	<1.5	<0.3
1×128	75×19×4	22.8	23.8	<1.8	<0.3
2×4	40×4×4	7.0	7.3	<0.6	<0.3
2×8	40×4×4	10.1	10.7	<0.6	<0.3
2×16	40×5×4	13.2	14.0	<1.2	<0.3
2×32	60×11×4	16.5	17.2	<1.5	<0.4
2×64	60×11×4	19.4	20.3	<1.8	<0.4

Notice: Above parameters of Insertion loss are taken at room temperature at 1310nm, 1490nm and 1550nm, and connectors loss has been included.

The above dimension applies to splitter with fiber ribbon output

Optical Properties

Operating Wavelength.... 1260 ~ 1650 nm

WDL <0.5dB(splitters $\leq n \times 16$)
 <0.8dB(splitters $\geq n \times 32$)

Maximum input power.... >300mW

Directivity >55dB

Return Loss > 55dB(without connector),
 > 50dB(with UPC type connector)
 > 55dB(with APC type connector)

Temperature and Humidity

Operation -40 to +85°C

Transport and storage.... -40 to +85°C

Storage rel. humidity..... 20~95 (%RH)

Fiber Type

Single mode fiber according to ITU-T G.657 A2 (G.652D compliant)