

### III Main Specification for PLC Splitter

#### 3.1 Mechanical Specification

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

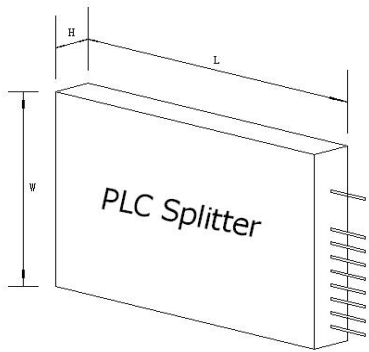
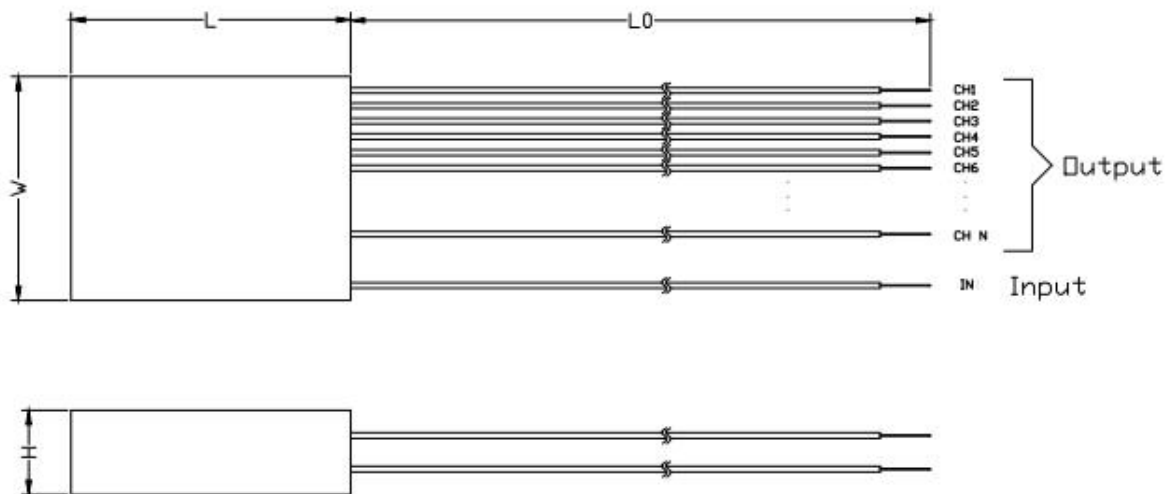
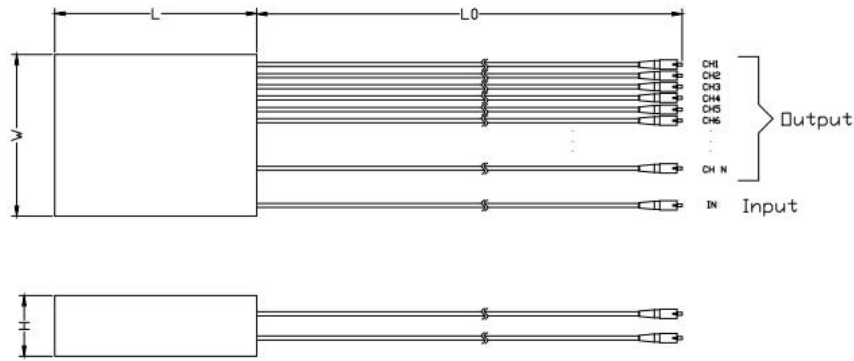


Figure 3.1-Dimensional structure of ABS module



Definition of ports on a ABS-module PLC splitter without connector



Pigtail for Input fiber: 2.0mm yellow tube or customized ,  $L_0$  is the length of input tube without connector;

Pigtail for Output fiber: 2.0mm yellow tube or customized ;  $L_0$  is the length of output tube without connector

**Remark:** The unit of  $L_i$  and  $L_o$  is centimeter, and the tolerance of  $L_i$  and  $L_o$  is  $-0/+5\text{cm}$ .

### 3.2 Input/Output fiber type of optical splitters

Input and output fiber of ABS splitter are  $\Phi 2.0\text{mm}$  or  $\Phi 3.0\text{mm}$  tubes;

Please refer to Table 3-1 for the housing dimensions of different packages:

Table 3-1

Parameter	1X2	1X3	1X4	1X6	1X8	1X12	1X16	1X32	1X64	2X2	2X4	2X8	2X16	2X32	2X64
L (mm)	100				120				140	100			120	140	
W (mm)	80				80				114	80			80	114	
H (mm)	10				18				18	10			18	18	

### 3.2 Performance Requirements

Please refer to table 3-2 for optical performance of PLC plitter.

Table 3-2

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	Max dB	3.9	7.1	10.6	13.8	17.0	21.0	4.5	7.5	11.0	14.6	17.7	21.2
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
Return Loss	Min dB	UPC:50 APC : 55											
Directivity	Min dB	55											
Operating Wavelength	nm	1260~1650											
Operating Temperature		-40~85											
Storage Temperature		-40~85											
Fiber Type		ITU. G657A or Customer Specified											

**Remark:**

1. The IL are tested without connector loss;

- 2.Insertion loss increases 0.3Db/pair if connectors are added;
- 3.The RL requirement is:  $RL \geq 55\text{dB}$  for with APC connectors and  $RL \geq 50\text{dB}$  for with UPC connectors.

## IV Packaging Requirements

### 4.1 Packing of ABS Module PLC Splitters

#### 4.1.1 Product Label

Material of product label is adhesive paper; product label will be pasted in the middle of the case( length-width direction) .

Labels as per table 4-1:

Table 4-1

Specifications	Example
Product Label Type: General 尺寸: 40*60mm Material: Self-adhesive Paper Font: Times New Roman Bold Word size: 22 in the first line; 17 in the second line, 17 in the third line;	<div style="border: 1px solid black; padding: 10px; margin: 10px auto; width: 80%;"> <p style="font-size: 24px; margin: 0;"><b>ABS Module PLC Splitter</b></p> <hr/> <p style="font-size: 18px; margin: 0;"><b>Model: 1×8 PLC Splitter</b></p> <hr/> <p style="font-size: 18px; margin: 0;"><b>SN: 1601000003</b></p> </div>

Note: The product model is printed as per different splitter ratio.

#### 4.1.2 Template of Test List

The neutral data report format is used in the test report, take 1X8 as an example, the format as following Table 4-1:

<b>1×8 PLC Splitter Test Sheet</b>									
Wavelength	1260-1650nm			Inspected Date			2017/05/29		
Product Type	PLC Splitter			Serial No.			1705000012		
Fiber Type	G657A			Fiber Length(m)			$\geq 1.0$		
Connector Type	SC/APC			Size(mm)			100×80×10		
Item.	IL(dB)			PDL(dB)			RL(dB)		
Wavelength(nm)	1310	1490	1550	1310	1490	1550	1310	1490	1550
Port 01	10.06	9.81	9.75	0.13	0.10	0.09	PASS	PASS	PASS
Port 02	9.71	9.77	9.83	0.08	0.12	0.08	PASS	PASS	PASS
Port 03	10.05	10.11	10.02	0.08	0.09	0.08	PASS	PASS	PASS
Port 04	9.96	10.13	9.96	0.12	0.09	0.11	PASS	PASS	PASS
Port 05	9.96	9.98	9.98	0.09	0.08	0.09	PASS	PASS	PASS
Port 06	9.83	10.00	10.13	0.10	0.10	0.13	PASS	PASS	PASS
Port 07	9.95	9.93	9.78	0.09	0.12	0.13	PASS	PASS	PASS
Port 08	9.79	9.82	10.05	0.11	0.08	0.12	PASS	PASS	PASS
Input	N/A						PASS	PASS	PASS
Max	10.06	10.13	10.13	0.13	0.12	0.13	N/A		
Min	9.71	9.77	9.75	0.08	0.08	0.08	N/A		
Average	9.91	9.94	9.94	0.10	0.10	0.10	N/A		
Uniformity	0.35	0.36	0.38	Directivity(dB)			$> 55$		

Picture 4-1 Template of Test List

QC pass stamp in the right corner.

#### 4.1.3 Product Packaging

ABS Module PLC Splitters are in blister package.



#### 4.1.4 Labels in Outer Carton

Labels should be pasted in left corner of outer carton, these labels contain product name, type, number, and production date, as shown in Figure 4-2. The position of the label is shown in Figure 4-2:

Table 4-2

Product: ABS Module PLC Splitters Type: General Size: 60*80mm Material: Font: Times New Roman Bold Word Size: 28 in the 1 <sup>st</sup> line, 17 in the 2, 3, 4line;	<b>ABS Module PLC Splitter</b>	
	Model	1×8
	Quantity	pcs
	Date	



Picture 4-2 Location of Label

## V Transportation

The product packaging should be suitable for any means of transportation, collision, drop, rain and snow direct and sun exposure should be avoided in transportation.

## VI Storage

Products should be stored in a well-ventilated, dry warehouse without corrosive gas. Storage temperature: -40 °C ~ +85 °C.