	<b>PLC Splitter Module</b>	Document No.	TTAF-SP-S07-1
TTAF Elektronik San ve Tic. Ltd. Şti.		Date	12-07-2016
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# OPTIC SPLITTER TECHNICAL SPECIFICATIONS

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## 1. Document History

Rev.	Approve Date	Originator	Change Description
01	Aug. 24, 2012	LGI	Initial
02	Jan. 16, 2015	KMW	Optical Specifications
03	Mar. 16, 2016	OSI	Re - specifications

## 2. General Description

This document details specifications of 1×N / 2×N PLC splitter modules manufactured by TTAF Elektronik San ve Tic. Ltd. Şti.

## 3. Optical Characteristic

### 3.1 Specification (without Connector)

Parameter	Unit	Specifications					
		1x2	1x4	1x8	1x16	1x32	1x64
Insertion loss(max.,S/P)	dB	≤3.9	≤7.2	≤10.7	≤14.0	≤18.0	≤21.0
Loss uniformity(max.,S/P)	dB	≤0.7	≤0.8	≤1.0	≤1.2	≤2.0	≤2.0
PDL(max.,S/P)	dB	≤0.2	≤0.2	≤0.2	≤0.3	≤0.3	≤0.3
Return Loss(min)	dB	≥ 50.0dB					
Directivity(min)	dB	≥ 50.0dB					
Case Type		According to customer's requirement					

Measured at room temperature, and wavelength of 1280 nm & 1620nm

### 3.2 Specification (without Connector)

Parameter	Unit	Specifications					
		2x2	2x4	2x8	2x16	2x32	2x64
Insertion loss(max.,S/P)	dB	≤4.5	≤7.6	≤11.0	≤14.5	≤17.5	≤21.5
Loss uniformity(max.,S/P)	dB	≤0.8	≤1.0	≤1.2	≤1.5	≤1.8	≤2.0
PDL(max.,S/P)	dB	≤0.2	≤0.2	≤0.3	≤0.4	≤0.4	≤0.4
Return Loss(min)	dB	≥ 50.0dB					
Directivity(min)	dB	≥ 50.0dB					
Case Type		According to customer's requirement					
Connector	dB	SC/FC/LC					

Measured at room temperature, and wavelength of 1280 nm & 1620nm

### 3.3 PLC splitter (Component packing dimensions)

No.	Parameter	Unit	Customer Specification					
			1x2	1x4	1x8	1x16	1x32	1x64
1	Module type	Width	4		7	7	12	
		Height	4		4	4	4	
		Length	40		55	55	60	
2	ABS type	Width	80			80	114	
		Height	10			18	18	
		Length	100			120	140	
3	Minicase type	Width	7		12	20	40	
		Height	4		4	6	6	
		Length	55		60	80	100	

## 4. Module type Splitter

### 4.1.1. 1 × 8 PLC Splitter (Module type)

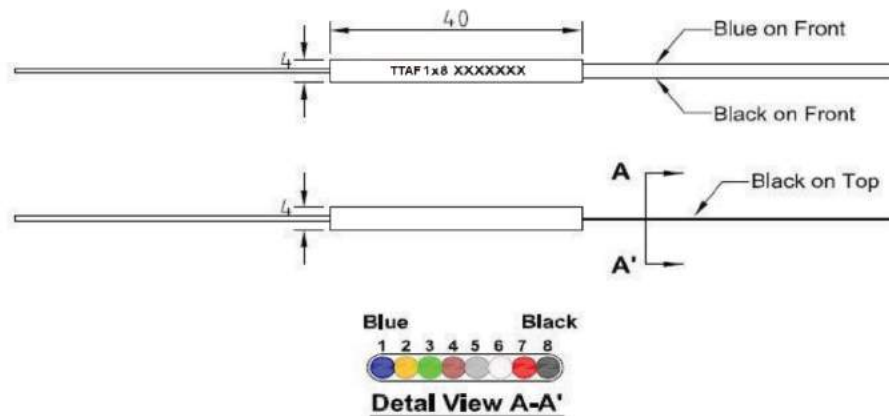


Figure 3. Color coding of 1x8 PLC splitter module with full pitch output V-groove

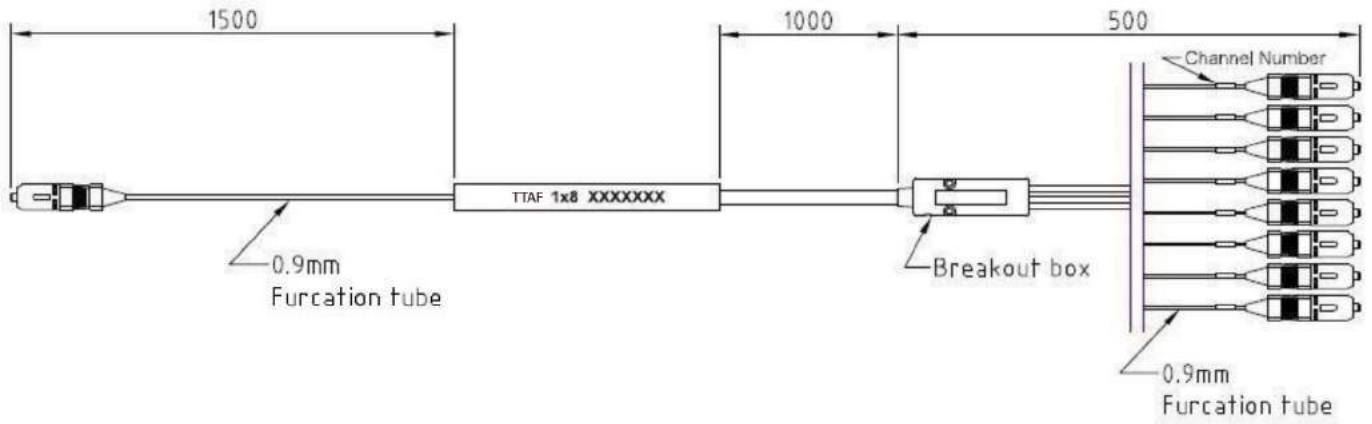
Port Number	Ribbon 1	1	2	3	4	5	6	7	8
Fiber Color		Blue	Orange	Green	Brown	Slate	White	Red	Black

### 4.2. Input & Output leads

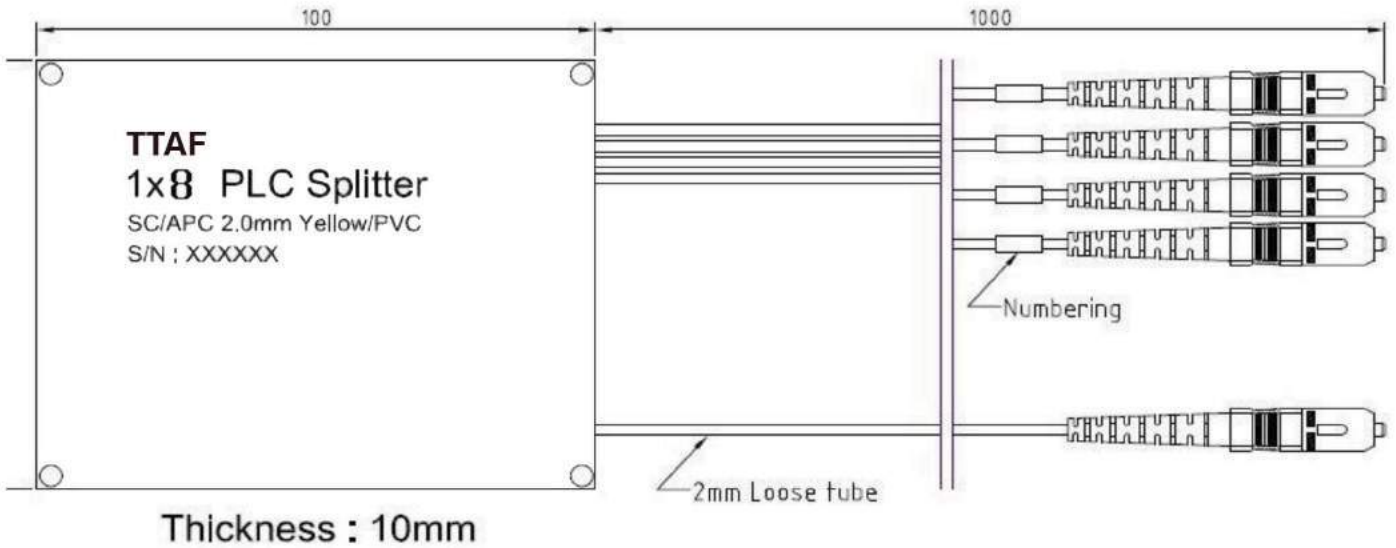
Parameter	Specifications				
	1 × 4	1 × 8	1 × 16	1 × 32	1 × 64
Input lead*	0.25mm Bare Fiber or 0.9mm Loose & Tight Buffer				
Output leads*	0.25mm Ribbon Fibers or 0.9mm Loose & Tight Buffer				
Fiber Type	single mode fibers in accordance with ITU-T 657A2/B2				
Length	According to customer's requirement				

## 5. PLC Splitter with Connector

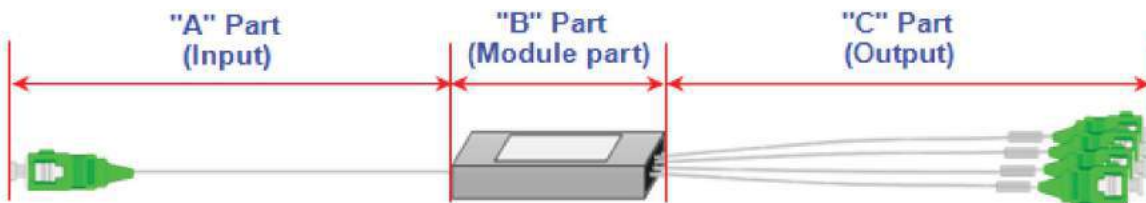
### 5.1. Type A (Fan-out type Splitter)



### 5.2 Type B (Cascade type Splitter)



### 5.3 Type C (Minicase type Splitter)



## 6. Operating and Storage Conditions

Parameter	Specifications
Operating Temperature*	-40°C ~ 85°C
Operating Wavelength*	1260 nm ~ 1650 nm
Storage Temperature	-40°C ~ 85°C
Storage Humidity	30 ~ 85% RH

\* Typical temperature and wavelength dependence of IL & PDL could be supplied

## 7. Reliabilities

TTAF PLC splitters are fully compliant with Telcordia GR-1209 and GR1221 reliability stipulations.

## 8. Test Reports


1) Data sheet shipped with PLC splitter reports the following test results:

- Insertion loss
- Polarization dependent loss
- Loss uniformity

2) The following data is provided on a statistical sampling basis:

- Return loss

<1\*4ch Example>

<b>Test Report</b>										
Product Name		1x4 Splitter								
Inspection Date		09/19/12								
QA RESULTS		Pass								
Serial Number		F123456789								
										
Function	Item	Insertion Loss(dB)		PDL(dB)		Return Loss(dB)		Directivity		Pass/Fail
	Wavelength(nm)	1310	1550	1310	1550	1310	1550	1310	1550	
	Specification(dB)	<=	<=	<=	<=	>=	>=	>=	>=	
		7.40	7.40	0.2	0.2	55.0	55.0	55.0	55.0	
	Port 1	7.20	7.00	0.02	0.01	>=55.0	>=55.0	>=55.0	>=55.0	Pass
	Port 2	7.30	7.10	0.03	0.01	>=55.0	>=55.0	>=55.0	>=55.0	Pass
	Port 3	7.10	7.20	0.04	0.10	>=55.0	>=55.0	>=55.0	>=55.0	Pass
Port 4	7.20	7.30	0.05	0.01	>=55.0	>=55.0	>=55.0	>=55.0	Pass	
Uniformity(dB)	<= 0.80	0.20	0.30		-	-	-	-	Pass	
Dimension	Item	Specification			Measurement				Pass/Fail	
	Housing	Length(mm)								Pass
		Width(mm)							Pass	
		Height(mm)							Pass	
	1ch Length(mm)								Pass	
4ch Length(mm)								Pass		
Visual Inspection	Item	Description								Pass/Fail
	Housing									
	Optical Fiber									Pass
	Color Code									Pass
Connector Type										