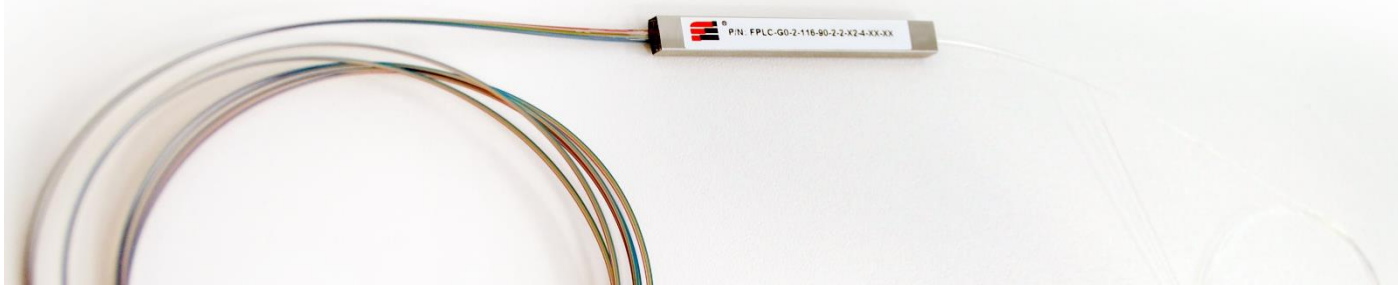


## Fiber Optic Cabling

# Optical Components - PON

## FPLC (Planar Waveguide Circuit) Splitters



The Fibrain FPLC series of optical splitters can be applied for splitting of optical power transmitted in a fiber optic link. Versions with a large number of output ports are available while a small size of the product is guaranteed by the planar technology used. **Fibrain FPLC GOLD series** are available in 1x2N, 1x3N, and 2x2N types. Fibrain FPLC splitters ensure very high stability of operation within the whole 1260-1650 nm band and have perfect thermal stability, guaranteeing operation in thermal range -40/+85 °C. An important advantage from the point of view of link design and maintenance is high uniformity of attenuation. Fibrain FPLC G0 splitters are available both without connector terminations (prepared for splicing) and any type of fiber optic connectors.

### APPLICATION FIELDS:

FTTH access networks  
HFC and cable networks  
Other optical telecommunication networks

### FEATURES AND ADVANTAGES:

Operating range 1260-1650 nm  
Temperature operating range -40/+85 °C  
Available types: 1x2N, 1x3N, 2x2N  
Low excess losses  
High attenuation uniformity  
G.657 standard fiber with reduced bending loss  
Available housings: SUS Minibox, ABS Blackbox  
Output form: Ribbon, 900 µm tube, 2.0 mm cable, length acc. to customer's order  
Available with any type of fiber optic connectors

**TECHNICAL SPECIFICATIONS:**

**1x2N:**

Parameter	Unit	Value						Comments
		1x2	1x4	1x8	1x16	1x32	1x64	
Max. Insertion loss <sup>1</sup>	dB	3.6	6.9	10.0	13.3	16.5	20.1	No connectors
Max. attenuation nonuniformity <sup>2</sup>	dB	0.25	0.45	0.60	0.80	1.00	1.50	No connectors
Max. PDL	dB	0.20	0.20	0.20	0.20	0.30	0.30	
Min. return loss	dB	55						
Min. directivity	dB	55						
Spectral operating range	nm	1260-1650						
Temperature operating range	°C	-40/+85						
Fiber type		G.657.A2						Acc. to requirements

**1x3N:**

Parameter	Unit	Value				Comments
		1x3	1x6	1x12	1x24	
Max. Insertion loss <sup>1</sup>	dB	6.2	9.3	12.2	16.0	No connectors
Max. attenuation nonuniformity <sup>2</sup>	dB	0.45	0.60	0.80	1.00	No connectors
Max. PDL	dB	0.20	0.20	0.20	0.30	
Min. return loss	dB	55				
Min. directivity	dB	55				
Spectral operating range	nm	1260-1650				
Temperature operating range	°C	-40/+85				
Fiber type		G.657.A2				Acc. to requirements

**2x2N:**

Parameter	Unit	Value						Comments
		2x2	2x4	2x8	2x16	2x32	2x64	
Max. Insertion loss <sup>1</sup>	dB	4.3	7.6	11.0	14.3	17.5	21.5	No connectors
Max. attenuation nonuniformity <sup>2</sup>	dB	0.8	1.0	1.2	1.7	1.9	2.5	No connectors
Max. PDL	dB	0.2	0.2	0.2	0.2	0.3	0.3	
Min. return loss	dB	55						
Min. directivity	dB	55						
Spectral operating range	nm	1260-1650						
Temperature operating range	°C	-40/+85						
Fiber type		G.657.A2						Acc. to requirements

<sup>1</sup> Additional insertion loss for PLC splitters with connectors: +0.4 dB

<sup>2</sup> Uniformity increased by 0.1 dB for PLC splitters with connectors

**AVAILABLE HOUSING:**

**1x2N:**

Output type	Housing type	Housing dimensions					
		1x2	1x4	1x8	1x16	1x32	1x64
Ribbon	Minibox SUS, blockless	55x7x4	55x7x4	55x7x4	55x7x4	60x12x4	80x20x6
900 µm tube	Minibox SUS, blockless	55x7x4	55x7x4	55x7x4	60x12x4	80x20x6	100x40x6
2.0 mm cable	ABS Blackbox	100X80x10	100X80x10	100X80x10	100X80x10	120x80x18	120x80x18

**1x3N:**

Output type	Housing type	Housing dimensions			
		1x3	1x6	1x12	1x24
Ribbon	Minibox SUS, blockless	55x7x4	55x7x4	55x7x4	60x12x4
900 µm tube	Minibox SUS, blockless	55x7x4	55x7x4	60x12x4	80x20x6
2.0 mm cable	ABS Blackbox	100X80x10	100X80x10	100X80x10	120X80x18

**2x2N:**

Output type	Housing type	Housing dimensions					
		2x2	2x4	2x8	2x16	2x32	2x64
Ribbon	Minibox SUS, blockless	55x7x4	55x7x4	55x7x4	55x7x4	60x12x4	80x20x6
900 µm tube	Minibox SUS, blockless	55x7x4	55x7x4	55x7x4	60x12x4	80x20x6	100x40x6
2.0 mm cable	ABS Blackbox	100X80x10	100X80x10	100X80x10	100X80x10	120x80x18	120x80x18

Series	Quality	Fiber type	Split ratio	Input fiber	Input length	Output fiber	Output length	Housing type	Input connector	Output connector
FPLC	G0	2 – G.657A	12 – 1x2	25 – 250 µm	0 – 0.5 m	1 – 250 µm ribbon	x0 – 0.5 m	1 – 40x4x4 mm	ST	ST
			14 – 1x4	20 – 2.0 mm	1 – 1.0 m	2 – 900 µm tube	x1 – 1.0 m	2 – 55x7x4 mm	SC	SC
			18 – 1x8	90 – 900 µm	2 – 2.0 m	3 – 2.0 mm cable	x2 – 2.0 m	3 – 60x12x4 mm	SCA	SCA
			116 – 1x16					4 – 80x20x6 mm	FC	FC
			132 – 1x32					5 – 100x40x6 mm	FCA	FCA
			164 – 1x64					7 – 100x80x10 mm	LC	LC
			13 – 1x3					8 – 120x80x18 mm	LCA	LCA
			16 – 1x6						E20	E20
			112 – 1x12						E2A	E2A
			124 – 1x24						XX – none	XX – none
			22 - 2x2							
			24 - 2x4							
			28 - 2x8							
			216 - 2x16							
			232 - 2x32							
			264 - 2x64							

Example reference: FPLC-G0-2-12-90-1-2-X1-2-SCA-SCA –1x2 PLC Splitter, GOLD quality, 900 µm input and output tube 1 m, G.657A fiber type, ALUBOX 55x7x4 mm housing, SC/APC input and output connectors

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