

Passive Optical Networks

Optical splitters of Fibrain series



INTRODUCTION:

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

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TECHNICAL SPECIFICATIONS:

1x2N:

Parameter	Unit	Value						Comments
		1x2	1x4	1x8	1x16	1x32	1x64	
Max. Insertion loss ¹	dB	3.6	6.9	10.0	13.3	16.5	20.1	No connectors
Max. attenuation nonuniformity ²	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 ¹	dB	6.2	9.3	12.2	16.0	No connectors
Max. attenuation nonuniformity ²	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 ¹	dB	4.3	7.6	11.0	14.3	17.5	21.5	No connectors
Max. attenuation nonuniformity ²	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

¹ Additional insertion loss for PLC splitters with connectors: +0.4 dB

² Uniformity increased by 0.1 dB for PLC splitters with connectors

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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:

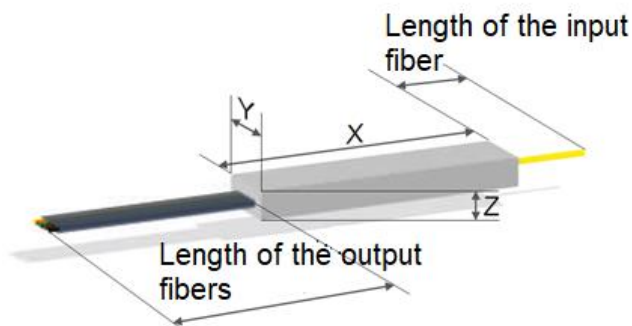
Output type	Housing type	Housing dimensions			
		1x3	1x6	1x12	1x24
Ribbon	Minibox SUS, blockless	55x7x4	55x7x4	55x7x4	60x12x4
900 μm tube	Minibox SUS, blockless	55x7x4	55x7x4	60x12x4	80x20x6
2.0 mm cable	ABS Blackbox	100X80x10	100X80x10	100X80x10	120X80x18

2x2N:

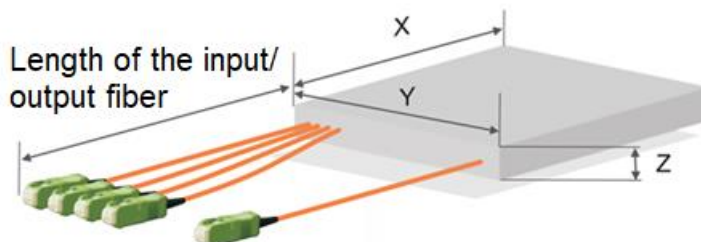
Output type	Housing type	Housing dimensions			
		1x3	1x6	1x12	1x24
Ribbon	Minibox SUS, blockless	55x7x4	55x7x4	55x7x4	60x12x4
900 μm tube	Minibox SUS, blockless	55x7x4	55x7x4	60x12x4	80x20x6
2.0 mm cable	ABS Blackbox	100X80x10	100X80x10	100X80x10	120X80x18

HOUSING VIEW:

Minibox SUS:



ABS Blackbox:



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ORDERING INFORMATION:

Series	Quality	Fiber type	Split ratio	Input fiber	Input length	Output fiber	Output length	Housing type	Input connector	Output connector
FPLC	G0	2 – G.657A2	12 – 1x2	20 – 2.0 mm	0 – 0.5 m	1 – 250 um ribbon	x0 – 0.5 m	2 – 55x7x4 mm	ST	ST
			14 – 1x4	25 – 250 um	1 – 1.0 m	2 – 900 um tube	x1 – 1.0 m	3 – 60x12x4 mm	SC	SC
			18 – 1x8	90 – 900 um	2 – 2.0 m	3 – 2.0 mm cable	x2 – 2.0 m	4 – 80x20x6 mm	SCA	SCA
			116 – 1x16					5 – 100x40x6 mm	FC	FC
			132 – 1x32					7 – 100x80x10 mm	FCA	FCA
			164 – 1x64					8 – 120x80x18 mm	LC	LC
			13 – 1x3						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-G0-2-13-20-1-3-X1-7-SCA-SCA – 1x3 PLC Splitter, GOLD Quality, 2.0 mm input and output cable 1 m, G.657A fiber type, ABS BLACKBOX 100x80x10 mm housing, SC/APC input and output connectors

Important notice

Buyer and/or user of this product has to make sure before using this product that it is suitable for the intended use. All questions of liability relating to this product are subject – in accordance with the prevailing – to the Terms of Sales of the selling Fibrain subsidiary.