1xN Balanced Optical Splitter

Product Type	Optical Splitter
Product Family	FBS - Furukawa Broadband System
Description	Optical splitters are passive components applied for optical power division on PON network. They consist of an input fiber and N output fibers, which divide the power of the optical signal proportionally, been characterized as a balanced splitters. Mainly used in optical networks FTTx / PON networks and HFC (Cable TV). Available in three models: - Input and Outputs with connectors. - Connectors only on output ports; - Input and Outputs without connectors.
Installation Environment	Indoor or Outdoor (Accommodated in the Appropriate Box).
Operation Environment	Not Aggressive.
Compatibility	Splice Trays or Connectorized Modules.
Warranty	12 months

Advantage

- FBT or PLC construction for 1x2 models;
- PLC construction for 1x4, 1x8, 1x16, 1x32, 1x64 models;
- Operation in the three passive optical networks wavelengths: 1310nm, 1490nm and 1550nm;
- Insertion Loss and Uniformity stable between 1260 and 1650nm for PLC models;
- Insertion Loss and Uniformity stable betwenn 1260 ~1360 and 1480~ 1650nm to FBT models;
- Its compact size allows storage in various types of optical splice trays;
- The MPO output port splitter allows incrising the connections density by linking multiple fiber through a single connection;
- High reliability;
- G.657A special fiber - optimized for accommodation in trays with small bending radius.

Performance parameters

Splitter type	1x2	1x4	1x8	1x16	1x32	1x64
Operating Wavelength	PLC: 1260~1650		FBT:1260~1360nm and 1480~1650nm			
Insertion Loss (not considering the connectors)	3.7dB	7.1dB	10.5dB	13.7dB	17.1dB	20,5dB
Uniformity	0.5 dB	0.6 dB	1.0 dB	1.3 dB	1.5 dB	1.7 dB
Maximum Polarization Dependent Loss (PDL)	0.2 dB	0.2 dB	0.25dB	0.3 dB	0.4 dB	0.5 dB
Directivity	>55 dB					
Return Loss	>55 dB					

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Environmental specification

Splitter type	1x2	1x4	1x8	1x16	1x32	1x64
Operating temperature	-40~+85ºC			-25~+70ºC		
Storage temperature	-40~+85ºC					
Operating relative humidity	5~95%					
Storage relative humidity	5~95%					

Splitter with connector
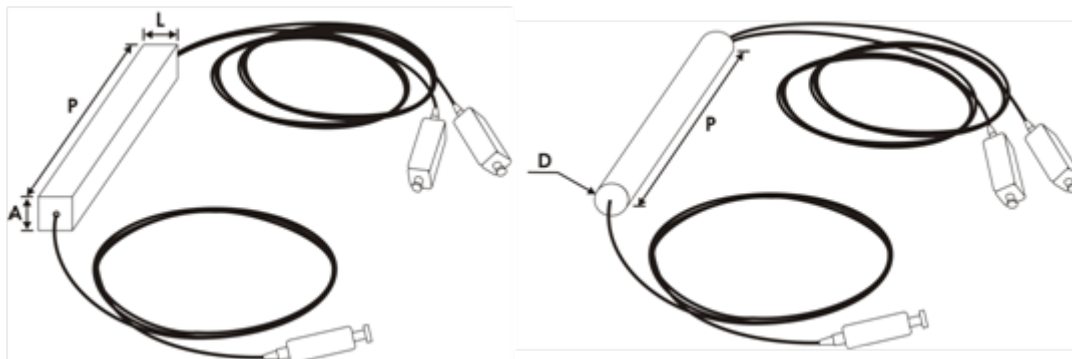
Dimensional features for splitter with connector

Splitter type	1x2		1x4		1x8		1x16		1x32	
Connectorization	I/O	O	I/O	O	I/O	O	I/O	O	I/O	O
Length (P)	50mm		40mm		40mm		60mm		80mm	
Diameter (D)	3.8mm		N/A		N/A		N/A		N/A	
Width (L)	N/A		7mm		7mm		12mm		20mm	
High(A)	N/A		4mm		4mm		4mm		6mm	
Input pigtail length	1.5m	0.6m	1.5m	0.6m	1.5m	0.6m	1.5m	0.6m	1.5m	0.6m
Output pigtail length	0.6m	0.6m	0.6m	0.6m	0.6m	0.6m	0.6m	0.6m	0.6m	0.6m
Pigtail diameter	900μm									

O - Connectors just on the output ports.
I/O - Connectors on the output and input ports.

Splitter without connector
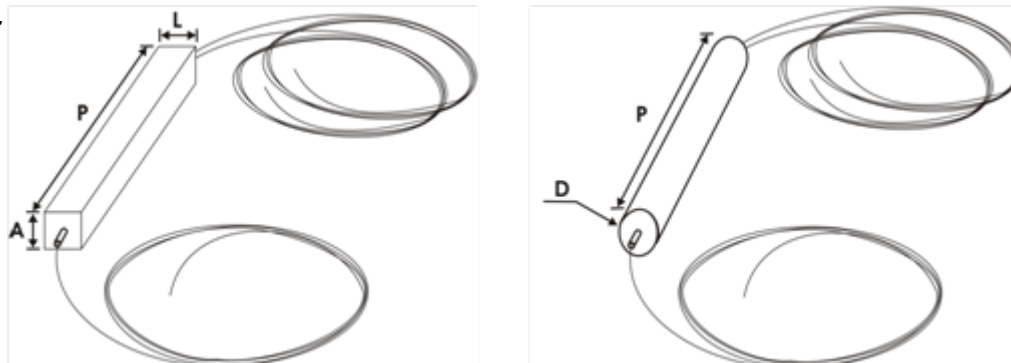
Dimensional features for splitter without connector

Splitter type	1x2	1x4	1x8	1x16	1x32	1x64
Length (P)	50mm	40mm	40mm	40mm	50mm	60mm
Diameter (D)	3mm	N/A	N/A	N/A	N/A	N/A
Width (L)	N/A	4mm	4mm	4mm	7mm	12mm
High (A)	N/A	4mm	4mm	4mm	4mm	4mm
Fiber length	2m					
Bare Fiber Diameter	0,25mm					

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Color Codes

Port 1	Blue
Port 2	Orange
Port 3	Green
Port 4	Brown
Port 5	Gray
Port 6	White
Port 7	Purple
Port 8	Black

- For 1x16, 1x32 and1x64 splitters, the group of colors will be repeated every 8 ports, each of them separated and identified by colored plastic tapes;
- The color code applies to splitters without connectors;
- Connectorized Splitters ports are identified by platic rings with numbers.

Connector Type

Connector	Optical Atenuation (dB):		Maximun Return Loss(dB):	Features
	Typical	**Maximun**		
SC-APC	0,15	0,30	>60	• "Push-pull" Connector; • Plastic Body; • Ceramic Bolt (Zirconia).
SC-UPC	0,15	0,30	>50	

* For Splitters with connector, its necessary to add the connection losses to the losses presents in the splitter to obtain the performance specifications of the set.

Fiber Type

Input and output fibers: "Bend Loss Insensitive" G.657A [2] - Single Mode

Standards Compliance

- Telcordia GR-1209 (Generic Requirements for Passive Optical Components)
- Telcordia GR-1221 (Reliability Requirements for Passive Optical Components)
- IEC 61753-1 (Fibre Optic Interconnecting Devices and Passive Components Performance Standard)

Certifications

Anatel (Homologation 2101-07-0256)

Furukawa Marking

1XN XXX OPTICAL SPLITTER YY/ZZ G.657A GG-GGG/AA-AAA BBDCC/EEDFF

XXX = Fabrication tecnology (FBT or PLC)
N = Number of outputs
YY = For unbalanced componet, indicates the percentage of the first output optical power
ZZ = For unbalanced component, indicates the percentage of the second output optical power
G.657A = Fiber type
GG-GGG = Input connector type
AA-AAA = Output connector type
BB = Input fiber/pigtail length (m)
D = Diameter
CC = Input fiber/pigtail coating diameter (0.9mm or 2mm)
EE = Output fiber/pigtail length (m)
FF = Output fiber/pigtail coating diameter (0.9mm or 2mm)

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Product Code

Splitter without connector	
35500100	1X2 FBT OPTICAL SPLITTER 50/50 G.657A NC/NC 2M/2M
35500104	1X4 PLC OPTICAL SPLITTER G.657A NC/NC 2M/2M
35500099	1X8 PLC OPTICAL SPLITTER G.657A NC/NC 2M/2M
35500108	1X16 PLC OPTICAL SPLITTER G.657A NC/NC 2M/2M
35500112	1X32 PLC OPTICAL SPLITTER G.657A NC/NC 2M/2M
35500109	1X64 PLC OPTICAL SPLITTER G.657A NC/NC 2M/2M
Splitter with connector	
35500202	1X2 FBT OPTICAL SPLITTER 50/50 G.657A SC-UPC/SC-UPC 0.6D0.9/0.6D0.9
35500190	1X2 PLC OPTICAL SPLITTER G.657A SC-UPC/SC-UPC 0.6D0.9/0.6D0.9 WITHOUT BREAKOUT
35500176	1X4 PLC OPTICAL SPLITTER G.657A SC-UPC/SC-UPC 0.6D0.9/0.6D0.9 WITHOUT BREAKOUT
35500172	1X8 PLC OPTICAL SPLITTER G.657A SC-UPC/SC-UPC 0.6D0.9/0.6D0.9 WITHOUT BREAKOUT
35500194	1X16 PLC OPTICAL SPLITTER G.657A SC-UPC/SC-UPC 0.6D0.9/0.6D0.9 WITHOUT BREAKOUT
35500198	1X32 PLC OPTICAL SPLITTER G.657A SC-UPC/SC-UPC 0.6D0.9/0.6D0.9 WITHOUT BREAKOUT
Splitter with connector just on the output ports	
35500200	1X2 FBT OPTICAL SPLITTER 50/50 G.657A NC/SC-APC 1.5D0.9/0.6D0.9
35500191	1X2 PLC OPTICAL SPLITTER G.657A NC/SC-APC 1.5D0.9/0.6D0.9 WITHOUT BREAKOUT
35500174	1X4 PLC OPTICAL SPLITTER G.657A NC/SC-APC 1.5D0.9/0.6D0.9 WITHOUT BREAKOUT
35500178	1X8 PLC OPTICAL SPLITTER G.657A NC/SC-APC 1.5D0.9/0.6D0.9 WITHOUT BREAKOUT
35500192	1X16 PLC OPTICAL SPLITTER G.657A NC/SC-APC 1.5D0.9/0.6D0.9 WITHOUT BREAKOUT
35500196	1X32 PLC OPTICAL SPLITTER G.657A NC/SC-APC 1.5D0.9/0.6D0.9 WITHOUT BREAKOUT
35500201	1X2 FBT OPTICAL SPLITTER 50/50 G.657A NC/SC-UPC 1.5D0.9/0.6D0.9
35500189	1X2 PLC OPTICAL SPLITTER G.657A NC/SC-UPC 1.5D0.9/0.6D0.9 WITHOUT BREAKOUT
35500175	1X4 PLC OPTICAL SPLITTER G.657A NC/SC-UPC 1.5D0.9/0.6D0.9 WITHOUT BREAKOUT
35500179	1X8 PLC OPTICAL SPLITTER G.657A NC/SC-UPC 1.5D0.9/0.6D0.9 WITHOUT BREAKOUT
35500193	1X16 PLC OPTICAL SPLITTER G.657A NC/SC-UPC 1.5D0.9/0.6D0.9 WITHOUT BREAKOUT
35500197	1X32 PLC OPTICAL SPLITTER G.657A NC/SC-UPC 1.5D0.9/0.6D0.9 WITHOUT BREAKOUT

Included Accessories   Individual test report (Insertion Loss and Return Loss measures[1])

Notes   *1- Measurements considering splitters without connectors;*
2- "Bend Loss Insensitive" G.657A fibers are fully compatible with G.652 fibers.

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