

3M™ PLC Splitters



3M planar light circuit splitters are fully passive optical branching devices, that exhibit uniform signal splitting for the most advanced optical networks. These planar silica waveguide devices are packed in small form factor housings to offer compact management into 3M modules and splice trays.

Bend insensitive, reduced water peak single-mode fibre (ITU.G657.A2) is used to ensure low bending loss in applications which require tight radius or significant handling by the technician. These splitters are manufactured and tested to GR-1209/1221 to provide the high performance and reliability needed in the outside plant environment.

Applications for the PLC splitters include all FTTH network architectures (GPON, BPON, EPON), CATV and data communications.

Features

- Full range from 1x2 to 2x64 PLC Splitters
- All type of typical fibre protection 250µm, 900µm and 2mm
- Pre- connectorized with SC and LC connectors (PC and APC)
- ITU.G657.A2 fibre

Benefits

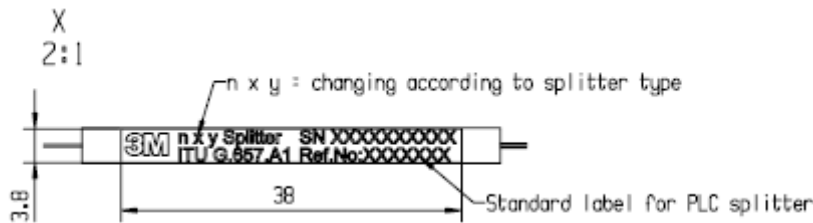
- Solutions for all type of FTTH applications
- Easy implementation in closures and distribution boxes
- Fits all FTTH network specifications
- Low bend radii (>7,5mm) and downwards compatible to ITU.G652.D

Specifications

Parameters:			Unit	1X2	1X4	1X8	1X16	1X32	1X64	2X2	2X4	2X8	2X16	2X32	2X64
Insertion Loss *	Max	dB		≤3.8	≤7.0	≤10.2	≤13.5	≤16.8	≤20.3	≤4.0	≤7.3	≤10.6	≤13.9	≤17.2	≤20.5
Connector insertion loss	Mean	dB		≤0.25/0.5 max. per connector											
Channel Uniformity	Max	dB		≤0.6	≤0.6	≤0.8	≤1.2	≤1.5	≤1.8	≤1.0	≤1.0	≤1.0	≤1.5	≤2.0	≤2.5
PDL	Max	dB		≤0.12	≤0.15	≤0.2	≤0.2	≤0.2	≤0.3	≤0.3	≤0.3	≤0.3	≤0.4	≤0.4	≤0.5
Operating wavelength	-	nm		1260 to 1650											
Return Loss	Min	dB		≥50 (PC/UPC), ≥55 (APC)											
Directivity	Min	dB		≥55											
Input power	Max	dBm		17 dBm at 1550nm											
Operating Temperature	-	°C		-40 to 85 (5-85% RH)											
Storage Temperature	-	°C		-40 to 85 (5-85% RH)											
Fiber Type	-	-		G.657.A2 or Customer Specified											
Dimensions:															
Basic Type PLC Splitter	-	mm		4x4x40		4x7x50		4x12x60		4x4x50		4x7x50		4x12x60	
SP Type PLC Splitter	-	mm		4x4x40		4x7x50		4x12x60		4x4x50		4x7x50		4x12x60	
SHC Type PLC Splitter (HxWxL)	-	mm		4x7x60		4x12x60	6x20x80	6x40x100		4x7x60		4x12x60	6x20x80	6x40x100	
LHC Type Splitter Module	-	mm		10x80x100			18x80x120	18x115x140		10x80x100			18x80x120	18x115x140	
Remarks:															
* Above IL parameters are valid for the splitters without connectors															

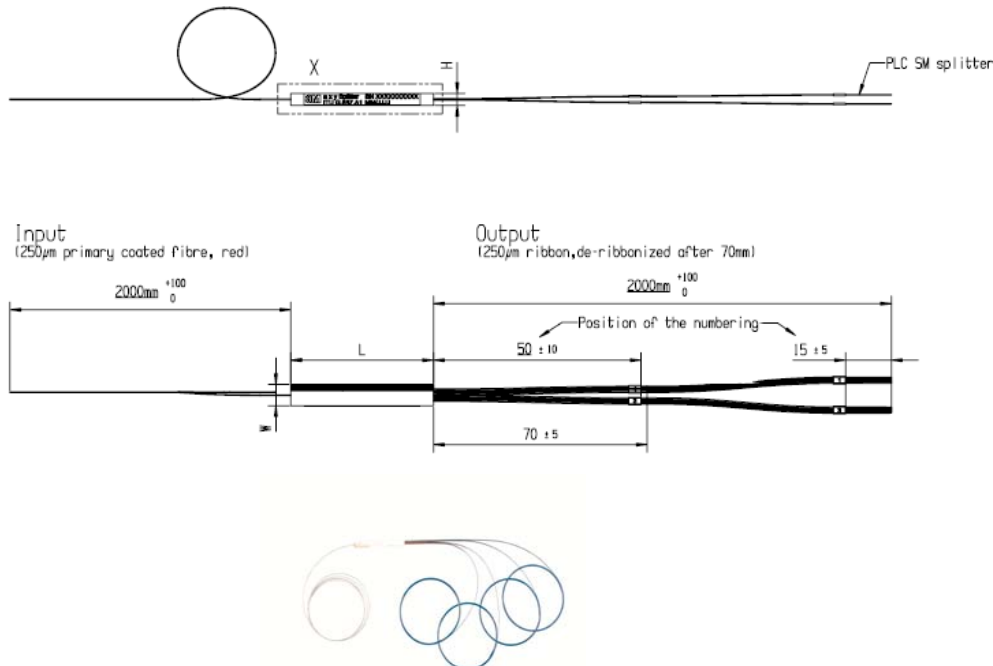
Splitter Housing Printing (250µm Bare Fibre, 900µm SHC, 250µm/900µm SP)

- Splitter housing printed on the top, input fibres left, output fibres right
- Printing is scratch resistant and resistant against Isopropylalcohol
- Printing colour black



250µm Bare Fibre Splitters

- Fibre length (L) on input and output fibres total is 2000mm ± 50mm
- De-ribbonized zone of 250µm bare fibre splitters is 1930mm
- All fibres in the de-ribbonization zone have 250µm colour coded fibre
- The output fibres are bundled together (max 8 fibres per bundle) by either numbered tape or numbered cable rings. Numbering starting with No.1 up to No.8.
- For 1x2 splitters the two unused fibres of the 4 fibre ribbon are removed
- For 2xX splitters the input fibres have 250µm colour coding.

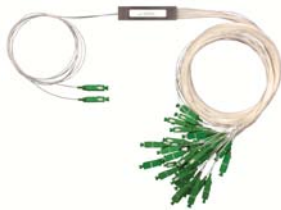


ANSI/TIA/EIA 598-A Colour coding of ribbon fibres (output side)

Channel (Output)	Fiber Numbering & Color							
	1	2	3	4	5	6	7	8
4ch Ribbon Fiber	Blue	Orange	Green	Brown				
8ch Ribbon Fiber	Blue	Orange	Green	Brown	Slate	White	Red	Black

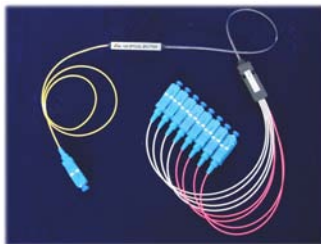
Small Hard Case (SHC) splitter housing terminated on 900µm buffered fibre

- All splitters terminated on 900µm buffered fibre. A single „Small Hard Case“ (SHC) housing is used, with all fibres entering and exiting this single housing. No sub-housings for ribbon fibre.
- Fibre length on all fibres incl. connectors is 2000mm ± 20mm.
- Max. length difference between any connector ferrule tip and housing edge 40mm.
- All input and output fibre ends are terminated with connectors.
- Connectors can be SC/PC, SC/APC (standard), LC/PC, LC/APC.
- All input and output fibres are marked close to the connector boot with clip on tags with numbers 1.....X (X=2...64).
- All fibre buffers are of white or natural colour.
- Input port fibre indicated by coloured buffer.
- The boots of all output ports are green for APC and white for PC.



Standard Package (SP) splitter housing with subsequent breakout housing (s) terminated on 900µm buffered fibre

- All splitters terminated on 900µm buffered fibre. One housing for the splitter with 250µm in and out (ribbon), with subsequent breakout housing (1ea per 8 fibre ribbon), with 900µm buffered fibre between breakout housing and connectors. Ribbon length between splitter housing and breakout housing 30cm.
- Fibre length on all fibres incl. connectors is 2000mm ± 20mm.
- Max. length difference between any connector ferrule tip and housing edge 40mm.
- All input and output fibre ends are terminated with connectors.
- Connectors can be SC/PC, SC/APC (standard), LC/PC, LC/APC.
- All input and output fibres are marked close to the connector boot with clip on tags with numbers 1.....X (X=2...64).
- All fibre buffers are of white or natural colour.
- Input port fibre indicated by coloured buffer.
- The boots of all output ports are green for APC and white for PC.



LHC splitter

Rugged housing with Splitter terminated on 1,6 to 2mm (standard) jacketed cable.

- Only single „Large Hard Case“ housing must be used, with all fibres entering and exiting this single housing on the same side.
- Fibre length on all fibres incl. connectors is 2000mm ± 20mm.
- Max. length difference between any connector ferrule tip and housing edge 40mm.
- All input and output fibre ends are terminated with connectors.
- Connectors can be SC/PC, SC/APC (standard), LC/PC, LC/APC.
- All output fibres are marked close to the connector boot with clip or tags with numbers 1.....X (X=2...64).
- Output fibre jacket colour yellow.
- All output fibre buffers are yellow.
- Input port is indicated by a preferred colour buffer or connector boot.
- The boots of all output ports are green for APC and white for PC.



Ordering Information (for standard range)*

Ref.No	Parent Description	
PLC-801	PLC SM splitter 1x2, 250µm	Unterminated, single housing, ribbon output
PLC-802	PLC SM splitter 1x4, 250µm	Unterminated, single housing, ribbon output
PLC-803	PLC SM splitter 1x8, 250µm	Unterminated, single housing, ribbon output
PLC-804	PLC SM splitter 1x16, 250µm	Unterminated, single housing, ribbon output
PLC-805	PLC SM splitter 1x32, 250µm	Unterminated, single housing, ribbon output
PLC-806	PLC SM splitter 1x64, 250µm	Unterminated, single housing, ribbon output
PLC-807	PLC SM splitter 2x2, 250µm	Unterminated, single housing, ribbon output
PLC-808	PLC SM splitter 2x4, 250µm	Unterminated, single housing, ribbon output
PLC-809	PLC SM splitter 2x8, 250µm	Unterminated, single housing, ribbon output
PLC-810	PLC SM splitter 2x16, 250µm	Unterminated, single housing, ribbon output
PLC-811	PLC SM splitter 2x32, 250µm	Unterminated, single housing, ribbon output
PLC-815-SAS	PLC SM splitter 1x2, SHC 900µm SC/APC	Terminated SC/APC, small single housing
PLC-816-SAS	PLC SM splitter 1x4, SHC 900µm SC/APC	Terminated SC/APC, small single housing
PLC-817-SAS	PLC SM splitter 1x8, SHC 900µm SC/APC	Terminated SC/APC, small single housing
PLC-818-SAS	PLC SM splitter 1x16, SHC 900µm SC/APC	Terminated SC/APC, small single housing
PLC-819-SAS	PLC SM splitter 1x32, SHC 900µm SC/APC	Terminated SC/APC, small single housing
PLC-820-SAS	PLC SM splitter 1x64, SHC 900µm SC/APC	Terminated SC/APC, small single housing
PLC-820-SA	PLC SM splitter 1x2, SP 900µm SC/APC	Terminated SC/APC, splitter housing and separate breakout housing (s)
PLC-821-SA	PLC SM splitter 1x4, SP 900µm SC/APC	Terminated SC/APC, splitter housing and separate breakout housing (s)
PLC-822-SA	PLC SM splitter 1x8, SP 900µm SC/APC	Terminated SC/APC, splitter housing and separate breakout housing (s)
PLC-823-SA	PLC SM splitter 1x16, SP 900µm SC/APC	Terminated SC/APC, splitter housing and separate breakout housing (s)
PLC-824-SA	PLC SM splitter 1x32, SP 900µm SC/APC	Terminated SC/APC, splitter housing and separate breakout housing (s)
PLC-825-SA	PLC SM splitter 1x64, SP 900µm SC/APC	Terminated SC/APC, splitter housing and separate breakout housing (s)
PLC-840-SAL	PLC SM splitter 1x2, LHC 2mm SC/APC	Terminated SC/APC, large single housing
PLC-842-SAL	PLC SM splitter 1x8, LHC 2mm SC/APC	Terminated SC/APC, large single housing
PLC-843-SAL	PLC SM splitter 1x16, LHC 2mm SC/APC	Terminated SC/APC, large single housing
PLC-844-SAL	PLC SM splitter 1x32, LHC 2mm SC/APC	Terminated SC/APC, large single housing
PLC-846-SAL	PLC SM splitter 2x2, LHC 2mm SC/APC	Terminated SC/APC, large single housing
PLC-847-SAL	PLC SM splitter 2x4, LHC 2mm SC/APC	Terminated SC/APC, large single housing
PLC-848-SAL	PLC SM splitter 2x8, LHC 2mm SC/APC	Terminated SC/APC, large single housing
PLC-849-SAL	PLC SM splitter 2x16, LHC 2mm SC/APC	Terminated SC/APC, large single housing
PLC-850-SAL	PLC SM splitter 2x32, LHC 2mm SC/APC	Terminated SC/APC, large single housing
PLC-855-LAS	PLC SM splitter 1x2, SHC 900µm LC/APC	Terminated LC/APC, small single housing
PLC-856-LAS	PLC SM splitter 1x4, SHC 900µm LC/APC	Terminated LC/APC, small single housing
PLC-857-LAS	PLC SM splitter 1x8, SHC 900µm LC/APC	Terminated LC/APC, small single housing
PLC-862-LA	PLC SM splitter 1x8, SP 900µm LC/APC	Terminated LC/APC, splitter housing and separate breakout housing (s)
PLC-863-LA	PLC SM splitter 1x16, SP 900µm LC/APC	Terminated LC/APC, splitter housing and separate breakout housing (s)
PLC-864-LA	PLC SM splitter 1x32, SP 900µm LC/APC	Terminated LC/APC, splitter housing and separate breakout housing (s)
PLC-882-LAL	PLC SM splitter 1x8, LHC 2mm LC/APC	Terminated LC/APC, large single housing
PLC-892-LAN	PLC Splitter 1x32 LHC 2mm	Unterminated, single housing, Large Hardcase
PLC-817-SUS-1	PLC SM splitter 1x8, SHC 900µm SC/UPC UK	Terminated SC/UPC, small single housing, 1m Input- and Output fibres
PLC-817-SAS-1	PLC SM splitter 1x8, SHC 900µm SC/APC UK	Terminated SC/APC, small single housing, 1m Input- and Output fibres
PLC-819-SUS-1	PLC SM splitter 1x32, SHC 900µm SC/UPC UK	Terminated SC/UPC, small single housing, 1m Input- and Output fibres
PLC-819-SAS-1	PLC SM splitter 1x32, SHC 900µm SC/APC UK	Terminated SC/APC, small single housing, 1m Input- and Output fibres

*Other splitter configurations upon request

Packaging



Examples

Important Notice

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