

Communication Markets Division

3M™ Passive Optical Splitter Shelves and Modules

3M offers a robust portfolio of passive optical fiber splitter products made to enable easy configuration, design, ordering, and installation of passive optical networks. 3M™ Passive Optical Splitters are optimally configured and labeled with port counts specifically suited for PON networks and are self-contained and pre-connectorized to enable easy interconnect or cross-connect configurations. 3M Passive Optical Splitters enable various physical topology solutions to optimize the optical signal distribution for PON networks in a campus environment or throughout a building according to the installation needs including rack-mount, wall-mount or ceiling/floor enclosure.



3M™ Rack-mount 1RU Splitter Shelf and optional 3M™ Patch Cord Management Tray

Product Overview	
Application	Passive optical networking applications that require fiber optic splitter components to branch and distribute the optical signal to multiple endpoints.
Product range	Products are available to accommodate evenly distributed optical splitter configurations from 1×2 to 2×32.
Splitter shelves	1RU 19" rack-mount pre-configured and SC/APC pre-connectorized splitter shelves are available in five models (1×32, 2×32, two 1×16, two 2×16, four 1×8s).
Splitter modules	Splitter modules, pre-connectorized with SC/APC, can be installed in various 3M™ Fiber Distribution Unit rack or wall-mount enclosures or flat rack-mount panels. They are available with the following port configurations: 3-slot wide (2×32, 1×32, two 2×16, two 1×16, four 1×8s, four 2×8s) 2-slot wide (2×16, 1×16) 1-slot wide (2×8, 1×8, two 1×4s)

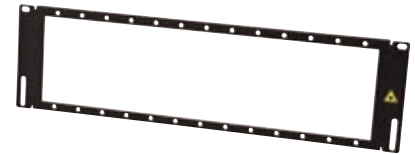
Fiber optic splitters are used typically to enable passive optical networks signal distribution between the main aggregation optical line terminal/ switch and the singlemode fiber-fed multiple optical network terminals/ endpoints. 3M Passive Optical Splitter products are clearly labeled with connectorized SC/APC couplers into and out of the modules which makes them easy to configure, install, and test for passive optical networks.



1x8 (1-slot) 1x16 (2-slot) 1x32 (3-slot)
3M™ Splitter Modules

3M™ Passive Optical Splitter Shelves and Modules

Features	Benefits
Factory tested	Consistent quality, faster installs
High performance specifications	Provides infrastructure longevity, flexibility in optical design
Self-contained units	Protects fibers, provides increased reliability
Pre-connectorized SC/APC	Ready for quick installation on arrival
Produced to industry specifications	Provides system compatibility and interoperability
Both rackmount shelf and modular	Allows flexible, optimized configurations for the project



3M™ Flat Mount Panel

Splitter performance values (provided without connectors): Operating wavelength range 1260-1650 nm

Parameters	1X2	1X4	1X8	1X16	1X32	2X4	2X8	2X16	2X32
Insertion loss (max dB)	3.8	7.1	10.5	13.5	16.8	7.5	10.8	14.1	17.4
Uniformity (dB)	≤0.5	≤0.6	≤0.8	≤1.2	≤2.5	≤1.2	≤1.5	≤2.0	≤2.5
PDL (dB)	≤0.2	≤0.2	≤0.25	≤0.3	≤0.4	≤0.3	≤0.4	≤0.4	≤0.4
Return loss (dB)	≤55	≤55	≤55	≤55	≤55	≤55	≤55	≤55	≤55
Directivity (dB)	≤55	≤55	≤55	≤55	≤55	≤55	≤55	≤55	≤55

Maximum insertion loss	Ratio of optical power at the input port of the coupler to optical power from any single output port. Maximum value for the device over entire operating wavelength and temperature range.
Uniformity	Measure of how evenly power is distributed between the output ports of the splitter. It is the maximum variation of the insertion loss between different legs of the splitter.
Polarization Dependent Loss (PDL)	Performance of a splitter can vary slightly depending on the direction of polarization of light in the fiber. PDL is a measure of variation of the coupler's insertion loss with varying polarization of the signal.
Return loss	Return loss is the ratio of optical power into an input port to the power returning to the same port.
Directivity	Ratio of the optical power into an input port to the optical power returning to any other input port.

3M™ Connectorized Splitter Shelves and Modules (includes two SC/APC connected pairs) Optical Insertion Loss and Reflectance Specifications:

Parameters	1X2	1X4	1X8	1X16	1X32	2X4	2X8	2X16	2X32
Insertion Loss (max dB)	4.6	7.9	11.3	14.3	17.6	8.3	11.6	14.9	18.2
Return Loss (dB)	≤55	≤55	≤55	≤55	≤55	≤55	≤55	≤55	≤55

3M factory connectorized SC/APC insertion loss per mated pair: Typical ≤ .15 dB, Max ≤ .4 dB, return loss better than 60 dB

3M™ Rack-mount 1RU Splitter Shelves

- 19-inch 1RU self-contained splitter shelf (1.7" H x 19" W x 6.9" D)
- All pre-connectorized with SC/APC
- Dual input splitters are provided to enable redundant configurations
- Use with second fiber patch panel for cross connect or stand alone for interconnect solution
- Optional, removable front fiber management tray for the unit



3M™ Rack Mount 1RU Splitter Shelf and optional 3M™ Patch Cord Management Tray



3M™ Patch Cord Management Rings, 1 RU

Ordering Information

Product Number	Description	3M ID
8421BK-132	Splitter shelf 1 rack unit, one 1X32 SC/APC in/out	80-6114-8025-4
8421BK-232	Splitter shelf 1 rack unit, one 2X32 SC/APC in/out	80-6114-8026-2
8421BK-2X116	Splitter shelf 1 rack unit, two 1X16 SC/APC in/out	80-6114-8027-0
8421BK-2X216	Splitter shelf 1 rack unit, two 2X16 SC/APC in/out	80-6114-8028-8
8421BK-4X108	Splitter shelf 1 rack unit, four 1X8 SC/APC in/out	80-6114-8029-6
8421BK-MGR	Patch cord management tray for 19" splitter shelf, black	80-6114-8430-6
8421BK-RNG	Patch cord management rings, 1 RU for 19" shelves	80-6114-8431-4

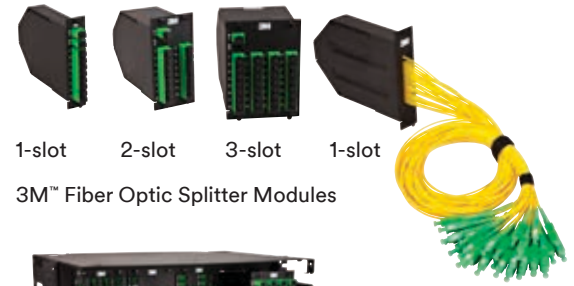
3M™ Fiber Optic Splitter Modules

- 1-, 2-, or 3-slot-wide splitter modules
- Fits into various 3M fiber enclosures (check for enclosure number of slots available)
- Compatible with 3M™ Rack-mount Fiber Distribution Unit 8425, 3M™ Wall-mount Fiber Distribution Units 8430 series, 3M™ Wall-mount Boxes 8437 series and 3M™ Rack-mount Panels 8422 series.
- Allows flexible, mix-n-match configurations with other 3M modular products (multi-fiber push on (MPO) trunk fan-out modules)

1-slot module dimensions: 5.1" H x 1.15" W x 6.12" D

2-slot module dimensions: 5.1" H x 2.47" W x 6.12" D

3-slot module dimensions: 5.1" H x 3.72" W x 6.12" D



3M™ Fiber Optic Splitter Modules



3M™ Rack-Mount FDU 8425 (12-slot capacity) with four 3-slot splitter modules

Ordering Information

Product Number	Description	Color	3M ID
8443BK-132	Splitter module, 3-slot wide, one 1X32 SC/APC in/out	Black	80-6114-8034-6
8443BK-232	Splitter module, 3-slot wide, one 2X32 SC/APC in/out	Black	80-6114-8035-3
8443BK-2X116	Splitter module, 3-slot wide, two 1X16 SC/APC in/out	Black	80-6114-8036-1
8443BK-2X216	Splitter module, 3-slot wide, two 2X16 SC/APC in/out	Black	80-6114-8037-9
8443BK-4X108	Splitter module, 3-slot wide, four 1X8 SC/APC in/out	Black	80-6114-8038-7
8443BK-4X208	Splitter module, 3-slot wide, four 2X8 SC/APC in/out	Black	80-6114-8039-5
8442BK-116	Splitter module, 2-slot wide, one 1X16 SC/APC in/out	Black	80-6114-8040-3
8442BK-216	Splitter module, 2-slot wide, one 2X16 SC/APC in/out	Black	80-6114-8041-1
8441BK-108	Splitter module, 1-slot wide, one 1X8 SC/APC in/out	Black	80-6114-8043-7
8441BK-204	Splitter module, 1-slot wide, one 2X4 SC/APC in/out	Black	80-6114-8091-6
8441BK-208	Splitter module, 1-slot wide, one 2X8 SC/APC in/out	Black	80-6114-8044-5

3M™ Rack-mount Fiber Distribution System 8425 series

The 3M Rack-mount Fiber Distribution Unit 8425 is a 4RU, 19" patch panel design accepting either the 3M™ Splitter Modules or 3M™ MPO to SC/APC Fan-out Modules in one-, two-, or three-slot wide configurations. The 8425 may also be used with many modular adapter plates available with industry accepted connector adapters.



3M™ Rack-mount Fiber Distribution Unit 8425

Ordering Information

Product Number	Description	3M ID
8425BK	FDU 4RU (holds 12 slots/plates)	80-6113-3545-8
8425BK-BPL	FDU 4RU back panel with one 3M™ Splice Tray 2524-FT, locking doors (holds 12 slots/plates)	80-6113-3546-6

3M™ Wall-mount Fiber Distribution System 8437 Series

The 3M Wall-mount Fiber Distribution System 8437 is a double door, lockable wall box designed specifically for the 3M Splitter Modules and 3M™ MPO to SC/APC Fan-out Modules in one-, two-, or three-slot wide configurations.



3M™ Wall-mount Box 8437



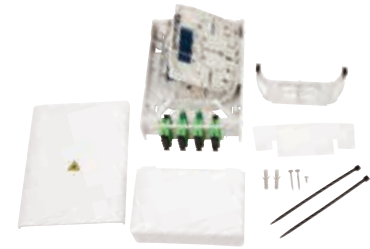
3M™ Wall-mount 8437 Boxes

Ordering Information

Product Number	Description	3M ID
8437BK-2HDM	Wall-mount box for 2 3-slot splitter modules	80-6114-8432-2
8437BK-3HDM	Wall-mount box for 3 3-slot splitter modules	80-6114-8433-0
8437BK-4HDM	Wall-mount box for 4 3-slot splitter modules	80-6114-8434-8

3M™ Fiber Distribution Terminal PBPOC Series

The 3M™ Fiber Distribution Terminals PBPOC with integrated splitters are wall-mounted compact boxes for application into distributed splitter architectures as part of a Passive Optical LAN Network. Because of this box's aesthetically pleasing design, it can easily integrate into common office environments without distraction.



Fiber Distribution Terminal PBPOC 2x104

Ordering Information

Product Number	Description	Color	3M ID
PBPOC-2X104	Wall box, plastic, with two 1x4 splitters, SC/APC outputs	White	80-6114-8433-0
PBPOC-108	Wall box, plastic, with one 1x8 splitters, SC/APC outputs	White	80-6114-8434-8

3M is a trademark of 3M Company.

Important Notice

All statements, technical information, and recommendations related to 3M's products are based on information believed to be reliable, but the accuracy or completeness is not guaranteed. Before using this product, you must evaluate it and determine if it is suitable for your intended application. You assume all risks and liability associated with such use. Any statements related to the product which are not contained in 3M's current publications, or any contrary statements contained on your purchase order shall have no force or effect unless expressly agreed upon, in writing, by an authorized officer of 3M.

Warranty; Limited Remedy; Limited Liability.

This product will be free from defects in material and manufacture for a period of 12 months from the time of purchase. **3M MAKES NO OTHER WARRANTIES INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.** If this product is defective within the warranty period stated above, your exclusive remedy shall be, at 3M's option, to replace or repair the 3M product or refund the purchase price of the 3M product. Except where prohibited by law, 3M will not be liable for any loss or damage arising from this 3M product, whether direct, indirect, special, incidental or consequential regardless of the legal theory asserted.



Communication Markets Division

6801 River Place Blvd.
Austin, TX 78726-9000 USA

Phone 1-800-426-8688
Fax 1-800-626-0329
Web 3M.com/Telecom

Please recycle. Printed in USA © 3M 2016.
All rights reserved. 80-6116-2013-1