



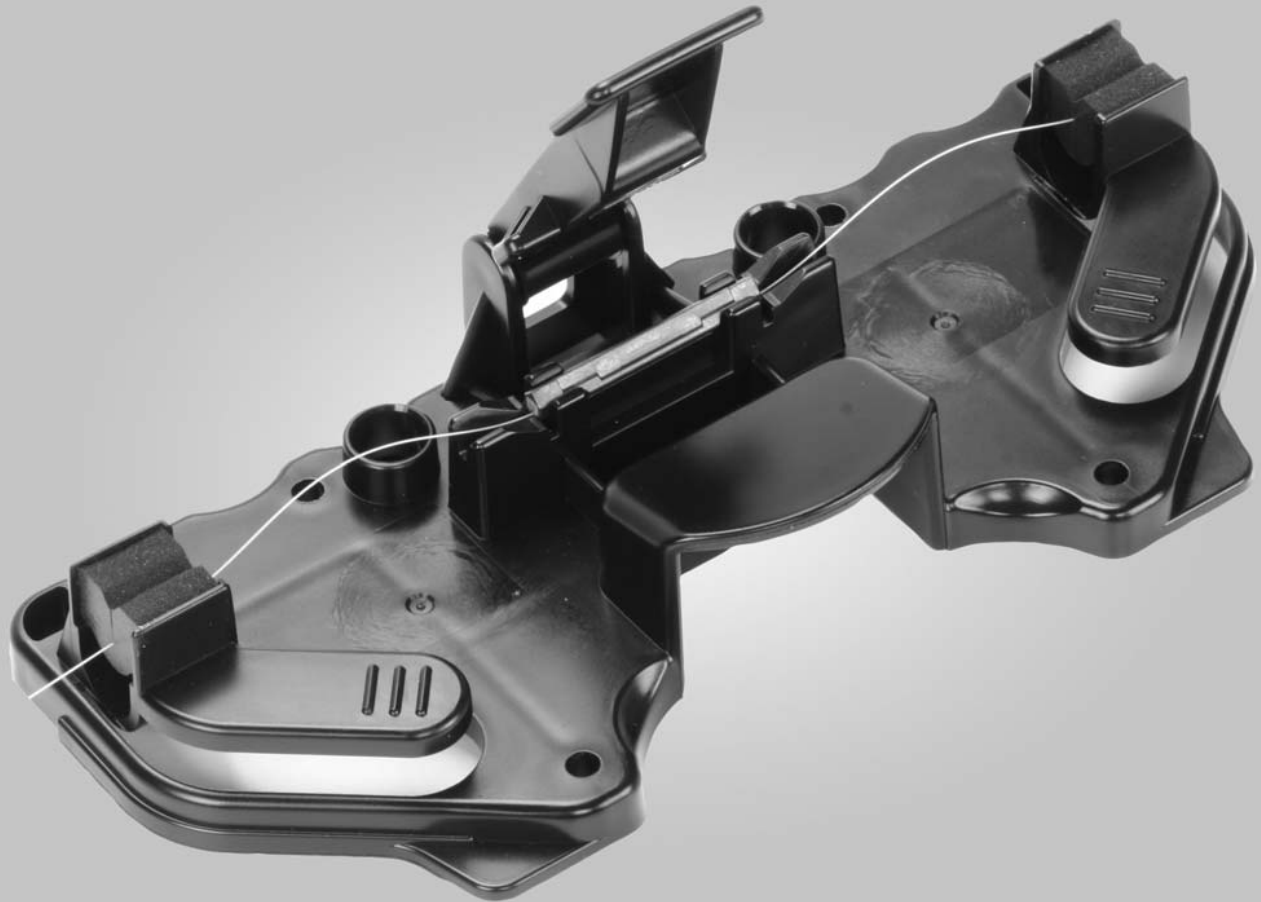
# Fiber Optic Splices and Connectors

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Many of the products in this catalog are certified as compliant with RoHS standards. For a complete and updated listing of specific RoHS-compliant products, refer to the 3M Communications Technology website at [www.3M.com/ROHS](http://www.3M.com/ROHS).

**v.071207**

# 3M™ Fibrlok™ Single Fiber Optical Splicing System 2500 Series



3M™ Fibrlok™ optical splice is a leading mechanical splice and is specified in fiber-to-the-premises projects as a substitute for fusion splicing. It provides a precise, simple and low-cost method of splicing optical fibers without electrical power. The Fibrlok splicing system is designed to minimize the need for lengthy training, specialized skills or experience.

Fibrlok single fiber optical splices utilize a metallic splicing element held inside a molded plastic body and cap to provide a fast, permanent splice. Index matching gel at the fiber splice interface enables a low-loss splice that maintains transmission quality over the life of the network. Assembly of the inexpensive Fibrlok splice requires only removal of the fiber coating, and cleaning and cleaving of the fiber.

3M offers three different configurations of single fiber splices to meet different application needs, Fibrlok II for 250µm or 900µm splices, Fibrlok 250µm for 250µm splices, and Fibrlok II Splice/Holder which eliminates the need for a separate assembly tool by integrating the Fibrlok II splice, tool and tray together.

## 3M™ FIBRLOK™ SINGLE FIBER OPTICAL SPLICING SYSTEM 2500

### 3M Fibrlok II Universal Optical Fiber Splice 2529

The 2529 optical fiber splice has successfully spliced any combination of 250µm and 900µm singlemode or multimode fibers for over 15 years.

Utilizing the rugged, low cost 2501 assembly tool, the 2529 can be installed for any indoor or outdoor application.



### 3M Fibrlok II Splice/Holder 2539

The 2539 integrates the 3M Fibrlok II splice 2529, actuation tool, and holder all in one package. It enables fast, on-site installation without a separate assembly tool or splice tray. Very high bond tape on the bottom of the splice/holder permanently holds it at the splice location.

The Fibrlok II splice/holder is also available with a pre-terminated SC/APC or SC/UPC pigtail for easy installation.



### 3M Fibrlok 250µm Splice 2540G

The 2540G splice enables fast, easy splicing of 250µm singlemode and multimode fiber for all splice installations, including fiber-to-the-premises.

Using the small, rugged 2504G assembly tool, it can be installed in any environment whether it is an aerial application or inside a building.



#### FEATURES

< 0.1dB insertion loss

30 second installation time

Minimum tooling requirements

No epoxy or electricity required

Simple, easy to use

Strong fiber retention

#### BENEFITS

High performance, permanent splices

Increased productivity

Low capital cost

Easy on-site installation

Minimal training, lower installed cost

Virtually no fiber movement

# 3M™ FIBRLOK™ SINGLE FIBER OPTICAL SPLICING SYSTEM 2500

## SPECIFICATIONS

3M FIBRLOK SINGLE FIBER OPTICAL SPLICES			
	2529	2539	2540G
Dimensions	3.8mm x 6.4mm x 38.1mm (0.15" x 0.25" x 1.50")	12.9mm x 12.0mm x 66.0mm (0.51" x 0.47" x 2.60")	4mm x 4mm x 36mm (0.16" x 0.16" x 1.42")
Fiber Diameter	125µm	125µm	125µm
Coating Diameter	250 or 900µm	250 or 900µm Tight Buffer	250µm
Installation Time	< 30 seconds after fiber preparation	< 30 seconds after fiber preparation	< 30 seconds after fiber preparation
Mean Insertion Loss	< 0.1dB	< 0.1dB	< 0.1dB
Return Loss	< -40dB Typical	< -40dB Typical	< -40dB Typical
Tensile Strength	4.4N (1.0 lbf) Minimum	4.4N (1.0 lbf) Minimum	4.4N (1.0 lbf) Minimum
Operating temperature	-40°C to 75°C (-40°F to 167°F)	-40°C to 75°C (-40°F to 167°F)	-40°C to 75°C (-40°F to 167°F)
Material	Engineering thermoplastic with aluminum alloy element and index matching gel	Engineering thermoplastic with aluminum alloy element, index matching gel and VHB tape	Engineering thermoplastic with alloy element and index matching gel

## ORDERING INFORMATION

3M FIBRLOK SINGLE FIBER OPTICAL SPLICES				
PRODUCT NUMBER	DESCRIPTION	PKG.	MIN. ORDER	UPC 054007-
<b>Splices</b>				
2529	Fibrlok II universal optical fiber splice for 250 and 900µm fiber	6/pkg, 10 pkg/cs.	60 each	92202
2529-K	2529 Fibrlok II splices with assembly tool (60 splices, one 2501 assembly tool)	1 kit/cs.	1 kit	92415
2539	2529 Fibrlok II splice, integrated actuation tool, and holder with tape	1/pkg, 60 pkg/cs.	60 each	21516*
2539 SC/APC	2539 Fibrlok II splice/holder with 0.75m (30") SC/APC connector pigtail	1/pkg, 12 pkg/cs.	12 each	22860*
2539 SC/UPC	2539 Fibrlok II splice/holder with 0.75m (30") SC/UPC connector pigtail	1/pkg, 12 pkg/cs.	12 each	22861*
2540G	Fibrlok 250µm fiber splice for 250µm fiber	5/pkg, 12 pkg/cs.	60 each	22685*
<b>Assembly Tools</b>				
2501	Required for Fibrlok II 2529	1/cs.	1 each	57125
2504G	Required for Fibrlok 250µm 2540G	1/cs.	1 each	22686*

\*UPC prefix 051115-

# 3M™ FIBRLOK™ SINGLE FIBER OPTICAL SPLICING SYSTEM 2500

## 3M Fibrok Splice Kit with Cleaver 2559-C

The Fibrok splice kits are available with (2559-C) and without (2559) a fiber cleaver and contain all the materials needed to terminate Fibrok splices whether it be a singlemode or multimode splice.

Detailed instructions are provided. Also included in the kits are the Fibrok II assembly tool 2501 and Fibrok 250µm assembly tool 2504G, simple-to-use tools designed for fast and easy installation.



Fibrok splice kit with cleaver 2559-C contains the following components:

- Fibrok II 2529 Splice Assembly Tool 2501
- Fibrok 250µm Assembly Tool 2504G
- Fiber Cleaver 2534 (not included in 2559 kit)
- Fiber Stripping Tool 6365-ST
- Kevlar Snips (scissors) 6365-KS
- Lint free cloths (100/pkg.)
- Cleaning alcohol bottle
- Fibrok II Splice 2529 (6 each)
- Fibrok 250µm Splice 2540G (5 each)
- Fibrok II Splice/Holder 2539 (2 each)

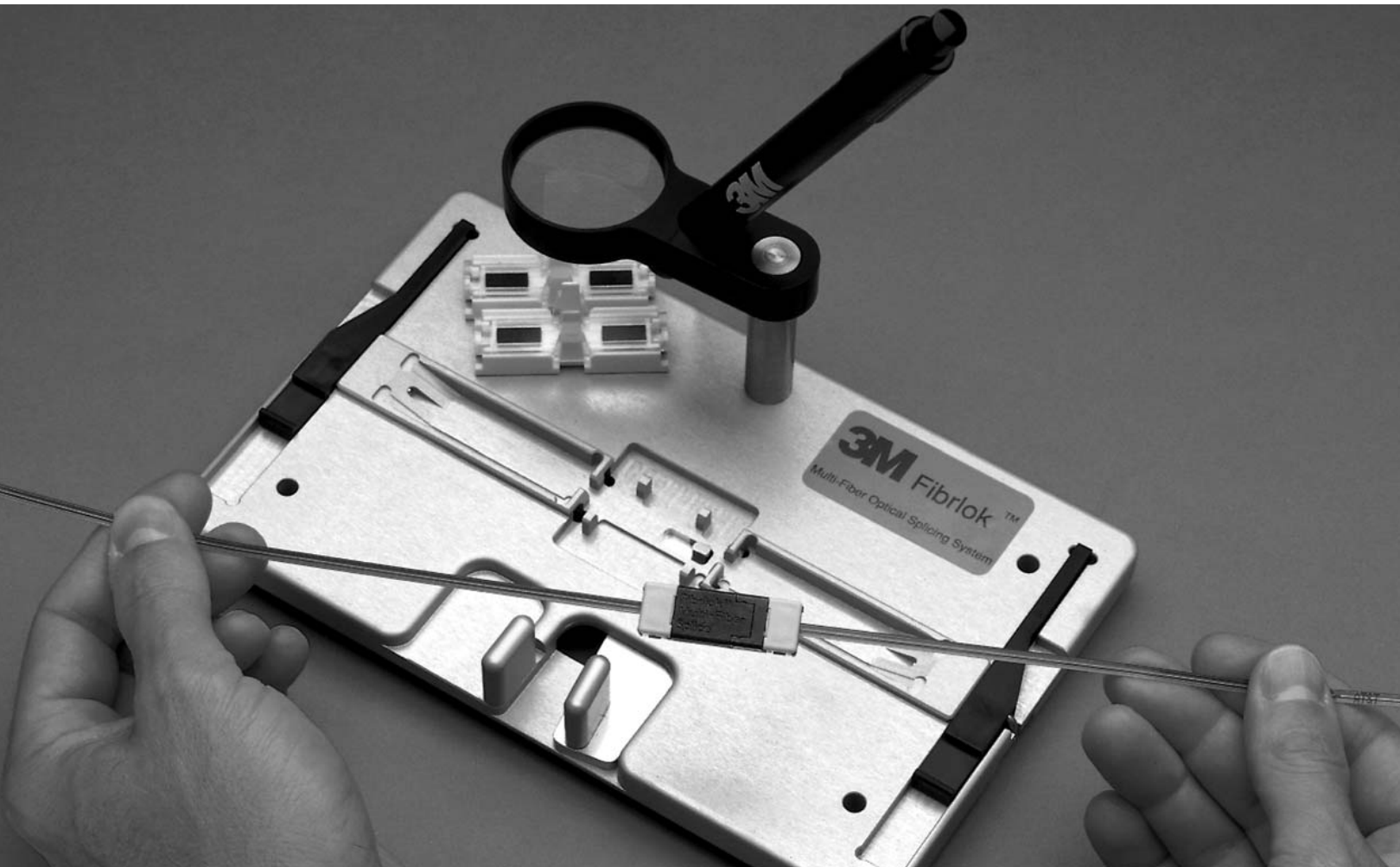
## ORDERING INFORMATION

### 3M FIBRLOK SPLICING KITS AND ACCESSORIES

PRODUCT NUMBER	DESCRIPTION	PKG.	MIN. ORDER	UPC 051115-
<b>Kits</b>				
2559-C	Fibrok splice kit with fiber cleaver	1/cs.	1 each	25801
2559	Fibrok splice kit without fiber cleaver	1/cs.	1 each	25800
<b>Replacements for 3M Fibrok Splice Kit</b>				
2501	Required for Fibrok II 2529	1/cs.	1 each	57125*
2504G	Required for Fibrok 250µm 2540G	1/cs.	1 each	22686
2534	Fiber cleaver	1/cs.	1 each	25802
6365-ST	Stripping tool	1/cs.	1 each	16200
6365-KS	Kevlar snips	1/cs.	1 each	16202
05-00017	Lint free cloths, 4" x 4"	100/pkg.	1 pkg	48999*

\*UPC prefix 054007-

# 3M™ Fibrlok™ Multi-Fiber Optical Splicing System 2600 Series



The Fibrlok multi-fiber optical splicing system uses field proven Fibrlok splice technology to provide fast, efficient and permanent splicing of multiple optical fibers. Designed to minimize the need for lengthy training, specialized skills or experience, the Fibrlok multi-fiber optical splicing system has been designed with the idea that “simpler is better.”

The Fibrlok multi-fiber splicing system consists of a consumable splice “module” and associated fiber preparation and splicing tools. Splices are available in 4-, 8- and 12-fiber versions.

The Fibrlok multi-fiber splice uses the same easy strip, clean, cleave and splice procedure used in the assembly of the Fibrlok II optical fiber splice. A complete splice can be assembled in less than five minutes, making the Fibrlok multi-fiber splice ideal for both new construction and cable restoration applications.

## 3M™ FIBRLOK™ MULTI-FIBER OPTICAL SPLICING SYSTEM 2600 SERIES

### Fibrlok Multi-Fiber Optical Fiber Splice (4 fiber) 2604

DESCRIPTION: MULTI-FIBER OPTICAL SPLICE (4 FIBER) PKG. (LBS.): 12 EACH (2.00)  
MIN. ORDER: 12 EACH UPC: 051138-11584

### Fibrlok Multi-Fiber Optical Fiber Splice (8 fiber) 2608

DESCRIPTION: MULTI-FIBER OPTICAL SPLICE (8 FIBER) PKG. (LBS.): 12 EACH (2.00)  
MIN. ORDER: 12 EACH UPC: 054007-91616

### Fibrlok Multi-Fiber Optical Fiber Splice (12 fiber) 2612

DESCRIPTION: MULTI-FIBER OPTICAL SPLICE (12 FIBER) PKG. (LBS.): 12 EACH (2.00)  
MIN. ORDER: 12 EACH UPC: 051138-11587

The 2600 series multi-fiber optical splice will accommodate singlemode or multimode fibers with a nominal cladding diameter of 125 microns. Splices accommodate both ribbon cable construction and individual 250 micron plastic-coated fibers. Color-coded versions of the Fibrlok multi-fiber optical fiber splice are available.

The 2600 kit provides the components required to assemble the multi-fiber splice. The Fibrlok ribbon construction tool kit 2670 provides organization and “ribbonizing” of individual 250-micron coated fibers prior to splicing. Fibrlok multi-fiber splice assembly tooling was designed to minimize the required tooling investment. These lightweight and portable tools are perfect for splicing in buried, underground, aerial, vault or pedestal splice locations.

After preparation, the fibers are inserted into the Fibrlok multi-fiber splice element. The assembly tool is then used to actuate the splice, forcing the clamping and locating surfaces against the fibers and aligning the fibers precisely and permanently in place.

## SPECIFICATIONS

Fiber diameter	125 µm
Coating diameter	250 µm; ribbon construction or individually coated fiber
Shelf life	30 years
Installation time	<5 minutes including preparation (stripping, cleaving, splice assembly)
Mean insertion loss	<0.1 dB
Reflection	<-40 dB typical
Tensile strength	1.0 lb. per individual fiber joint minimum; >3.0 lb. per fiber joint typical
Material	Engineering thermoplastic with aluminum alloy element
Operating temperature	-40° to 80°C (-40° to 176°F)
Thermal cycling	Change in insertion loss <0.05 dB, -40° to +80°C (-40° to 176°F)
Fungus resistance	ASTM G-21-70, rating 0
Vibration	EIA standard FOTP-11; test condition 1
Water immersion	Seven days at 43°C; change in insertion loss ≤0.05 dB



## 3M™ FIBRLOK™ MULTI-FIBER OPTICAL SPLICING SYSTEM 2600 SERIES



### Fibrlok Multi-Fiber Splice Preparation Kit 2600

PRODUCT NUMBER: 2600 DESCRIPTION: MULTI-FIBER OPTICAL SPLICE PREPARATION KIT  
PKG. (LBS.): 1 KIT (9.00) MIN. ORDER: 1 KIT UPC: 051138-11588

The 2600 multi-fiber optical splice preparation kit contains the actuator tool and accessories required for assembly of 12-fiber multi-fiber splices. Additional holder assemblies and stripper tube guides are required for splicing 4- or 8-fiber splices and are ordered separately.

### COMPONENTS

#### FIBRLOK MULTI-FIBER SPLICE PREPARATION KIT 2600

PRODUCT NUMBER	DESCRIPTION
2620	Multi-fiber optical splice actuator tool
2622	Multi-fiber pen light assembly
2630	Multi-fiber stripper handle assembly
2631	Multi-fiber stripper wall plug transformer (110V)
2634	Multi-fiber stripper tube guide (12 fiber, bonded)
2635	Multi-fiber stripper tube guide (12 fiber, AT&T ASR ribbon)
2652-A	Multi-fiber cleaver spacer gauge assembly
2653	Multi-fiber holder assembly (12 fiber, AT&T ASR ribbon)
2654	Multi-fiber holder assembly (12 fiber, bonded)
2651	Fiber viewer assembly (for Alcoa Fujikura cleaver)
05-00017	Lint free cloths, 4" x 4"

\*The Fibrlok 2600 multi-fiber optical splice preparation kit does not include the fiber cleaver.



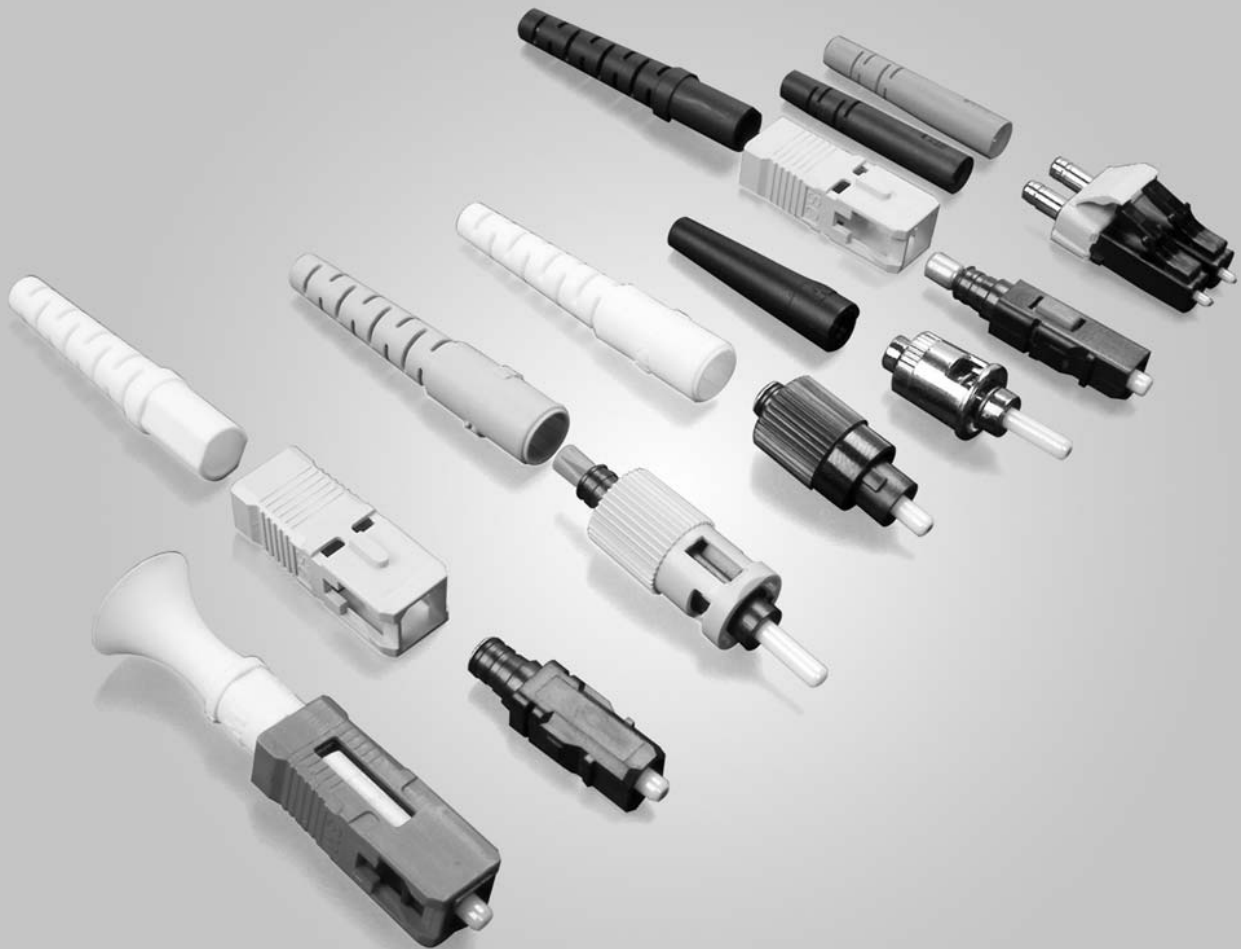
### Ribbon Construction Tool Kit 2670

DESCRIPTION: MULTI-FIBER RIBBON CONSTRUCTION TOOL  
PKG. (LBS.): 1 KIT (5.33) MIN. ORDER: 1 EACH UPC: 051138-11611

The 2670 multi-fiber ribbon construction tool kit contains the components required to construct ("ribbonize") individually coated 250-micron fibers.



# 3M™ Fiber Connectors

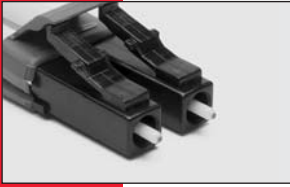


Drawing on 70 years of adhesive expertise and 40 years of experience in ceramic technology, 3M provides the most convenient, reliable, and easy-to-install connectors for both fiber and copper networks.

3M™ Hot Melt Fiber Optic Connectors have a proven record of high yield and reliable performance in both indoor and outdoor local area networks around the world. 3M™ Crimplok™ Fiber Optic Connectors are ideal where there is no electricity or in difficult locations. 3M™ No Polish Connectors enable a fast, on-site installation that eliminates field polishing.

All 3M connectors have been qualified to ANSI/TIA/EIA-568B.3.

## 3M™ FIBER CONNECTORS



### Hot Melt LC Connector

The only LC connector with hot melt adhesive. The LC connector offers all the advantages of the 3M hot melt technology, including fast installation, ease of termination, reliability, low insertion loss and very high yield. These singlemode and multimode connectors meet TIA 568B.3 requirements for both indoor and outdoor LAN applications. As with the 3M SC and ST hot melt connectors, there is no need for a syringe, applicator or mixing of epoxy with the LC connector.



### SC (Epoxy, Hot Melt, Crimplok™ and No Polish) Connector and Accessories

3M has simplified the SC connector to enhance performance and cable retention, and provide a readily field mountable connector. The connector complies with the NTT, JIS, ISO/IEC and TIA/EIA component and ISO/IEC, CENELEC, ANSI, TIA/EIA-568B standards. It features a rectangular push-pull coupling mechanism for easy insertion and high repeatability.

The SC connector is available in singlemode and multimode utilizing epoxy adhesive and is very good for factory termination of patch cords and pigtails. 3M hot melt SCs, available in singlemode and multimode, are preloaded with hot melt adhesive, enabling a field termination in less than two minutes. The SC connector is also available as the 3M™ Crimplok™ Connector. The Crimplok connector combines the speed of non-adhesive connectors with the performance characteristics of epoxy and hot melt connectors. Crimplok connectors are the ideal solution for emergency restoration work or where there is no power.



3M No Polish Connector (NPC) SCs utilize a one-piece, pre-assembled design that eliminates field polishing and loose parts. With a factory-polished ferrule assembly and a mechanical splice, the connector can be quickly installed – without electrical power – using a simple field tool. NPC is available in singlemode and multimode.



### ST (Epoxy, Hot Melt and Crimplok) Connector and Accessories

The ST connector product line provides high repeatability and low light loss for premises, LAN and telco applications. All 3M ST connectors meet the specifications in TIA/EIA 568B.3. The 3M products are supplied with a high quality PC finish on zirconia ceramic ferrules.

The ST connector is available in singlemode and multimode preloaded with hot melt adhesive, for field terminations in less than two minutes. The ST connector is also available as the 3M Crimplok connector. The Crimplok connector combines the speed of non-adhesive connectors with the performance characteristics of epoxy and hot melt connectors. Crimplok connectors are the ideal solution when there is no power source or for working in tight workspaces.

Please refer to the Customer Premises Products (Enterprise) section of the catalog for additional information.

## 3M™ FIBER CONNECTORS AND TERMINATION KITS

### FC/PC (Epoxy/Hot Melt) Connector and Accessories

The FC connector is a field mountable, pull-proof connector that is fully compatible with all FC connectors adhering to the NTT specification. The FC connector can maximize termination yield through ease of mounting and a high performance polishing procedure.

The three-piece connector design (connector, crimp ring, and boot) is mounted using the same simple process used for other 3M connectors.

The FC connector is available in singlemode and multimode utilizing epoxy adhesive. It is also available in singlemode and multimode preloaded with 3M's hot melt adhesive, enabling a field termination in less than two minutes for multiple terminations.

All 3M FC connectors meet the requirements of TIA/EIA-568B. Singlemode epoxy connectors are compliant with Telcordia GR-326-CORE.

### Fiber Connector Termination Kits and Accessories

3M LC termination kits and accessories provide tools and materials necessary to terminate 3M fiber optic connectors compatible with the major connectors in the industry today. A variety of kits are available to meet your needs.

The 6365 and 6361 termination kits contain all materials necessary to terminate 3M SC, ST, and FC hot melt connectors.

A number of hand tools enhance the 3M epoxy connector termination process. Most of the kit parts are available separately to supplement your existing kits and replenish consumables.

The 3M™ No Polish Connector Preparation Kits are available with (8865-C) and without (8865) a fiber cleaver and contain all the materials needed to terminate 3M SC no polish connectors whether it be a singlemode or multimode connection. Also included in the kits is the 3M™ No Polish Connector Assembly Tool 8865-AT, the simple-to-use tool designed for fast and easy installation.

Videos, training classes and detailed manuals are available to assure you are achieving the best results. Contact 3M Customer Service or your local sales representative for details.

The 3M™ Hot Melt Polishing Machine 6850A features a dry, single-paper technology for polishing the ferrule of a single hot melt ST connector. It is a 12-volt DC unit that provides hands-free operation and delivers consistent performance. Adapters for polishing ferrules of LC, SC and FC connectors are available.

Please refer to the Customer Premises Products (Enterprise) section of the catalog for additional information.



### **3M Solutions Tool**

The solutions tool is designed to show you the breadth of the 3M product line and allow you to drill into specific categories to identify solutions.

To use this free Internet support tool, visit: <http://www.3M.com/Telecom>.

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