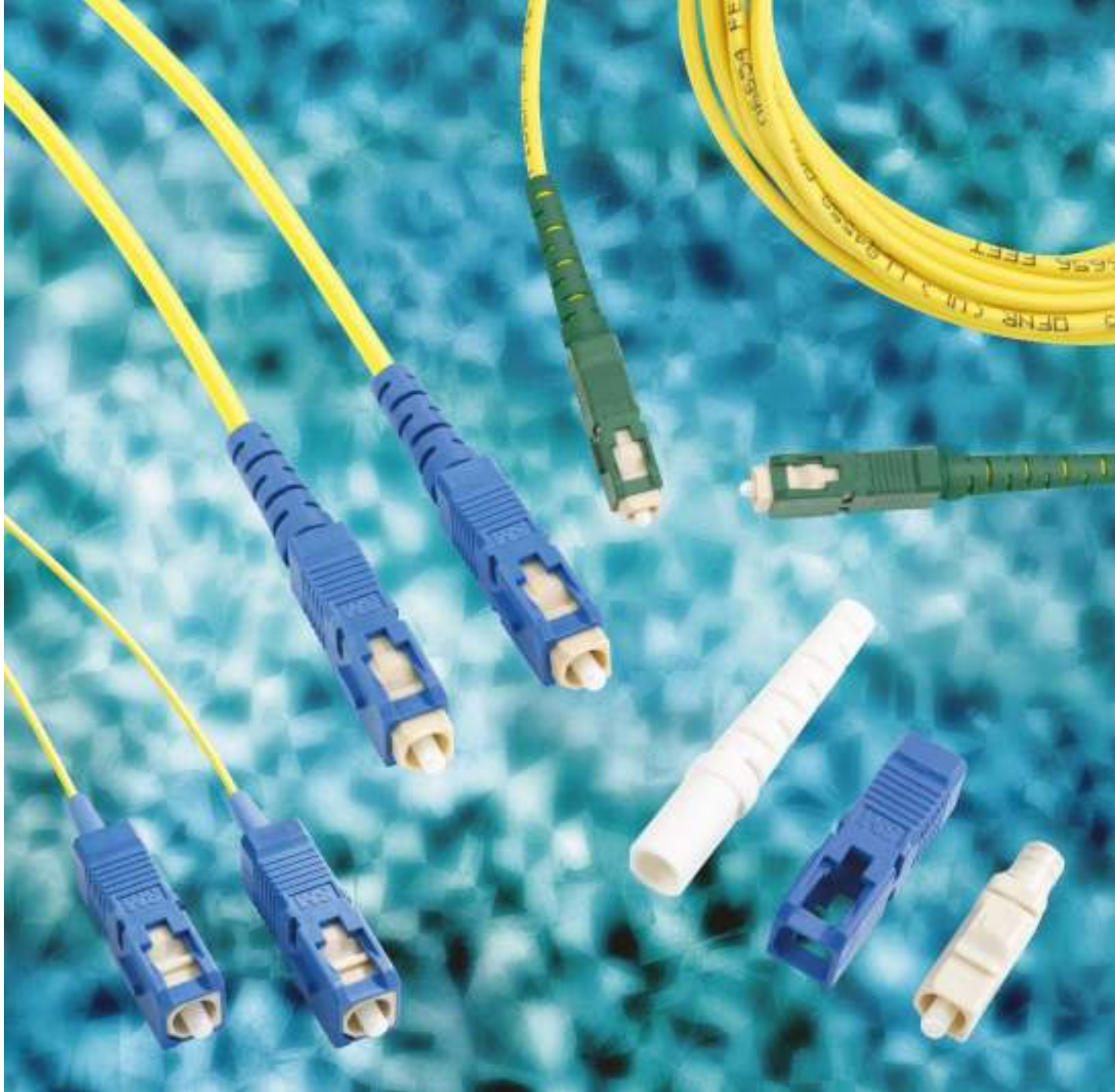


3M

SC Connectors and Accessories



A Family of SC Connectors

3M offers a full line of SC Connectors, including Epoxy, Hot Melt, Crimplok™, Low EMI, and Angled Polished Connectors, to meet all your connector needs. 3M has simplified the design of the SC Connector to enhance performance and cable retention and provide readily field mountable connectors.

The connector is fully compliant with NTT, JIS, ISO/IEC and TIA/EIA component and ISO/IEC, CENELEC, ANSI, TIA/EIA-568A and BICSI system and cabling level standards. The 3M™ SC Connector has a rectangular push-pull coupling mechanism for easy insertion and high repeatability. The zirconia ceramic ferrule, with a proprietary PC finish assures low attenuation and can now minimize reflected power to -55 dB on factory polished single-mode cable assemblies.

The SC Connector is designed for the most advanced fiber optic systems requiring exceptional stability, low reflections (single-mode) and high density. This versatile connector offers easy installation in both long and short transmission lines, subscriber networks or premises environments.

The 3M Field-Mountable Connector maximizes termination yield through ease of mounting and a high performance polishing procedure. The extended ferrule collar assembly ensures that the adhesive encapsulates the end of the buffer without wicking or spreading. The four-piece design (connector, shell, crimp ring and boot) is mounted using the same simple process used for other 3M connectors.

The 3M SC Low EMI Connector has unique material, which minimizes electromagnetic interference for routers and switches and test bed applications.

The SC Epoxy and Low EMI Connectors are available in single-mode

and multimode utilizing epoxy adhesive. The SC Hot Melt Connector, available in single-mode and multimode, is preloaded with Hot-Melt adhesive, enabling a field termination in less than two minutes for multiple terminations.

The SC Crimplok™ Connector, also available in both single-mode and multimode, combines the speed of non-adhesive connectors with the performance characteristics of epoxy and hot melt connectors.

The SC Hot Melt and Crimplok Connectors are specifically intended for ease of termination in local area network and meet requirements of system and cabling level standards.

3M also offers the following to help ensure you meet any and all of your connector needs.

A variety of distribution units are available to accommodate the SC design.

For high cable assembly applications, try the 3M Fiber Optic Bulk Pack. Consisting of 1,000 connectors, boots and accessories, the 3M Bulk Pack dramatically decreases assembly time and cost.

3M offers a standard 1.5" boot, as well as shorter 1.1" boots for high density, confined space applications.

2.0 mm boots for smaller jacket sizes ranging from 1.6 mm to 2.0 mm and buffer boots for 900 μm buffered fiber are also available.



SC Connector

2



SC Hot Melt Connector

3

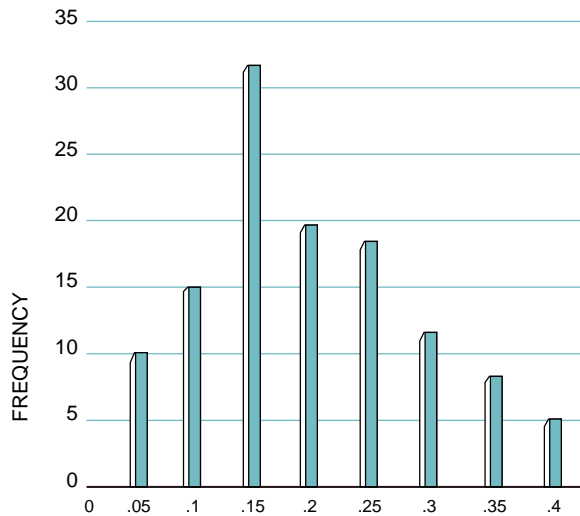
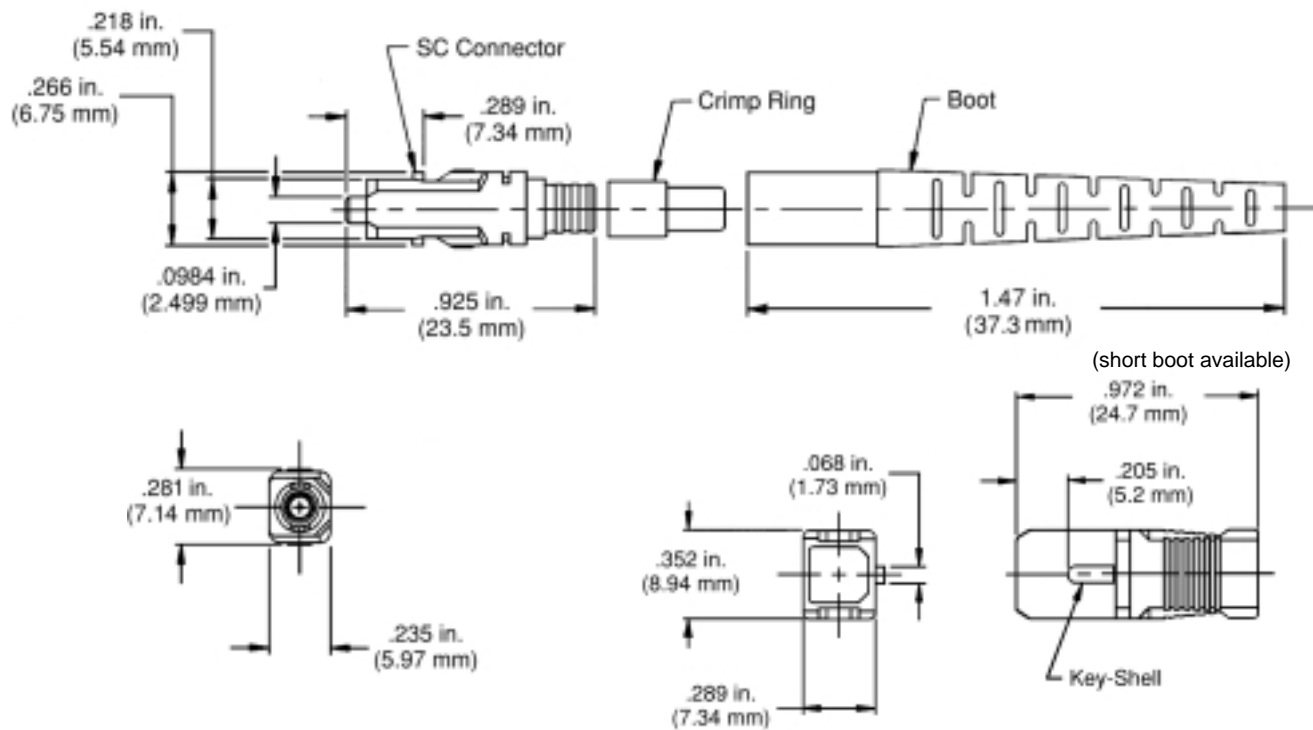
All 3M SC Connectors are available without the 3M logo for private labeling.

SC Connectors and Cable Assemblies

| Features | Benefits |
|---|--|
| Intermateable within NTT specifications | No retrofit, compatibility issues |
| Push pull mating | High density, repeatable connections |
| Pull-proof (independent) ferrule | Maintains optical contact |
| 3M PC finish | Excellent transmission performance |
| Zirconia ceramic ferrule | Reduces reflectance problems Factory polish to -55 dB reflections (single-mode epoxy only)* Field polish to -45 dB reflections (single-mode epoxy only)* |
| Thermoplastic shell | Corrosion resistant |
| Fewer parts | Fast, simple termination |

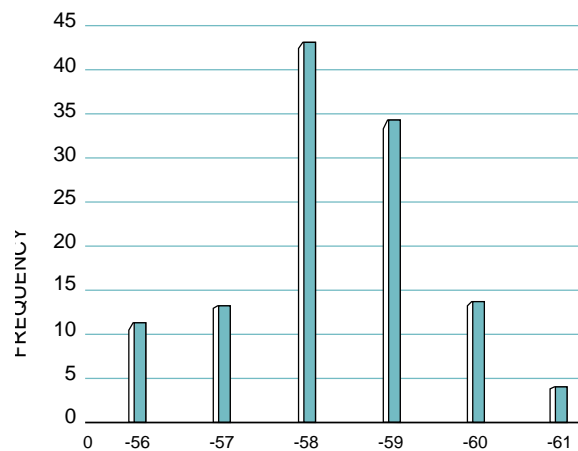
Hot Melt Version Only (in addition to above)

| | |
|------------------------------|---|
| Pre-loaded Hot Melt adhesive | Extended shelf life, fewer consumables (saves money) |
| No waiting for epoxy to cure | Termination in 2 minutes (productivity) |
| Single step polish | Only one abrasive to buy; faster polishing (reduces cost) |



Single-Mode Epoxy Insertion Loss (dB)

Mean: 0.19 dB; SiGma: 0.085 dB PoPulation Size = 121 Pieces



Single-Mode Epoxy Reflection (dB)

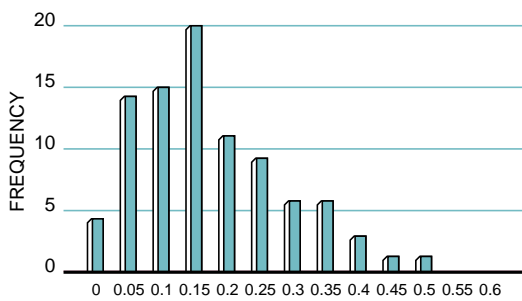
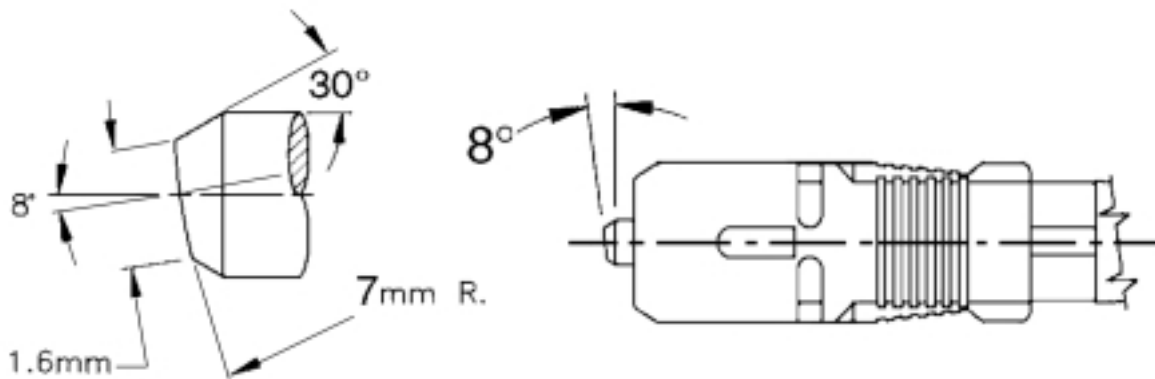
Mean: -.58dB; SiGma: 1.01 dB PoPulation Size = 121 Pieces

SC 8° Angled PC Cable Assemblies

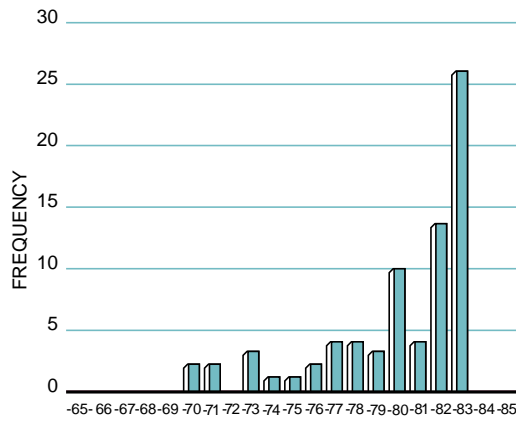
| Features | Benefits |
|--|--|
| 8° Angle polish on ferrule (patents issued US 5,351,327, US 5,458,582, US 5,321,784) | Low reflections, mated or unmated; intermateable with other SC 8° angled connectors meeting industry standards |
| Contacting fibers | Low, stable insertion loss |
| Isolated ferrule design | Not affected by cable disturbance |
| Push-pull mating (SC) | High density, repeatable connections |
| Zirconia ceramic ferrule | Durable, compliant material |
| Thermoplastic shell | Corrosion resistant |

SC 8° Angled PC Cable Assemblies, Single-mode

In order to meet the system requirements of the cable TV industry and other high-speed digital systems, 3M has developed a single-mode SC 8° angle-polished connector to minimize reflections to a mean of -80 dB.



SC 8° Angled Insertion Loss (dB)



SC 8° Angled Reflection (dB)

Specifications for SC Connectors

| | Multimode | | | Single-mode | | | |
|--|---|---|---|---|---|---|---|
| Product Number | 6300 | 6900 | 6306 | 8300 | 8306 8307 | 8900 | 8306-APC |
| Connector type | Hot Melt | Crimplok™ | Epoxy | Hot Melt | Epoxy | Crimplok | Epoxy |
| Fiber size (µm) | 125 | 125 | 125 | 126 | 126 127 | 126 | 126 |
| Fiber attenuation (dB) Field mount @ 1300 nm | <0.2 typical (62.5/125 µm fiber) | <0.2 typical (62.5/125 µm fiber) | <0.2 typical (62.5/125 µm fiber) | <0.2 typical | <0.3 typical | <0.2 typical | <0.3 typical |
| Reflection (dB) Field mount | ≤-25 typical | ≤-27 typical | ≤-25 typical | ≤-25 typical | ≤-45 typical | ≤-40 typical | ≤-65 typical |
| Connection durability (dB), after 500 matings | <0.2 change | <0.22 change | <0.2 change | <0.2 change | <0.2 change | <0.22 change | <0.2 change |
| Operating temperature Connector only (cable dependent) | -40° to 60°C (-40° to 140°F) | -10° to 60°C (14° to 140°F) | -40° to 85°C (-40° to 185°F) | -40° to 60°C (-40° to 140°F) | -40° to 85°C (-40° to 185°F) | -10° to 60°C (14° to 140°F) | -40° to 85°C (-40° to 185°F) |
| Storage temperature | -40° to 85°C (-40° to 185°F) | -40° to 80°C (-40° to 176°F) | -40° to 85°C (-40° to 185°F) | -40° to 85°C (-40° to 185°F) | -40° to 85°C (-40° to 185°F) | -40° to 80°C (-40° to 176°F) | -40° to 85°C (-40° to 185°F) |
| Cable tension (in service) Straight pull | <0.5 dB increase at 7.5 lbs. | <0.5 dB increase at 20 lbs. | <0.5 dB increase at 7.5 lbs. | <0.5 dB increase at 7.5 lbs. | <0.5 dB increase at 7.5 lbs. | <0.5 dB increase at 20 lbs. | <0.5 dB increase at 7.5 lbs. |
| Side pull | <0.5 dB increase at 3 lbs. | <0.5 dB increase at 3 lbs. | <0.5 dB increase at 3 lbs. | <0.5 dB increase at 3 lbs. | <0.5 dB increase at 3 lbs. | <0.5 dB increase at 3 lbs. | <0.5 dB increase at 3 lbs. |
| Material Connector ferrule Connector body & housing Boot | Zirconia ceramic Engineering Thermoplastic Elastomer resin | Zirconia ceramic Engineering Thermoplastic Elastomer resin | Zirconia ceramic Engineering Thermoplastic Elastomer resin | Zirconia ceramic Engineering Thermoplastic Elastomer resin | Zirconia ceramic Engineering Thermoplastic Elastomer resin | Zirconia ceramic Engineering Thermoplastic Elastomer resin | 8° angle Zirconia ceramic Elastomer resin |
| Flame retardancy | UL-94 V-0 | UL-94 V-0 | UL-94 V-0 | UL-94 V-0 | UL-94 V-0 | UL-94 V-0 | UL-94 V-0 |
| Connector identification Body Outer shell Boot | Black Beige White | Black Beige Black | Beige Beige Beige | Black Blue White | Beige Blue White | Black Blue Black | Beige Green Green |
| Field Termination Kit 120 V 230 V | 6355 6351 | 6955 (no power needed) | 8365 8361 | 6355 6351 | 8365 8361 | 6955 (no power needed) | 8366 Conversion Kit |

Use 3M Universal Termination Kits for an organized, quick installation

The 8365/8361 kit includes all tools and supplies necessary to terminate all epoxy connectors with a high temperature epoxy to meet Bellcore environmental tests.

The 8365/8361 kit also includes a polishing procedure that enables the installer to meet a -40 dB reflection requirement.

The 8366 SC APC conversion kit includes a polishing procedure that enables the installer to meet a -65 dB reflection requirement.

The 6355/6351 Hot Melt termination kit will provide all the equipment needed to terminate all 3M Hot Melt connectors.

The 6955 Crimplok™ termination kit provides all the equipment needed to terminate all 3M Crimplok connectors.

Ordering Guide

| Description | Product Number | Packaging |
|---|----------------|----------------|
| Field-mountable connectors | | |
| Single-mode/Epoxy (126µm) | 8306 | 1/pkg., 60/cs. |
| Single-mode/Epoxy (127µm) | 8307 | 1/pkg., 60/cs. |
| Single-mode/Hot Melt (126µm) | 8300 | 1/pkg., 60/cs. |
| Single-mode APC Epoxy (126µm) | 8306-APC | 1/pkg., 60/cs. |
| Single-mode Low EMI (blue boot) | 8309-U | 1/pkg., 60/cs. |
| Single-mode Low EMI (white boot) | 8309-W | 1/pkg., 60/cs. |
| Single-mode Crimplok™ (126µm) | 8900 | 1/pkg., 60/cs. |
| Multimode/Epoxy (125µm) | 6306 | 1/pkg., 60/cs. |
| Multimode/Hot Melt (125µm) | 6300 | 1/pkg., 60/cs. |
| Multimode Low EMI (beige boot) | 6309-BE | 1/pkg., 60/cs. |
| Multimode Low EMI (white boot) | 6309-W | 1/pkg., 60/cs. |
| Multimode Crimplok™ (125µm) | 6900 | 1/pkg., 60/cs. |
| Cable assembly* | | |
| Single-mode, connector code | DA | 1/pkg., 1/cs. |
| Single-mode, 8° angle | EP | 1/pkg., 1/cs. |
| Single-mode Low EMI | DT | 1/pkg., 1/cs. |
| Multimode, connector code | DB | 1/pkg., 1/cs. |
| Multimode Low EMI | DS | 1/pkg., 1/cs. |
| Couplings | | |
| Single-mode simplex | 8310 | 1/pkg., 60/cs. |
| Single-mode duplex | 8313 | 1/pkg., 60/cs. |
| Single-mode APC | 8310-G | 1/pkg., 60/cs. |
| Multimode simplex | 6310 | |
| Multimode duplex | 6313 | |
| Complete universal termination kits | | |
| Single-mode and Multimode ST, SC & FC Termination Kit, 120V Oven, Epoxy | 8365 | 1/each, 1/cs. |
| Single-mode and Multimode ST, SC & FC Termination Kit, 230V Oven, Epoxy | 8361 | 1/each, 1/cs. |
| SC Angled Polished Connector Conversion Kit | 8366 | 1/each, 1/cs. |
| Hot Melt Fiber Optic Termination Kit, ST, SC & FC 120V Oven | 6355 | 1/each, 1/cs. |
| Hot Melt Fiber Optic Termination Kit, ST, SC & FC, 230V Oven | 6351 | 1/each, 1/cs. |
| Crimplok Fiber Optic Termination Kit ST & SC Single-mode & Multimode | 6955 | 1/each, 1/cs. |

* Please refer to cable assembly ordering guide, or price book for complete part numbers

Ordering Information

To order, specify the correct product number from the Ordering Guide chart. For more information, please contact a 3M sales representative 800/426/8688.

3M and Crimplok are trademarks of 3M.

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 one year from the date 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.**



Telecommunications

6801 River Place Blvd.
Austin, TX 78726-9000
800/426 8688
FAX 800/626 0329
www.3M.com/telecom



Recycled Paper
40% Pre-consumer
10% Post-consumer

Litho in USA.

© 3M IPC 2001 80-6111-3107-1