STEREN®

FIBER OPTIC PRODUCT CATALOG

Quality connections are critical in the fiber optic network. Connectors, adapters, splitters and other devices are among the lowest-cost items in the network, but they play an indispensable role in maintaining optimal performance and helping carry light signals farther. Fiber optic voice, video and data networks require properly assembled and accurately tested connections.

But depending on the vendor, connectivity quality can range from exceptional to inferior…and thus affect the reliability and performance of your network. Some manufacturers comply with only the minimal standards and specifications and rely on less than strictly controlled processes in production. On the other hand, our fiber optic products reach much higher standards.

Our solutions serve broadband cable and satellite TV operators, cabling and telephony systems contractors, and many other markets. In fact, we offer one of the largest product portfolios in the electronics world. We possess a complete design, engineering, production, quality assurance and technical support organization unrivaled by any competing company.

Introduction

This catalog is your official guide to our fiber optic products.

As demonstrated by our variety of equipment categories, we can fulfill nearly all applications and network requirements. We provide a full line of assemblies and other products suited to your needs. Inside this catalog you'll find descriptions, specifications and ordering information.

In addition to assemblies, we provide a wide variety of connectors, adapters, attenuators, terminators, wavelength division multiplexers and splitters. We also offer fiber preparation tools for a quality connection. It's a complete package for all your fiber connectivity needs.

the advantages we offer

Attaining High Standards

Our fiber optic assemblies are rated at the highest technical specifications, meeting or exceeding Telcordia and TIA/EIA standards. Each product is quality tested to ensure that it meets these industry standards. As proof of this testing, each cable shipped to the customer is supplied with data sheets identifying certified specifications.

By complying with industry standards, we make certain that each fiber optic product has been manufactured to the highest quality possible and performs as expected for its recommended use. And once we ship you a product, our quality assurance process continues: Our engineering staff also provides after-sales technical support for all of our products to ensure that you are completely satisfied.

One example of these specifications:

Wavelength Division Multiplexers
Insertion Loss ≥0.4dB
Return Loss ≥55dB
Isolation ≥16dB
Bandwidth (nm) ±20nm

Operating Wavelength 1310 and 1550nm
Thermal Stability ≤±0.1 dB
Directivity ≥60dB
Operating Temperature -40°C to 75°C
Storage Temperature -40°C to 85°C

Our assemblies are customized to your specifications based on fiber mode, simplex/duplex construction, connector and polish type, jacket color, and cable diameter and length. Our cable assemblies are precision manufactured and 100% factory tested and certified.

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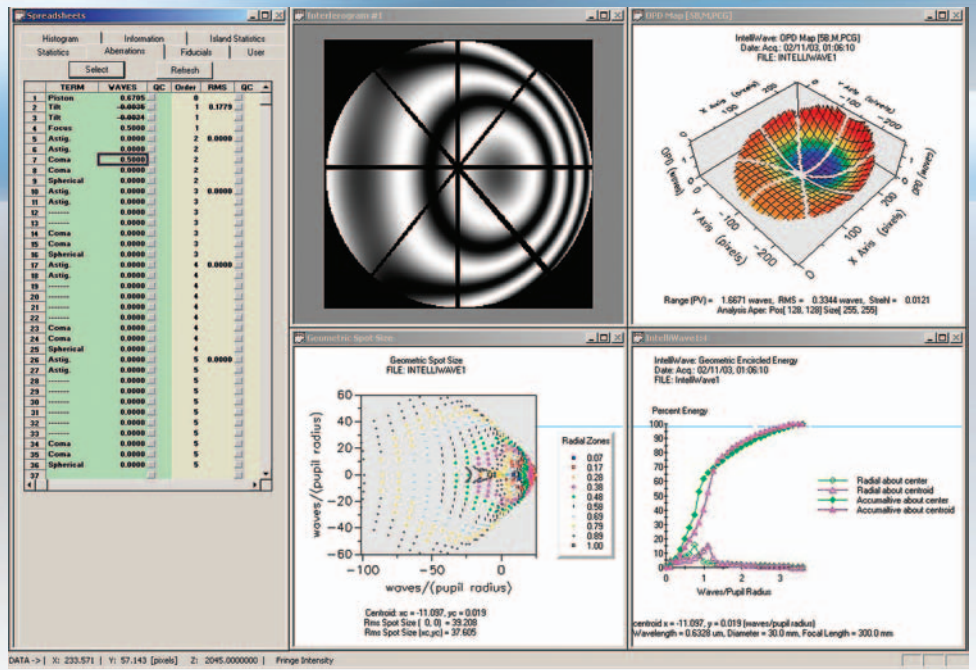
Quality Testing

As an essential part of manufacturing and quality assurance, precise measurements are performed both during and after the assembly process. For example, we utilize high-resolution interferometric microscopes to analyze the geometry of the connector end-face and ensure the highest quality for each assembly. These important measurements include:

- curvature radius—determines the creation of an effective contact area for the connectorized fiber
- undercut or protrusion—measures the precise limits for the connectorized fiber to make physical contact and provide maximum optical performance
- apex offset—the displacement area from the connector's apex to the ideal placement directly atop the fiber core; the closer the apex to the core, the better the physical contact
- end-face angle—a measurement of the bare fiber's angle of cleave, which enables proper connector alignment and intermateability
- analysis of the roughness or smoothness of the polished surface.

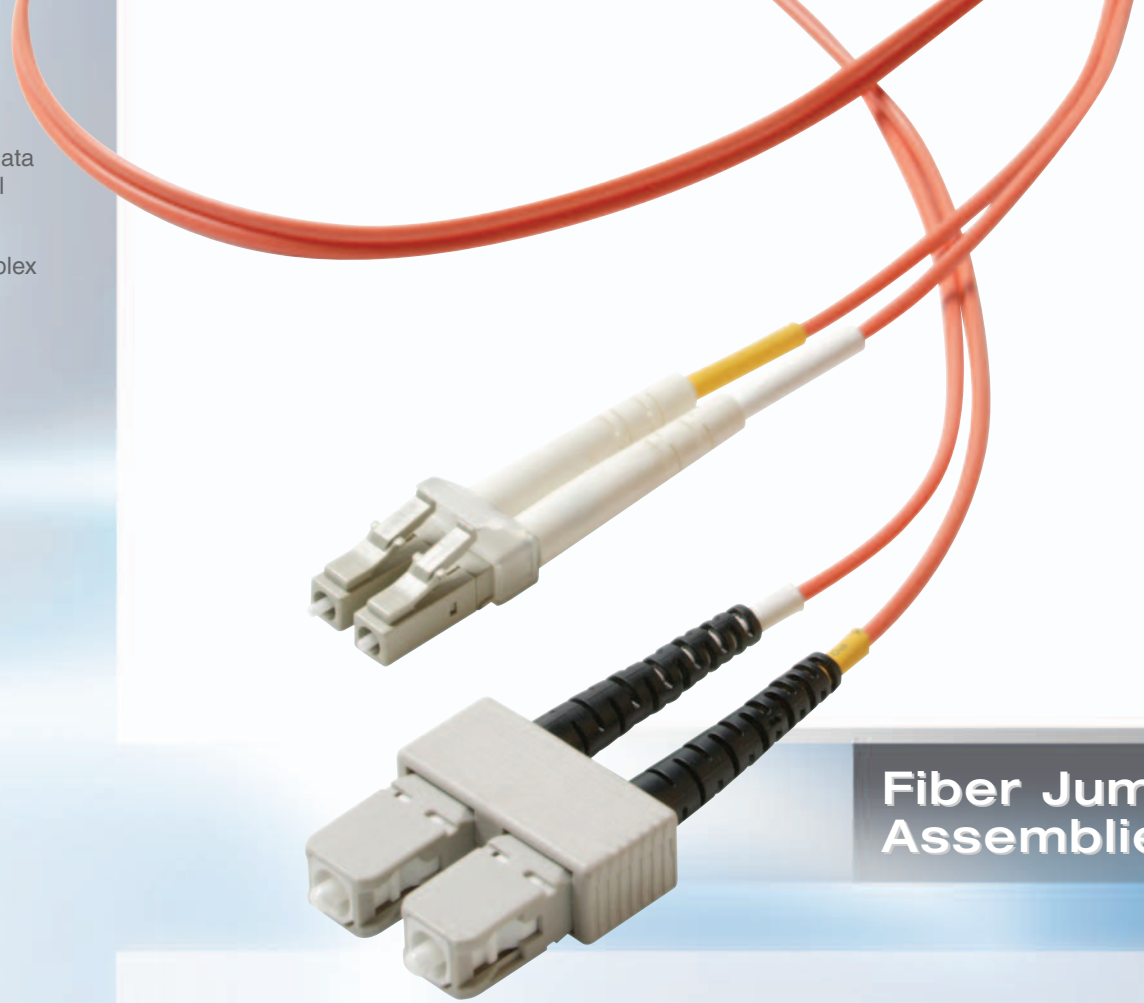


The Advantages We Offer

A clean and high-quality connector end-face enables optimum fiber performance. To ensure that each assembly will meet high performance standards, we perform a visual analysis of the end-face using a 400x fiber inspection scope.

Features & Benefits

- High-Performance Fiber Cable for Use in Data Networks, Optical Patch Panels, and Digital Video and Audio Applications
- Customized by Fiber Mode, Simplex or Duplex Construction, Connector Type, Connector Polish, Cable Diameter, Cable Length and Jacket Color
- Precision Manufactured
- FDDI and OFNR Rated
- Flame Retardant PVC Jacket
- 100% Factory Tested and Certified



Fiber Jumper Assemblies

Typical Specifications

Mode	Connector Type	End Finish	Insertion Loss	Return Loss
Singlemode	SC,FC,ST,LC,MU	PC	<0.2dB	>50dB
Singlemode	SC,FC,ST,LC,MU	UPC	<0.2dB	>55dB
Singlemode	SC, FC	APC	<0.2dB	>65dB
Singlemode	MTRJ		<0.5dB	>35dB
Multimode	SC, FC, ST	PC	<0.2dB	
Multimode	MTRJ		<0.5dB	

- Meets or Exceeds Applicable TIA/EIA and Telcordia Standards

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Ordering Information

Complete the form below by filling in each block with the appropriate letter or number that corresponds to the choice in each menu item. Each jumper assembly must have a combination of 15 letters/numbers.
Example: FJ5S1A1A30001MY

F	J											
Fiber	**Type**	**Singlemode/ Multimode**	**Simplex/ Duplex**	**Connector 1**	**Polish 1**	**Connector 2**	**Polish 2**	**Cable Diameter**	**Cable Length**	**Meters,Feet or Inches**	**Jacket Color**
F Fiber	**J** Jumper	**5** Singlemode 9/125 125µm **6** Singlemode 9/125 126µm **7** Multimode 50/125 127µm **8** Multimode 62.5/125 127µm	**S** Simplex  **D** Duplex 	**1** ST **2** SC **3** FC **4** MTRJ **5** LC **6** MU **7** E2000 **8** DIN **9** MPO **0** D4	**A** APC (Angle) **P** PC **U** UPC (Ultra) **M** Male (MT), for MTRJ connector only **F** Female (MT), for MTRJ connector only	**1** ST **2** SC **3** FC **4** MTRJ **5** LC **6** MU **7** E2000 **8** DIN **9** MPO **0** D4	**A** APC (Angle) **P** PC **U** UPC (Ultra) **M** Male (MT), for MTRJ connector only **F** Female (MT), for MTRJ connector only	**30** 3.0mm **31** 3.0 (652C) **20** 2.0mm **18** 1.8mm **16** 1.6mm **09** 0.9mm **10** 0.9mm/HT **06** 0.6mm	**001** 1 **002** 2 **003** 3 *through* **999**999	**M** Meters **F** Feet **I** Inches	**Y** Yellow **R** Red **G** Green **B** Blue **O** Orange **W** White


ST


SC


FC


MTRJ


LC


MU


E2000


DIN


MPO


D4

Features & Benefits

- High-Performance Fiber Cable for Use in Data Networks, Optical Patch Panels, and Digital Video and Audio Applications
- Customized by Fiber Mode, Simplex or Duplex Construction, Connector Type, Connector Polish, Cable Diameter, Cable Length and Jacket Color
- Precision Manufactured
- Flame Retardant PVC Jacket
- 100% Factory Tested and Certified
- FDDI and OFNR Rated

Fiber Pigtail Assemblies

Typical Specifications

Mode	Connector Type	End Finish	Insertion Loss	Return Loss
Singlemode	SC,FC,ST,LC,MU	PC	<0.2dB	>50dB
Singlemode	SC,FC,ST,LC,MU	UPC	<0.2dB	>55dB
Singlemode	SC, FC	APC	<0.2dB	>65dB
Singlemode	MTRJ		<0.5dB	>35dB
Multimode	SC, FC, ST	PC	<0.2dB	
Multimode	MTRJ		<0.5dB	

- Meets or Exceeds Applicable TIA/EIA and Telcordia Standards

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Ordering Information

Complete the form below by filling in each block with the appropriate letter or number that corresponds to the choice in each menu item. Each pigtail assembly must have a combination of 13 letters/numbers.
Example: FP5S1A30002MY

F	P								
Fiber	**Type**	**Singlemode/ Multimode**	**Simplex/ Duplex**	**Connector**	**Polish**	**Cable Diameter**	**Cable Length**	**Meters,Feet or Inches**	**Jacket Color**
F Fiber	**P** Pigtail	**5** Singlemode 9/125 125µm **6** Singlemode 9/125 126µm **7** Multimode 50/125 127µm **8** Multimode 62.5/125 127µm	**S** Simplex  **D** Duplex 	**1** ST **2** SC **3** FC **4** MTRJ **5** LC **6** MU **7** E2000 **8** DIN **9** MPO **0** D4	**A** APC (Angle) **P** PC **U** UPC (Ultra) **M** Male (MT), for MTRJ connector only **F** Female (MT), for MTRJ connector only	**30** 3.0mm **31** 3.0 (652C) **20** 2.0mm **18** 1.8mm **16** 1.6mm **09** 0.9mm **10** 0.9mm/HT **06** 0.6mm	**001** 1 **002** 2 **003** 3 *through* **999** 999	**M** Meters **F** Feet **I** Inches	**Y** Yellow **R** Red **G** Green **B** Blue **O** Orange **W** White

ST SC FC MTRJ LC MU E2000 DIN MPO D4

Features & Benefits

- High-Performance Fiber Cable for Use in situations where pre-connectorized inside or outside plant cables are desired for installation in 5/8 x 24 housing ports in Fiber Optic Nodes
- Customized by Fiber Count, Cable Type, Fiber Mode, Connector Type, Connector Polish, Cable Length, and Cable Furcation Length and Diameter
- Precision Manufactured
- Flame Retardant PVC Jacket
- 100% Factory Tested and Certified

Breakout Receiver Service Pigtail Cable

Typical Specifications

Mode	Connector Type	End Finish	Insertion Loss	Return Loss
Singlemode	SC,FC	PC	<0.2dB	>50dB
Singlemode	SC,FC	UPC	<0.2dB	>55dB
Singlemode	SC,FC	APC	<0.2dB	>65dB

- Meets or Exceeds Applicable TIA/EIA and Telcordia Standards

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Ordering Information

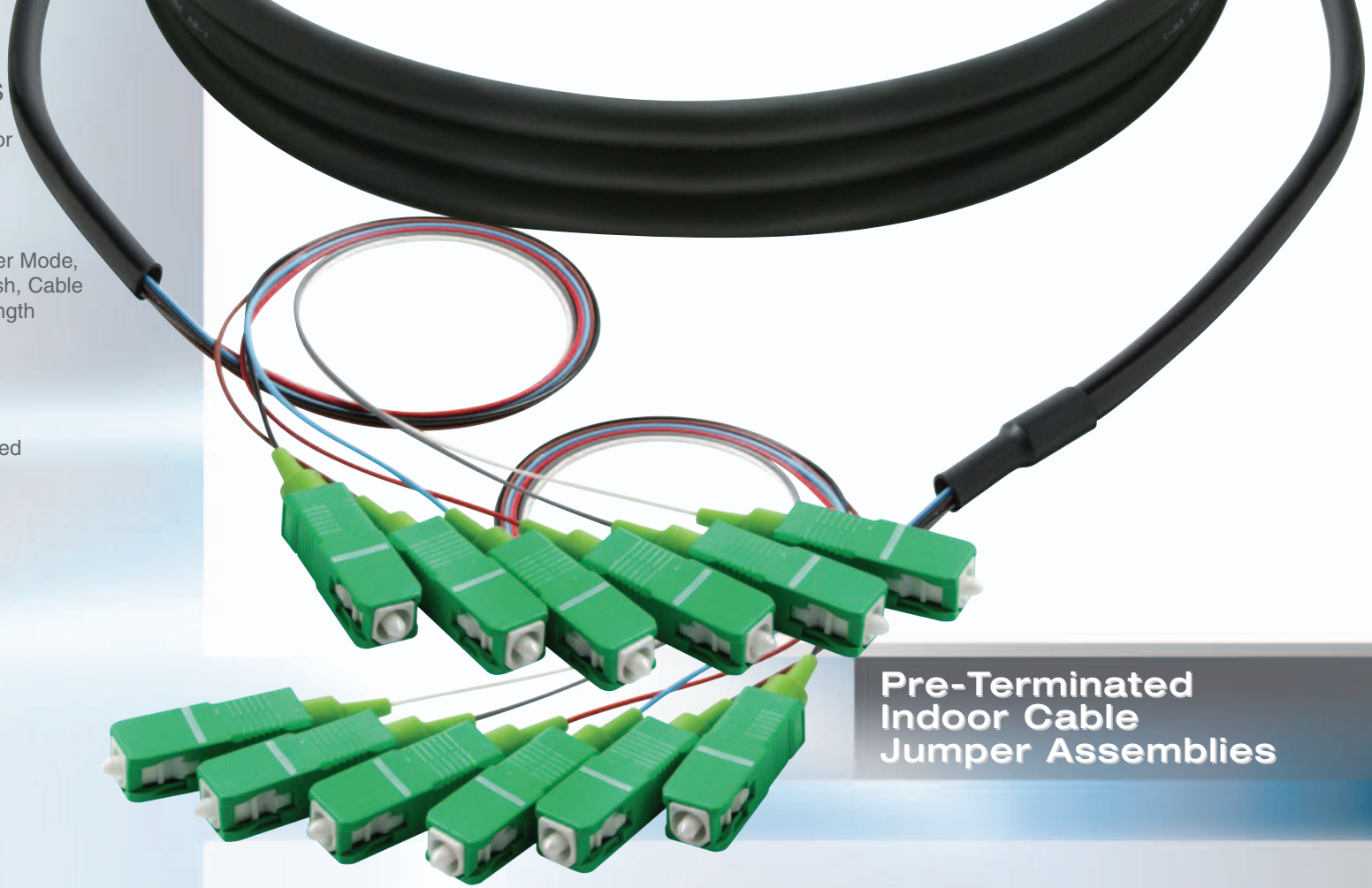
Complete the form below by filling in each block with the appropriate letter or number that corresponds to the choice in each menu item. Each Breakout Receiver Service Pigtail Cable assembly must have a combination of 15 letters/numbers.
Example: FR2CA52A0040209

F	R			5					
Fiber	**Type**	**Fiber Count**	**Cable Type**	**Singlemode Multimode**	**Connector**	**Polish**	**Cable (Total Length in Feet ONLY)**	**Cable Furcation (Breakout) Length Inches ONLY**	**Furcation Diameter**
F Fiber	**R** Breakout Receiver Service Pigtail Cable	**2C** 2-Ct OSP Cable **4C** 4-Ct OSP Cable **6C** 6-Ct OSP Cable **8C** 8-Ct OSP Cable	**A** Armored **D** Dielectric	**5** Singlemode	**2** SC **3** FC	**A** APC (Angle) **P** PC **U** UPC (Ultra)	**001** 1 Foot **002** 2 Feet **003** 3 Feet *through* **999** 999 Feet	**01** 1 Inch **02** 2 Inches **03** 3 Inches *through* **99** 99 Inches	**30** 3.0mm **20** 2.0mm **09** 900um

SC FC

Features & Benefits

- High-Performance Fiber Cable for Use in Situations Where Pre-Connectorized Inside Plant Cables Are Desired
- Customized by Fiber Count, Fiber Mode, Connector Type, Connector Polish, Cable Length, and Cable Furcation Length
- Precision Manufactured
- Flame Retardant PVC Jacket
- 100% Factory Tested and Certified



Pre-Terminated Indoor Cable Jumper Assemblies

Typical Specifications

Mode	Connector Type	End Finish	Insertion Loss	Return Loss
Singlemode	SC,FC,ST,LC,MU	PC	<0.2dB	>50dB
Singlemode	SC,FC,ST,LC,MU	UPC	<0.2dB	>55dB
Singlemode	SC, FC	APC	<0.2dB	>65dB
Singlemode	MTRJ		<0.5dB	>35dB
Multimode	SC, FC, ST	PC	<0.2dB	
Multimode	MTRJ		<0.5dB	

- Meets or Exceeds Applicable TIA/EIA and Telcordia Standards

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Ordering Information

Complete the form below by filling in each block with the appropriate letter or number that corresponds to the choice in each menu item. Each jumper assembly must have a combination of 15 letters/numbers.
Example: FBJE52A2A003F1I

F	BJ										
Fiber	**Type**	**Fiber Count**	**Singlemode Multimode**	**Connector 1**	**Polish 1**	**Connector 2**	**Polish 2**	**Cable Total Length**	**Meters, Feet, Inches**	**Cable Furcation (Breakout) Length**	**Meters, Feet, Inches**
F Fiber	**BJ** Breakout Jumper	**A** 2-Ct. OFNR Breakout Cable **B** 2-Ct. OFNP Breakout Cable **C** 4-Ct. OFNR Breakout Cable **D** 4-Ct. OFNP Breakout Cable **E** 6-Ct. OFNR Breakout Cable **F** 6-Ct. OFNP Breakout Cable **G** 8-Ct. OFNR Breakout Cable **H** 8-Ct. OFNP Breakout Cable **I** 10-Ct. OFNR Breakout Cable **J** 10-Ct. OFNP Breakout Cable **K** 12-Ct. OFNR Breakout Cable **L** 12-Ct. OFNP Breakout Cable **M** 2-Ct. Armored OSP Breakout Cable **N** 4-Ct. Armored OSP Breakout Cable **O** 6-Ct. Armored OSP Breakout Cable **P** 8-Ct. Armored OSP Breakout Cable **Q** 10-Ct. Armored OSP Breakout Cable **R** 12-Ct. Armored OSP Breakout Cable **S** 2-Ct.Tight Buffer OSP Breakout Cable **T** 4-Ct.Tight Buffer OSP Breakout Cable **U** 6-Ct.Tight Buffer OSP Breakout Cable **V** 8-Ct.Tight Buffer OSP Breakout Cable **W** 10-Ct.Tight Buffer OSP Breakout Cable **Y** 12-Ct.Tight Buffer OSP Breakout Cable	**5** Singlemode 9/125 **7** Multimode 50/125 **8** Multimode 62.5/125	**1** ST **2** SC **3** FC **4** MTRJ **5** LC **6** MU **7** E2000 **8** DIN **9** MPO **0** D4	**A** APC (Angle) **P** PC **U** UPC (Ultra) **M** Male (MT), for MTRJ connector only **F** Female (MT), for MTRJ connector only	**1** ST **2** SC **3** FC **4** MTRJ **5** LC **6** MU **7** E2000 **8** DIN **9** MPO **0** D4	**A** APC (Angle) **P** PC **U** UPC (Ultra) **M** Male (MT), for MTRJ con-nector only **F** Female (MT), for MTRJ con-nector only	**001** 1 **002** 2 **003** 3 *through* **999** 999	**M** Meters **F** Feet **I** Inches	**1** 1 **2** 2 **3** 3 **4** 4 **5** 5 **6** 6 **7** 7 **8** 8 **9** 9 **0** 10	**M** Meters **F** Feet **I** Inches

Features & Benefits

- High-Performance Fiber Cable for Use in Situations Where Pre-Connectorized Inside Plant Cables Are Desired
- Customized by Fiber Count, Fiber Mode, Connector Type, Connector Polish, Cable Length and Cable Furcation Length
- Precision Manufactured
- Flame Retardant PVC Jacket
- 100% Factory Tested and Certified

Pre-Terminated Indoor Cable Pigtail Assemblies

Typical Specifications

Mode	Connector Type	End Finish	Insertion Loss	Return Loss
Singlemode	SC,FC,ST,LC,MU	PC	<0.2dB	>50dB
Singlemode	SC,FC,ST,LC,MU	UPC	<0.2dB	>55dB
Singlemode	SC, FC	APC	<0.2dB	>65dB
Singlemode	MTRJ		<0.5dB	>35dB
Multimode	SC, FC, ST	PC	<0.2dB	
Multimode	MTRJ		<0.5dB	

- Meets or Exceeds Applicable TIA/EIA and Telcordia Standards

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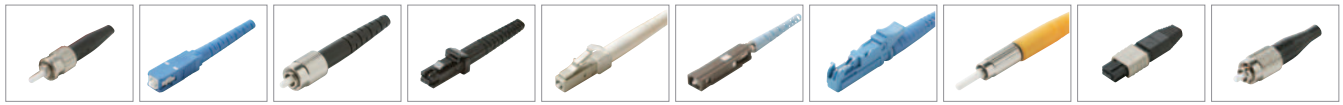
Ordering Information

Complete the form below by filling in each block with the appropriate letter or number that corresponds to the choice in each menu item. Each pigtail assembly must have a combination of 13 letters/numbers.
Example: FBPB52A002M2M

F	BP									
Fiber	**Type**	**Fiber Count**	**Singlemode Multimode**	**Connector**	**Polish**	**Cable Total Length**	**Meters, Feet, Inches**	**Cable Furcation (Breakout) Length**	**Meters, Feet, Inches**
F Fiber	**BP** Breakout Pigtail	**A** 2-Ct. OFNR Breakout Cable **B** 2-Ct. OFNP Breakout Cable **C** 4-Ct. OFNR Breakout Cable **D** 4-Ct.OFNP Breakout Cable **E** 6-Ct.OFNR Breakout Cable **F** 6-Ct.OFNP Breakout Cable **G** 8-Ct. OFNR Breakout Cable **H** 8-Ct.OFNP Breakout Cable **I** 10-Ct. OFNR Breakout Cable **J** 10-Ct. OFNP Breakout Cable **K** 12-Ct. OFNR Breakout Cable **L** 12-Ct. OFNP Breakout Cable **M** 2-Ct. Armored OSP Breakout Cable **N** 4-Ct. Armored OSP Breakout Cable **O** 6-Ct. Armored OSP Breakout Cable **P** 8-Ct. Armored OSP Breakout Cable **Q** 10-Ct. Armored OSP Breakout Cable **R** 12-Ct. Armored OSP Breakout Cable **S** 2-Ct.Tight Buffer OSP Breakout Cable **T** 4-Ct.Tight Buffer OSP Breakout Cable **U** 6-Ct.Tight Buffer OSP Breakout Cable **V** 8-Ct.Tight Buffer OSP Breakout Cable **W** 10-Ct.Tight Buffer OSP Breakout Cable **Y** 12-Ct.Tight Buffer OSP Breakout Cable	**5** Singlemode 9/125 **7** Multimode 50/125 **8** Multimode 62.5/125	**1** ST **2** SC **3** FC **4** MTRJ **5** LC **6** MU **7** E2000 **8** DIN **9** MPO **0** D4	**A** APC (Angle) **P** PC **U** UPC (Ultra) **M** Male (MT), for MTRJ connector only **F** Female (MT), for MTRJ connector only	**001** 1 **002** 2 **003** 3 *through* **999** 999	**M** Meters **F** Feet **I** Inches	**1** 1 **2** 2 **3** 3 **4** 4 **5** 5 **6** 6 **7** 7 **8** 8 **9** 9 **0** 10	**M** Meters **F** Feet **I** Inches



Features & Benefits

- Categorized by Fiber Mode, Simplex or Duplex Construction, Connector Type, Connector Polish, Cable Diameter, Assembly Type and Ferrule Type
- Precision Manufactured
- One-Piece Connectors
- Constructed with Zirconia Ferrules
- 100% Factory Tested and Certified

Connectors

Typical Specifications

- Insertion Loss:
  ST, FC, SC, MU, LC, D4, DIN, E2000 Multimode ≤0.3dB, Singlemode ≤0.2dB
  MPO Multimode ≤0.5 dB, Singlemode ≤0.75dB
  MT-RJ Multimode ≤0.5dB, Singlemode ≤0.5dB
- Return Loss:
  ST, FC, SC, MU, LC, D4, DIN, E2000 Multimode ≥25dB, Singlemode ≥50-60dB
  MPO Multimode ≥35dB, Singlemode ≥40dB
  MT-RJ Multimode ≥20dB, Singlemode ≥25dB
- Mating Durability (500 times) ≤0.2dB
- Operating Temperature -40°C to 75°C
- Storage Temperature -40°C to 85°C

- Meets or Exceeds Applicable TIA/EIA and Telcordia Standards

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Ordering Information

Complete the form below by filling in each block with the appropriate letter or number that corresponds to the choice in each menu item. Each connector must have a combination of 10 letters/numbers.

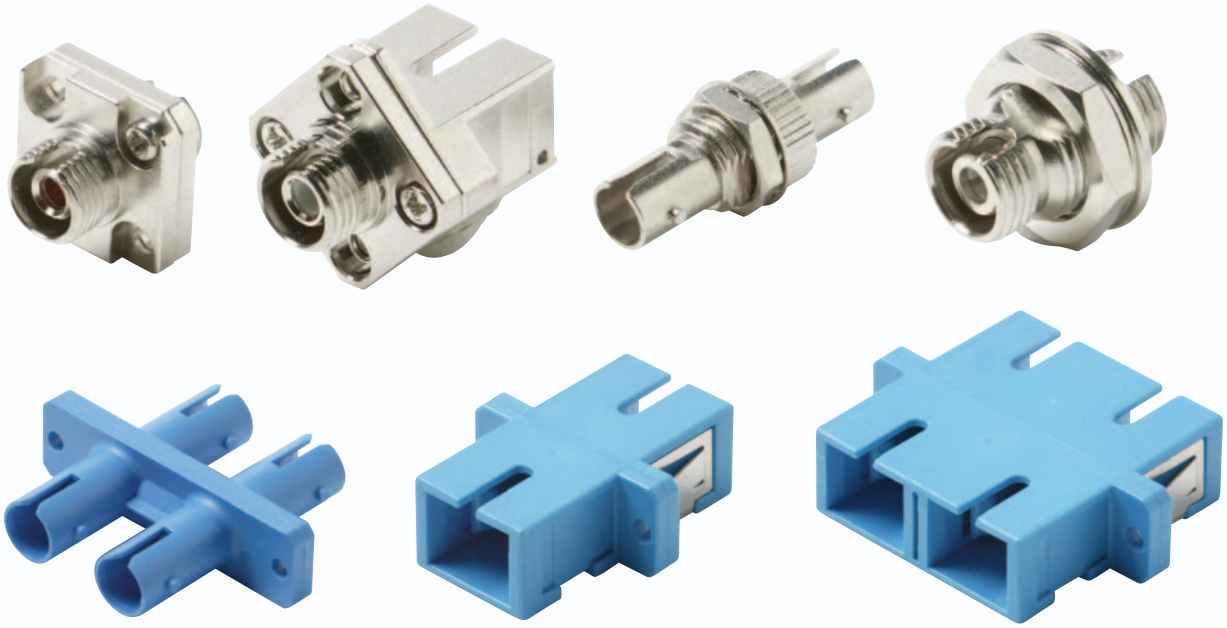
Example: FC5S2A20PC

F	C						
Fiber	**Type**	**Singlemode Multimode**	**Simplex/ Duplex**	**Connector**	**Polish**	**Cable Diameter**	**Assembly Type and Ferrule Type**
F Fiber	**C** Connector	**5** Singlemode 125µm **6** Singlemode 126µm **7** Multimode 127µm	**S** Simplex  **D** Duplex 	**1** ST **2** SC **3** FC **4** MTRJ **5** LC **6** MU **7** E2000 **8** DIN **9** MPO **0** D4	**A** APC (Angle) **P** PC **M** Male (MT), for MTRJ connector only **F** Female (MT), for MTRJ connector only	**30** 3.0mm **20** 2.0mm **18** 1.8mm **16** 1.6mm **09** 0.9mm	**BU** Bulk **OP** One piece **PC** Pre-dome single piece **AC** Conical ferrule single piece **AS** Step ferrule single piece **CP** Pre 8° conical ferrule single piece **CS** Pre 8° step ferrule single piece

ST SC FC MTRJ LC MU E2000 DIN MPO D4

Features & Benefits

- Categorized by Type of Material, Simplex or Duplex Construction, Shape, Connector Type, Connector Polish, Type of Sleeve and Color
- Precision Manufactured
- Molded Thermoplastic or Nickel-Plated Brass Bodies
- Zirconia or Phosphor Bronze Sleeves
- 100% Factory Tested and Certified



Adapters

Typical Specifications

Mode	Connector Type	End Finish	Insertion Loss	Return Loss
Singlemode	SC,FC,ST,LC,MU	PC	<0.2dB	>50dB
Singlemode	SC,FC,ST,LC,MU	UPC	<0.2dB	>55dB
Singlemode	SC, FC	APC	<0.2dB	>65dB
Singlemode	MTRJ		<0.5dB	>35dB
Multimode	SC, FC, ST	PC	<0.2dB	
Multimode	MTRJ		<0.5dB	

- Meets or Exceeds Applicable TIA/EIA and Telcordia Standards

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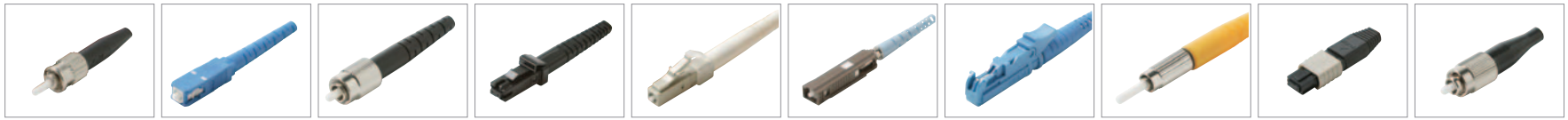
Ordering Information

Complete the form below by filling in each block with the appropriate letter or number that corresponds to the choice in each menu item. Each adapter must have a combination of 13 letters/numbers.
Example: FDMDHS0101PZ0

F	D								
Fiber	**Type**	**Material**	**Shape**	**Simplex/ Duplex**	**Connector 1**	**Connector 2**	**Polish**	**Sleeve**	**Color (Only for Plastic Adapter)**
F Fiber	**D** Adapters	**M** Metal **P** Plastic **B** Bare	**DH** "D" Hole for ST & FC Simplex for Metal **DD** "DD" Hole for ST, FC & DIN Simplex for Metal **RF** Rectangular Flange **SF** Square Flange **VD** Vertical Duplex for SC Type **QU** Quad for SC Type	**S** Simplex  **D** Duplex 	**01** ST **02** SC **03** FC **4M** MTRJ/Male **4F** MTRJ/ Female **05** LC **06** MU **07** E2000 **08** DIN **09** MPO **00** D4	**01** ST **02** SC **03** FC **4M** MTRJ/Male **4F** MTRJ/ Female **05** LC **06** MU **07** E2000 **08** DIN **09** MPO **00** D4	**P** PC[1] **A** APC (Angle)[2]	**Z** Zirconia **P** Phosphor Bronze **N** No sleeve (for MTRJ & MPO)	**N** None (for Metal Adapter) **0** Blue **1** Green (APC) **2** Beige **3** Black **4** Yellow **5** Custom



1 FC/PC FDM: Slot Width = 2.2±0.05mm. SC/PC FDM: Tabs Color Coded Blue
2 FC/APC FDM: Slot Width = 2.2±0.02mm. SC/APC FDM: Tabs Color Coded Green

Features & Benefits

- Categorized by Connector Type and Polish
- Improves Signal Performance
- Maintains Neat Appearance
- Protects Unused Ports from Damage
- Reduces Back Reflections on Unused Ports
- Precision Manufactured
- Low Back Reflection
- High Power Endurance
- Simple Manipulation
- 100% Factory Tested and Certified

Terminators

Typical Specifications

- Return Loss:
  PC > 45dB
  UPC > 55dB
  APC > 60dB
- Operating Temperature -40°C to 75°C
- Storage Temperature -40°C to 85°C

- Meets or Exceeds Applicable TIA/EIA and Telcordia Standards

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Ordering Information

Complete the form below by filling in each block with the appropriate letter or number that corresponds to the choice in each menu item. Each terminator must have a combination of 4 letters/numbers.
Example: FT1P

F	T		
Fiber	**Type**	**Connector**	**Polish**
F Fiber	**T** Terminator	**1** ST **2** SC **3** FC **4** LC **5** MU	**A** APC (Angle) **P** PC **U** UPC (Ultra)

Features & Benefits

- Categorized by Fiber Mode, Wavelength, Connector Type, Connector Polish, Attenuation
- Precision Manufactured
- Low Ripple
- Excellent Environmental Stability
- 300mW Power-Handling Capability
- Polarization Insensitive
- Attenuator Values from -1 to -25dB
- Doped Fiber Process
- 100% Factory Tested and Certified
- Excellent Insertion and Return Loss Characteristics

Attenuators

Typical Specifications

- Return Loss:
  PC > 45dB
  UPC > 55dB
  APC > 60dB
- Attenuation Tolerance:
  1 to 5 dB ± 0.5dB, 6 to10dB ± 0.75dB,
  11 to20dB ± 1dB, 20 to 25 dB ± 1.5dB
- Operating Temperature -40°C to 75°C
- Storage Temperature -40°C to 85°C

- Meets or Exceeds Applicable TIA/EIA and Telcordia Standards

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Ordering Information

Complete the form below by filling in each block with the appropriate letter or number that corresponds to the choice in each menu item. Each attenuator must have a combination of 8 letters/numbers.
Example: FA822A20

F	A					
Fiber	**Type**	**Singlemode Multimode**	**Wavelength**	**Connector**	**Polish**	**Attenuation Loss (dB)***
F Fiber	**A** Attenuator	**5** Singlemode 9/125 **8** Multimode 62.5/125	**1** 1310nm **2** 1550nm **3** 1310 & 1550nm **4** 850nm **5** 850 & 1300nm	**1** ST **2** SC **3** FC **4** LC **5** MU	**A** APC (Angle) **P** PC **U** UPC (Ultra)	**01** 1dB **02** 2dB **03** 3dB **05** 5dB **10** 10dB **15** 15dB **20** 20dB **25** 25dB

* Custom Attenuation Values Available Upon Request

Features & Benefits

- Combines Multiple Optical Frequencies onto a Single Fiber
- Manufactured with Fused Taper Technology
- Categorized by Package Type, Connector Type and Connector Polish
- 1310/1550nm Wavelength
- SMF-28 Fiber
- Super Grade
- 1 x 2 Port Configuration
- 1m Pigtail Length
- Precision Manufactured
- 100% Factory Tested and Certified

Wavelength Division Multiplexers

Typical Specifications

- Insertion Loss ≥0.4dB
- Return Loss ≥55dB
- Isolation ≥16dB
- Bandwidth (nm) ±20nm
- Operating Wavelength 1310 and 1550nm
- Thermal Stability ≤±0.1 dB
- Directivity ≥60dB
- Operating Temperature -40°C to 75°C
- Storage Temperature -40°C to 85°C

- Meets or Exceeds Applicable TIA/EIA and Telcordia Standards

STEREN®

Ordering Information

Complete the form below by filling in each block with the appropriate letter or number that corresponds to the choice in each menu item. Each WDM must have a combination of 11 letters/numbers.
Example: FW350S1BB1P

F	W	35	0	S	1		B		
Fiber	**Type**	**Wavelength**	**Fiber Type**	**Grade**	**Port**	**Package Type**	**Pigtail Length**	**Connector**	**Polish**
F Fiber	**W** Wavelength Division Multiplexer (WDM)	**35** 1310/1550nm	**0** SMF-28	**S** Super	**1** 1 x 2	**B** 250µm Bare Fiber **L** 900µm Loose Tube **3** ϕ3mm Cable	**B** 1 Meter	**N** No Connector **1** ST Connector **2** SC Connector **3** FC Connector **5** LC Connector **6** MU Connector	**0** No Polish **P** PC **U** UPC (Ultra) **A** APC (Angle)

Features & Benefits

- Combines Optical Signals from Multiple Fibers or Divide Signals to Different Fibers
- Categorized by Splitter Structure, Fiber Mode, Single or Dual Window Mode, Bandwidth, Wavelength, Grade, Port Configuration, Coupling Ratio, Package, Pigtail Length, Connector Type and Connector Polish
- Precision Manufactured
- 100% Factory Tested and Certified

Splitters

Typical Specifications

- Insertion Loss (50/50 split ratio) <3.4dB
- Uniformity (50/50 split ratio) <0.6dB
- Polarization Dependent Loss (dB) <0.1dB (single window); <0.15dB (dual window)
- Directivity >55 dB
- Central Wavelength 1310nm or 1550nm
- Operating Bandwidth ±40nm (Broadband); ± 10nm (Narrow Band)
- Operating Temperature –40°C to+75°C
- Storage Temperature –40°C to +85°C

- Meets or Exceeds Applicable TIA/EIA Standards

STEREN®

Ordering Information

Complete the form below by filling in each block with the appropriate letter or number that corresponds to the choice in each menu item. Each splitter must have a combination of 15 letters/numbers.
Example: FSX5SN13SA1BA2P

F	S												
Fiber	**Type**	**Splitter Structure**	**Singlemode Multimode**	**Coupler Mode**	**Band Type**	**Wavelength**	**Grade**	**Port**	**Coupling Ratio %**	**Package**	**Pigtail Length (Meters Only)**	**Connector**	**Polish**
F Fiber	**S** Splitter	**X** X Type **Y** Y Type **T** Tree Type **S** Star Type	**5** Singlemode 9/125 **7** Multimode 50/125 **8** Multimode 62.5/125	**S** Single Window **D** Dual Window	**N** Narrow band **B** Broad band	**13** 1310nm **15** 1550nm **35** 1310 & 1550nm **85** 850nm **83** 850 & 1300nm	**S** Super **H** High **U** Ultra	**A** 1x2 **B** 1x3 **C** 1x4 **D** 1x8 **E** 1x16 **F** 1x32 **G** 2x2 **H** 4x4 **I** 8x8 **J** 16x16	**1** 1/99 **2** 5/95 **3** 10/90 **4** 20/80 **5** 30/70 **6** 40/60 **7** 50/50 **8** 15/85 **9** 25/75 **0** 35/65 **A** 45/55 **B** 33.3/33.3/33.4 **C** 25/25/25/25 **D** 12.5/12.5/ 12.5/12.5/12.5/ 12.5/12.5/12.5 **E** 6.25/6.25/6.25/ 6.25/6.25/6.25/ 6.25/6.25/6.25/ 6.25/6.25/6.25/ 6.25/6.25/6.25/ 6.25/	**B** 250µm Bare Fiber **M** 250µm Bare Fiber for Mini Coupler **L** 900µm Loose Tube **2** ϕ2mm Cable **3** ϕ3mm Cable **G** 250µm Bare Fiber with LGX BOX	**A** 0.5 Meters **B** 1 Meter **C** 1.5 Meters **D** 2 Meters	**N** No Conn. **1** ST **2** SC **3** FC **4** LC **5** MU	**O** No Polish **P** PC **U** UPC (Ultra) **A** APC (Angle)

514-010

Precision Fiber Optic Cable Stripper

- Suitable for 0.010″ (250µm) Fiber
- Adjustable for Precise Removal of Outer Jacket and Fiber Buffer
- Precision Ground Steel Blades
- Easy-Grip Plastic Coated Handles

514-013

Fiber Optic Cable Cutter

- Wedge-Shaped Diamond Tip for Precise Scribing and Snapping of Fiber
- Steel Chromate Pen with Pocket Clip 3/8″(Dia.) x 5 3/16″(H)

514-050

Fiber Optic Cable Scissors

- Effortlessly cuts Aramid strength fibers and Kevlar in fiber optic cable
- Precision ground grooved cutting edges prevent slippage
- Large Ergonomic Plastic Handles 3 3/8″(W) x 5 7/8″(H) x 3/16″(D)

Tools

514-207

Fiber Optic Stripper-Cutter

- Precisely cuts and strips all 0.010″ (250µm) and 0.0125″ (315µm) glass fiber buffer
- Easily strips 2.8mm, 5.0mm and 8.0mm outer diameter jacket
- Pre-Set Opposing-Blade for Clean Operation Without Adjustment
- Non-slip ridged handle facilitates precise operation
- 1 3/8″(W) x 3 5/8″(H) x 3/4″(D)

514-055

Fiber Optic Ratchet Crimper for Fiber Optic Connectors

- Full Cycle Ratchet Mechanism
- Ensures a solid repeatable crimp
- Precision Machined Hex Die
- 0.042″ (1.07mm), 0.068″ (1.72mm), 0.078″ (1.98mm), 0.128″ (3.25mm), 0.151″ (3.84mm), 0.178″ (4.52mm)
- Adjustable Return Spring Tension
- 2 5/8″(W) x 8 1/2″(H) x 7/8″(D)

STEREN®

glossary

Adapter: Terminator used to align and join two fiber optic connectors.

Aramid: Type of high-strength nylon yarn, such as Kevlar®, woven into fiber cable that strengthens, protects and supports fiber bundles.

Attenuation: Loss of signal intensity due to system elements, expressed in dB at a certain wavelength and calculated between two points in a fiber optic network or as a network's total loss.

Attenuator: Component that reduces the intensity of a signal in a fiber optic network by adding a specific amount of loss.

Broadband: Signal transmission over a wide frequency range.

Buffer tubes: Tubes extruded over fibers in a cable to protect and isolate them.

Buffering: Protective material extruded onto the fiber coating that guard the individual fibers from damage and the environment.

Cable assembly: Fiber optic cable with installed connectors, used to connect to optical equipment. Assemblies can be either pigtails (one side with a connector) or jumpers (both sides with connectors).

Cladding: Glass surrounding the core of an individual fiber that keeps the light from escaping the core.

Coating: Protective acrylic layer added to the surface of a fiber during the manufacturing process.

Connector: Device installed on a fiber optic cable to connect it to optical equipment. Types of fiber connectors include SC, ST, FC, D4, MU, MTRJ, DIN and E2000.

Core: Center of an optical fiber through which light is transmitted.

Decibel: Unit of measurement, abbreviated dB, indicating the relative strength of light signals.

Demultiplex: To separate two or more combined signals from a single transmission.

Dielectric: Non-metallic material, such as glass used in fiber.

Digital: Signal format composed of two discrete, noncontinuous levels illustrated by ones and zeros.

Dispersion: Phenomenon that produces a broadening of input pulses along the length of the fiber, causing signal degradation.

Duplex: Two single-core fiber optic cables joined together. Also known as ZipCord.

Fan out: Type of fiber optic cable in which individual fibers are separated and strengthened for termination at nodes and other equipment. Also known as breakout or furcation.

Ferrule: Mechanical component, usually a rigid tube, that protects and aligns the fiber in a connector.

FDDI: Fiber Distributed Data Interface, a standard for a 100 Mbps fiber optic LAN.

Fiber: Optical waveguide consisting of a core and cladding made of glass.

Furcation: End of a fiber optic cable that is separated out for termination at nodes and other equipment. Also known as fan out or breakout.

Hybrid cable: Fiber cable containing both singlemode and multimode fiber.

Index of refraction: Characteristic of a medium, such as glass fiber, that indicates the velocity of light traveling through it relative to the velocity of light in a vacuum.

Insertion loss: Total amount of signal loss, expressed in dB, caused by a component in the network.

Jumper: Length of cable terminated on both ends. Also known as cable assembly.

MDPE: Medium density polyethylene, a plastic material used to make cable jackets.

Media converter: Equipment that modulates fiber optic signals for transmission over paired cable.

Micron: Millionth of a meter, abbreviated µm. Also known as micrometer.

Minimum bending radius: Fiber optic cable rating that indicates how tightly it can be bent or installed around corners.

Multifiber cable: Type of cable that contains more than one fiber.

Multimode: Type of fiber optic cable that allows multiple lightwave paths.

Multiplex: To combine two or more discrete signals into a single transmission.

Narrowband: Signal transmission over a small, restricted frequency range.

OFNP: Optical Fiber, Nonconductive, Plenum. Type of fiber cable that meets fire protection standards for use in environmental air spaces.

OFNR: Optical Fiber, Nonconductive, Riser. Type of strong fiber cable for use vertically between floors.

OSP: Type of armored cable used in outside plant.

PE: Polyethylene, a plastic material used in jackets for outside plant cable.

Pigtail: Length of cable permanently attached to equipment at one end and terminated with a connector at the other end.

Polish: Finishing process applied to a connector during manufacturing to produce a certain return loss.

PVC: Polyvinyl chloride, a plastic material used in cable jackets.

Reflection: Light in an optical cable that is sent back (reflected) into the fiber. Also known as return loss.

Return Loss: The ratio of the power of an optical signal in a cable to the power of the cable's reflected signals.

Scattering: Loss of signal power caused by fiber impurities or changes in the fiber's index of refraction.

Simplex: Type of fiber optic cable with a single core.

Singlemode: Type of fiber optic cable that allows only one lightwave path.

Tight-buffered cable: Type of cable in which each fiber is protected by a 900µm thermoplastic coating to improve ease of handling and connectorization.

Total internal reflection: Characteristic of glass fiber that completely reflects the light off the cladding and back into the core, without any loss of light.

Wavelength: Distance between two successive points of a signal's cycle, usually measured in nanometers (nm).

Wavelength Division Multiplexer: Equipment that allows multiple optical frequencies to combine onto a single fiber.

Window: Range of wavelengths within which a fiber operates best.

ZipCord: Two single-core fiber optic cables joined together. Also called duplex cable.

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