

Cable Assemblies

Corning Cable Systems offers the most complete line of connectors and factory-terminated cables, from single-fiber jumpers to high-fiber-count assemblies. As the industry's leading supplier of cable assemblies, Corning Cable Systems' state-of-the-art manufacturing process ensures unsurpassed connector performance with products that meet or exceed all industry standards for reflectance and insertion loss. Highly trained and qualified associates thoroughly screen the incoming fibers and ferrules, assemble and polish them in a carefully monitored and controlled process, and quality test the assemblies at the end. This assembly and polishing process ensures the same outstanding quality in every connector.

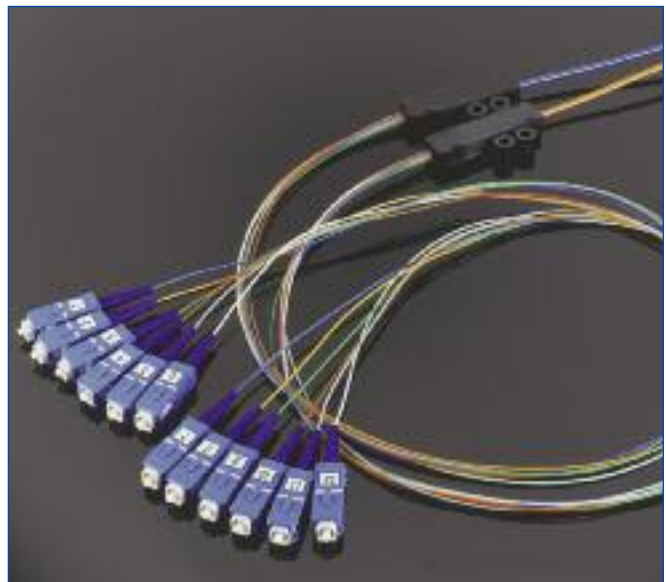
A LANscape®
Solutions Product



LC Duplex Cable Assembly, 2-Fiber | Photo LAN663






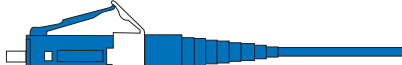

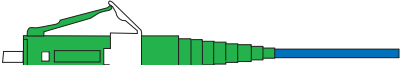










ST® Compatible Ultra PC Cable Assembly, 12-Fiber
| Photo CCA29




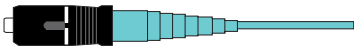
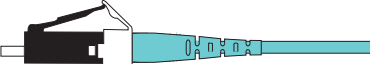




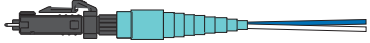
SC Ultra PC Cable Assembly | Photo CCA31

Single-Mode Connector Types

	Jacketed Fiber	900 μm Fiber
SC Ultra PC	 <i>Drawing ZA-1447</i>	 <i>Drawing ZA-1448</i>
SC Angled PC	 <i>Drawing ZA-1451</i>	 <i>Drawing ZA-1452</i>
LC Ultra PC	 <i>Drawing ZA-3135</i>	 <i>Drawing ZA-3135</i>
LC Angled PC	 <i>Drawing ZA-2958</i>	 <i>Drawing ZA-3136</i>
FC Ultra PC	 <i>Drawing ZA-1441</i>	 <i>Drawing ZA-1442</i>
FC Angled PC	 <i>Drawing ZA-1445</i>	 <i>Drawing ZA-1446</i>
ST® Compatible Ultra PC	 <i>Drawing ZA-1457</i>	 <i>Drawing ZA-1458</i>
MT-RJ	 <i>Drawing ZA-2385</i>	 <i>Drawing ZA-2385</i>

Note: Drawings are not to scale.

Multimode Connector Types

	Jacketed Fiber	900 μm Fiber
SC PC	 <i>Drawing ZA-2835</i>	 <i>Drawing ZA-2837</i>
LC PC	 <i>Drawing ZA-2836</i>	 <i>Drawing ZA-2836</i>
ST® Compatible PC	 <i>Drawing ZA-2838</i>	 <i>Drawing ZA-2832</i>
MT-RJ	 <i>Drawing ZA-2831</i>	 <i>Drawing ZA-2831</i>

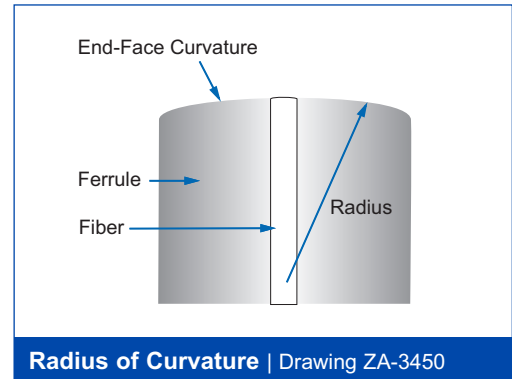
Note: Drawings are not to scale.

Connector Performance

Controlling connector end-face geometry is key to ensuring network reliability. Radius of Curvature, Apex Offset and Fiber Undercut are the three critical parameters that affect long-term connector performance. These parameters are closely monitored and controlled throughout Corning Cable Systems' automated process, thus assuring the highest quality in each and every connector assembly.

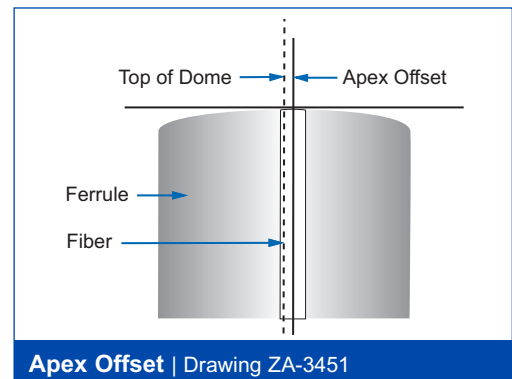
Radius of Curvature

Radius of Curvature describes the radius of the end-face surface measured from the ferrule axis. The correct Radius of Curvature is necessary to control the compressive forces on the connector end-face. Radius of Curvature values between 10 to 30 millimeters are recommended to avoid fiber damage and to ensure low reflectance and insertion loss.



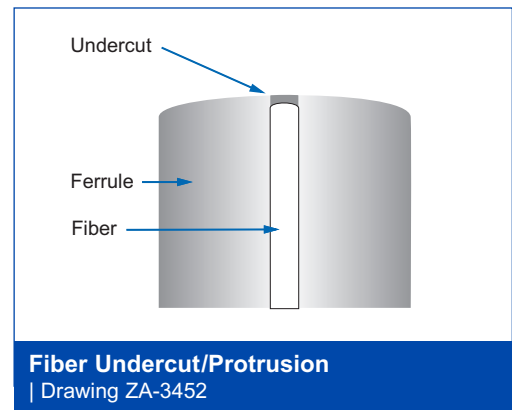
Apex Offset

Apex Offset is the displacement between the apex of the sphere that fits the ferrule end-face and the center of the fiber core. Excessive Apex Offset can lead to lack of physical contact of the fiber cores and an increase in insertion loss. A typical Apex Offset value of 50 microns is recommended. Values greater than 50 microns can reduce fiber-to-fiber contact and cause increases in reflectance over the operating temperature.



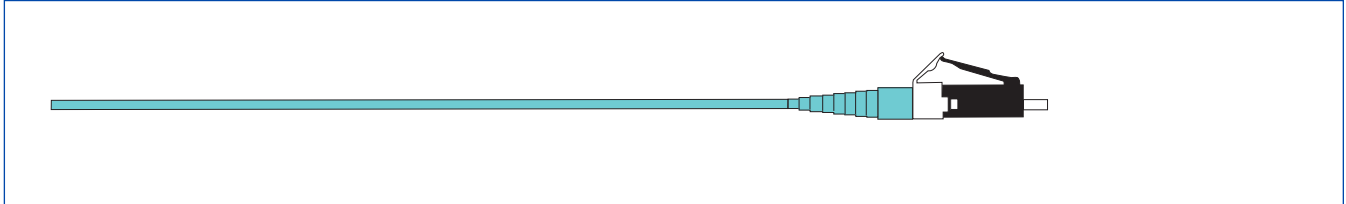
Fiber Undercut/Protrusion

Fiber Undercut is the distance of the fiber above or below the fitted spherical surface of the ferrule. Proper undercut guarantees that fiber-to-fiber contact will always be maintained over the operating temperature range. An undercut value of ± 50 nanometers is recommended to avoid air gaps between fibers. Larger undercut values can cause changes in reflectance and insertion loss. Excessive fiber protrusion can increase the compressive load at the end of the fiber causing fiber damage or failure of the fiber-ferrule epoxy bond.



Single-Fiber Cable

Example shows cable with an LC PC connector installed.

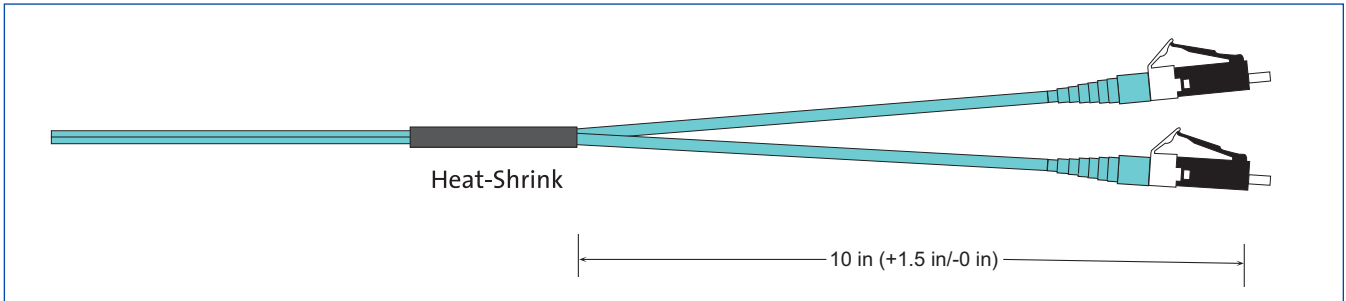


Single-Fiber Cable | Drawing ZA-3414

Note: Available in 1.6 mm, 2.0 mm or 2.9 mm outer diameters.

Zipcord Cable (2 fibers)

Example shows cable with LC PC connectors installed.

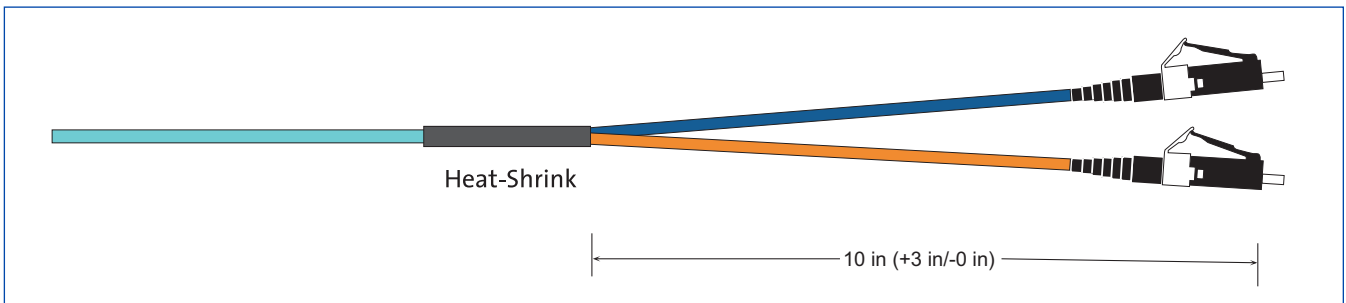


Zipcord Cable (2 fibers) | Drawing ZA-3415

Note: Available in 1.6 mm, 2.0 mm and 2.9 mm subunits.

DFX® Cable (2 fibers)

Example shows cable with SC ultra PC connectors installed.



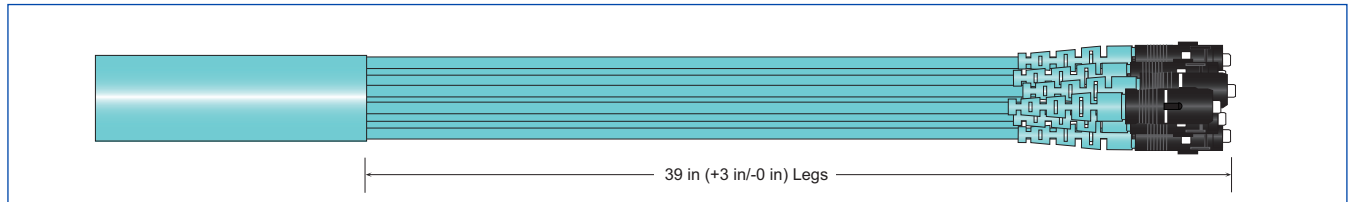
DFX Cable (2 fibers) | Drawing ZA-3416

Notes:

- 1) Available in 2.0 mm or 2.9 mm legs.
- 2) For total assembly length less than 3 ft, legs are 6 in (+3 in/-0 in).

Fan-Out Cable (2-24 fibers)

Example shows cable with SC PC connectors installed.



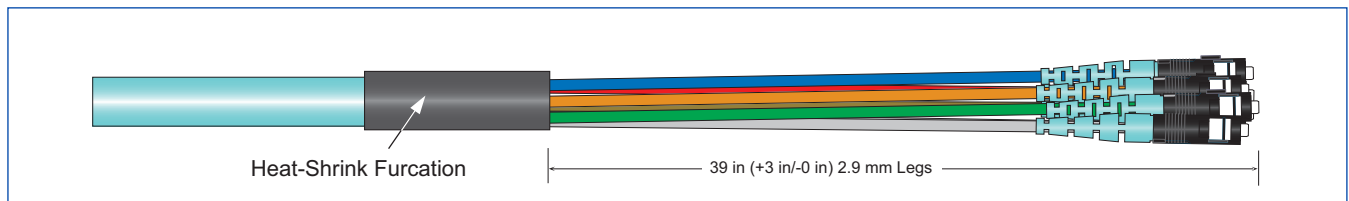
Fan-Out Cable (2-24 fibers) | Drawing ZA-3417

Note:

- 1) Maximum fiber count for fan-out cable assemblies is 24 fibers.
- 2) Available in 1.6 mm, 2.0 mm and 2.9 mm subunits.

MIC® Cable Furcation (2-12 fibers) with 2.9 mm Legs

Example shows cable with SC PC connectors installed.

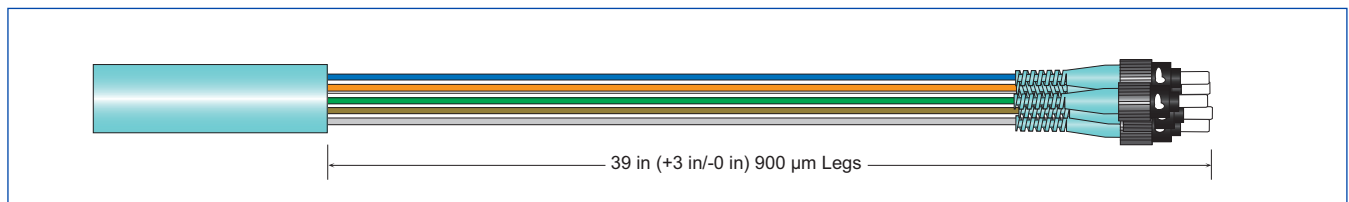


MIC Cable Furcation (2-12 fibers) | Drawing ZA-3418

Note: Available in 2.0 mm and 900 µm legs.

MIC Cable Furcation (13-24 fibers) with 900 µm Legs

Example shows cable with ST® Compatible PC Connectors installed.



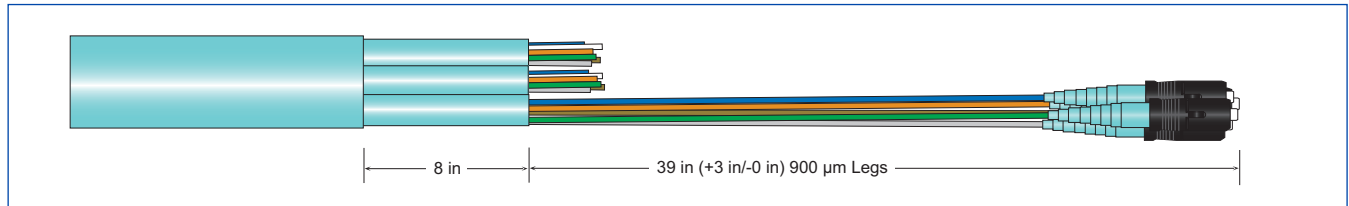
MIC Cable Furcation (13-24 fibers) | Drawing ZA-3419

Notes:

- 1) Also available in 2.0 mm and 2.9 mm legs.
- 2) Standard construction of 24-fiber assembly is a single-layer MIC Cable.
- 3) For MIC Unitized Cable construction, a serialized part number is required.

MIC® Unitized Cable Furcation (36-144 fibers)

Example shows cable with SC PC connectors installed.



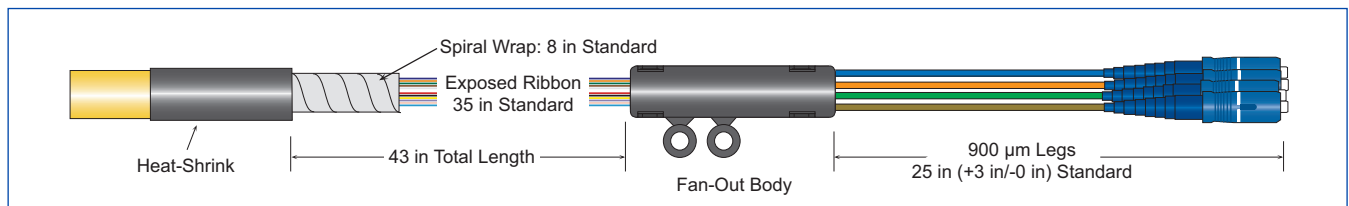
MIC Unitized Cable Furcation (36-144 fibers) | Drawing ZA-3420

Note:

- 1) Also available in 2.0 mm and 2.9 mm legs.
- 2) Standard construction is 6-fiber subunit up to 48-fiber, and 12-fiber subunit from 60 to 144 fibers.
- 3) 24-fiber assembly available in MIC Unitized Cable construction. A serialized part number is required.

Ribbon Riser and FREEDM® Ribbon Cable Configuration (12-72 fibers)

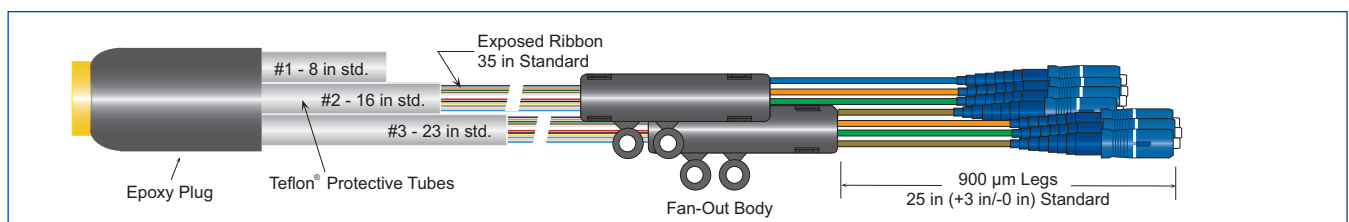
Example shows cable with SC ultra PC connectors installed.



Ribbon Riser and FREEDM Ribbon Cable Configuration | Drawing ZA-3140

Ribbon Riser and FREEDM Ribbon Cable Configuration (84-216 fibers)

Example shows 216-fiber cable with SC ultra PC connectors installed.



Ribbon Riser and FREEDM Ribbon Cable Configuration | Drawing ZA-2960

Fiber Counts for Protective Tubes:

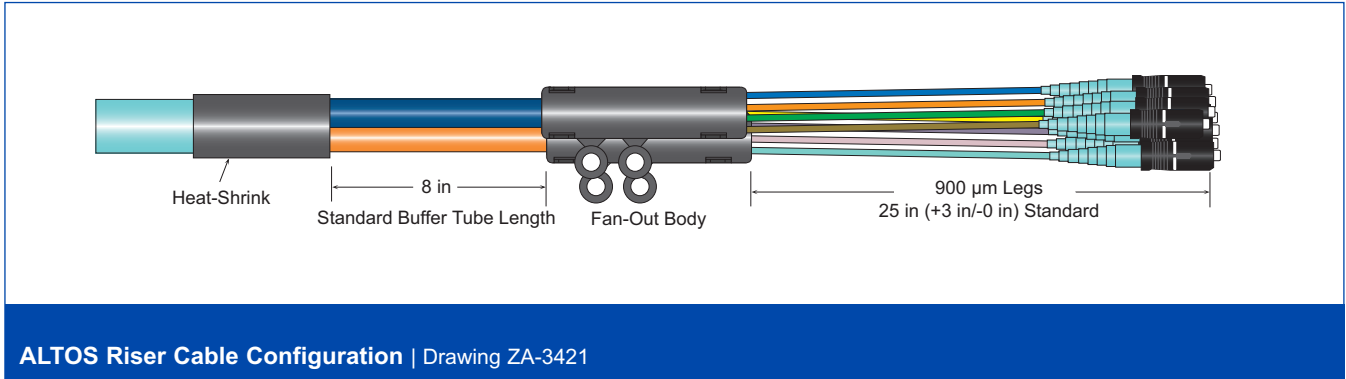
- Tube #1: 1-72 fibers
- Tube #2: 73-144 fibers
- Tube #3: 145-216 fibers

Cable Assemblies

A LANscape®
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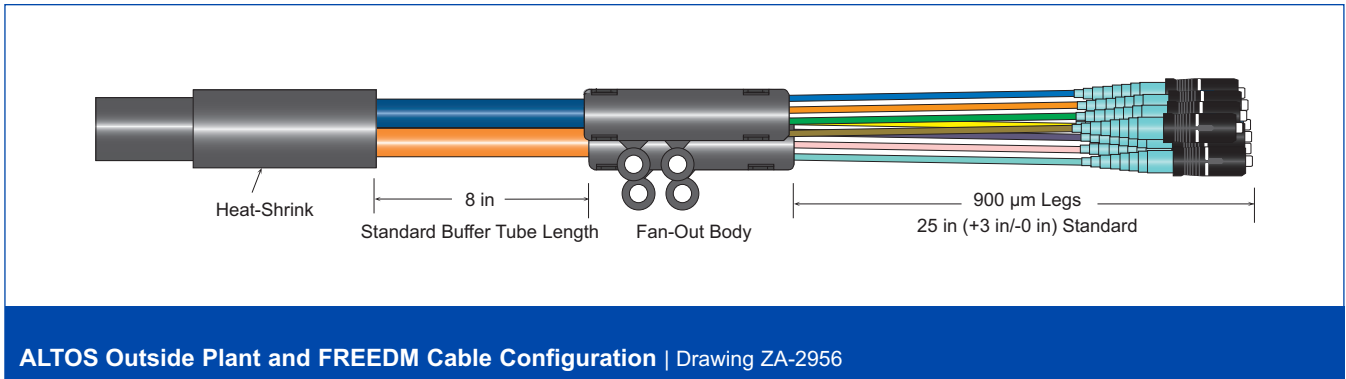
ALTOS® Riser Cable Configuration

Example shows cable with SC PC connectors installed.



ALTOS Outside Plant and FREEDM® Cable Configuration

Example shows cable with SC PC connectors installed.



specifications |

Multimode Connectors				
Type	Code	Typical Insertion Loss (dB) 50/125 μm and 62.5/125 μm	Ferrule	Housing
SC PC Simplex	39	0.35	Ceramic	Composite
SC PC Duplex	57	0.35	Ceramic	Composite
ST® Compatible PC	50	0.35	Ceramic	Composite
LC PC Simplex	03	0.35	Ceramic	Composite
LC PC Duplex	05	0.35	Ceramic	Composite
FC PC Simplex	17	0.35	Ceramic	Composite
MT-RJ (non-pinned)	97	0.3	Composite	Composite

Notes:

- 1) Low-loss cable assemblies available for use with all Plug & Play™ Systems.
- 2) Refer to LAN-664-EN for ordering information.

Single-Mode Connectors					
Type	Code	Typical Insertion Loss (dB)	Reflectance (dB) Typical	Ferrule	Housing
SC Simplex UPC	58	0.15	≤ -58	Ceramic	Composite
SC Duplex UPC	72	0.15	≤ -59	Ceramic	Composite
LC Simplex UPC	02	0.15	≤ -58	Ceramic	Composite
LC Duplex UPC	04	0.15	≤ -58	Ceramic	Composite
LC 90° Boot Clip UPC	12	0.15	≤ -58	Ceramic	Composite
FC Simplex UPC	54	0.15	≤ -59	Ceramic	Nickel, Brass
ST Compatible UPC	61	0.15	≤ -58	Ceramic	Composite
SC Simplex APC	44	0.15	≤ -75	Ceramic	Composite
LC Simplex APC	22	0.3	≤ -75	Ceramic	Composite
LC Duplex with 90° Boot Clip	23	0.15	≤ -58	Ceramic	Composite
FC Simplex APC	21	0.15	≤ -75	Ceramic	Nickel, Brass
MT-RJ (non-pinned)	98	0.3	≤ -53	Composite	Composite

ordering information |

Single-Fiber Connectors

Corning Cable Systems patch cords and high-fiber-count assemblies are ordered using five easy steps. The steps involve the selection of connector(s), cable and length. The format and steps are listed below.

<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/>
1	2	3	4	5

|1

Select connector code.

00 = No connectors (use when ordering a pigtail)

Multimode

- 39 = SC PC simplex
- 57 = SC PC duplex
- 03 = LC PC simplex*
- 05 = LC PC duplex*
- 17 = FC PC simplex
- 50 = ST® Compatible PC

Single-mode

- 58 = SC simplex UPC
- 44 = SC simplex APC
- 72 = SC duplex UPC
- 02 = LC simplex UPC*
- 22 = LC simplex APC*
- 04 = LC duplex UPC*
- 12 = LC 90° boot clip UPC*
- 54 = FC simplex UPC
- 21 = FC simplex APC
- 61 = ST Compatible UPC

See Notes 1 and 2.

|2

Select fiber count.

01-96

See Note 3.

|3

Select cable code based on construction and fiber type (see Table A).

|4

Select cable assembly length.

001 to 999

See Note 4.

|5

Select unit of measure.

M = Meters

F = Feet

Notes:

1) Connector code based on type of adapter used at the patch panel and the electronic interface. Always use the lowest code first when constructing the part number.

2) *Available on 1.6 mm, 2.0 mm and 900 μm cable types only.

3) For fiber counts greater than 96, contact a Corning Cable Systems Customer Service Representative.

4) For lengths greater than 999, contact a Corning Cable Systems Customer Service Representative.

ordering information | (continued)

Table A					
Fiber Type	62.5 μm	50 μm	LANscape® Pretium® 300 Solutions	Single-Mode	Bend-Improved Single-Mode
Cable Type					
Cable Listing: No Listing Required					
900 μm	K4141	C4131	S4180	R4131	G4131
Cable Listing: Riser – OFNR					
Single-Fiber Cable					
2.9 mm	K3141	C3131	S3180	R3131	G3131
2.0 mm	K2141	C2131	S2180	R2131	G2131
1.6 mm	K3116	C3116	S3116	R3116	G3116
Zipcord Cable (2 fiber)					
2.9 mm	K5141	C5131	S5180	R5131	G5131
2.0 mm	K5120	C5120	S5120	R5120	G5120
1.6 mm	K5116	C5116	S5116	R5116	G5116
DFX® Cable (2 fiber)					
2.9 mm legs				R9131	G9131
2.0 mm legs				R9120	G9120
Fan-Out Cable (2-24 fibers)					
2.9 mm subunits	K61HD	C61HD	S61HD	R61HD	
2.0 mm subunits	K61LD	C61LD	S61LD	R61LD	
1.6 mm subunits	K61XD	C61XD	S61XD	R61XD	
MIC® Cable (2-12 fibers)					
2.9 mm	K8130	C8131	S8180	R8131	
2.0 mm	K8120	C8120	S8120	R8120	
900 μm	K81NF	C81NF	S81NF	R81NF	
MIC Cable (> 12 fibers)					
2.0 mm legs	K8120	C8120		R8120	
900 μm legs	K8130	C8131	S8180	R8131	
MIC Unitized Cable (36-144 fibers)					
900 μm legs	K8130	C8131	S8180	R8131	
2.0 mm legs	K8120	C8120		R8120	
Ribbon Interconnect Riser (2, 4 and 12 fiber)					
Ribbon Riser	KJ140*	CJ131*	SJ180*	RJ131*	
ALTOS® Riser Cable	KC725*	CC725*	SC725*	RC725*	
	KW725*	CW725*	SW725*	RW725*	

*Defines standard as 25-in leg lengths. Other leg lengths available. Part number will change.

Note: Please contact Customer Service for Pretium 550 and Pretium 600 Solutions cable assembly part numbers.

ordering information | (continued)

Table A (continued)					
Fiber Type	62.5 µm	50 µm	LANscape® Pretium® 300 Solutions	Single-Mode	Bend-Improved Single-Mode
Cable Type					
Cable Listing: Plenum – OFNP					
Single-Fiber Cable					
2.9 mm	K3841	C3831	S3880	R3831	G3831
2.0 mm	K2841	C2831	S2880	R2831	G2831
1.6 mm	K3816	C3816	S3816	R3816	G3816
Zipcord Cable (2 fiber)					
2.9 mm	K5841	C5831	S5880	R5831	G5831
Fan-Out Cable					
2.9 mm subunits	K68HD	C68HD	S68HD	R68HD	G68HD
2.0 mm subunits	K68LD	C68LD	S68LD	R68LD	G68LD
1.6 mm subunits	K68XD	C68XD	S68XD	R68XD	G68XD
MIC® Cable (2-12 fibers)					
2.9 mm	K8830	C8831	S8880	R8831	G8831
2.0 mm	K8820	C8820	S8820	R8820	G8820
900 µm legs	K88NF	C88NF	S88NF	R88NF	G88NF
MIC Cable (> 12 fibers)					
2.0 mm legs	K8830	C8831	S8880	R8831	G8831
	K8820	C8820	S8820	R8820	G8820
MIC Unitized Cable (36 - 144 fibers)					
900 um legs	K8830	C8831	S8880	R8831	G8831
2.0 mm legs	K8820	C8820	S8820	R8820	G8820
Ribbon Interconnect (2, 4 and 12 fiber)					
Ribbon Plenum	KJ840*	CJ831*	SJ880*	RJ831*	GJ831*
	KC825*	CC825*	SC825*	RC825*	GC825*
Indoor/Outdoor					
FREEDM® Cable	KWF25*	CWF25*	SWF25*	RWF25*	
FREEDM LST™ Cable	KSF25*	CSF25*	SSF25*	RSF25*	
FREEDM Ribbon Riser Cable	KCF25*	CCF25*	SCF25*	RCF25*	
FREEDM One Riser Cable (6 and 12 fiber)					
2.9 mm, 39 in legs	K8F30	C8F31	S8F80	R8F31	
2.0 mm, 39 in legs	K8F20	C8F20	S8F20	R8F20	
900 µm, 39 in legs	K8FNF	C8FNF	S8FNF	R8FNF	
FREEDM One Plenum Cable (6 and 12 fiber)					
2.9 mm, 39 in legs	K8P30	C8P31	S8P80	R8P31	
2.0 mm, 39 in legs	K8P20	C8P20	S8P20	R8P20	
900 µm, 39 in legs	K8PNF	C8PNF	S8PNF	R8PNF	
Outdoor					
ALTOS® Cable	KW425*	CW425*	SW425*	RW425*	
Tactical Cable					
2.0 mm legs	K8U20			H8U20	

*Defines standard as 25-in leg lengths. Other leg lengths available. Part number will change.

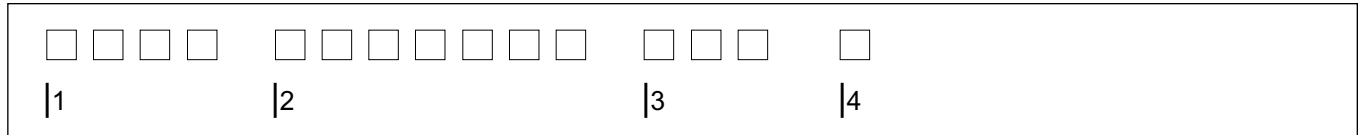
Notes:

- 1) Please contact Customer Service for Pretium 550 and Pretium 600 Solutions cable assembly part numbers.
- 2) When using the standard part number scheme, 39-in leg lengths are standard. Otherwise, a serialized part number will be required.

ordering information | (continued)

MT-RJ Jumpers

Corning Cable Systems 2-fiber patch cords are ordered using four easy steps. The steps involve the selection of connector(s), cable and length. The format and steps are listed below.



1
Select connector code.
00 = No connectors (use when ordering a pigtail)

- Multimode**
97 = MT-RJ (non-pinned)
Single-mode
98 = MT-RJ (non-pinned)

For hybrid MT-RJ jumpers, use the following options to construct the part number:

- Multimode**
39 = SC PC simplex
57 = SC PC duplex
03 = LC PC simplex*
05 = LC PC duplex*
17 = FC PC simplex
50 = ST® Compatible PC
Single-mode
58 = SC simplex UPC
72 = SC duplex UPC
02 = LC simplex UPC*
04 = LC duplex UPC*
12 = LC 90° boot clip UPC*
54 = FC simplex UPC
61 = ST Compatible UPC

See Notes 1-3.

2
Select cable code based on construction and fiber type (see Table B).

3
Select length.
001 – 999
See Note 4.

4
Select unit of measure.
M = Meters
F = Feet

Notes:
1) Connector code based on type of adapter used at the patch panel and the electronic interface. Always use the lowest code first when constructing the part number.

2) MT-RJ patch cords are typically sold without pins. For pinned versions, call Customer Service.

3) *LC available 2.0 mm legs only. If 900 µm or 1.6 mm legs are required, please contact Customer Service.

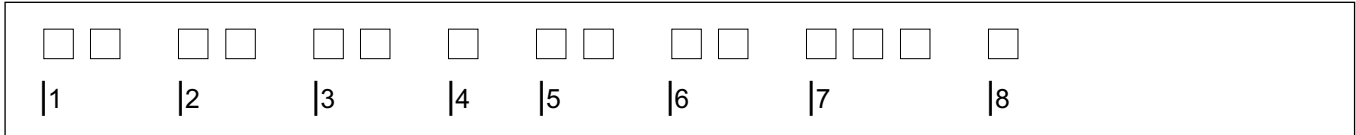
4) For lengths greater than 999, contact a Corning Cable Systems Customer Service Representative.

Table B				
Fiber Type	62.5 µm	50 µm	LANscape® Pretium® 300 Solutions	Single-Mode
Cable Type				
Cable Listing: Riser – OFNR Ribbon Interconnect	02KJ140	02CJ131	02SJ180	02RJ131
Cable Listing: Riser – OFNP Ribbon Interconnect	02KJ840	02CJ831	02SJ880	02RJ831

Notes:
1) For hybrid jumpers, standard leg length for single-fiber connector end is 10 in, 2.9 mm legs. For LC, standard leg is 2.0 mm.
2) Please contact Customer Service for Pretium 550 and Pretium 600 Solutions cable assembly part numbers.

ordering information | (continued)

MT-RJ Trunks, 2-144 Fibers



|1
Select connector type on first end.
Single-mode
87 = MT-RJ (pinned)
See Note 1.
Multimode
86 = MT-RJ (pinned)
See Notes 2 and 3.
For single-fiber connectors, use the following options to construct the part number:
Multimode
39 = SC PC simplex
57 = SC PC duplex
03 = LC PC simplex*
05 = LC PC duplex*
17 = FC PC simplex
50 = ST® Compatible PC
Single-mode
58 = SC simplex UPC
72 = SC duplex UPC
02 = LC simplex UPC*
04 = LC duplex UPC*
54 = FC simplex UPC
61 = ST Compatible UPC
See Note 4.

|2
Select connector type on second end.
Single-mode
87 = MT-RJ (pinned)
Multimode
86 = MT-RJ (pinned)
See Notes 3 and 5.

|3
Select standard fiber count.
02 = 2 fibers
06 = 6 fibers
12 = 12 fibers
24 = 24 fibers
36 = 36 fibers
48 = 48 fibers
72 = 72 fibers
96 = 96 fibers
E4 = 144 fibers

|4
Select fiber type.
R = Single-mode
K = 62.5 μm multimode
C = 50 μm multimode
S = 50 μm laser-optimized multimode
H = Bend-improved single-mode

|5
Select cable type.
81 = MIC® Riser Cable
88 = MIC Plenum Cable

|6
Select cable performance.
31 = Single-mode
30 = 62.5 μm multimode
31 = 50 μm multimode
80 = 50 μm laser-optimized multimode

|7
Select assembly length.
001 – 999
See Note 6.

|8
Select unit of measure.
M = Meters
F = Feet

Notes:
1) Select connector code based on type of adapter used at the patch panel and the electronic interface. Always use the lowest code first when constructing the part number.

2) Most multi-fiber applications are for backbone cabling and will require an MT-RJ (pinned) connector. If non-pinned connectors are required, please contact Customer Service.

3) For MT-RJ end, standard legs are 900 μm. Leg lengths are 39 in (-0 / +3 in).

4) Fiber counts 12 or less, standard legs are 2.9 mm, leg lengths 39 in (-0 / +3 in). Fiber counts greater than 12, standard legs are 900 μm, leg lengths 39 in (-0 / +3 in).

5) If non-pinned connectors are required, please contact Customer Service.

6) For lengths greater than 999, contact a Corning Cable Systems Customer Service Representative.

7) LCs are only available on 900 mm, 1.6 mm and 2.0 mm.

8) Contact Customer Service for Pretium 550 and Pretium 600 Solutions cable assembly part numbers.

ordering information | (continued)

Part Number Examples

Jumper with Single-Fiber Connectors

50 µm laser-optimized multimode jumper with LC PC simplex and SC PC simplex connectors on 2.0 mm riser single-fiber cable, 10 ft

03	39	01	S2180	010	F
1	2	3	4	5	

- 1 = 03 = LC PC simplex - 1st end; 39 = SC PC simplex - 2nd end
- 2 = 01 = 1-fiber cable
- 3 = S2180 = 50 µm laser-optimized multimode, 2.0 mm riser rate
- 4 = 010 = Assembly length of 10
- 5 = F = Unit of measure in feet

Jumper with MT-RJ Connectors

50 µm laser-optimized multimode jumper with SC PC duplex and MT-RJ (non-pinned) connectors on 2-fiber ribbon interconnect riser cable, 25 m

57	97	02SJ180	025	M
1	2	3	4	

- 1 = 57 = SC PC duplex - 1st end; 97 = MT-RJ (non-pinned) - 2nd end
- 2 = 02S2180 = 50 µm laser-optimized multimode, ribbon interconnect riser cable
- 3 = 025 = Assembly length of 25
- 4 = M = Unit of measure in meters

