A Furukawa Company

LC Connector Family
Simplifying Adds, Moves, and Changes with a High Density Solution

LC Connector Family

Features

- Half the size of the standard connectors
- RJ45 push-pull style housing
- Polarized
- Pull-proof
- PC finish
- Anti-snag latch
- Minimal polish

Benefits

- Doubles fiber density in shelves and outlets – lowering system costs
- Allows easy disengagement in dense spaces
- Assures high repeatability, maintains transmit/receive direction
- Maintains optical contact under loads, and helps prevent accidental disconnects
- Helps minimize transmission problems. Optimizes optical contact
- Improves durability and reduces cross-connect rearrangement effort
- Reduces installation time for field mountable connectors

Applications

- Telecommunications Networks
- Local Area Networks
- Data Processing Networks
- Device Terminations
- Premises Distribution
- Cable Television
- Fiber-to-the-Home
- Fiber-to-the-Desktop

Product Description

OFS listened to our customers, and responded by delivering the next generation fiber optic LC Connector Solution for private and public networks. The LC Connector Solution was developed in response to customer needs for smaller and easier-to-use fiber optic connectivity. OFS Labs created a solution that reduces the space required on panels, outlets, and in closets by 50% throughout the network.

It simplifies moves, adds, and changes and saves you money. The LC Connector uses an improved version of the familiar, user-friendly telephone plug, which provides a reassuring, audible click when engaged. The unique combination of small size and the click of connectivity makes the LC Connector the right choice for your network.

Designed to work together, the LC Solution is a complete family of products designed to offer the optimal, high-density solution for private and public networks. The LC Solution is Telcordia, ANSI/EIA/TIA and IEC compliant.

The LC fiber optic family consists of:
- Field Mountable Connectors
- Simplex Patchcords
- Duplex Patchcords
- Hybrid Patchcords
- Pigtails
- Duplex Adapters
- Simplex Adapters
- LIU and LGX® Panels
- Collar with adapters for MULTIMAX Panel and Outlets
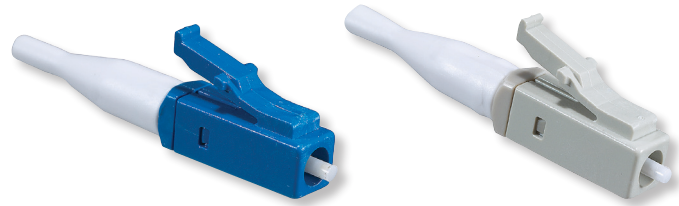- Tool and Consumable Kits

www.ofsoptics.com

LC Connector

The LC Connector, developed by OFS Laboratories, represents the next generation small form factor (SFF) connector. The LC Connector Solution reduces the space required on panels, outlets and in closets by approximately 50% throughout the network. It simplifies moves, adds and changes and helps save you money. The LC Connector uses an improved version of the familiar, user-friendly RJ-style telephone plug that provides a reassuring, audible click when engaged. The new, one-piece design enhances the connector's durability and meets side-load requirements of standard 2.5 mm connectors. The connector can only be installed into the adapter in one orientation thus maintaining proper polarization and alignment. The straight-in motion significantly reduces debris and enhances optical performance. The unique combination of small size and the click of connectivity make our LC Connector the right choice for today's high performance networks.

Two versions are available. The jumper connector is designed for 1.6 to 2.0 mm cordage. A trigger as well as the standard latch make the jumper connector easy to engage and disengage. The behind-the-wall (BTW) version is designed to mount on 0.9 mm buffered fiber. The BTW version uses finger catch and extended latch to make the LC easy to engage and disengage.
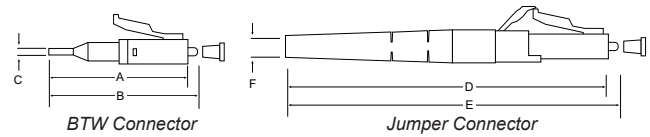
The LC Connector is easily field mountable and all of the tools necessary are contained in the 1032B kit combined with the D182959 upgrade kit. The upgrade kit contains a microscope adapter, polishing tool and connector holders. Consumable kits containing enough material to mount approximately 200 connectors (not included) are available for both the multimode and single-mode connectors. Order a D182983 consumable epoxy kit for multimode connectors, or the D182977 consumable epoxy kit when using single-mode connectors.

Singe-Mode and Multimode LC BTW Connectors

BTW Connector *Jumper Connector*

Ref.	Dimensions mm	
	Minimum	*Maximum*
A	—	30
B	—	32
C	0.7	1.4
D	—	49
E	—	51
F	1.8	3.4

LC Field Mountable Connector Specifications (max, std. dev.)

Specification	Value
Ferrule Diameter	125.5 µm
Cable OD	.9 mm BTW
Insertion Loss m,s[1]	0.25 dB, 0.05 dB
Return Loss	55 dB
Mating Durability (Insertion Loss Change after 500 Reconnects	< 0.2 dB
Temperature Stability	-40 °F to +167 °F (-40 °C to +75 °C)
Insertion Loss Change	< 0.3 dB
Tip Material	Zirconia

[1] Complete connection concatenated statistics, 8.3/125 fiber, 62.5/125 fiber, dry connection.

Ordering Information

Description	Product Code	Comcode
LC Connectors		
SM Simplex Jumper - Individual	P1100A-Z-126.0	109 154 559
SM Simplex Jumper - 100 Pack	P1100A-Z-125.0-100	109 167 502
SM Simplex Jumper - 100 Pack	P1100A-Z-125.5-100	109 167 510
SM Simplex Jumper - 1000 Pack	P1100A-126.0-1000	109 047 753
SM Simplex Jumper - 100 Pack	P1100A-Z-126.0-100	109 167 528
SM Duplex Jumper	P1102A-Z-126.0	108 137 605
SM Duplex Jumper - 100 Pack	P1102A-Z-126.0-100	108 241 969
SM BTW	P1101A-Z-126.0	107 764 300
SM BTW	P1101A-Z-126.0-100	107 764 420
SM BTW - 100 Pack	P1101A-Z-125.0-100	109 095 364
SM BTW - 100 Pack	P1101A-Z-125.5-100	109 095 356
MM Simplex	P1000A-Z-127.0	108 064 445
MM Duplex	P1002A-Z-127.0	108 138 678
MM Duplex	P1002A-Z-127.0-100	108 241 977
MM BTW	P1001A-Z-127.0	107 764 292
MM BTW	P1001A-Z-127.0-100	108 247 412
MM BTW	P1001A-Z-127.0-100	108 247 412

LC Adapter

The LC adapters from OFS feature a self-adjusting mechanism designed to accommodate panels of thickness between 1.55 to 1.75 mm (0.50 to 0.067 inches). The LC duplex adapter occupies approximately the same space as an SC simplex adapter, doubling the density capacity of the equipment. Our LC Adapter is designed to work together with the complete LC product family to offer an optimal, high-density solution for your network.
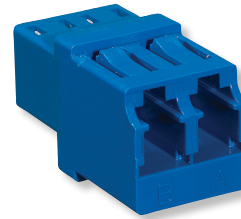
The adapter has a square profile and can be rotated to any of four positions in the panel. It is available in single-mode, multimode, simplex and duplex options. LC adapters can mount in panels designed to fit the 5-inch, 7-inch, and 9-inch LGX shelves. Three versions are available.

One option is a low profile LC single-mode duplex adapter that fits the opening of an SC simplex adapter. It fits panels of thickness between 1.55 to 1.75 mm (0.50 to 0.067 inches).
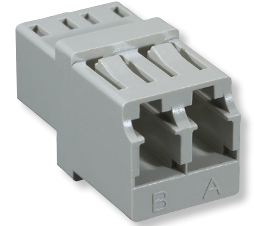
The duplex angled mount LC adapter latches into a rectangular panel opening 17.83 mm high (max 17.98 mm) by 17.23 mm wide (max 13.39 mm) wide.

Single-Mode LC Duplex Adapter

Multimode LC Duplex Adapter

Low Profile Duplex LC Adapter

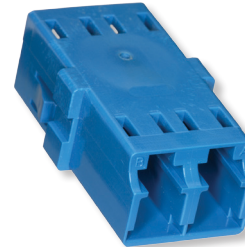**Our LC Adapter products include:**
• Single-mode, simplex and duplex
• Multimode, simplex and duplex
• LC adapter in SC footpring

.475 (12.06) — .575 (14.60)
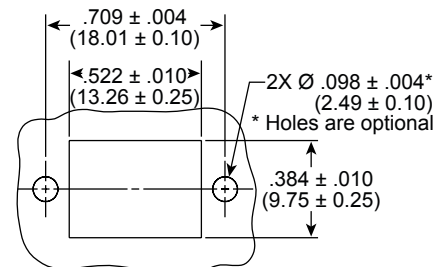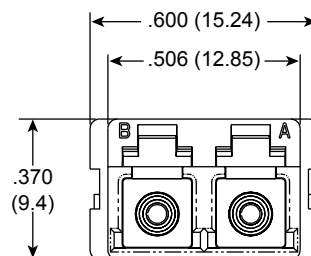.146 (3.71)
.073 (1.85)

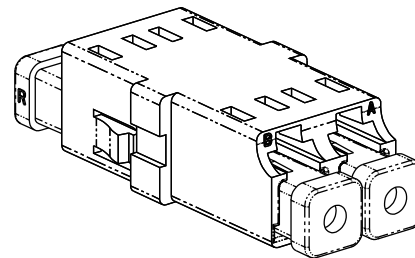Panel Latch

Optical Plane

1.050 (26.67)

.600 (15.24)
.506 (12.85)

.370 (9.4)

.709 ± .004 (18.01 ± 0.10)
.522 ± .010 (13.26 ± 0.25)
2X Ø .098 ± .004* (2.49 ± 0.10) * Holes are optional
.384 ± .010 (9.75 ± 0.25)
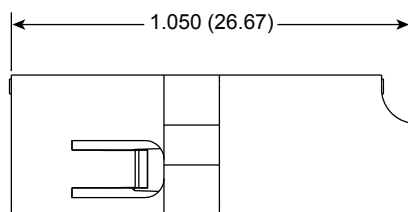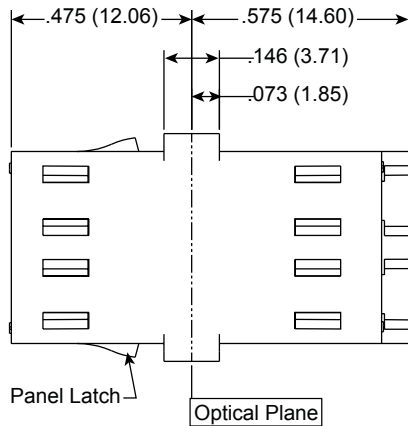
LC Adapter Ordering Information

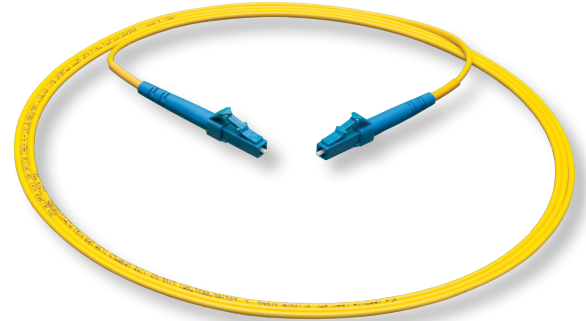| Description	Product Code	Comcode
MM LC simplex adapter	C1001B-1	107 764 243
MM LC duplex adapter	C1001B-2	108 072 497
MM LC duplex adapter (1000 pack)	C1001B-2-1000	109 161 323
LaserWave® MM LC duplex adapter	C1001B-2-LS	108 911 710
SM LC simplex adapter	C1101A-1	107 764 268
SM LC duplex adapter	C1101A-2	108 072 489
SM LC duplex adapter , 100 pack	C1101A-2-100	300 541 232
SM LCAPC simplex adapter	C1201B-1	108 388 901
SM LCAPC simplex adapter (1000 pack)	C1201B-1-1000	300 471 265
SM LCAPC duplex adapter	C1201B-2	108 388 919
SM LCAPC duplex adapter (100 pack)	C1201B-2-100	300 528 684
SM LCAPC duplex adapter (1000 pack)	C1201B-2-1000	300 471 273
MM LC in SC footprint duplex adapter	C1004B-2	108 950 312
MM LC in SC footprint duplex adapter (100 pack)	C1004B-2-100	108 950 411
LaserWave MM LC in SC footprint duplex adapter	C1004B-2-LS	300 478 138
SM LC in SC footprint duplex adapter	C1104A-2	300 515 210
SM LC in SC footprint duplex adapter (100 pack)	C1104A-2-100	300 444 197
SM LC in SC footprint duplex adapter (1000 pack)	C1104A-2-1000	300 444 205
SM LCAPC in SC footprint duplex adapter	C1204A-2	108 950 379
SM LCAPC in SC footprint duplex adapter (100 pack)	C1204A-2-100	108 950 460
SM LC Duplex (in SC footprint) Shielded Adapter	C1104A-2-S	109 188 649
SM LC Duplex (in SC footprint) Shielded Adapter (100 pack)	C1104A-2-S-100	109 188 664
SM LC Duplex (in SC footprint) Shielded, Shuttered Adapter	C1104A-2-SS	109 188 631
SM LC Duplex (in SC footprint) Shielded, Shuttered Adapter (100 pack)	C1104A-2-SS-100	109 188 656
SM LCAPC Duplex (in SC footprint) Shielded, Shuttered Adapter	C1204A-2-SS	300 388 402
SM LCAPC Duplex (in SC footprint) Shielded, Shuttered Adapter (100 pack)	C1204A-2-SS-100	300 388 410
SM LC Simplex Shielded Adapter	C1101A-1-S	300 387 966
SM LC Simplex Shielded Adapter (100 pack)	C1101A-1-S-100	300 387 974
SM LC Duplex Shielded Adapter	C1101A-2-S	300 387 982
SM LC Duplex Shielded Adapter (100 pack)	C1101A-2-S-100	300 387 990

LC Adapter

OFS offers extensive line of LC fiber optic jumpers. Included in the offering are both simplex and duplex jumpers as well as hybrids and pigtails.

The LC Connector used on the LC Patchcords has a trigger mechanism that allows the connector to be easily engaged and disengaged. This trigger also prevents the plug from snagging when jumper cables are being routed. On multimode duplex jumpers, the trigger also allows the two plugs to be simultaneously disengaged.

The LC Jumpers are available in 1.6 mm diameter cordage. 1.6 mm cordage, the smallest in the industry, allows greater jumper density in a fully loaded frame and prevents congestion in overhead racks. A duplex jumper made from a figure-eight MiniCord® Cordage does not require a bulky bifurcation joint thereby saving space in the frame. The duplex MiniCord jumper can be peeled apart with ease so that two cords can be installed as one, then easily separated into two, saving time and effort. Single-mode cordage uses OFS depressed clad fiber providing excellent bend loss performance. The bend radius permits you to install jumpers in spaces with limited maneuverability or around sharp corners.

Jumpers are tested and must meet a maximum insertion loss of 0.25 dB. Jumpers come in fixed lengths or can be ordered in custom lengths.

LC AllWave® FLEX Simplex Jumper
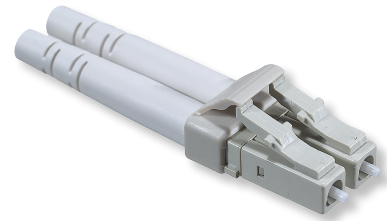
Duplex LC Multimode Connector

Simplex LC Single-Mode Connector

Simplex LC Angled-Polished Connectors

Ordering Information - Connectors and Adapters

Description	Product Code	Comcode
Insertion Loss (max., std. dev.)	0.25 dB, 0.05 dB	0.10, 0.10 dB
Return Loss Minimum	55 dB	20 dB
Cable OD	1.6 mm	1.6 mm
Cable Retention[2] (cordage)	20 lbs./88.9N	20 lbs./88.9N
Mating Durability for 500 Reconnects Insertion Loss Change	< 0.2 dB	<0.2 dB
Temperature Stability (–40 °C to +75 °C) Insertion Loss Change	< 0.3 dB	< 0.3 dB
Tip Material	Ceramic	Ceramic

[1] Complete connection concatenated statistics 8.3/125 fiber, 62.5/125 fiber, dry connection.

Length per Code

6" Min to 12" Max
154.2mm to 226.6mm

2.0"
50.77mm
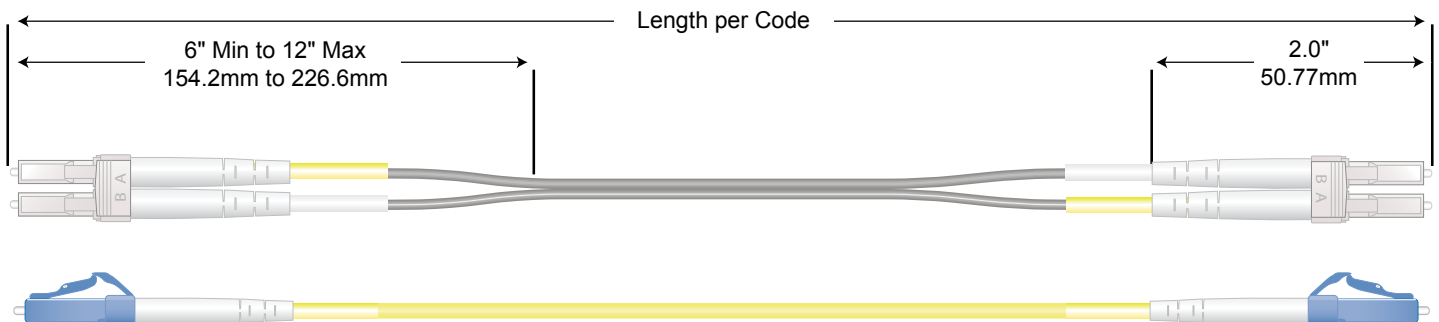
LC Jumper Assemblies SMART Coding

Examples: **JP3WY001LCUSCU003M** – Jumper Plenum 3.0 mm AllWave® *FLEX* Fiber Yellow 1 fiber (Simplex) LCU SCU 003 Meters long
JR2WY002LCUSCU003M – Jumper Riser 2.0 mm AllWave *FLEX* Fiber Yellow 2 fibers (Zip) LCU SCU 003 Meters long
JR9WY001LCUUNC003M – Jumper Riser 900 µm AllWave *FLEX* Fiber Yellow 1 fiber LCU UNC (Pigtail) 003 Meters long

SMART Code syntax below has spaces between field sets for visibility. Actual SMART Code should not include any spacing.

XXX X X XXX XXX XXX XXX X

Unit Of Measure

M = Meters (Min. 1 m)
C = Centimeters (Min. 15 cm simplex/45 cm duplex)
F = Feet (Min. 1 ft)
I = Inches (Min. 6 in. simplex/18 in. duplex)

Length
001 - 999

Cable Design

JH1 = LSZH 1.6 mm
JH2 = LSZH 2.0 mm
JH3 = LSZH 3.0 mm
JH4 = LSZH 4.8 mm (Simplex Only)
JH5 = LSZH 4.8 mm I/O (Simplex Only)
JN6 = Nylon 600 µm (Simplex Only)
JN9 = Nylon 900 µm (Simplex Only)
JP3 = Plenum 3.0 mm
JP4 = Plenum 4.8 mm (Simplex Only)
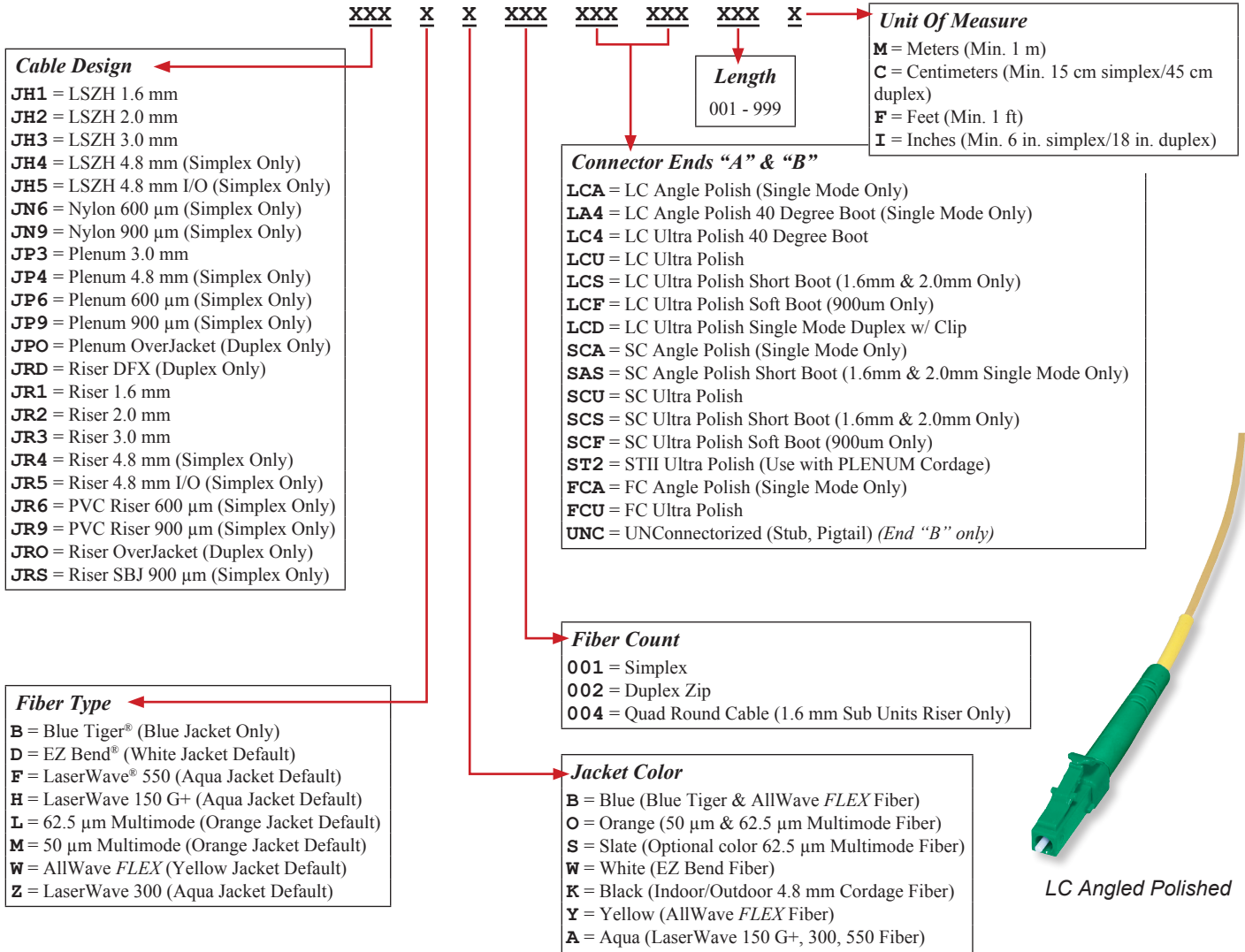**JP6** = Plenum 600 µm (Simplex Only)
JP9 = Plenum 900 µm (Simplex Only)
JPO = Plenum OverJacket (Duplex Only)
JRD = Riser DFX (Duplex Only)
JR1 = Riser 1.6 mm
JR2 = Riser 2.0 mm
JR3 = Riser 3.0 mm
JR4 = Riser 4.8 mm (Simplex Only)
JR5 = Riser 4.8 mm I/O (Simplex Only)
JR6 = PVC Riser 600 µm (Simplex Only)
JR9 = PVC Riser 900 µm (Simplex Only)
JRO = Riser OverJacket (Duplex Only)
JRS = Riser SBJ 900 µm (Simplex Only)

Connector Ends "A" & "B"

LCA = LC Angle Polish (Single Mode Only)
LA4 = LC Angle Polish 40 Degree Boot (Single Mode Only)
LC4 = LC Ultra Polish 40 Degree Boot
LCU = LC Ultra Polish
LCS = LC Ultra Polish Short Boot (1.6mm & 2.0mm Only)
LCF = LC Ultra Polish Soft Boot (900um Only)
LCD = LC Ultra Polish Single Mode Duplex w/ Clip
SCA = SC Angle Polish (Single Mode Only)
SAS = SC Angle Polish Short Boot (1.6mm & 2.0mm Single Mode Only)
SCU = SC Ultra Polish
SCS = SC Ultra Polish Short Boot (1.6mm & 2.0mm Only)
SCF = SC Ultra Polish Soft Boot (900um Only)
ST2 = STII Ultra Polish (Use with PLENUM Cordage)
FCA = FC Angle Polish (Single Mode Only)
FCU = FC Ultra Polish
UNC = UNConnectorized (Stub, Pigtail) *(End "B" only)*

Fiber Count

001 = Simplex
002 = Duplex Zip
004 = Quad Round Cable (1.6 mm Sub Units Riser Only)

Fiber Type

B = Blue Tiger® (Blue Jacket Only)
D = EZ Bend® (White Jacket Default)
F = LaserWave® 550 (Aqua Jacket Default)
H = LaserWave 150 G+ (Aqua Jacket Default)
L = 62.5 µm Multimode (Orange Jacket Default)
M = 50 µm Multimode (Orange Jacket Default)
W = AllWave *FLEX* (Yellow Jacket Default)
Z = LaserWave 300 (Aqua Jacket Default)

Jacket Color

B = Blue (Blue Tiger & AllWave *FLEX* Fiber)
O = Orange (50 µm & 62.5 µm Multimode Fiber)
S = Slate (Optional color 62.5 µm Multimode Fiber)
W = White (EZ Bend Fiber)
K = Black (Indoor/Outdoor 4.8 mm Cordage Fiber)
Y = Yellow (AllWave *FLEX* Fiber)
A = Aqua (LaserWave 150 G+, 300, 550 Fiber)

LC Angled Polished

For additional information please contact your sales representative.
You can also visit our website at www.ofsoptics.com or call 1-888-fiberhelp (1-888-342-3743) USA or 1-770-798-5555 outside the USA.

RoHS Compliant
EU Directive 2002/95/EC