

# **VPC and LPC Fiber Patch Cords**

### APPLICATION

Fiber Optic Patch Cords are designed to interconnect, or cross-connect fiber networks within structured cabling systems for Data Centers, Broadband CATV, Passive Optical Networks (PON), WDM or DWDM multiplexing, FTTH, and voice services in ATM and SONET metropolitan and access networks. Common connector patch cord configurations in 1, 2, 3, 5, and 10-meter lengths are stocked for quick service, while hybrid connector combinations, custom lengths, ultra-low loss, and custom color patch cords are made to order. Contact customer service for details.



#### **SPECIFICATION**

Patch cords shall be compliant with ANSI/TIA-568.3-D. Standard insertion loss shall be a maximum of 0.25 dB for multimode and single-mode. Low loss shall be a maximum of 0.15 dB for multimode and single-mode with Ultra-Low loss a maximum of 0.10 dB for multimode LC and SC connectors. Multimode return loss shall be greater than 26 dB and greater than 50 dB for single UPC mode connectors. Single-mode angled physical contact connectors (APC) shall have a minimum of 60 dB return loss. Patch cords shall have a pull force of at least 50 N per IEC 61300-2-4. Connector durability of greater than 500 matings for both multimode and singlemode. Patch cord shall be LSHF (Low Smoke Halogen Free), HFFR-LS (Halogen-Free Flame-Retardant Low-Smoke) rated. Patch cords shall be individually packaged with part numbers. descriptions, optical performance, code 39 barcode part number printed on each package, and QR code to access supporting documentation. Patch cords shall include wrap labels including length, end designation, and serial number, providing traceability to factory collected test data.

### FEATURES

- Available in simplex, duplex, and pigtail configurations
- LC, LC Uniboot, LC/APC, SC, SC/APC, ST, FC, and FC/APC connector options
- Stock and Make-to-Order
- TIA compliant color-coded connectors and boots
- · Cable jacket and boots color-coded for easy ID of fiber
- · Fiber options: OS2, OM1, OM3, and OM4
- 100% tested for insertion loss and single-mode for return loss
- Uniboot option includes reversible polarity feature, allowing polarity changes in the field without tools
- Uniboot design is ideal for high-density applications and comes standard with 2.0 mm round cables
- Patch cords include a Limited Lifetime Warranty when used with other Leviton cabling and installed by a Leviton certified contractor
- Other jacket colors available as custom with MOQ and lead time applicable
- Custom configurations via <u>Levitonemea.com/mto</u>

#### **DESIGN CONSIDERATIONS**

- LSHF (Low smoke Halogen Free), HFFR-LS (Halogen-free flame-retardant low-smoke) rated
- All connectors have precision pre-radiused or pre-angled zirconia ferrules supporting consistent End Face Geometry (EFG)
- · Single-mode available in UPC and APC polish
- FC and ST connectors have metal bodies
- Duplex clips included with LC and SC duplex configurations
- · Bend-insensitive glass (OS2, OM3, and OM4)

#### **STANDARDS & REGULATIONS**

- ANSI/TIA-568.3-D
- ISO/IEC 11801-1
- ANSI/TIA-598-D
- · Fiber Optic Connector Intermatability Standards (FOCIS)
- TIA-604-10B (LC)
- TIA-604-3B (SC)
- TIA-604-2B (ST)
- TIA-604-4B (FC)
- End face geometry:
  - IEC 61755-3-1 (UPC/PC)
- IEC 61755-3-2 (APC)
- Fiber compliance:
  - OS2: IEC 60793-2-50, ITU-T G.657.A1
  - OM1: IEC 60793-2-10
  - OM3: IEC 60793-2-10, ITU-T G.651.1
  - OM4: IEC 60793-2-10, ITU-T G.651.1
- Jacket flame rating:
- LSZH / HFFR-LS
- IEC 60332-3-24, IEC 60332-1-2
- RoHS



#### **COUNTRY OF ORIGIN**

CHINA

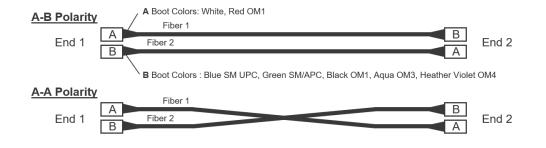
#### WARRANTY INFORMATION

For Leviton product warranties, go to leviton.com/warranty

#### **PHYSICAL SPECIFICATIONS**

Connector Durability:	> 500 Matings
Connector Cable Retention:	50 N (11.24 lbf)

FIBER PERFORM	FIBER PERFORMANCE										
Cable Ivpe	Fiber Count	Diamotor	Weight	Tension (N)		Bend radius (mm)		Temperature Range (C°)			
	Count	(mm)	(kg/km)	Installation	Long Term	Installation	Long Term	Operational	Storage		
1.2 mm Duplex Zipcord	2	1.2 x 2.5	4 kg/km	50	30	24 mm	12 mm	- - 20°C to - +70°C	-40°C to +75°C		
1.6 mm Duplex Zipcord	2	1.6 x 3.2	6 kg/km	50	30	50 mm	30 mm				
2.0 mm Duplex Round	2	2.0	7 kg/km	50	30	30 mm	20 mm				
2.0 mm Simplex	1	2.0	5 kg/km	50	30	50 mm	30 mm				



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#### **OPTICAL SPECIFICATIONS**

	Insertion Loss: Standard Performance Insertion Loss: Low Loss & Ultra Low Loss			oss & Ultra Low Loss	Retu	rn Loss
Connector Family	Multimode	Single-mode	Multimode	Single-mode	Multimode	Single-mode (UPC/APC)
LC	≤ 0.25 dB	≤ 0.25 dB	≤ 0.10 dB *	≤ 0.15 dB	≥ 26 dB	≥ 50 dB / ≥ 60 dB
SC	≤ 0.25 dB	≤ 0.25 dB	≤ 0.10 dB *	≤ 0.15 dB	≥ 26 dB	≥ 50 dB / ≥ 60 dB
ST	≤ 0.25 dB	≤ 0.25 dB	≤ 0.15 dB	≤ 0.15 dB	≥ 26 dB	≥ 50 dB / ≥ 60 dB
FC	≤ 0.25 dB	≤ 0.25 dB	≤ 0.15 dB	≤ 0.15 dB	≥ 26 dB	≥ 50 dB / ≥ 60 dB

\* Ultra Low Loss available in multimode LC and SC connectors only.

Fiber Type	Maxi	imum Atter	uation (dB	/km)		dwidth lz'km)	Transmission Distance (meters)				
	850 nm	1300 nm	1310 nm	1550 nm	850 nm	1300 nm	100 Mb	1 GbE	10 GbE	40G SR4	100G SR4
8.2/125 μm Single-mode (OS2)	N/A	N/A	0.4	0.3	N/A	N/A	>5000 @ 1310 nm		>10000 @ 1310 nm	N/A	N/A
62.5/125 μm MM (OM1)	3.5	1.0	N/A	N/A	200	500		300/600@ 850/1300 nm	36/300 @ 850/1300 nm	N/A	N/A
50/125 µm LO (10G-300m) MM (OM3)	3.0	1.0	N/A	N/A	2,000 <sup>1</sup>	500 <sup>2</sup>	300/300 @ 850/1300 nm	1,000/600 @ 850/1300 nm	300/300 @ 850/1300 nm	100 @850 nm	100 @850 nm
50/125 µm LO (10G-550m) MM (OM4)	3.0	1.0	N/A	N/A	4,700 <sup>1</sup>	500 <sup>2</sup>		1,040/600 @ 850/1300 nm	550/300 @ 850/1300 nm	150 @850 nm	150 @850 nm

1 The effective modal bandwidth is determined based on an overfill launch (OFL) per ANSI/TIA-455-204, except on laser-optimized fiber types.

2 10GbE transmission @ 1,300 nm only applies to 10GBASE-LX4 (CWDM).

Note: Transmission distances are estimated for channels with 1.0dB of insertion loss. To be assured of application support, best practices must be used during installation, including the inspection and cleaning of end faces. Leviton makes no representations or warranties of any kind, express or implied.

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Part number	Fiber Type	Cable Type	Connectors	Colors	Length (Meters)
VPC-S2D1LCLC0010	SM OS2	1.6mm Dup Zip	LC-LC	YELLOW	1.0
VPC-S2D1LCLC0020	SM OS2	1.6mm Dup Zip	LC-LC	YELLOW	2.0
VPC-S2D1LCLC0030	SM OS2	1.6mm Dup Zip	LC-LC	YELLOW	3.0
VPC-S2D1LCLC0050	SM OS2	1.6mm Dup Zip	LC-LC	YELLOW	5.0
VPC-S2D1LCLC0100	SM OS2	1.6mm Dup Zip	LC-LC	YELLOW	10.0
VPC-S2D1LCSC0010	SM OS2	1.6mm Dup Zip	LC-SC	YELLOW	1.0
VPC-S2D1LCSC0020	SM OS2	1.6mm Dup Zip	LC-SC	YELLOW	2.0
VPC-S2D1LCSC0030	SM OS2	1.6mm Dup Zip	LC-SC	YELLOW	3.0
VPC-S2D1LCSC0100	SM OS2	1.6mm Dup Zip	LC-SC	YELLOW	10.0
VPC-S2D1SCSC0010	SM OS2	1.6mm Dup Zip	LC-SC	YELLOW	1.0
VPC-S2D1SCSC0020	SM OS2	1.6mm Dup Zip	LC-SC	YELLOW	2.0
VPC-S2D1ALAL0010	SM OS2	1.6mm Dup Zip	LC/APC-LC/APC	YELLOW	1.0
VPC-S2D1LCSC0050	SM OS2	1.6mm Dup Zip	LC/APC-LC/APC	YELLOW	5.0
VPC-S2D1ALAL0030	SM OS2	1.6mm Dup Zip	SC/APC-SC/APC	YELLOW	3.0
VPC-M4D1LCLC0010	MM OM4	1.6mm Dup Zip	LC-LC	HEATHER VIOLET	1.0
VPC-M4D1LCLC0020	MM OM4	1.6mm Dup Zip	LC-LC	HEATHER VIOLET	2.0
VPC-M4D1LCLC0030	MM OM4	1.6mm Dup Zip	LC-LC	HEATHER VIOLET	3.0
VPC-M4D1LCLC0050	MM OM4	1.6mm Dup Zip	LC-LC	HEATHER VIOLET	4.0
VPC-M4D1LCLC0100	MM OM4	1.6mm Dup Zip	LC-LC	HEATHER VIOLET	10.0
VPC-M4D1LCSC0020	MM OM4	1.6mm Dup Zip	LC-SC	HEATHER VIOLET	2.0
VPC-M4D1LCSC0030	MM OM4	1.6mm Dup Zip	LC-SC	HEATHER VIOLET	3.0
VPC-M3D1LCLC0010	MM OM3	1.6mm Dup Zip	LC-LC	AQUA	1.0
VPC-M3D1LCLC0020	MM OM3	1.6mm Dup Zip	LC-LC	AQUA	2.0
VPC-M3D1LCLC0030	MM OM3	1.6mm Dup Zip	LC-LC	AQUA	3.0
VPC-M3D1LCSC0010	MM OM3	1.6mm Dup Zip	LC-SC	AQUA	1.0
VPC-M3D1LCSC0020	MM OM3	1.6mm Dup Zip	LC-SC	AQUA	2.0
VPC-M3D1LCSC0030	MM OM3	1.6mm Dup Zip	LC-SC	AQUA	3.0
VPC-M3D1LCSC0050	MM OM3	1.6mm Dup Zip	LC-SC	AQUA	5.0
VPC-M3D1LCSC0100	MM OM3	1.6mm Dup Zip	LC-SC	AQUA	10.0

## PRODUCT SPECIFICATIONS VPC and LPC Fiber Patch Cords



	r!	FIBER PAIL	CH CORD OP1	TIONS		
AAA-	BBB	сс	DD	EE	FFFF	-YYY
Product Type	Fiber Type	Cable Type	Connector (1st end)	Connector (2nd end)	Cable length (m)**	Customization
VPC = Standard Fiber Patch Cord LPC = Low Loss Fiber Patch Cord	<ul> <li>S2 = OS2 Yellow</li> <li>M1 = OM1 Orange</li> <li>M3 = OM3 Aqua</li> <li>M4 = OM4 H. Violet</li> </ul>	<ul> <li>S2 = 2.0 MM SIMPLEX</li> <li>D0 = 1.2 MM DUP-ZIP</li> <li>D1 = 1.6 MM DUP-ZIP</li> <li>R2 = 2.0 MM DUP-RND *</li> </ul>	<ul> <li>LC = LC/UPC</li> <li>LP = LC/UPC/ Uniboot*</li> <li>AP = LC/APC/ Uniboot*</li> <li>L9 = LC/9APC</li> <li>AL = LC/APC</li> <li>SC = SC/UPC</li> <li>AC = SC/APC</li> <li>C9 = SC/9APC</li> <li>ST = ST/UPC</li> <li>FC = FC/UPC</li> <li>AF = FC/APC</li> </ul>	<ul> <li>LC = LC/UPC</li> <li>LP = LC/UPC/ Uniboot*</li> <li>AP = LC/APC/ Uniboot*</li> <li>L9 = LC/9APC</li> <li>AL = LC/APC</li> <li>SC = SC/UPC</li> <li>AC = SC/APC</li> <li>C9 = SC/9APC</li> <li>ST = ST/UPC</li> <li>FC = FC/UPC</li> <li>AF = FC/APC</li> <li>XX = PTAIL</li> </ul>	<ul> <li>0005 = 000.5 METERS</li> <li>0015 = 001.5 METERS</li> <li>0150 = 015.0 METERS</li> </ul>	Colors*** • 01 = Blue • 02 = Orange • 03 = Green • 04 = Brown • 05 = Slate • 06 = White • 07 = Red • 08 = Black • 09 = Yellow • 10 = Violet • 11 = Rose • 12 = Aqua Polarity

For assistance customizing your fiber patch cords, please visit levitonemea.com/mto or call Tech Support +44 (0) 1592 778494.

Notes on configuring fiber patch cords:

\* 2.0 mm duplex round patch cords require LC uniboot type connectors \*\* Length ≤ 30 metres are configurable in .2/.4/.5/.6/.8 meter increments

\*\*\* Patch cords with custom colors have a 1-km minimum order quantity

For further support information, visit leviton.com/ns/support

Page 5 of 5

#### NETWORK SOLUTIONS GLOBAL HEADQUARTERS

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