Single-mode Patch Cables

FIBERTRONICS

Single-mode Patch Cables feature a core with a very small diameter that only allows one mode of light through.

As a result of this the number of reflections resulting from the light traveling down the core are dramatically reduced. This in turn lowers the attenuation and allows the signal to travel both faster and further. If it helps, think of it in terms of water flowing through a very thin hose pipe, it will be more compressed, travel faster and further through small the hose than through a large one.

Features & Specifications

- **Connector Types:** UPC - LC, SC, FC, ST, MTRJ[1]; APC - LC, SC, FC
- **Insertion Loss:** 0.1dB (Typical), 0.3dB (Max UPC), 0.4dB (Max APC)
- **Back Reflection:** -50dB (UPC), -65dB (APC)
- **Operating Temperature:** -20°C to +70°C
- **Available Cable Diameters:** 3mm, 2mm, 0.9mm, 250µm
- **Fiber Type:** Corning SMF28 or Better
- **Jacket Types:** PVC, OFNR (Riser), OFNP (Plenum), LSZH (Low-Smoke Zero-Halogen)
- **Cable Color:** Yellow, EIA/TIA-598

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Simplex vs Duplex

Simplex communications are sent in one direction. As an example, a signal is transmitted via a Simplex Fiber Optic Cable from device A to device B, the signal cannot return from device B via the same cable. Simplex communications include typical residential internet, were a single line is used for downloading data while another is used for uploading data. Devices that are connected via Duplex are able to send data in both directions simultaneously. A good example of a duplex connection is your everyday telephone line, which allows for communications from both parties at the same time.

Part Numbers Explained

Below is an example part number: PC-KK7D3AR01M

Fiber Optic Patch Cable Assembly, LC/UPC to LC/UPC, 50/125µm OM3 Multimode Duplex with a 3mm Aqua Riser Jacket, 1 Meter Long.

PC	-	KK	7	D	3	A	R	R	M
PRODUCT GROUP		CONNECTORS A & B	FIBER MODE	FIBER COUNT	CABLE DIAM Ø	JACKET COLOR	JACKET TYPE	TOTAL LENGTH	UOM

LEGEND/KEY

CONNECTORS

D: SC/UPC
E: SC/APC
F: E2000
G: E2000/APC
H: FC/UPC
I: FC/APC
K: LC/UPC
L: LC/APC
S: ST/UPC
Y: MT-RJ

FIBER MODES

9: 9/125µm SIngle-mode
6: 6.25/125µm Multimode
7: 50/125µm OM3 Laser Optimized Multimode
4: 50/125µm OM4
2: 200/230µm Multimode
1: 100/140µm Multimode
P: Panda PM Fiber
B: Bowtie PM Fiber
E: Eliptical PM Fiber

FIBER COUNT

S: Simplex (1 Fiber)
D: Duplex (2 Fiber)

CABLE DIAM Ø

2: 2mm Jacket
3: 3mm Jacket
4: 900µm (.9mm)
6: 250µm Bare
7: 500µm Bare

JACKET COLOR

Y: Yellow
O: Orange
A: Aqua
L: Blue
G: Green
E: Brown
S: Slate
W: White
R: Red
B: Black
U: Purple
P: Pink

JACKET TYPE

R: Riser (OFNR)
P: Plenum (OFNP)
L: Low Smoke Zero Halogen (LSZH)
N: None
V: PVC Jacket

COLOR

M: Meters
F: Feet
I: Inches
C: Centimeters

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A Quick Guide To Fiber Optic Connectors

You're about to begin a brand new fiber optic installation, or perhaps you're working on an existing one? You'll need a a good idea of what type of connectors will work best. This simple guide should help you in understanding the various fiber optic connectors on the market and get you up and running in no time. Please note that there are many, many types of connectors and variants available, we will only be covering the most commonly used ones here.

LC Connectors

LC connectors are licensed by Lucent Technologies, now known as Alcatel-Lucent. These connectors are ideal for use in high-density applications due to their small size and feature a pull-proof design. They are available in both simplex and duplex versions with a 1.25mm zirconia ferrule. Additionally LC connectors also make use of an specialized latch mechanism in order to provide stability within rack mounts

SC Connectors

SC connectors, also known as Subscriber Connectors, Square Connectors or Standard Connectors are non-optical disconnect connectors with a 2.5mm pre-radius-ed zirconia ferrule. They are ideal for quick patching of cables into rack or wall mounts due to their push-pull design. Available in simplex and duplex with a reusable duplex holding clip to allow for duplex connections.

FC Connectors

FC connectors are known as both Ferrule Connectors and Fiber Channel Connectors. They feature a durable threaded coupling and are best suited for use within telecoms applications and make use of non-optical disconnect.

ST Connectors

ST connectors or Straight Tip connectos make use of a semi-unique bayonet connection with a 2.5mm ferrule. ST's are great fiber optic connectors for field installation due to their reliability and durability. They are available in both simplex and and duplex

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