

# Multimode Patch Cables

FIBERTRONICS 



**Multimode Patch Cables have a larger diameter core than Single-mode, allowing multiple modes of light to propagate.**

As one might expect, due to the larger core diameter more data is able to be transmitted. However far more light refraction and attenuation takes place. This means that they are used over far shorter distances than single-mode cables, due to signal degradation. They are most commonly found in short distance data applications such as LANs (Local Area Networks).

## Features & Specifications

- **Connector Types:** UPC - LC, SC, FC, ST, MTRJ<sup>1</sup>
- **Insertion Loss:** 0.1dB (Typical), 0.3dB (Max)
- **Back Reflection:** -25dB (UPC)
- **Operating Temperature:** -20°C to +70°C
- **Available Cable Diameters:** 3mm<sup>2</sup>, 2mm, 1.6mm 0.9mm, 250µm
- **Fiber Type:** OM1: Corning Infinicor 300, OM3: Corning ClearCurve
- **Jacket Types:** PVC<sup>2</sup>, OFNR (Riser), OFNP (Plenum), LSZH (Low-Smoke Zero-Halogen)
- **Cable Color:** OM1 - Orange, OM3 - Aqua, EIA/TIA-598

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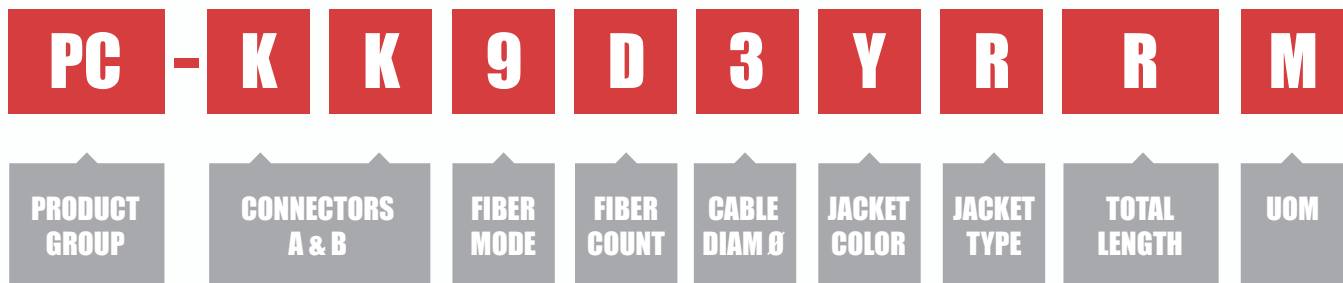
# Simplex vs Duplex

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, where 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-KK9D3YR01M**

Fiber Optic Patch Cable Assembly, LC/UPC to LC/UPC, Single-mode 9/125µm Duplex with a 3mm Yellow Riser Jacket, 1 Meter Long.



### 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: Elliptical 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

# 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 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 a 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 connectors 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 duplex