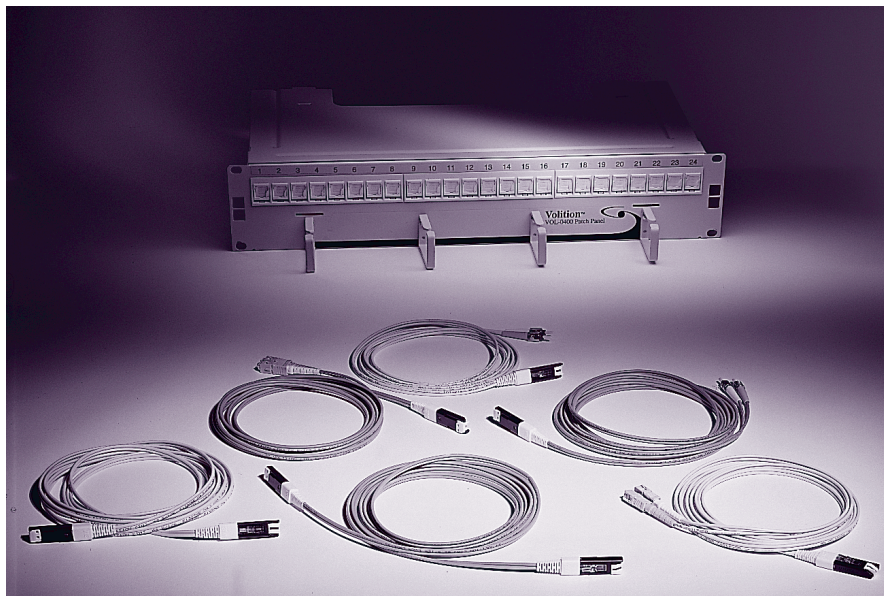


Volition™ VF-45™ Multimode and Single-mode Socket and Patch Cords

The Volition VF-45 Socket and Patch Cords from 3M are the latest duplex, fiber optic interconnects for affordable, high bandwidth, fiber-to-the-desk networks. The VF-45 plug and socket work like an 8-pin modular jack, bringing the simplicity of the RJ-45 jack to optical fiber applications.

VF-45 sockets can be field terminated in closet patch panels and in work area outlets for premises backbone and horizontal cabling applications. Field termination on duplex multimode and single-mode fiber using the Volition VF-45 Termination Kit takes less than two minutes, two fibers at a time!

The mating VF-45 plugs, factory-terminated onto patch cords, enables interconnection from socket-to-socket or from socket-to-transceiver devices. VF-45 patch cords are provided in a variety of lengths and are also available in hybrid ST* or SC configurations. All VF-45 patch cords are constructed with the innovative 3M "GGP" high-strength coated optical fiber, providing for durability and tight bend radius in desktop applications.



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Ordering Information for Volition VF-45 Sockets

| Product Number | Description | UPC 051138- |
|-----------------|---|----------------|
| VOL-0001 | VF-45 Socket, Multimode | 58290 |
| | Includes socket base, white housing, Socket Fiber Holder and boot; complete for termination to 250 µm coated multimode fiber. | |
| VOL-0002 | VF-45 Socket, Single-mode | 75927 |
| | Includes socket base, white housing with blue doors, Socket Fiber Holder and boot; complete for termination to 250 µm coated single-mode fiber. | |
| VOL-0011 | VF-45 Socket, Fiber Holder | 58627 |

Note: Termination requires the VF-45 Quick Install Kit (VOL-0562).



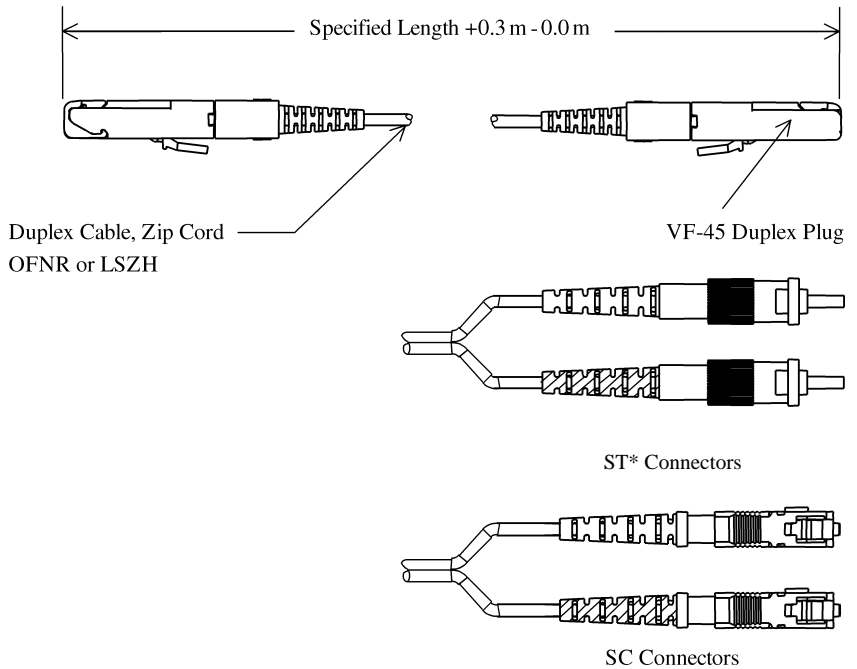
Features — Benefits

| | |
|--|--|
| Plug-to-socket design (no adapter needed) | Low cost |
| High-density duplex interconnect | Small size |
| V-groove alignment with injection-molded parts | Eliminates expensive ferrules, sleeves or precision components |
| RJ-45 style latch | Familiar, easy to use |
| Socket, snap together assembly | Easy to install, lower labor costs |
| Tested to TIA and IEC performance requirements | Reliable |
| Patch cords made with innovative 3M high strength fiber (requiring a minimum bend diameter of only one inch) | Dependable in under-desk applications |
| Full line of Volition Network Solutions products and services | Warranted system offering |

Volition™ VF-45™ Patch Cords

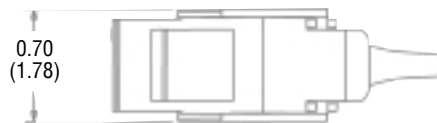
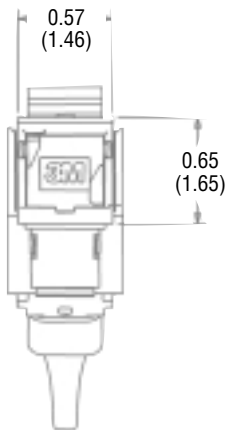
VF-45 Patch Cords are available in the following combinations:

- VF-45 to VF-45
- VF-45 to ST*
- VF-45 to SC



Volition VF-45 Socket

Dimensions in. (cm)



Specifications for Volition VF-45 Patch Cords

| Material | Specifications | |
|-----------|------------------------------------|----------------------------|
| | Single-mode | Multimode |
| Connector | Engineering Thermoplastic UL-94 VO | |
| Boot | Thermoplastic Elastomer | |
| Fiber | 9 μm single-mode | 62.5 μm or 50 μm multimode |

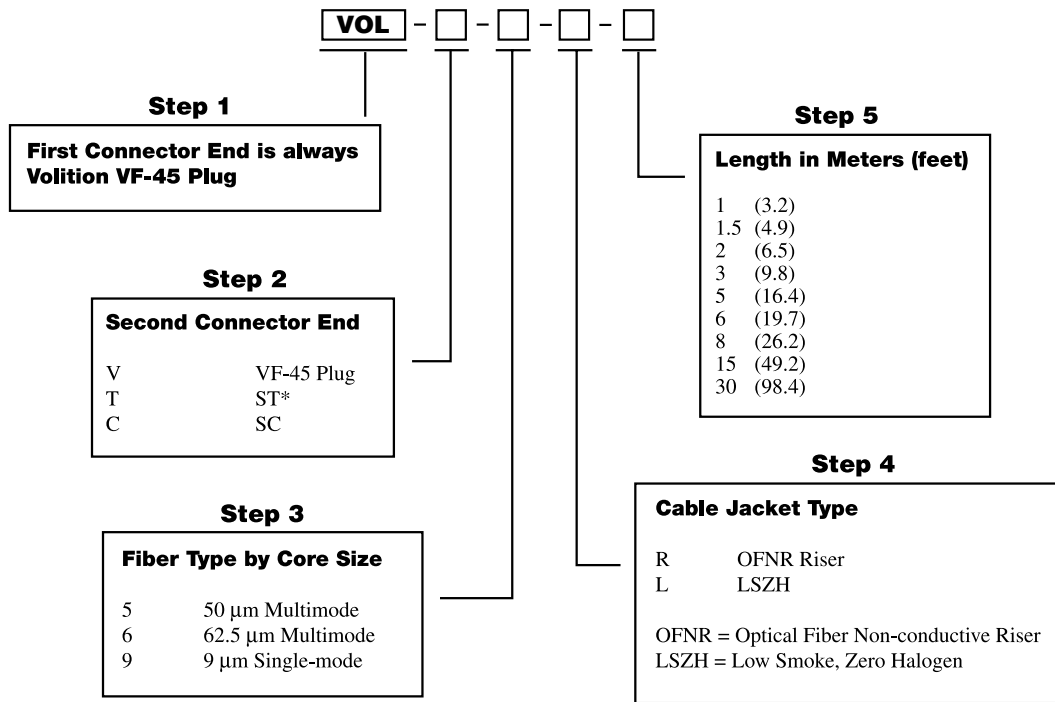
Specifications for Volition VF-45 Plug and Sockets

| Test | Test Conditions/Requirements | |
|----------------------|---|---|
| | Single-mode | Multimode |
| Attenuation | ≤0.75 dB | <0.75 dB |
| Reflection | ≤-26 dB | >-20 dB |
| Mating durability | 500 cycles, <0.75 dB max. | |
| Strength of coupling | 33 N, ≤0.75 dB | |
| Plug cable retention | Tensile load 66 N, side pull 19.4 N, ≤0.75 dB | Tensile load 66 N, side pull 6.6 N, <0.75 dB |
| Plug flex | 100 cycles, ± 90 degrees, 0.5 kg, <0.75 dB | |
| Plug twist | 10 cycles, ± 2.5 revolutions, 15 N, <0.75 dB | |
| Cold | -10°C (14°F) for 96 hours, <0.3 dB increase | |
| Heat | 60°C (140°F) for 14 days, <0.3 dB increase | |
| Humidity* | 40°C, 95% relative humidity for 96 hours, ≤0.4 dB | |
| Impact* | 8 drops @ 1.8 m, <0.75 dB | |
| Thermal cycling** | -10° to 60°C (14° to 140°F), 5 cycles, <0.3 dB increase | |
| Vibration* | 10 to 55 Hz, 30 min. each axis, <0.3 dB increase | |

*Multimode
**Single-mode

Volition™ Patch Cord Ordering Chart

In five easy steps, you can accurately specify your Volition VF-45™ Patch Cord.
Establish 3M part numbers by using the following codes.



Example: VF-45 to ST*, 9 μm Single-mode OFNR Cable, 2 meters.
VOL T 9 R 2
 (VOL-T9R2)

Example: VF-45 to VF-45, 50 μm Multimode LSZH Cable, 30 meters.
VOL 5 L 30
 (VOL-5L30)

Specifications

Volition VF-45 Patch Cords interconnected with Volition VF-45 Sockets perform to the following loss and reflection data and conform to the following combination of TIA, IEC and 3M performance specifications.

62.5 μm Loss & Reflection Typical Performance

| Loss (dB) | | Reflection (dB) | |
|-----------|-------------|-----------------|-------|
| 1310 | 850 | 1310 | 850 |
| Mean | -0.21 -0.28 | -29.2 | -27.2 |
| Sigma | 0.13 0.14 | 1.41 | 1.77 |

50 μm Loss & Reflection Typical Performance

| Loss (dB) | | Reflection (dB) | |
|-----------|-----------|-----------------|-------|
| 1310 | 850 | 1310 | 850 |
| Mean | 0.28 0.37 | -33.3 | -32.7 |
| Sigma | 0.17 0.17 | 1.83 | 1.57 |

Single-mode Loss & Reflection Typical Performance

| Loss (dB) | Reflection (dB) |
|-----------|-----------------|
| Mean | 0.20 -56.4 |
| Sigma | 0.18 3.4 |

TIA Specifies:
Loss ≤ 0.75 dB
Reflection ≤ -26.0 dB