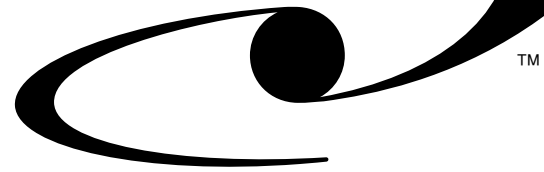


# Volition™ VF-45™ Singlemode Socket and Patch Cords



## IT'S AS EASY AS PLUGGING IN AN RJ-45.

The Volition VF-45 Singlemode Socket and Patch Cords from 3M are the latest duplex, fiber optic interconnect products for affordable, high bandwidth, 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 singlemode 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 singlemode 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 singlemode patch cords, enable interconnection from socket-to-socket or from socket-to-transceiver devices. VF-45 singlemode 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 durability and tight bend radius in desktop applications.

**3M** Innovation

## IT'S AS EASY (CONT.)

The VF-45™ singlemode fiber optic interconnect conforms to 3M specifications chosen to meet even the toughest customer expectations. The VF-45 interconnect is the heart of a full system of affordable optical fiber Volition™ Network Solutions.

### FEATURES

- Plug-to-socket design (no adapter needed)
- High-density duplex interconnect
- V-groove alignment with injection-molded parts
- RJ-45 style latch
- Socket, snap-together assembly
- Tested to TIA performance specifications
- Patch cords made with innovative 3M high-strength fiber (requiring a minimum bend diameter of only one inch)
- Full line of Volition™ Network Solution products and services

### BENEFITS

- Low cost
- Small size
- Eliminates expensive ferrules, sleeves or precision components
- Familiar, easy to use
- Easy to install, lower labor costs
- Reliable
- Dependable in under-desk applications
- Warranted system offering

## Volition Singlemode VF-45 Socket from 3M

### Ordering Information

Volition VF-45 Singlemode Patch Cords may be ordered in the following lengths. m (ft.)

1 (3.2)	3 (9.8)	8 (2.6)
1.5 (4.9)	5 (16.4)	15 (49.2)
2 (6.5)	6 (19.7)	30 (98.4)

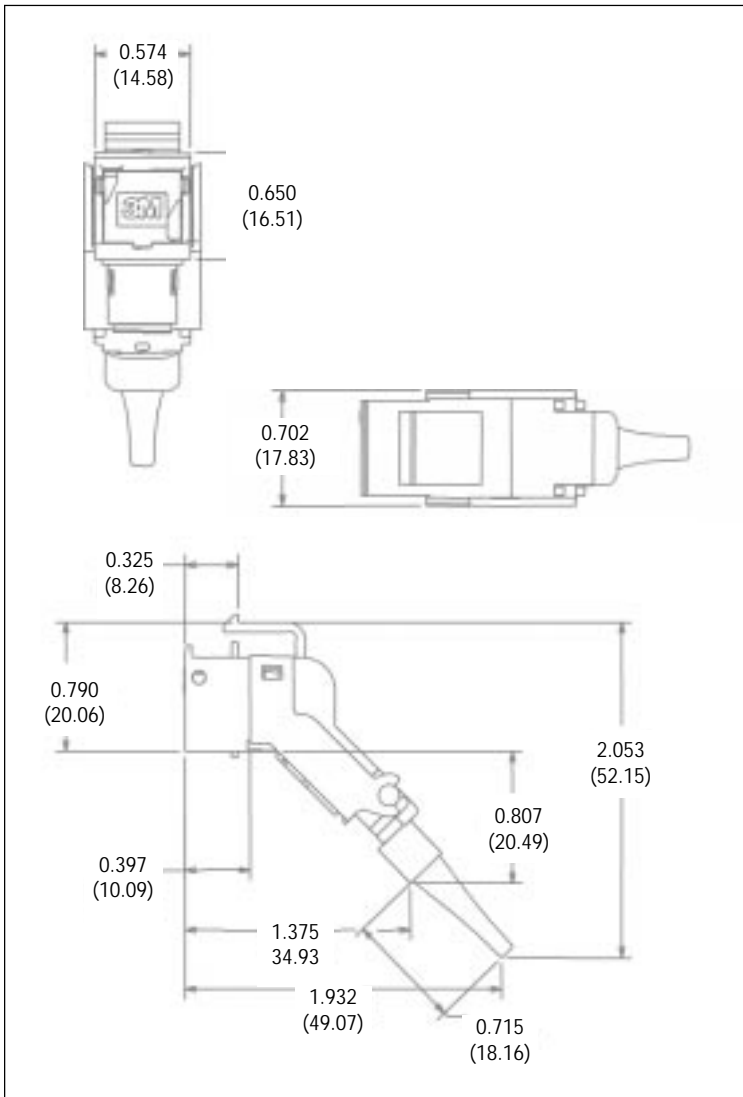
Model #	Description
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VOL-0002	VF-45 Socket, Singlemode
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The VF-45 Socket (VOL-0002) includes socket base, housing, Socket Fiber Holder and boot; complete for termination to 250 µm coated singlemode fiber. Termination requires the VF-45 Socket Termination Kit (VOL-0560). The VF-45 Socket Fiber Holders (VOL-0011) may be purchased separately as replacement parts, if necessary.

VOL-0011	VF-45 Socket Fiber Holder
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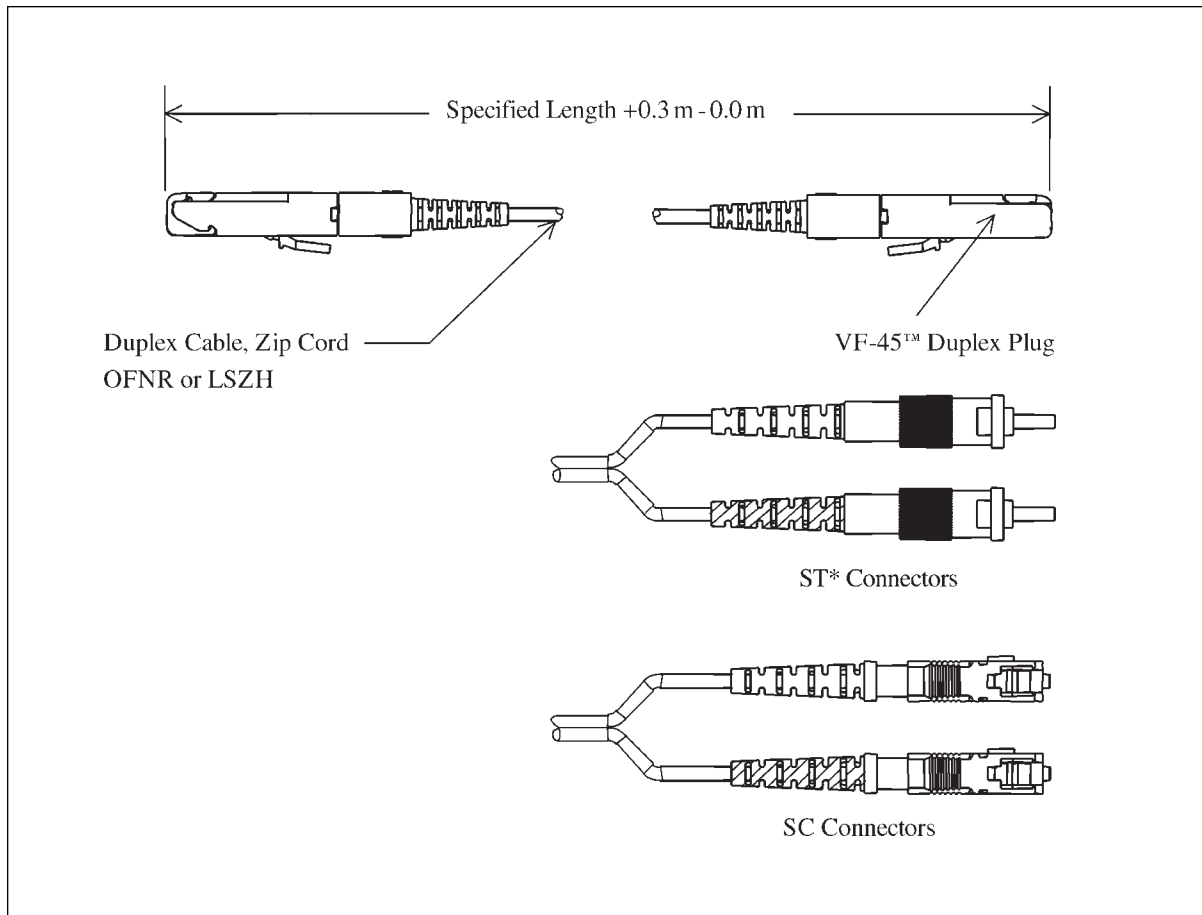
## VOLITION™ SINGLEMODE VF-45™ SOCKET



## VOLITION SINGLEMODE 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



## SPECIFICATIONS

Volition™ Singlemode VF-45 Patch Cords, interconnected with Volition VF-45 Sockets, perform to the following loss and reflection data. Volition Singlemode VF-45 Patch Cords, interconnected with Volition VF-45 singlemode sockets are tested to TIA and 3M performance specifications. This is typical performance data, not to be used for specification purposes.

### Singlemode Loss & Reflectance Typical Performance

	Loss (dB)	Reflectance (dB)
	1.310	1.310
Mean	0.20	-56.4
Sigma	0.18	3.4

TIA Specifies: Loss  $\leq$  0.75 dB Reflection  $\leq$  26.0 dB

# Volition™ Singlemode VF-45™ Patch Cord Material Specifications

Material	Specification
Connector	Engineering Thermoplastic UL-94 V0
Boot	Thermoplastic Elastomer
Fiber	9 μm singlemode

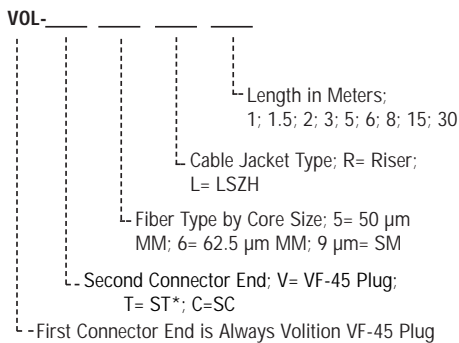
The cable used to make Volition Patch Cords contains a singlemode optical fiber with 100 μm glass cladding diameter and a polymer coating bringing the diameter to a total of 125 μm. The polymer is a tough, permanent primary coating, which provides improved strength and bend resistance. The static fatigue parameter is a 50% improvement over standard glass. This high-strength fiber is fully compatible and intermateable with standard glass fiber.

## Ordering Information

Volition VF-45 Singlemode Patch Cords may be ordered in the following lengths. m (ft.)

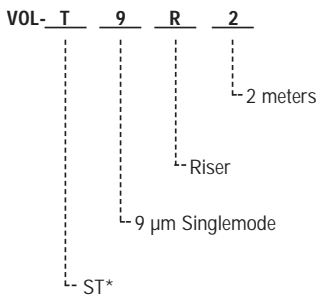
1 (3.2)	3 (9.8)	8 (2.6)
1.5 (4.9)	5 (16.4)	15 (49.2)
2 (6.5)	6 (19.7)	30 (98.4)

## Model Numbers



OFNR= Optical Fiber Non-Conductive Riser  
LSZH= Low Smoke, Zero Halogen

## Examples



Description: VF-45 to ST\*, 9 μm Singlemode OFNR Cable, 2 meters.

## VF-45™ Plug and Socket Material Specifications

Test	Performance Specifications
Attenuation	≤ 0.75 dB
Reflection	≤ -26 dB
Mating durability	500 cycles, ≤ 0.75 dB
Strength of coupling	33 N, ≤ 0.75 dB
Impact	8 drops @ 1.8 m, ≤ 0.75 dB
Plug cable retention	Tensile load 66 N, Side Pull 19.4 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 for 96 hours, ≤ 0.3 dB increase
Heat	+60°C for 14 days, ≤ 0.3 dB increase
Humidity	40°C, 95% rh for 96 hours, ≤ 0.4 dB

### Important Notice

Before using this product, you must evaluate it and determine if it is suitable for your intended application. You assume all risks and liability associated with such use.

#### Warranty; Limited Remedy; Limited Liability.

This product will be free from defects in material and manufacture for a period of one year from the date of purchase. 3M MAKES NO OTHER WARRANTIES


INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. If this product is defective within the warranty period stated above, your exclusive remedy shall be, at 3M's option, to replace or repair the 3M product or refund the purchase price of the 3M product. Except where prohibited by law, 3M will not be liable for any loss or damage arising from this 3M product, whether direct, indirect, special, incidental or consequential regardless of the legal theory asserted.



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