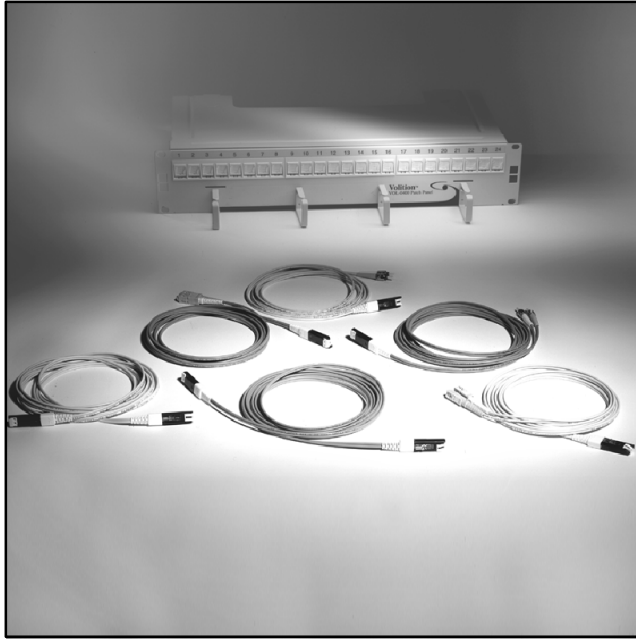


3M™ Volition™ VF-45™ Sockets and Patch Cords

VOL Series



- Low cost plug-to-socket design (no adapter needed)
- High-density duplex interconnect in a small size
- V-groove alignment with injection-molded parts eliminates expensive ferrules, sleeves or precision components
- RJ-45 style latch is familiar and easy to use
- Socket, snap together assembly is easy to install, providing lower labor costs
- Reliable — tested to TIA and IEC performance requirement
- Patch cords are made with innovative 3M high strength fiber (requiring a minimum bend diameter of only one inch) which makes them dependable in under-desk applications
- Patch cords mate to themselves or to standard ST, SC, LC and MT-RJ connectors

Date Modified: May 30, 2003

TS-0993-02
Sheet 1 of 3

Physical

Material

Connector: Engineering Thermoplastic UL 94V-0

Boot: Thermoplastic Elastomer UL 94V-0

Single-mode

Door: Blue

Fiber: 9 μm

Multimode

Beige

62.5 μm or 50 μm

Performance

Single-mode

Attenuation: <0.75 dB

Reflection: <0-26 dB

Mating Durability: 500 cycles, <0.75 dB max.

Strength of Coupling: 33 N, \leq 0.75 dB

Plug Cable Retention

Single-mode: Tensile load 66 HN, side pull 19.4N, \leq 0.75 dB

Multimode: Tensile load 66 HN, side pull 6.6 N, \leq 0.75 dB max.

Plug Flex: 100 cycles, \pm 90 degrees, 0.5 kg, \leq 0.75 dB

Plug Twist: 10 cycles, \pm 2.5 revolutions, 15 N, \leq 0.75 dB

Impact (Multimode): 8 drops @ 1.8 m, <0.75 dB

Thermal Cycling (Single-mode): -10° to 60° C / 14° to 140° F, 5 cycles, <0.3 dB increase

Vibration: 10 to 55 Hz, 30min, each axis, <0.3 dB increase

Environmental

Cold: -10° C for 196 hours, \leq 0.3 dB increase

Heat: 60° C for 14 days, \leq 0.3 dB increase

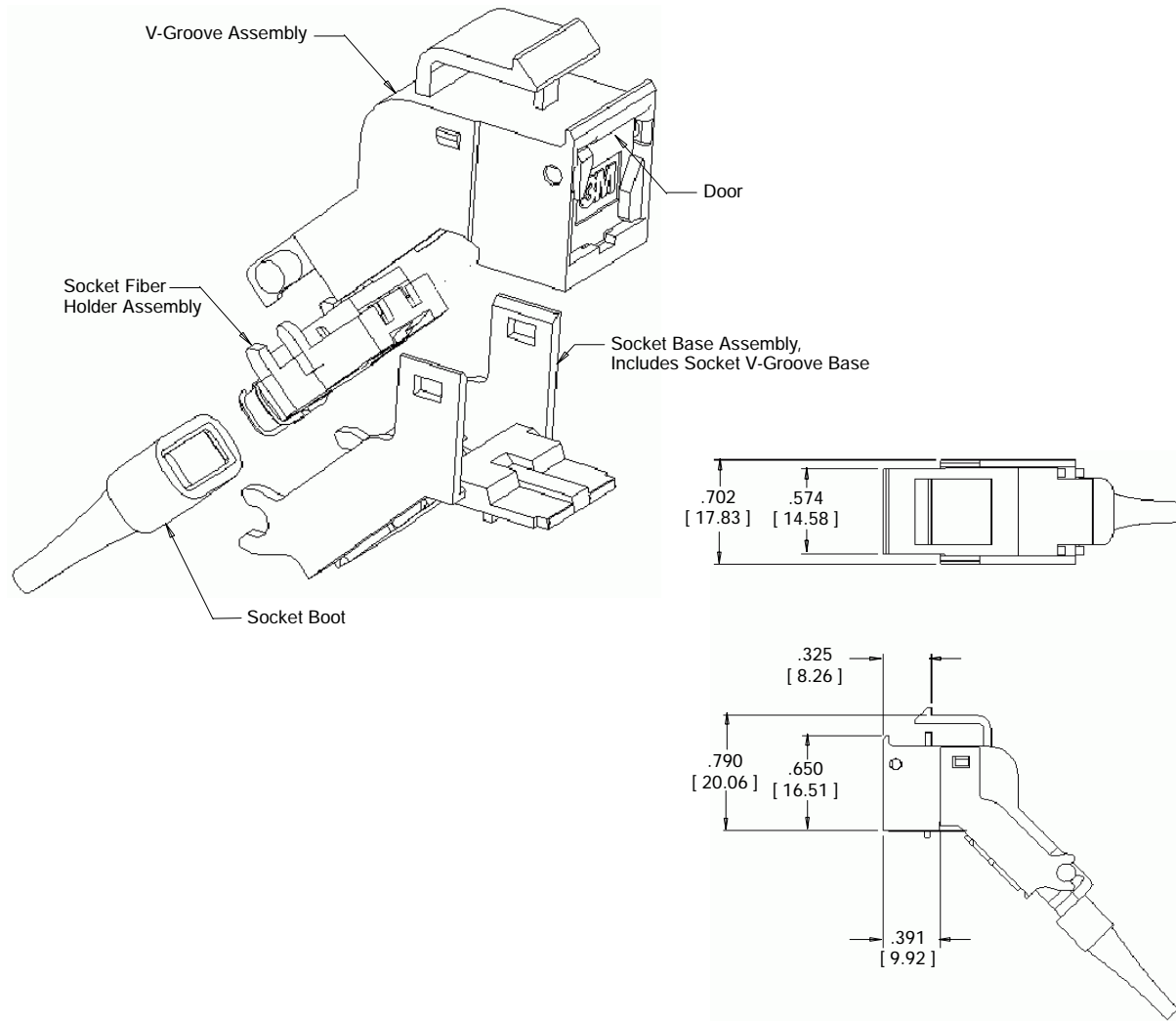
Humidity (Multimode): 40° C, 95% relative humidity for 96 hours, \leq 0.4 dB

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3M
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Sockets



Inch
[mm]

Tolerance Unless Noted			
	.0	.00	.000
Inch	±.1	±.01	±.005

[] Dimensions for Reference only

Ordering Information

VOL-00XX

01 = Multimode — includes socket base, white housing, socket fiber holder and boot; complete for termination to 250 μm coated multimode fiber.

02 = Single-mode — includes socket base white housing with blue doors. Socket fiber holder and boot; complete for termination to 250 μm coated multimode fiber.

11 = Fiber Holder

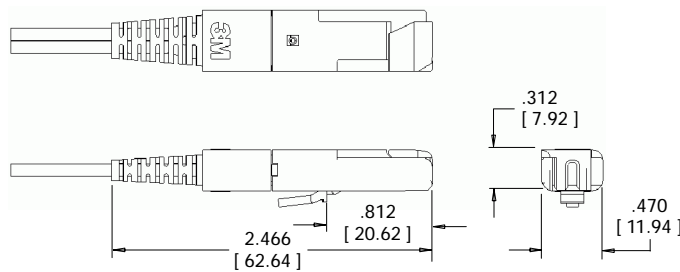
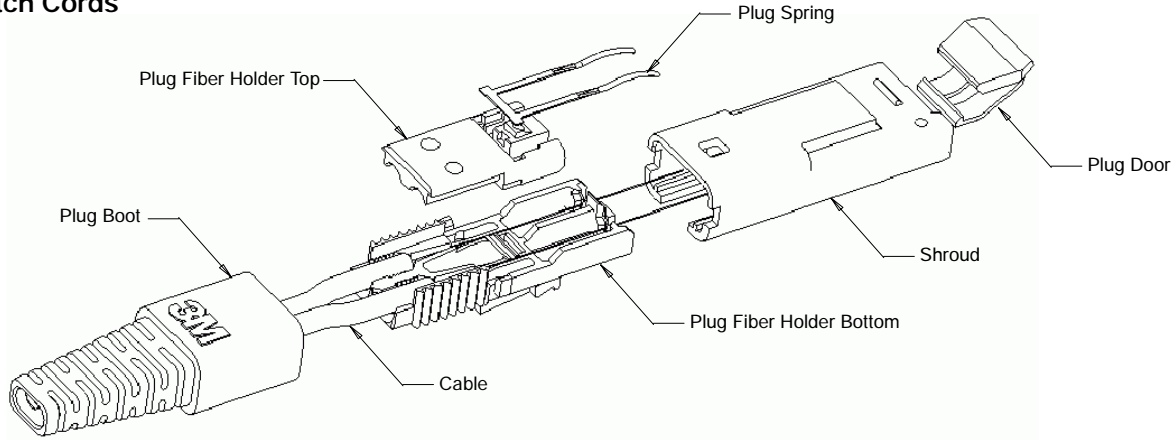
Note: Termination requires the VF-45 Quick Install Kit (VOL-0562).

TS-0993-02
Sheet 2 of 3

3M™ Volition™ VF-45™ Sockets and Patch Cords

VOL Series

Patch Cords



Inch [mm]			
Tolerance Unless Noted			
	.0	.00	.000
Inch	±.1	±.01	±.005

[] Dimensions for Reference only

Note: Cable "Certification/Flame Rating" in USA is ONFR per UL 1666. For non-USA applications, LSZH per IEC 332-3 is also available. Volition VF-45 Patch Cords connected 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

50 μm Loss & Reflection Typical Performance

Single-mode Loss & Reflection Typical Performance

	62.5 μm Loss & Reflection Typical Performance				50 μm Loss & Reflection Typical Performance				Single-mode Loss & Reflection Typical Performance	
	Loss (dB)		Reflection (dB)		Loss (dB)		Reflection (dB)		Loss (dB)	Reflection (dB)
Mean	1310	850	1310	850	1310	850	1310	850	1310	1310
Sigma	-0.21	-0.28	-29.2	-27.2	-0.29	-0.19	-32.5	-33.1	0.20	-56.4
	0.13	0.14	1.41	1.77	0.15	0.11	1.89	0.93	0.18	3.4

TIA Specifies: Loss < =0.75 dB
Reflection < =26.0 dB

Ordering Information

Second Connector End:

V = VF-45 Plug
T = ST
C = SC
L = LC
M = MT-RJ*

Fiber Type by Core Size:
5 = 50 μm Multimode
6 = 62.5 μm Multimode
9 = 9 μm Single-mode

VOL-XXXX

Length in Meters (feet):

1 (3.2)
1.5 (4.9)
2 (6.5)
3 (9.8)
5 (16.4)
6 (19.7)
8 (26.2)
15 (49.2)
30 (98.4)

Cable Jacket Type:

L/R = LSZH/OFNR for 50 μm Multimode
R = ONFR for 62.5 μm Multimode and 9 μm Single-mode
L = Low Smoke, Zero Halogen (LSZH)

- Note:
1. First connector end terminated with VF-45 Plug.
 2. LSZH is not certified to USA NEC requirements. LSZH cables are manufactured to the following standards: Flame Propagation (IEC 332-3), Smoke Density (IEC 61034), Toxic Emission (IEC - 20.37 or HD 605), and Corrosive Gas (IEC 754-1 and -2).
 3. MT-RJ is available for multimode only.

TS-0993-02
Sheet 3 of 3

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