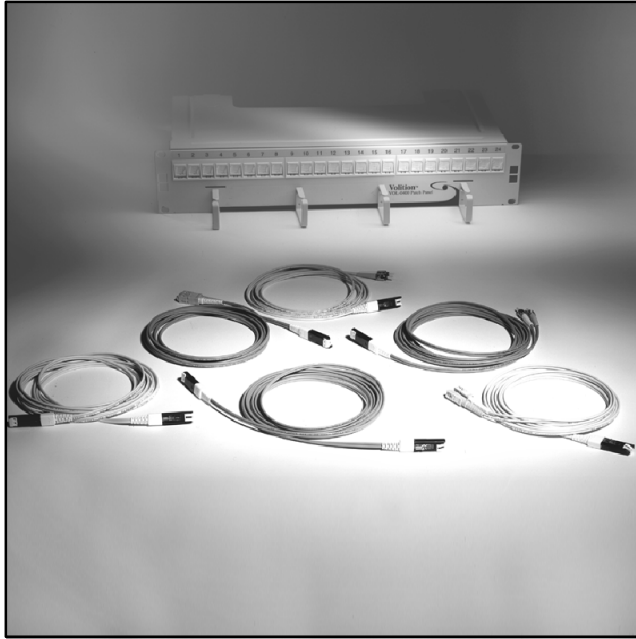


3M™ Volition™ VF-45™ Sockets and Patch Cords

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

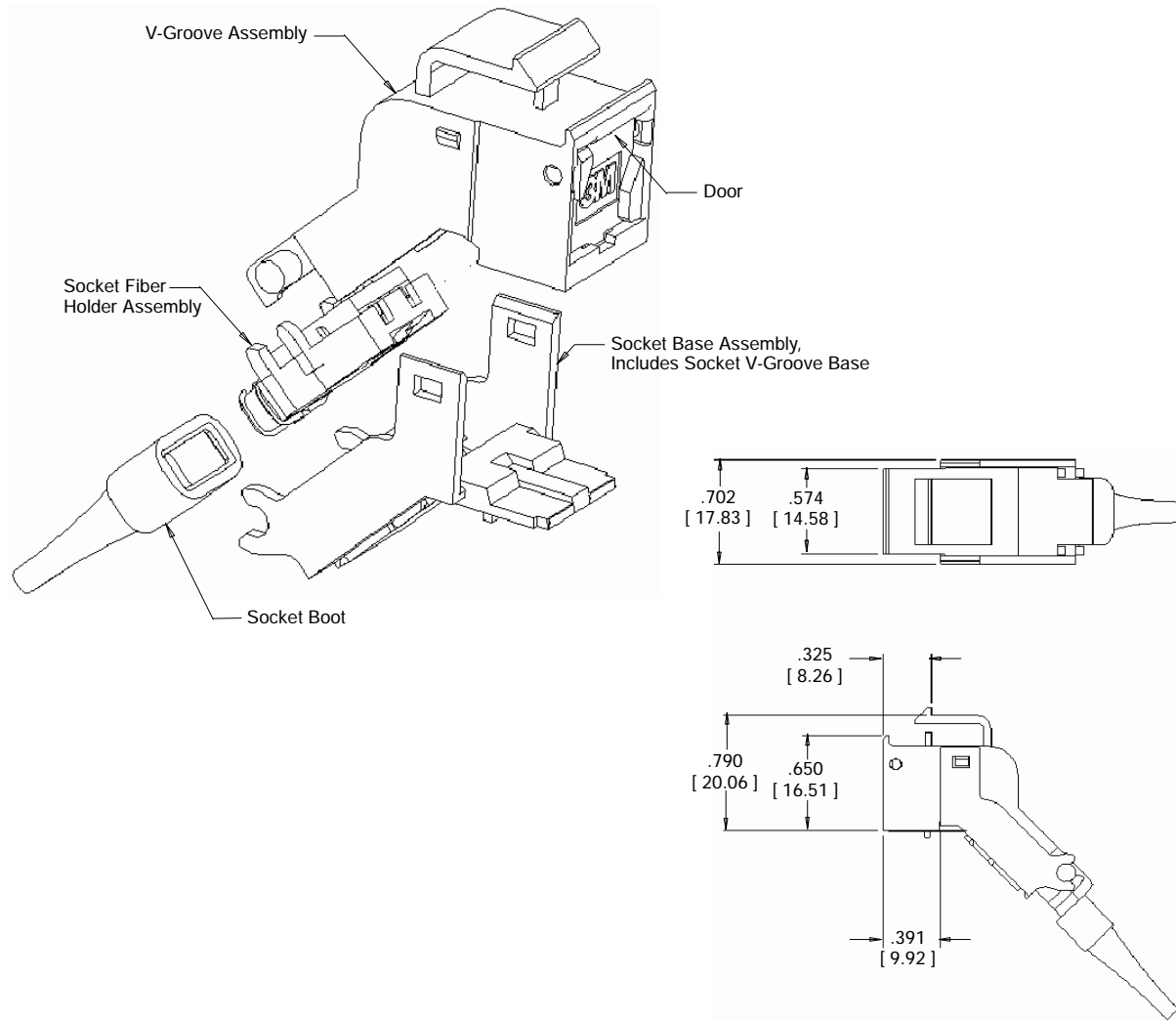
Humidity (Multimode): 40° C, 95% relative humidity for 96 hours, \leq 0.4 dB

Volition and VF-45 are trademarks of 3M Company.

3M
Interconnect Solutions
<http://www/3M.com/interconnects/>

3M is a trademark of 3M Company.
For technical, sales or ordering information call
800-225-5373

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

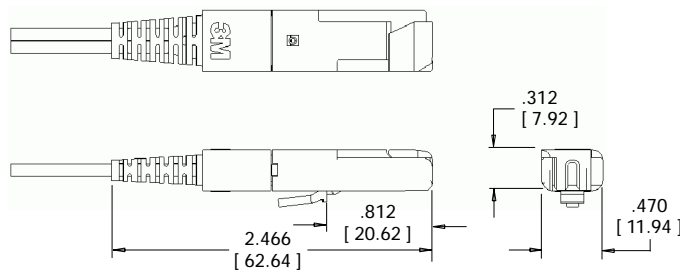
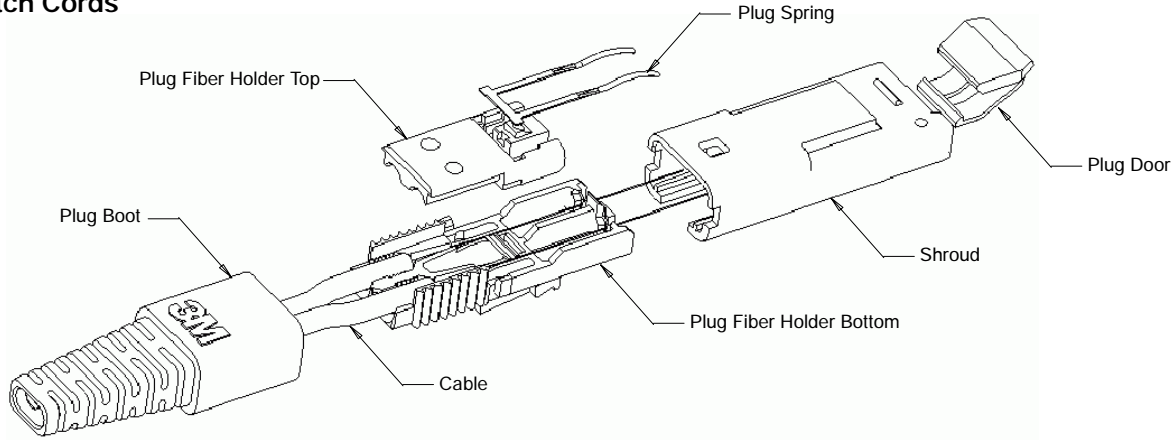
Note: Termination requires the VF-45 Quick Install Kit (VOL-0562).

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

Important Notice

All statements, technical information, and recommendations related to 3M's products are based on information believed to be reliable, but the accuracy or completeness is not guaranteed. 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. Any statements related to the product which are not contained in 3M's current publications, or any contrary statements contained on your purchase order shall have no force or effect unless expressly agreed upon, in writing, by an authorized officer of 3M.



Electronic and Interconnect Solutions Division

6801 River Place Blvd.
Austin, TX 78726-9000
www.3M.com/eisd

Warranty; Limited Remedy; Limited Liability.

This product will be free from defects in material and manufacture for a period of 1 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.**

© 3M 2003