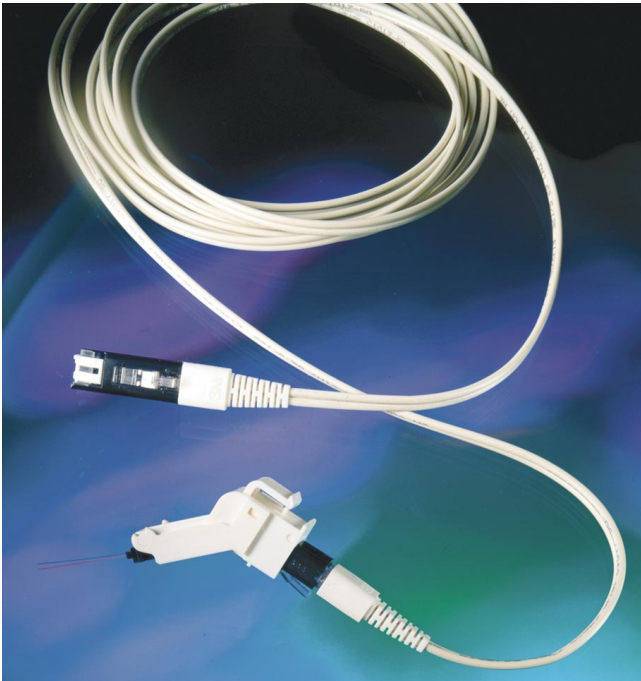




# Volition™ VF-45™

## Multimode Sockets and Patch Cords



Volition™ VF-45™ Multimode Socket and Patch Cords

### It's as easy as plugging in an RJ45

The Volition Socket and Patch Cord is the latest duplex, fibre optic interconnect for affordable, high bandwidth, fibre-to-the-desk networks. The VF-45 plug and socket work like an 8-pin modular jack, bringing the simplicity of the RJ45 jack to optical fibre applications.

VF-45 sockets can be field terminated in patch panels and outlets for building backbone and horizontal cabling applications. Field termination on duplex multimode fibre using the Volition VF-45 Termination Kit takes less than two minutes, two fibres at a time!

The mating VF-45 plugs, factory terminated onto patch cords, enable 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 patch cords are constructed with 3M's innovative 'GGP' polymer coated optical fibre, providing enhanced durability under tight bend radius conditions.

The VF-45 fibre optic interconnect is tested in accordance with and conforms to a combination of TIA, IEC and 3M specifications chosen to meet even the toughest customer expectations. The interconnect is the heart of a full system of Volition products which provide affordable, optical fibre, premises cabling solutions.

---

### Features

- Plug to socket design (no adapter needed)
- Small size duplex interconnect (half the size of a duplex SC connector)
- V-groove alignment with injection-moulded parts
- RJ45 style latch
- Socket - 3-piece snap together assembly
- Tested to TIA and IEC performance requirements
- Patch cords made with 3M's innovative coated fibre, GGP (requiring a minimum bend radius of only 24mm)
- Full line of Volition™ Network Solutions products and services

### Benefits

- Low cost
- High density
- No need for expensive ferrules, sleeves, or precision components
- Familiarity, easy to use
- Easy to install, lower labour cost
- Reliable
- Dependable
- Warrantied system offering

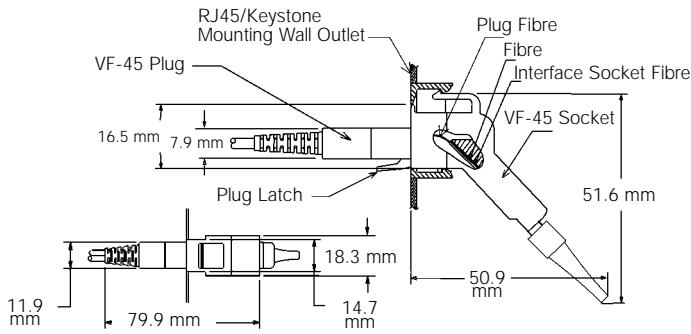
# Specifications

## Volition Multimode VF-45™ Socket

Ref.-No.	Description
VOL-0001	VF-45 Socket, Multimode PU: 96 ea/ca., MOQ: 96 ea
VOL-0011	Fibre Holder for VF-45 Socket, Multimode and Singlemode PU: 96 ea/ca., MOQ: 96 ea

The VF-45 Socket (VOL-0001) includes socket base, housing, fibre holder and boot; complete for termination to 250 µm coated multi-mode fibre. Termination requires the VF-45 Socket Termination Kit (VOL-0562). The VF-45 Socket Fibre Holders (VOL-0011) may be purchased separately as replacement parts, if necessary.

### VF-45TM Socket and Plug



### Specifications - Volition VF-45 Socket and Plug

#### 62.5 µm Insertion and Return Loss

##### Typical Performance

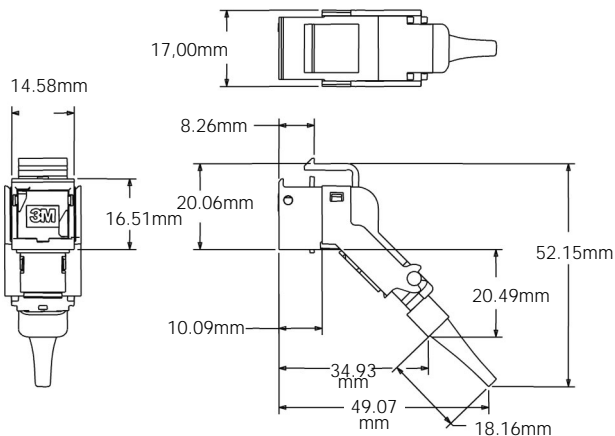
Wavelength	Loss (dB)		Return Loss (dB)	
	1310	850	1310	850
Mean	0.21	0.28	29.2	27.2
Sigma	0.13	0.14	1.41	1.77

#### 50 µm Insertion and Return Loss

##### Typical Performance

Wavelength	Loss (dB)		Return Loss (dB)	
	1310	850	1310	850
Mean	0.29	0.19	32.5	33.1
Sigma	0.15	0.11	0.89	0.93

## Volition Singlemode VF-45™ Socket



# Specifications

## Volition VF-45™ Socket and Plug continued

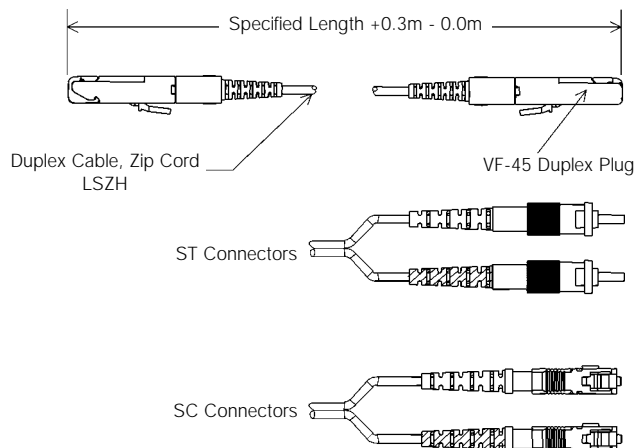
Parameter	TIA/EIA Fibre optic test procedure	IEC 61300 series test method	Severity	Performance
Attenuation:	171	3-4	n/a	≤0.75 dB 0.5 dB typical
Return loss:	107	3-6	n/a	>20 dB
Mating durability:	21	2-2	500 cycles	≤0.75 dB, >20 dB RL
Impact:	2	2-12	8 drops at 1.5 m	≤0.75 dB, >20 dB RL
Plug cable retention/ side pull:	6	2-4	66 N at 0 degrees 6.6 N at 90 degrees	≤0.75 dB, >20 dB RL
Strength of coupling:	185	2-6	33 N	≤0.75 dB, >20 dB RL
Plug cabling flexing:	1	n/a	±90 degrees, 0.5 kg 100 cycles	≤0.75 dB, >20 dB RL
Plug cable twist:	36	2-5	±2.5 revolutions, 15N	≤0.75 dB, >20 dB RL
Cold:	188	2-17	-10 °C, 96 hours, sample functioning	≤0.75 dB, >20 dB RL ≤0.3 dB atten. change
Heat:	4	2-18	+60 °C 14 days, sample functioning	≤0.75 dB, >20 dB RL ≤0.3 dB atten. change
Humidity:	5	2-19	+40 °C, 90-95 % RH, 96 hours, sample functioning	≤0.75 dB, >20 dB RL ≤0.4 dB atten. change
Thermal cycling:	n/a	2-22	-10 °C to +60 °C 5 cycles	≤0.75 dB, >20 dB RL ≤0.3 dB atten. change
Vibration:	n/a	2-1	10-55 Hz, 30 min each axis	≤0.75 dB, >20dB RL ≤0.3 dB atten. change

Note: Above performance applies to both 50 µm and 62.5 µm multimode fibre.

## VF-45 Patch Cords


The cable used to make Volition Patchcords is graded index multimode optical fibre with 100µm glass cladding diameter and 125µm polymer coating diameter. The polymer is a tough permanent coating, which provides improved strength and bend resistance. The static fatigue parameter is a 50% improvement over standard fibre. This high strength fibre is fully compatible and intermatable with standard glass fibre.

Material	Specification
Connector:	Engineering Thermoplastic UL-94 V0
Boot:	Thermoplastic Elastomer
Fibre:	62.5/125 µm or 50/125 µm multimode






## Ordering Information

## Ref.-No.

VF-45 to VF-45 Patch Cords	Length			50 µm core, LSZH	62.5 µm core, LSZH
		PU:12 ea/ca.	MOQ: 12 ea	VOL-V5L1	VOL-V6L1
	1 m	PU:12 ea/ca.	MOQ: 12 ea	VOL-V5L1	VOL-V6L1
	1.5 m	PU:12 ea/ca.	MOQ: 12 ea	VOL-V5L1.5	VOL-V6L1.5
	2 m	PU:12 ea/ca.	MOQ: 12 ea	VOL-V5L2	VOL-V6L2
	3 m	PU:12 ea/ca.	MOQ: 12 ea	VOL-V5L3	VOL-V6L3
	5 m	PU:12 ea/ca.	MOQ: 12 ea	VOL-V5L5	VOL-V6L5
	6 m	PU:12 ea/ca.	MOQ: 12 ea	VOL-V5L6	VOL-V6L6
	8 m	PU:12 ea/ca.	MOQ: 12 ea	VOL-V5L8	VOL-V6L8
	15 m	PU:12 ea/ca.	MOQ: 12 ea	VOL-V5L15	VOL-V6L15
	30 m	PU:1 ea/ca.	MOQ: 1 ea	VOL-V5L30	VOL-V6L30

## Ordering Information

## Ref.-No.

	Length			50 µm core, LSZH	62.5 µm core, LSZH	
<b>VF-45 to ST Patch Cords</b> 	1 m	PU:12 ea/ca.	MOQ: 12 ea	<b>VOL-T5L1</b>	<b>VOL-T6L1</b>	
	1.5 m	PU:12 ea/ca.	MOQ: 12 ea	<b>VOL-T5L1.5</b>	<b>VOL-T6L1.5</b>	
	2 m	PU:12 ea/ca.	MOQ: 12 ea	<b>VOL-T5L2</b>	<b>VOL-T6L2</b>	
	3 m	PU:12 ea/ca.	MOQ: 12 ea	<b>VOL-T5L3</b>	<b>VOL-T6L3</b>	
	5 m	PU:12 ea/ca.	MOQ: 12 ea	<b>VOL-T5L5</b>	<b>VOL-T6L5</b>	
	6 m	PU:12 ea/ca.	MOQ: 12 ea	<b>VOL-T5L6</b>	<b>VOL-T6L6</b>	
	8 m	PU:12 ea/ca.	MOQ: 12 ea	<b>VOL-T5L8</b>	<b>VOL-T6L8</b>	
	15 m	PU:12 ea/ca.	MOQ: 12 ea	<b>VOL-T5L15</b>	<b>VOL-T6L15</b>	
	30 m	PU: 1 ea/ca.	MOQ: 1 ea	<b>VOL-T5L30</b>	<b>VOL-T6L30</b>	
<b>VF-45 to SC Patch Cords</b> 	1 m	PU:12 ea/ca.	MOQ: 12 ea	<b>VOL-C5L1</b>	<b>VOL-C6L1</b>	
	1.5 m	PU:12 ea/ca.	MOQ: 12 ea	<b>VOL-C5L1.5</b>	<b>VOL-C6L1.5</b>	
	2 m	PU:12 ea/ca.	MOQ: 12 ea	<b>VOL-C5L2</b>	<b>VOL-C6L2</b>	
	3 m	PU:12 ea/ca.	MOQ: 12 ea	<b>VOL-C5L3</b>	<b>VOL-C6L3</b>	
	5 m	PU:12 ea/ca.	MOQ: 12 ea	<b>VOL-C5L5</b>	<b>VOL-C6L5</b>	
	6 m	PU:12 ea/ca.	MOQ: 12 ea	<b>VOL-C5L6</b>	<b>VOL-C6L6</b>	
	8 m	PU:12 ea/ca.	MOQ: 12 ea	<b>VOL-C5L8</b>	<b>VOL-C6L8</b>	
	15 m	PU:12 ea/ca.	MOQ: 12 ea	<b>VOL-C5L15</b>	<b>VOL-C6L15</b>	
	30 m	PU:1 ea/ca.	MOQ: 1 ea	<b>VOL-C5L30</b>	<b>VOL-C6L30</b>	
<b>VF-45 to LC Patch Cords</b>	1 m	PU:12 ea/ca.	MOQ: 12 ea	<b>VOL-L5L1</b>	<b>VOL-L6L1</b>	
	1,5 m	PU:12 ea/ca.	MOQ: 12 ea	<b>VOL-L5L1.5</b>	<b>VOL-L6L1.5</b>	
	2 m	PU:12 ea/ca.	MOQ: 12 ea	<b>VOL-L5L2</b>	<b>VOL-L6L2</b>	
	3 m	PU:12 ea/ca.	MOQ: 12 ea	<b>VOL-L5L3</b>	<b>VOL-L6L3</b>	
	5 m	PU:12 ea/ca.	MOQ: 12 ea	<b>VOL-L5L5</b>	<b>VOL-L6L5</b>	
	6 m	PU:12 ea/ca.	MOQ: 12 ea	<b>VOL-L5L6</b>	<b>VOL-L6L6</b>	
	8 m	PU:12 ea/ca.	MOQ: 12 ea	<b>VOL-L5L8</b>	<b>VOL-L6L8</b>	
	<b>VF-45 to MT-RJ Patch Cords</b> 	1 m	PU:12 ea/ca.	MOQ: 12 ea	<b>VOL-M5RL1</b>	<b>VOL-M6RL1</b>
		1,5 m	PU:12 ea/ca.	MOQ: 12 ea	<b>VOL-M5RL1.5</b>	<b>VOL-M6RL1.5</b>
2 m		PU:12 ea/ca.	MOQ: 12 ea	<b>VOL-M5RL2</b>	<b>VOL-M6RL2</b>	
3 m		PU:12 ea/ca.	MOQ: 12 ea	<b>VOL-M5RL3</b>	<b>VOL-M6RL3</b>	
5 m		PU:12 ea/ca.	MOQ: 12 ea	<b>VOL-M5RL5</b>	<b>VOL-M6RL5</b>	
6 m		PU:12 ea/ca.	MOQ: 12 ea	<b>VOL-M5RL6</b>	<b>VOL-M6RL6</b>	
8 m		PU:12 ea/ca.	MOQ: 12 ea	<b>VOL-M5RL8</b>	<b>VOL-M6RL8</b>	
10 m		PU:12 ea/ca.	MOQ: 12 ea	<b>VOL-M5L10.0</b>	<b>VOL-M6L10.0</b>	
15 m		PU:12 ea/ca.	MOQ: 12 ea	<b>VOL-M5RL15</b>	-	
30 m	PU: 1 ea/ca.	MOQ: 1 ea	<b>VOL-M5RL30</b>	-		

**3M, Volition and VF-45 are trademarks of 3M. Quante is a trademark of Quante AG.**

### Important Notice

3M does not accept responsibility or liability, direct or consequential arising from reliance upon any information provided and the user should determine the suitability of the products for their intended use. Nothing in this statement will be deemed to exclude or restrict 3M's liability for death or personal injury arising from its negligence. All questions of liability relating to 3M products are governed by the seller's terms of sale subject where applicable to the prevailing law.

If any goods supplied or processed by or on behalf of 3M prove on inspection to be defective in material or workmanship, 3M will (at its option) replace the same or refund to the Buyer the price of the goods or services. Except as set out above, all warranties and conditions, whether express or implied, statutory or otherwise are excluded to the fullest extent permissible at law.



### Quante AG

#### 3M Telecommunications

Uellendahler Str. 353 · 42109 Wuppertal / Germany

Tel.: ++49 (0)202/ 292 - 0

Fax: ++49 (0)202/ 292 - 2893

### 3M Quante Telecommunications Ltd.

Snailwell Business Park

Fordham Road · Snailwell · Cambridgeshire CB8 7NY/UK

Tel.: ++44 (0)1638/ 721333

Fax: ++44 (0)1638/ 720900