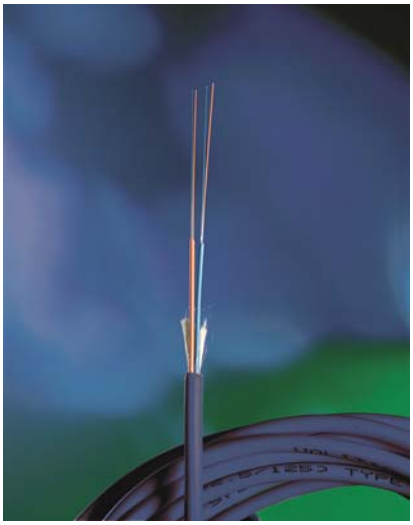
Datasheet

3M™ Volition™ Indoor Fiber Optic Cable – Tight Buffer



Volition Network Solution from 3M includes horizontal and backbone cable with OM1, OM2, OM3 and OM4 multimode and 9/125um singlemode fiber as part of the system.
The horizontal cable provides the physical link between the fiber connector patch panel in the floor distribute and the fiber connector in the outlet. Volition Indoor Tight Buffer cable is available from 1 to 72 cores format.

Each fiber is tight coated to a 900 micron diameter, with a durable, protective material and the coating(tight buffer material).Cables are available and the cable jacket can be LSOH or PVC.

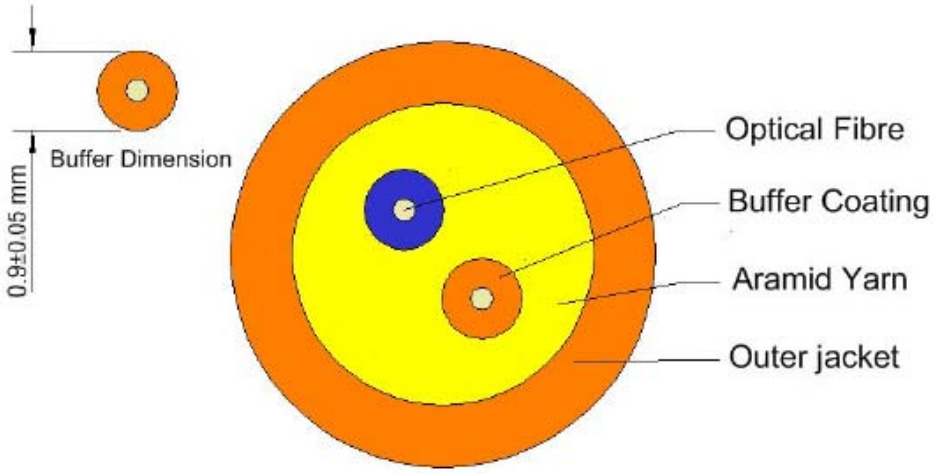
3M Fiber Specification for Indoor Tight Buffer Cable

62.5/125 OM1 Multimode	Attenuation	Bandwidth	Index of Refraction
	≤3.5dB/km@850nm	>200MHz-km@850nm	1.496
	≤1.5dB/km@1300nm	>600MHz-km@1300nm	1.491
50/125 OM2 Multimode	Attenuation	Bandwidth	Index of Refraction
	≤3.5dB/km@850nm	>500MHz-km@850nm	1.482
	≤1.5dB/km@1300nm	>500MHz-km@1300nm	1.477
50/125 OM3 Multimode	Attenuation	Bandwidth	Index of Refraction
	≤3.5dB/km@850nm	>2000MHz-km@850nm Laser	1.482
	≤1.5dB/km@1300nm	>500MHz-km@1300nm	1.477
50/125 OM4 Multimode	Attenuation	Bandwidth	Index of Refraction
	≤3.5dB/km@850nm	>4700MHz-km@850nm Laser	1.482
	≤1.5dB/km@1300nm	>500MHz-km@1300nm	1.477
9/125 Single Mode	Attenuation		Index of Refraction
	≤0.7dB/km@1310nm		1.467
	≤0.7dB/km@1550nm		1.468

Features and Benefits

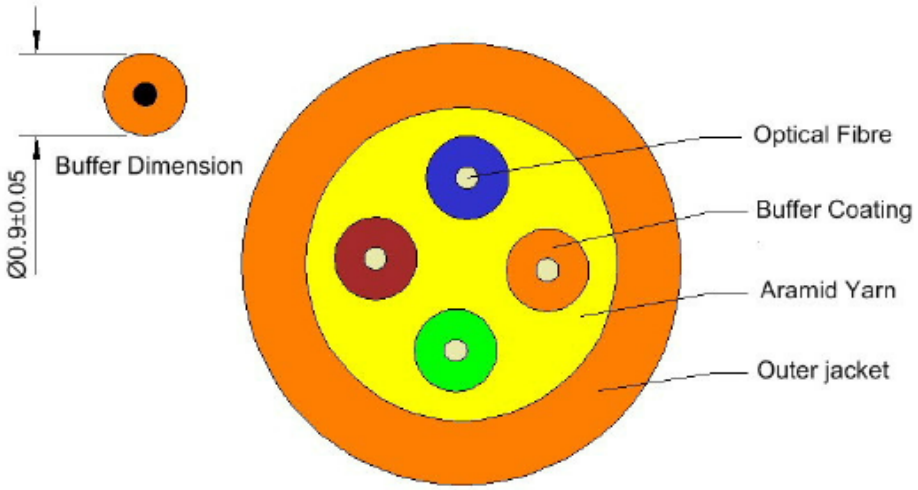
Features	Benefits
• Small cable diameter	• Minimizes weight and optimizes cable installation
• Available in SM,OM1, OM2, OM3, OM4 and SM	• Complete range of cables
• Produced to industry specification	• Ensures system compatibility and interoperability

Cable specification for 2 Fibers Cable



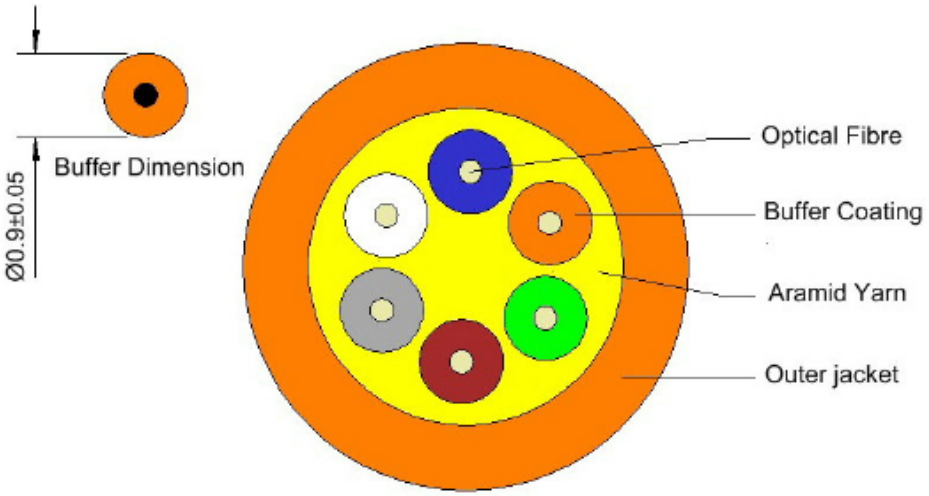
Technical Parameters					
Parameter		**Units**	**Value / Details**		
Fibre Count			2		
Cable Type			PVC Riser	PVC Plenum	LSZH
Buffer & Sheath Colours			See Table-1, 2 relevant colour		
Buffer Diameter		mm	0.9 ± 0.05		
Cable Diameter		mm	4.8 ± 0.2		
Outer Sheath Radial Thickness		mm	0.7		
Approx. Cable Weight		Kg/km	17	19	18
Bending Radius	Dynamic		≥ 20 x Cable Diameter		
	Static		≥ 10 x Cable Diameter		
Tensile Strength	Installation	N	660	440	660
	Operation	N	198	132	198
Crush Resistance		N/10cm	1000		
Operational Temperature		°C	-20 to +70	0 to +70	-20 to +70
Installation Temperature		°C	-10 to +60	0 to +60	0 to +60
Storage Temperature		°C	-40 to +70	-40 to +70	-40 to +70
Drum Length		m	Up to 3000		

Cable specification for 4 Fibers Cable



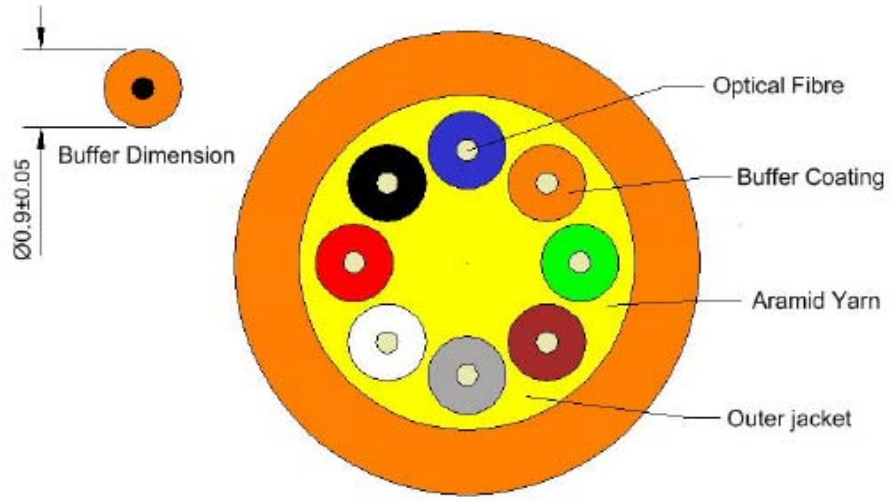
Technical Parameters					
Parameter		**Units**	**Value / Details**		
Fibre Count			4		
Cable Type			PVC Riser	PVC Plenum	LSZH
Buffer & Sheath Colours			See Table-1, 2 relevant colour		
Buffer Diameter		mm	0.9 ± 0.05		
Cable Diameter		mm	4.8±0.2		
Outer Sheath Radial Thickness		mm	0.7		
Approx. Cable Weight		Kg/km	19	21	20
Bending Radius	Dynamic		≥ 20 x Cable Diameter		
	Static		≥ 10 x Cable Diameter		
Tensile Strength	Installation	N	660	440	660
	Operation	N	198	132	198
Crush Resistance		N/10cm	1000		
Operational Temperature		^{o}C	-20 to +70	0 to +70	-20 to +70
Installation Temperature		^{o}C	-10 to +60	0 to +60	0 to +60
Storage Temperature		^{o}C	-40 to +70	-40 to +70	-40 to +70
Drum Length		m	Up to 3000		

Cable specification for 6 Fibers Cable



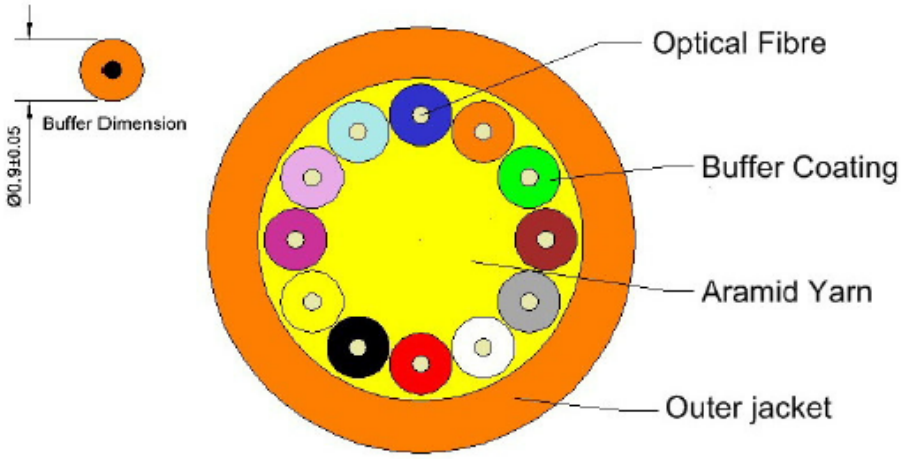
Technical Parameters					
Parameter		**Units**	**Value / Details**		
Fibre Count			6		
Cable Type			PVC Riser	PVC Plenum	LSZH
Buffer & Sheath Colours			See Table-1, 2 relevant colour		
Buffer Diameter		mm	0.9 ± 0.05		
Cable Diameter		mm	4.8±0.2		
Outer Sheath Radial Thickness		mm	0.7		
Approx. Cable Weight		Kg/km	21	23	22
Bending Radius	Dynamic		≥ 20 x Cable Diameter		
	Static		≥ 10 x Cable Diameter		
Tensile Strength	Installation	N	660	440	660
	Operation	N	198	132	198
Crush Resistance		N/10cm	1000		
Operational Temperature		°C	-20 to +70	0 to +70	-20 to +70
Installation Temperature		°C	-10 to +60	0 to +60	0 to +60
Storage Temperature		°C	-40 to +70	-40 to +70	-40 to +70
Drum Length		m	Up to 3000		

Cable specification for 8 Fibers Cable



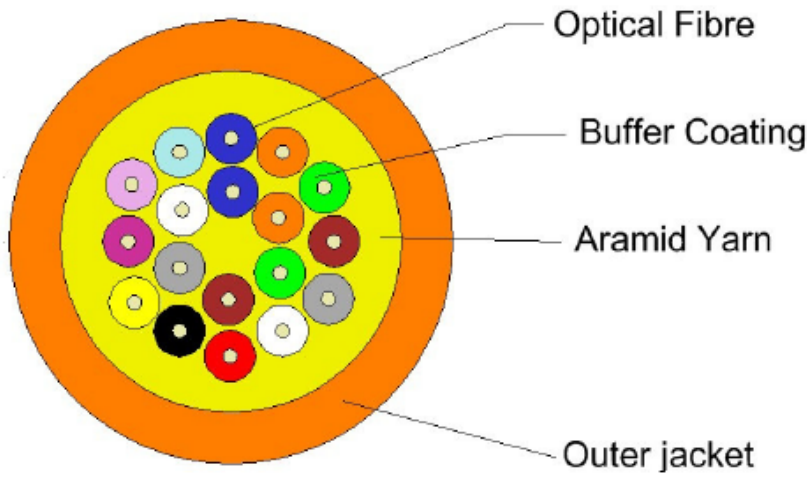
Technical Parameters					
Parameter		**Units**	**Value / Details**		
Fibre Count			8		
Cable Type			PVC Riser	PVC Plenum	LSZH
Buffer & Sheath Colours			See Table-1, 2 relevant colour		
Buffer Diameter		mm	0.9 ± 0.05		
Cable Diameter		mm	5.4±0.2		
Outer Sheath Radial Thickness		mm	0.75		
Approx. Cable Weight		Kg/km	26	28	26
Bending Radius	Dynamic		≥ 20 x Cable Diameter		
	Static		≥ 10 x Cable Diameter		
Tensile Strength	Installation	N	660	440	660
	Operation	N	198	132	198
Crush Resistance		N/10cm	1000		
Operational Temperature		^{o}C	-20 to +70	0 to +70	-20 to +70
Installation Temperature		^{o}C	-10 to +60	0 to +60	0 to +60
Storage Temperature		^{o}C	-40 to +70	-40 to +70	-40 to +70
Drum Length		m	Up to 3000		

Cable specification for 12 Fibers Cable



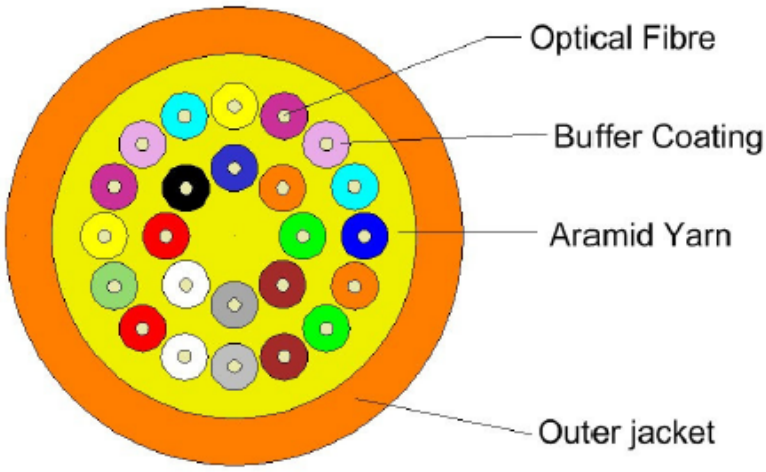
Technical Parameters					
Parameter		**Units**	**Value / Details**		
Fibre Count			12		
Cable Type			PVC Riser	PVC Plenum	LSZH
Buffer & Sheath Colours			See Table-1, 2 relevant colour		
Buffer Diameter		mm	0.9 ± 0.05		
Cable Diameter		mm	6.2±0.2		
Outer Sheath Radial Thickness		mm	0.75		
Approx. Cable Weight		Kg/km	32	35	33
Bending Radius	Dynamic		≥ 20 x Cable Diameter		
	Static		≥ 10 x Cable Diameter		
Tensile Strength	Installation	N	660	440	660
	Operation	N	198	132	198
Crush Resistance		N/10cm	1000		
Operational Temperature		^{o}C	-20 to +70	0 to +70	-20 to +70
Installation Temperature		^{o}C	-10 to +60	0 to +60	0 to +60
Storage Temperature		^{o}C	-40 to +70	-40 to +70	-40 to +70
Drum Length		m	Up to 3000		

Cable specification for 16 Fibers Cable



Technical Parameters					
Parameter		**Units**	**Value / Details**		
Fibre Count			16		
Cable Type			PVC Riser	PVC Plenum	LSZH
Buffer & Sheath Colours			See Table-3, 2 relevant colour		
Buffer Diameter		mm	0.9 ± 0.05		
Buffers per subunit			No subunit		
Subunit Diameter		mm	No subunit		
Subunit Counts			No subunit		
Cable Diameter		mm	7.8 ± 0.2		
Outer Sheath Radial Thickness		mm	0.9		
Approx. Cable Weight		Kg/km	48	51	49
Bending Radius	Dynamic		≥ 20 x Cable Diameter		
	Static		≥ 10 x Cable Diameter		
Tensile Strength	Installation	N	1320	660	1320
	Operation	N	396	198	396
Crush Resistance		N/10cm	1000		
Operational Temperature		°C	-20 to +70	0 to +70	-20 to +70
Installation Temperature		°C	-10 to +60	0 to +60	0 to +60
Storage Temperature		°C	-40 to +70	-40 to +70	-40 to +70
Drum Length		m	Up to 1000		

Cable specification for 24 Fibers Cable



Technical Parameters					
Parameter		**Units**	**Value / Details**		
Fibre Count			24		
Cable Type			PVC Riser	PVC Plenum	LSZH
Buffer & Sheath Colours			See Table-3, 2 relevant colour		
Buffer Diameter		mm	0.9 ± 0.05		
Buffers per subunit			No subunit		
Subunit Diameter		mm	No subunit		
Subunit Counts			No subunit		
Cable Diameter		mm	8.8 ± 0.2		
Outer Sheath Radial Thickness		mm	0.9		
Approx. Cable Weight		Kg/km	60	64	61
Bending Radius	Dynamic		≥ 20 x Cable Diameter		
	Static		≥ 10 x Cable Diameter		
Tensile Strength	Installation	N	1320	660	1320
	Operation	N	396	198	396
Crush Resistance		N/10cm	1000		
Operational Temperature		^{o}C	-20 to +70	0 to +70	-20 to +70
Installation Temperature		^{o}C	-10 to +60	0 to +60	0 to +60
Storage Temperature		^{o}C	-40 to +70	-40 to +70	-40 to +70
Drum Length		m	Up to 1000		

Ordering Information