Network Connectivity

Fibre LAN cables

Product catalogue 2010

Schneider Electric
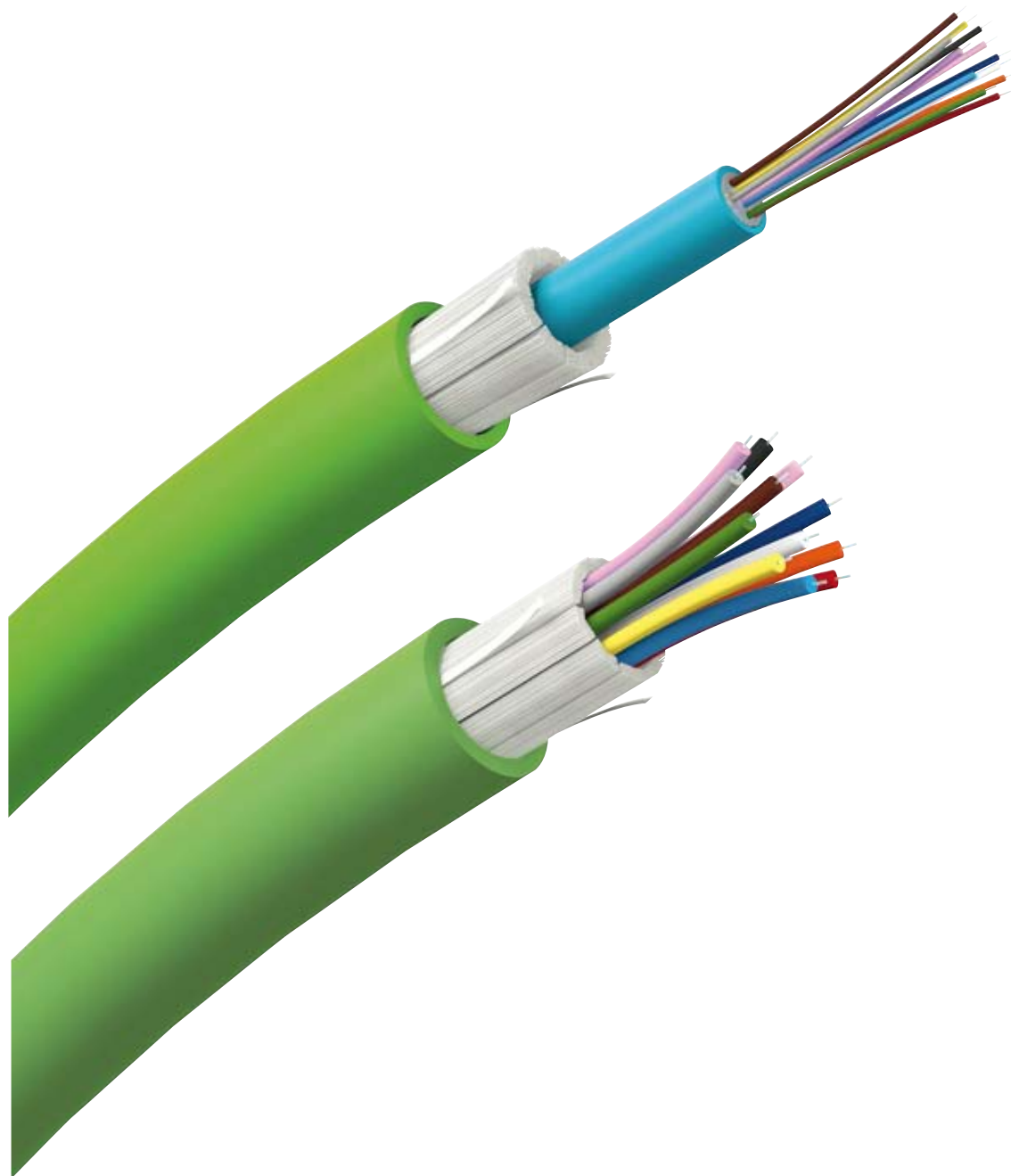
Fibre LAN cables.
Part of a total solution.

The Schneider Electric Fibre LAN cables are an important part of our total Network Connectivity solution that also includes panels, cabinets, connectors etc. All Network Connectivity products are specially designed to work perfectly together with complementary Schneider Electric products like trunking, poles, boxes and wiring devices in order to deliver true and seamless end-to-end connectivity. Our target is to provide stylish and ergonomic network connections at workplaces to make your life easier and enhance productivity.

The Fibre LAN offer covers needs for all kinds of LAN installations: Campus (between buildings), Building backbones (between technical rooms) and Distribution (from technical rooms to workstations).

Schneider Electric network connectivity

1. Cabinets

2. Panels for data, fibre optic and telecom

3. Fibre LAN backbone cables

4. Copper LAN and Fibre LAN distribution cables

5. Fibre LAN campus cables

6. Fibre data sockets in trunking

7. Fibre data sockets in posts

8. Fibre data sockets in floor boxes

Fibre optic technology offers several advantages

- Very high data rates
- Flexible, reliable networks
- Very low & constant attenuation
- Long distances (up to 40 km)
- No EMC rules
- No grounding issue
- Immune to crosstalks
- Safety in sensitive environments (no spark)

- Confidentiality
- No corrosion
- Simplified field testing
- High port density
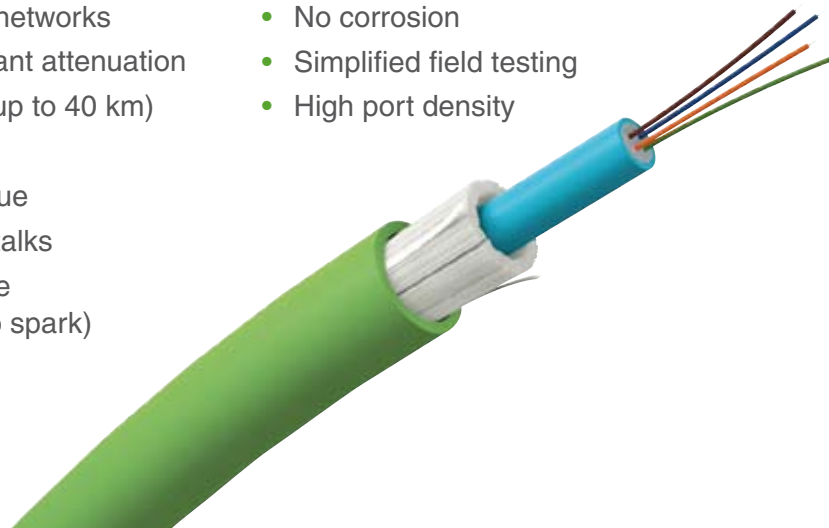
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The Fibre LAN range offers a complete product portfolio for LAN installations. Providing the best support for high-speed data networks the fibre LAN range complements our Copper LAN and LexCom offers. Optic cables, patchcords, connectors, tools and accessories are part of the Fibre LAN offer.

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The LexCom 19" fibre optic panel is one of the most installation and user-friendly panels on the market. Quick-fix, sliding function, integrated guiding panel, excellent protection and clear marking, coiling wheels and much more.

Fibre optic performances

The Schneider Electric Fibre LAN is a reliable and robust solution for high-speed data networks. The range includes both OM2 and OM3, but also OM4 and OS2 following the latest standards.

Fibre LAN performances in brief:
- Supports all kinds of network applications like 10 Gigabit/s Ethernet, Gigabit/s Ethernet, FastEthernet, Ethernet.
- Guarantees the compatibility with LAN active components.
- Compliant with international LAN optic transmission standards
- Available in multimode and single-mode, adapted to all LAN active equipments using LED, VCSEL and LASER technologies.

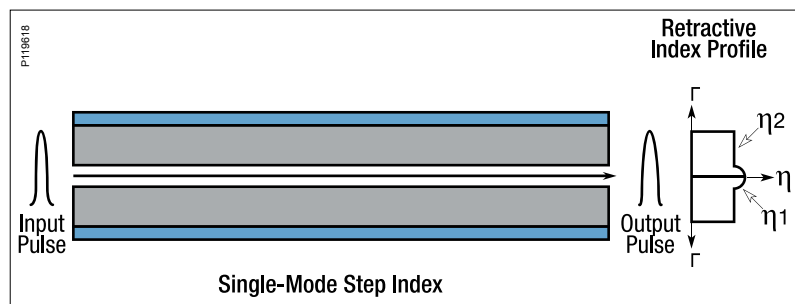## Two types of fibres: Multimode and Single-mode

Multimode (OM2, OM3, OM4)
- 3 ranges of multimode optic fibres performances: OM2 50/125, OM3 50/125 and OM4 50/125. Meeting the markets needs up to 10 Gigabit/s.
- OM4 50/125 performance. Meeting the markets needs for speeds beyond 40 Gigabit/s and 100 Gigabit/s.
- High bandwidth. Optimized to increase the maximum optic link distance at both operating wavelengths (850nm and 1300nm).
- Low attenuation. Optimized to decrease the signal attenuation at both operating wavelengths (850nm and 1300nm).
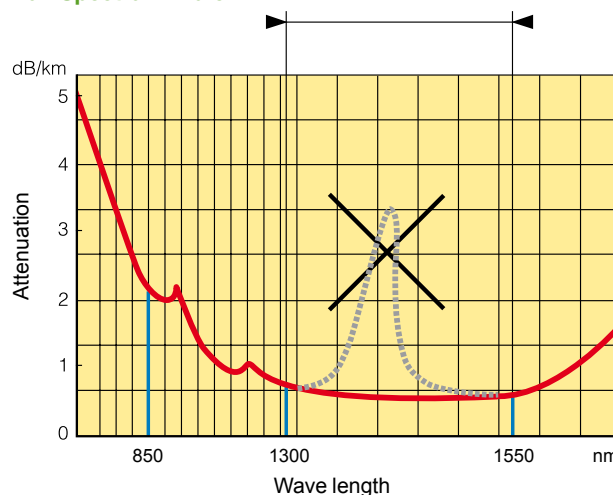

Multimode Graded Index
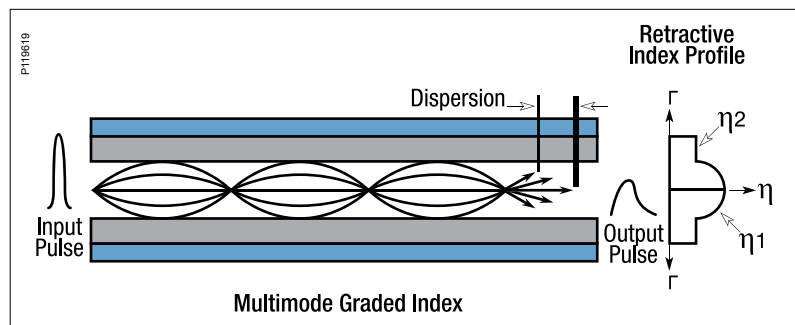
Single-mode (OS1/OS2)
- Single-mode optic fibres performances: OS1/OS2 9/125.Meeting the markets needs for all single-mode applications.
- Low Water Peak and PMD. Optimized to decrease the signal attenuation between 1260 to 1625nm allowing for multiplexing (modern optical transmission technologies like DWDM).
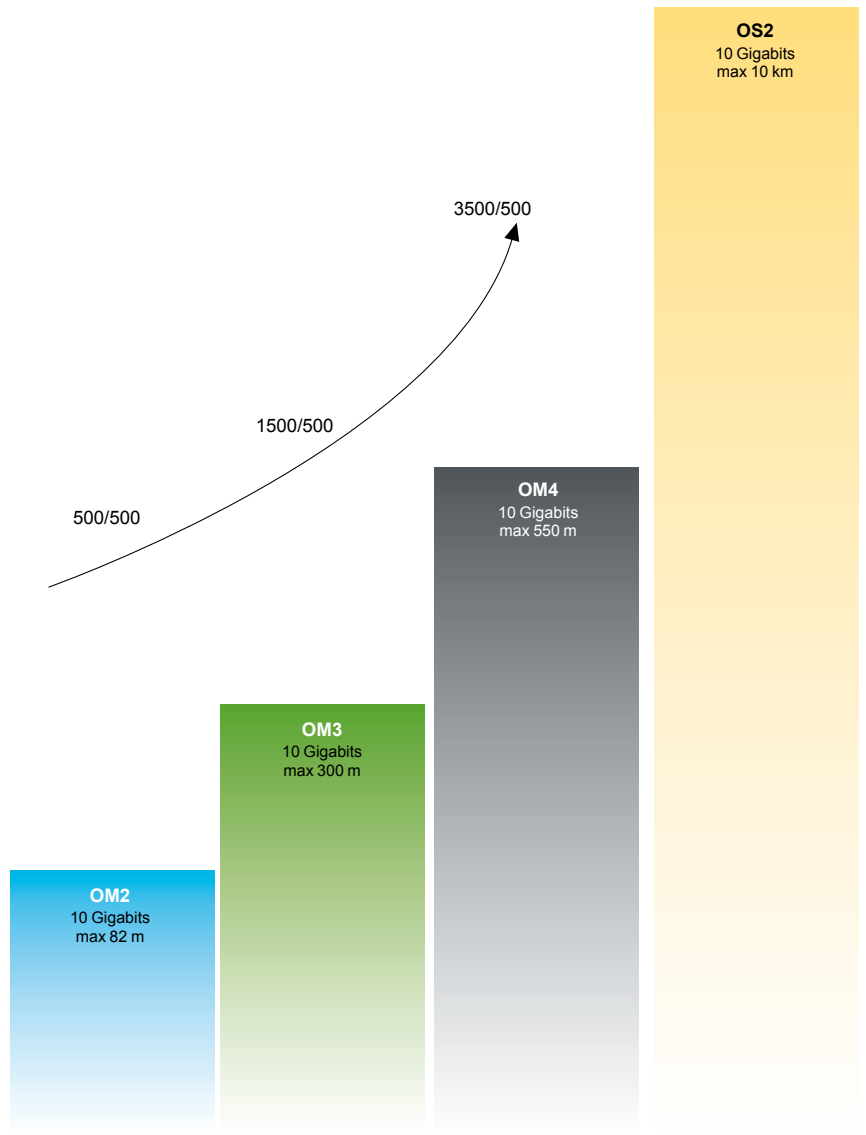

Single-Mode Step Index

Full Spectrum Fibre

4

Supports all kinds of network applications

3500/500

1500/500

500/500

OS2
10 Gigabits
max 10 km

OM4
10 Gigabits
max 550 m

OM3
10 Gigabits
max 300 m

OM2
10 Gigabits
max 82 m

| Applications	Wavelength	Multimode fibre			Single-mode fibre
		OM2 50/125 µm	OM3 50/125 µm	OM4 50/125 µm	OS2 9/125 µm
100 Gbit/s *Draft IEEE 802.3ba		-	100 m	125 m	10 km / 40 km
40 Gbit/s *Draft IEEE 802.3ba		-	100 m	125 m	10 km / 40 km
10 Gbit/s (10GBASE-SR/SW)	**VCSEL 850 nm**	82 m	300 m	550 m	-
10 Gbit/s (10GBASE-LX4)	**LASER 1300 nm**	300 m	300 m	300 m	-
10 Gbit/s (10GBASE-LRM)	**LASER WDM 1300 nm**	220 m	220 m	220 m	-
10 Gbit/s (10GBASE-LR/LW)	**LASER 1310 nm**	-	-	-	10 km
10 Gbit/s (10GBASE-ER/EW)	**LASER 1550 nm**	-	-	-	40 km
1 Gbit/s (1000BASE-SX)	**VCSEL 850 nm**	550 m	1000 m	1100 m	-
1 Gbit/s (1000BASE-LX)	**LASER 1300/1310 nm**	550 m	550 m	600 m	5 km
100 Mbit/s (100BASE-SX)	**VCSEL 850 nm**	300 m	300 m	300 m	-
100 Mbit/s (100BASE-LX)	**LASER 1300/1310 nm**	2000 m	2000 m	2000 m	>20 km

High performance in two structures

The Schneider Electric Fibre LAN range is adapted to the familiar ways of installing optic connectors and pigtails (SC, LC, ST). The range is available under 2 different structures: Tight buffered and Loose tube to be used for direct connector termination and for splicing respectively.

Loose tube

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Tight buffered

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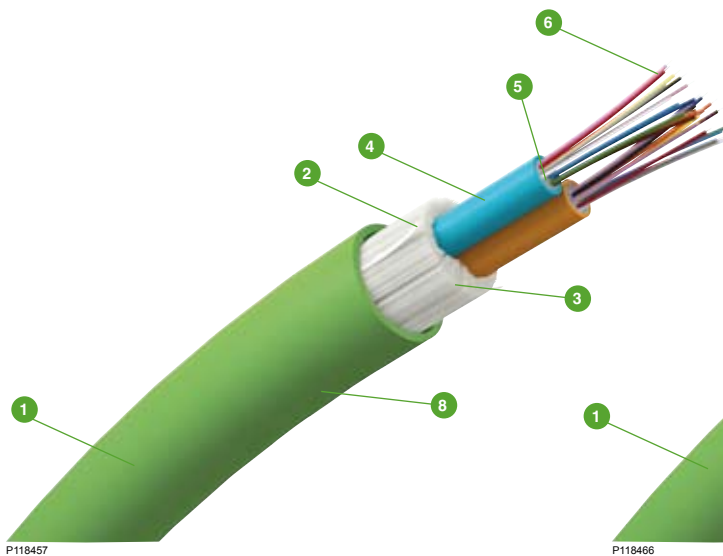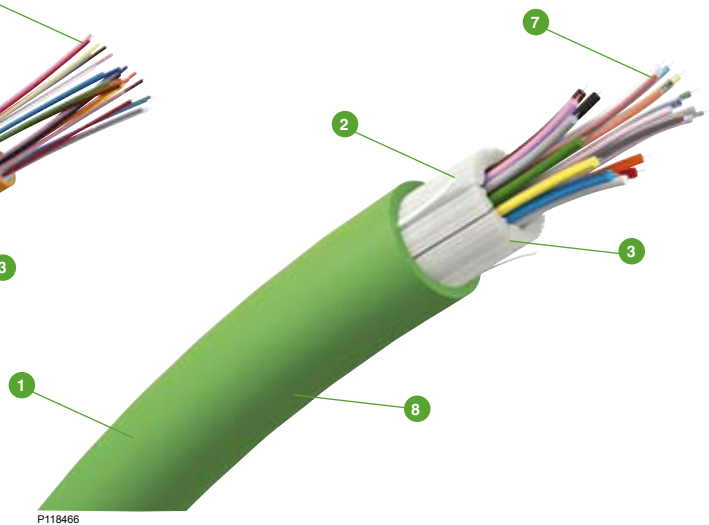
❶ Robust sheath

Tensile strength
Reinforces the tensile strength of the cable.

Robustness
High maximum pulling force and crush resistance of the cable during installation.

UV resistance
Resistance to UV degregation.

Colours
Distinct colours to identify strategic cables and prevent mistakenly cutting the cable.

❷ Water swellable elements

Provide a protective barrier against longitudinally water ingression while guaranteeing cable perfomance.

❸ 100% glass yarns

Reinforcing the tensile strength of the cable. Acting as rodent retardant.

❹ Innovative design

Innovative design of dual loose tube structure to help simplify the installation.

❺ Gel

Provides a protective barrier against longitudinall water ingression while guaranteeing cable perfomance.

Coating

❻ 250 μm coating

❼ 900 μm coating

❽ Compact for improved bending radius

The compact design of the cables gives several benefits:
• Reduced bending radii: 10 x diameter for Tight buffered and 60 mm for Loose tube cables
• Reduced diameter and increased installation space

Packaging

Packaging adapted to our customers requests (convenient small sized drums or cut to length).

Colour code

Fibre n°1 to n°12 according to the following colours.

1	Blue	
2	Orange	
3	Green	
4	Brown	
5	Grey	
6	White	
7	Red	
8	Black	
9	Yellow	
10	Violet	
11	Rose	
12	Aqua	

Fibre n°13 to n°24: idem + transparent

Environment-friendly

LSZH

LSZH (Low Smoke Zero Halogen) sheath according to test methods IEC 61034 (smoke density), IEC 60754-1 (gas toxicity), IEC 60754-2 (gas corrosiveness) for Tight buffered and Loose tube cables.

Flame retardant

Flame retardant (self extinguishing) according to IEC 60332-1 for Tight buffered and Loose tube cables.

Fire retardant

Fire retardant (no fire propagation along the cable) according to IEC 60332-3C for Tight buffered cables.

RoHS and REACH

RoHS compliance according to UE directive.
REACH compliance.
PeP available for the range.

Fibre LAN cables

FL-C Loose tube Fibre optic cables

Specifications
- Compact and universal cables suitable for indoor and specific outdoor installations:
  - Low Smoke Zero Halogen (LSZH) green coloured external sheath
  - UV resistant
  - dielectric
  - high tensile strength
  - rodent retardant
  - longitudinally watertight
- Loose tube gel-filled cable construction with 250 µm coating available in unitube structure for 4, 6, 8 and 12 fibres and bitube structure for 24 fibres.
- Flame retardant according to IEC 60 332-1, EN 50 265 2.1, NFC 32 070 2.1 (Category C2)

Performances
- OM2 50/125 compliant with ITU G.651, IEC 60793-2-10 Type A1a.1 and ISO/IEC 11801 Ed.2.1 OM2.
- OM3 50/125 compliant with ITU G.651, IEC 60793-2-10 Type A1a.2 and ISO/IEC 11801 Ed.2.1 OM3.
- OM4 50/125 compliant with IEC 60793-2-10 Type A1a.3, ISO/IEC 11801 Ed.2.1 and ISO/IEC 11801:2002 Amd.2 OM4.
- OS1/OS2 9/125 compliant with ITU G.652.D, IEC 60793-2-50 Type B1.3, ISO IEC 11801 Ed.2.1 and ISO/IEC 11801:2002 Amd.2 OS2.
- Cable mechanical characteristics tested according to IEC 60794-1

Use
- High data rate fibre optic backbones for building and campus
- Suitable for splicing termination: installation with pigtails by fusion or mechanical splices.
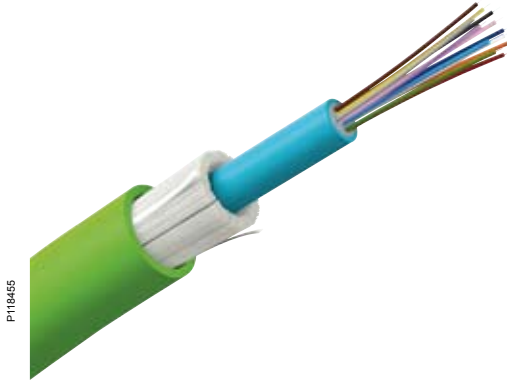
OM2 50/125 µm		
Type	**Length**	**Ref. No**
Optic cable Indoor/outdoor OM2 50/125 µm multimode fibres, green overall jacket.		
OM2 50/125, Loose tube, 4 fibres	2100 m	VDIC52204L
	Cut to length	VDIC52204LM
OM2 50/125, Loose tube, 6 fibres	525 m	VDIC42206L
	2100 m	VDIC52206L
	Cut to length	VDIC52206LM
OM2 50/125, Loose tube, 8 fibres	2100 m	VDIC52208L
	Cut to length	VDIC52208LM
OM2 50/125, Loose tube, 12 fibres	525 m	VDIC42212L
	2100 m	VDIC52212L
	Cut to length	VDIC52212LM
OM2 50/125, Loose tube, 24 fibres	525 m	VDIC42224L
	2100 m	VDIC52224L
	Cut to length	VDIC52224LM

Fibre LAN cables

OM3 50/125 µm

Type	Length	Ref. No
Optic cable Indoor/outdoor OM3 50/125 µm multimode fibres, green overall jacket.		
OM3 50/125, Loose tube, 6 fibres	525 m	VDIC42306L
	2100 m	VDIC52306L
	Cut to length	VDIC52306LM
OM3 50/125, Loose tube, 12 fibres	525 m	VDIC42312L
	2100 m	VDIC52312L
	Cut to length	VDIC52312LM
OM3 50/125, Loose tube, 24 fibres	525 m	VDIC42324L
	2100 m	VDIC52324L
	Cut to length	VDIC52324LM

OM4 50/125 µm

Type	Length	Ref. No
Optic cable indoor/outdoor, OM4 50/125 µm multimode fibres, green overall jacket.		
OM4 50/125, Loose tube, 6 fibres	2100 m	VDIC52406L
	Cut to length	VDIC52406LM
OM4 50/125, Loose tube, 12 fibres	2100 m	VDIC52412L
	Cut to length	VDIC52412LM
OM4 50/125, Loose tube, 24 fibres	2100 m	VDIC52424L
	Cut to length	VDIC52424LM

OS1/OS2 9/125 µm

Type	Length	Ref. No
Optic cable indoor/outdoor, OS1/OS2 9/125 µm single-mode fibres, green overall jacket.		
OS1/OS2 9/125, Loose tube, 4 fibres	2100 m	VDIC52504L
	Cut to length	VDIC52504LM
OS1/OS2 9/125, Loose tube, 6 fibres	525 m	VDIC42506L
	2100 m	VDIC52506L
	Cut to length	VDIC52506LM
OS1/OS2 9/125, Loose tube, 8 fibres	2100 m	VDIC52508L
	Cut to length	VDIC52508LM
OS1/0S2 9/125, Loose tube, 12 fibres	525 m	VDIC42512L
	2100 m	VDIC52512L
	Cut to length	VDIC52512LM
OS1/0S2 9/125, Loose tube, 24 fibres	525 m	VDIC42524L
	2100 m	VDIC52524L
	Cut to length	VDIC52524LM

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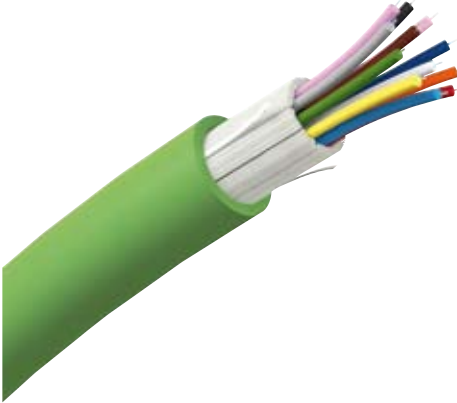
FL-C Tight buffered Fibre optic cables

Specifications
■ Compact and universal cables suitable for indoor and specific outdoor installations:
  – Low Smoke Zero Halogen (LSZH) green coloured external sheath
  – UV resistant
  – dielectric
  – high tensile strength
  – rodent retardant
  – longitudinally watertight
■ Tight buffered gel-free cable construction with 900 µm coating.
■ Flame retardant according to IEC 60 332-1, EN 50 265 2.1, NFC 32 070 2.1 (Category C2). Fire retardant according to IEC 60 332-3 C, EN 50 266, NFC 32 070 2.2 (Category C1)

Performances
■ OM2 50/125 compliant with ITU G.651, IEC 60793-2-10 Type A1a.1 and ISO/IEC 11801 Ed.2.1 OM2.
■ OM3 50/125 compliant with ITU G.651, IEC 60793-2-10 Type A1a.2 and ISO/IEC 11801 Ed.2.1 OM3.
■ OM4 50/125 compliant with IEC 60793-2-10 Type A1a.3, ISO/IEC 11801 Ed.2.1 and ISO/IEC 11801:2002 Amd.2 OM4.
■ OS1/OS2 9/125 compliant with ITU G.652.D, IEC 60793-2-50 Type B1.3, ISO IEC 11801 Ed.2.1 and ISO/IEC 11801:2002 Amd.2 OS2.
■ Cable mechanical characteristics tested according to IEC 60794-1

Use
■ High data rate fibre optic backbones for building and campus
■ Horizontal cable (FTTD Fibre to the desk) with the 2 fibres
■ Suitable for direct termination: installation with connectors (prefibred, cold-cured and/or heat-cured types).

OM2 50/125 µm		
Type	**Length**	**Ref. No**
Optic cable Indoor/outdoor OM2 50/125 µm multimode fibres, green overall jacket.		
OM2 50/125, Tight buffered, 4 fibres	2100 m	VDIC52204T
	Cut to length	VDIC52204TM
OM2 50/125, Tight buffered, 6 fibres	525 m	VDIC42206T
	2100 m	VDIC52206T
	Cut to length	VDIC52206TM
OM2 50/125, Tight buffered, 8 fibres	2100 m	VDIC52208T
	Cut to length	VDIC52208TM
OM2 50/125, Tight buffered, 12 fibres	525 m	VDIC42212T
	2100 m	VDIC52212T
	Cut to length	VDIC52212TM
OM2 50/125, Tight buffered, 24 fibres	525 m	VDIC42224T
	2100 m	VDIC52224T
	Cut to length	VDIC52224TM

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Fibre LAN cables

OM3 50/125 µm

Type	Length	Ref. No
Optic cable Indoor/outdoor OM3 50/125 µm multimode fibres, green overall jacket.		
OM3 50/125, Tight buffered, 2 fibres	525 m	VDIC42302T
	2100 m	VDIC52302T
	Cut to length	VDIC52302TM
OM3 50/125, Tight buffered, 6 fibres	525 m	VDIC42306T
	2100 m	VDIC52306T
	Cut to length	VDIC52306TM
OM3 50/125, Tight buffered, 12 fibres	525 m	VDIC42312T
	2100 m	VDIC52312T
	Cut to length	VDIC52312TM
OM3 50/125, Tight buffered, 24 fibres	525 m	VDIC42324T
	2100 m	VDIC52324T
	Cut to length	VDIC52324TM

OM4 50/125 µm

Type	Length	Ref. No
Optic cable indoor/outdoor, OM4 50/125 µm multimode fibres, green overall jacket.		
OM4 50/125, Tight buffered, 6 fibres	2100 m	VDIC52406T
	Cut to length	VDIC52406TM
OM4 50/125, Tight buffered, 12 fibres	2100 m	VDIC52412T
	Cut to length	VDIC52412TM
OM4 50/125, Tight buffered, 24 fibres	2100 m	VDIC52424T
	Cut to length	VDIC52424TM

OS1/OS2 9/125 µm

Type	Length	Ref. No
Optic cable indoor/outdoor, OS1/OS2 9/125 µm single-mode fibres, green overall jacket.		
OS1/OS2 9/125, Tight buffered, 6 fibres	525 m	VDIC42506T
	2100 m	VDIC52506T
	Cut to length	VDIC52506TM
OS1/OS2 9/125, Tight buffered, 12 fibres	525 m	VDIC42512T
	2100 m	VDIC52512T
	Cut to length	VDIC52512TM
OS1/OS2 9/125, Tight buffered, 24 fibres	525 m	VDIC42524T
	2100 m	VDIC52524T
	Cut to length	VDIC52524TM

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