

Fibre Optic Cabling

A fibre optic cable is made up of thin strands of glass that carry light down them to transmit information. You can get hundreds of fibres into one cable enabling vast amounts of data to be transmitted.

Fibre	Type	Micron Size	Maximum Distance	Maximum Distance
OM1	Multimode	62.5/125	1 Gbit	300m
OM2	Multimode	50/125	1 Gbit	500m
OM3	Multimode (Optimised)	50/125+	10 Gbit	300m
			40 Gbit	100m
			100 Gbit	100m
OM4	Multimode (Optimised)	50/125+	10 Gbit	550m
			40 Gbit	150m
			100 Gbit	150m
OS2	Singlemode	9/125	10 Gbit	40km

Popular Fibre Constructions

Loose Tube

Contains water resistant gel around the fibres to protect it from stresses caused by the environment (moisture and temperature). The gel also acts as a water blocker to keep it away from the fibre. Best for use in external environments with flat runs.

Multi Loose Tube (MLT)

Loose tube construction with multiple tubes housing the fibres. Predominantly used for higher core counts.

Tight Buffered

Typically contains an aramid yarn around the fibres to secure them and keep them from moving when installed vertically. Best for use in internal environments and for vertical risers.

CSTA (Corrugated Steel Tape Armoured)

Loose tube construction with an additional steel tape armouring around the fibres. Suitable for ducts it provides additional protection against rodents.

SWA (Steel Wire Armoured)

Loose tube construction with water blocked e-glass elements and overall steel wire armouring. Suitable for ducts and direct burial (with PE sheath) it provides superior protection against rodents.

Terminations



FC

Predominantly for use with singlemode fibre, has a threaded coupling nut for secure connection. 2.5mm ferrule. Rarely used now. Only available as simplex.



LC

Available in simplex and duplex formats. Small form factor of an SC connector for high density connections. 1.25mm ferrule.



MPO

Specialised high density connector for use with ribbon cables. Mainly used with pre-terminated assemblies. MPO stands for 'Multi Fibre Push On'.



MTP

Essentially it is an MPO connector, but MTP is a registered trademark from US-Conec. A large number of manufacturers are now using the MTP Connector as it has improved optical and mechanical performance compared to generic MPO connectors.



SC

Available in simplex and duplex formats. Push/Pull mechanism for fast and reliable connection. 2.5mm ferrule.



ST

ST connector has a quick release bayonet style body. 2.5mm ferrule. Only available as simplex.