

1. OPTICAL FIBRE CABLE (OFC)

Sl. No.	Parameter	Specification Requirement	Compliance (Yes/No)
1	Type of Cable	6 core Single Mode, Armoured, Stranded Loose-tube, Gel-free bend insensitive Fiber Optic cable suitable for use in direct burial, outdoor ducts and backbone cabling	
2	Standard	EN 50173; ISO/IE 11801 - YES ANSI/TIA-568-C.3 - YES	
3	Fiber	Single mode	
4	Fiber Size	9/125/250 micron	
5	No. of Core	6 Core	
6	Fiber Identification	Standard	
7	Fiber Identification	Each fiber strand / tube must be color coded in the sequence as per TIA 598 standard: Blue, Orange, Green, Brown, Slate, White etc.	
8	Attenuation	@ 1310nm \leq 0.34 dB/Km MAX	
		@ 1385nm \leq 0.31 dB/Km	
		@1490nm \leq 0.28 dB/km	
		@1550nm \leq 0.22 dB/Km MAX	
9	Tube colour	Standard	
10	Loose Tube Material	PBTP Loose tube with dry water blocking	
11	Water Blocking in tubes	Tubes shall have jelly for water ingress protection	
12	Central Strength member	Di-electric type FRP rod or equivalent	
13	Peripheral Strength member	Two steel wire /water swellable polyester tape wrapping tube	
14	Ripcord	Polyester based yarn below armour tape for easy ripping.	
15	Armouring	Corrugated Steel Tape Armour (ECCS tape) \geq 0.125 mm	
16	Jacket Material/Sheath	UV resistance and stabilized Polyethylene	
17	Sheath Colour	Black	
18	Tensile Strength	2700 N or better	
19	Crush resistance	44N/mm or better	
20	Impact strength	Min 2.8 N-M or better	
21	Flex as per IEC 60794-1 E6	35 cycles/Standard	
22	Cable Diameter	10.0 - 13.0 mm	
23	Cable weight Kg/Km	100 - 120 Kg/km	
24	Operating Temperature	0 - 60 °C /Standard	
25	Model	Vendor to specify	
26	Make	Molex / Comscope /Panduit / Belden / Lapp/Equivalent	

2. SPECIFICATION OF CAT-6 STP CABLE

Sl. No.	Parameter	Specification Requirement	Compliance (Yes/No)
1	Type	Shielded Twisted Pair, Category6, TIA/EIA568-B.2-1-GrayColor	
2	Conductors	23 AWG solid bare copper	
3	Pair	4 Pairs Twisted Together	
4	Insulation	High Density Polyethylene Solid/ Polyolefin	
5	Shielding	Aluminium Foil – Polyester Tape with TC drain wire	
6	Jacket	LSZH, IEC60332-3-22	
7	Jacket Material	PVC -Polyvinylchloride	
8	Nom. Diameter	7.5 mm	
5	Shielded	Aluminum/Polyester foil tinned copper braided	
6	Pulling Force	11.5 Kgs or higher	
7	Bending Radius	Less than 8 X Cable Diameter /Standard	
8	Delay Skew	<45ns	
9	Conductor Resistance	≤ 9.38 Ω/100m	
10	Mutual Capacitance	5.6nFMAX/100m	
11	Resistance unbalance	5% Max	
12	Capacitance unbalance	330pF/100m	
13	Maximum Supported Speed	10 Gbps	
14	Bandwidth	250 MHz	
15	Ethernet Standard	10GBase-T	
16	Propagation Delay	536ns/100m,max@250MHz	
17	RoHS	RoHS Compliant	
18	Flame test method	LSZH	
19	Pair Separator	YES	
20	Approvals	(a)UL Listed/UL Verified	
21		(b)ETL verified to TIA/EIACat6	
22	Operating temperature	-20°C to+70°C	
23	Model	Vendor to specify	
24	Make	Molex / Comscope /Panduit / Belden / Lapp / Equivalent	