

## Cable Construction

### Cable cross-section



### Cable structure and parameter

No. of Fibers	Max Fiber Per tube	No. of Loose Tubes	Cable Outer Sheath Thickness
			mm
4	4	1	1.5 ± 0.2
8	8	1	1.5 ± 0.2
12	12	1	1.5 ± 0.2
24	12	2	1.5 ± 0.2
36	12	3	1.5 ± 0.2
48	12	4	1.5 ± 0.2
96	12	8	1.5 ± 0.2
144	12/24	12/6	1.5 ± 0.2
192	12/24	16/8	1.5 ± 0.2
288	12/24	24/12	1.5 ± 0.2

### Cable Design

- Fiber:** The Cable can be based on Multimode OM1, OM2, OM3 or Single Mode Fiber as per ITU-T G.652.D, G.657, G.655, or Combination specifications (Hybrid Cable).
- CSM:** Fiber Reinforced Plastic is used as Central Strength Member.
- Loose Tube:** Polybutylene Terephthalate (PBT).
- Ingress Protection:** Dry Core design with the help of Water Swellable Tapes & Yarns.
- Filling Compound:** Loose Tube is filled with Thixotropic Jelly Filled, the filling compound gives protection to the fiber in case of strains etc.
- Stranding:** The Loose Buffer Tubes are stranded around the Central Strength Member through SZ Stranding which is a reverse lay method i.e. the direction of stranding reverses after a predetermined no. of revolutions, at the reverse points, the elements are parallel to the axis of cable, a binding yarn is wound around the elements to retain and keep them in proper position.
- Peripheral Strength:** Glass Yarns will be used to give extra strength to the cable (if required).
- Outer Sheath:** HFFR / LSZH.

Further details of the fiber material and mechanical/environmental characteristics are also available in the Catalogue.

### Fiber Color Code is as per given specification

No.	1	2	3	4	5	6	7	8	9	10	11	12
Color	Blue	Orange	Green	Brown	Grey	White	Red	Black	Yellow	Violet	Pink	Aqua

If 24 Fiber tube required, ring marked fibers will be used.

### Color Code for Loose Tube (LT) is as per given specification

No.	1	2	3	4	5	6	7	8	9	10	11	12
Color	Blue	Orange	Green	Brown	Grey	White	Red	Black	Yellow	Violet	Pink	Aqua

Any other specific color coding can also be used as per customer requirement.

### Printing / Marking

Sheath Marking as below or as required.

ATC – YEAR – XXXXX – XXX FIBER XX INDOOR OFC – XXXX	
SM INDOOR OFC	: Single Mode Indoor Type Optical Fiber Cable
XXXX	: Length of Marking (* The Marking is Printed every 1 meter)
XXX	: Number of Fibers
XXXXX	: Customer Name

The color of marking is **White / Yellow**.

The both cable ends are sealed with heat shrinkable end caps to prevent water ingress.

