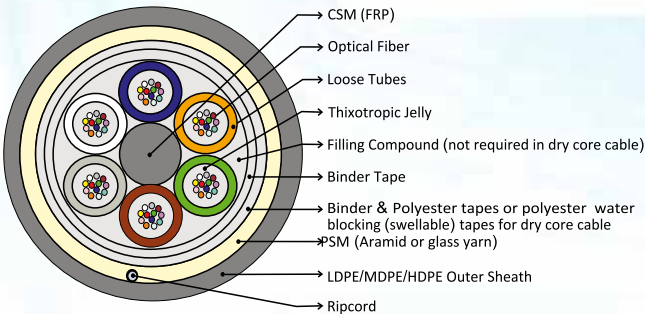


# Duct Mini (Non-Metallic) Optical Fiber Cable

## 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, G657, G655, or Combination specifications (Hybrid Cable).
- CSM:

Fiber Reinforced Plastic is used as Central Strength Member.
- Loose Tube:

Polybutylene Terephthalate (PBT) Loose Tube is filled with Thixotropic Jelly, the filling compound gives protection to the fiber in case of strains etc.
- Dry Core:

A combination of water swell able tapes and yarns will be used to stop the ingress of water inside the cable.
- 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.
- Outer Sheath:

HDPE.
- Application:

Inter Office, Data, Voice & video transmission, Security & control systems having light weight & flexible characteristics for inside duct installation.

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 - XX FIBER XX Mini DUCT OFC - XXXX |                                                              |
|-------------------------------------------------------|--------------------------------------------------------------|
| SM M-DUCT OFC                                         | : Single Mode MINI Duct 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.

