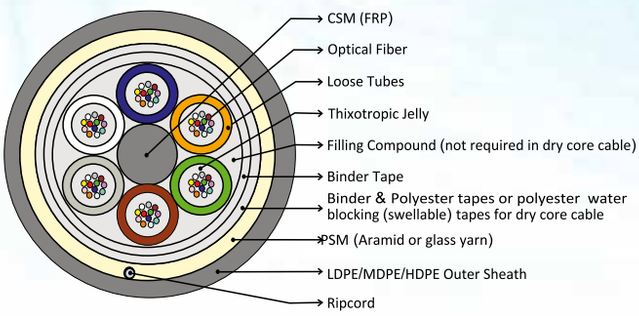
Cable Construction

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).

Filling Compound: Loose Tube is filled with Thixotropic Jelly, 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.

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.

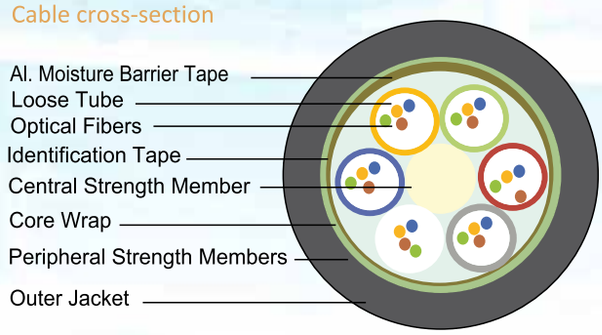
ATC - YEAR - XXXXX - XX FIBER XX DUCT OFC - XXXX	
SM DUCT OFC	: Single Mode Duct Type Optical Fiber Cable
XXXX	: Length of Marking (* The Marking is Printed every 1 meter)
XXX	: Number of Fibers
XXXXX	: Customer Name

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

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

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).
Moisture barrier:	Aluminum Moisture Barrier Tape.
Flooding Compound:	Interstices all filled with gel to protect ingress of water (Not required in dry cable).
Filling Compound:	Loose Tube is filled with Thixotropic Jelly, 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.
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.

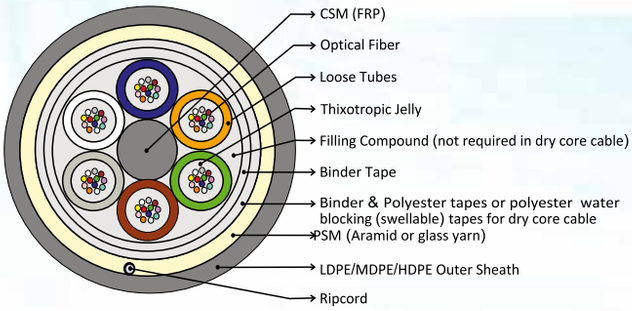
ATC - YEAR - XXXXX - XX FIBER XX DUCT (Metallic) OFC - XXXX	
SM/MM DUCT Metallic OFC	: Multi Mode or Single Mode Duct Metallic Type Optical Fiber Cable
XXXX	: Length of Marking (* The Marking is Printed every 1 meter)
XXX	: Number of Fibers
XXXXX	: Customer Name

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

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

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 yarms 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.

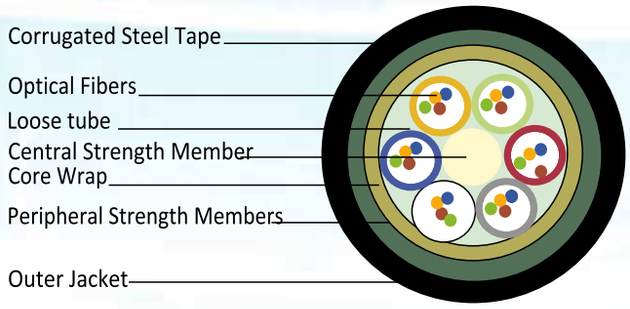
ATC - YEAR - XXXXX - XX FIBER XX Mini DUCT OFC - XXXX	
SM M-DUCT OFC	: Single Mode MINI Duct Type Optical Fiber Cable
XXXX	: Length of Marking (* The Marking is Printed every 1 meter)
XXX	: Number of Fibers
XXXXX	: Customer Name

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

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

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

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).
Flooding Compound:	Jelly filled Construction with core wrap or water swell able Tape to stop ingress of water.
Armoring:	Corrugated Steel Tapes helps to give cable ruggedness and rodent protection with direct buried Installation.
Filling Compound:	Loose Tube is filled with Thixotropic Jelly, 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.
Outer Sheath:	HDPE.
Application:	Data, Voice & Video transmission with rodent protection and direct buried 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 STASS OFC - XXXX	
STASS OFC	: Multi Mode or Single Mode sheath steel tape armored Type Optical Fiber Cable
XXXX	: Length of Marking (* The Marking is Printed every 1 meter)
XXX	: Number of Fibers
XXXXX	: Customer Name

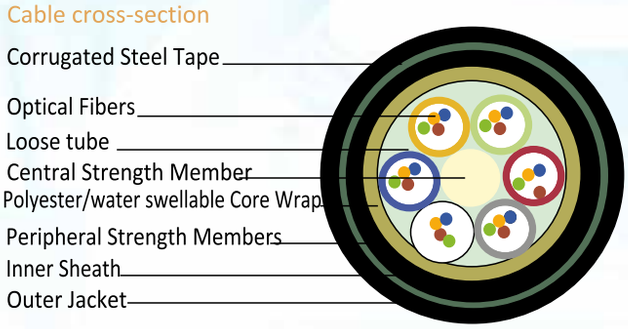
The color of marking is **White / Yellow**.

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

Steel Tape Armored Type (Dual Sheath) Optical Fiber Cable

Cable Construction

Cable cross-section



Cable structure and parameter

No. of Fibers	Max Fiber Per tube	No. of Loose Tubes	Cable Inner Sheath Thickness	Cable Outer Sheath Thickness
			mm	mm
4	4	1	1 ± 0.2	1.5 ± 0.2
8	8	1	1 ± 0.2	1.5 ± 0.2
12	12	1	1 ± 0.2	1.5 ± 0.2
24	12	2	1 ± 0.2	1.5 ± 0.2
36	12	3	1 ± 0.2	1.5 ± 0.2
48	12	4	1 ± 0.2	1.5 ± 0.2
96	12	8	1 ± 0.2	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).
Flooding Compound:	Jelly filled Construction with core wrap or water swell able Tape to stop ingress of water.
Armoring:	Corrugated Steel Tapes helps to give cable ruggedness and rodent protection with direct buried Installation.
Filling Compound:	Loose Tube is filled with Thixotropic Jelly, (Not required in dry cable) 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.
Inner Sheath:	LDPE/MDPE.
Outer Sheath:	HDPE.
Application:	Data, Voice & Video transmission with rodent protection and direct buried 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.

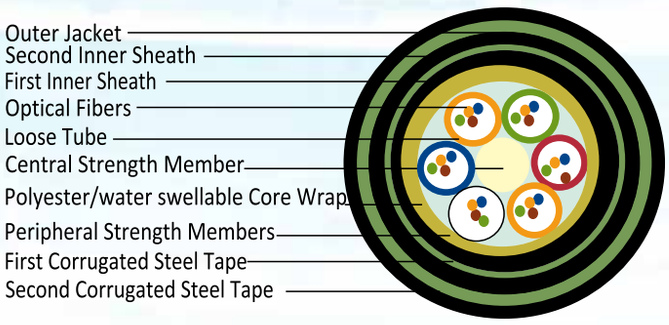
ATC - YEAR - XXXXX - XX FIBER XX STADS OFC - XXXX	
STADS OFC	: Multi Mode or Single Mode sheath steel tape armored Type Optical Fiber Cable
XXXX	: Length of Marking (* The Marking is Printed every 1 meter)
XXX	: Number of Fibers
XXXXX	: Customer Name

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

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

Cable Construction

Cable cross-section



Cable structure and parameter

No. of Fibers	Max Fiber Per tube	No. of Loose Tubes	Cable Inner Sheath Thickness	Cable Outer Sheath Thickness
			mm	mm
4	4	1	1 ± 0.2	1.5 ± 0.2
8	8	1	1 ± 0.2	1.5 ± 0.2
12	12	1	1 ± 0.2	1.5 ± 0.2
24	12	2	1 ± 0.2	1.5 ± 0.2
36	12	3	1 ± 0.2	1.5 ± 0.2
48	12	4	1 ± 0.2	1.5 ± 0.2
96	12	8	1 ± 0.2	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).
Flooding Compound:	Jelly Filled construction with core wrap or water swellable tape to stop ingress of water.
Armoring:	Two Corrugated Steel Tapes helps to give cable more ruggedness and extra rodent protection.
Filling Compound:	Loose Tube is filled with Thixotropic Jelly, 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.
Inner Sheath:	LDPE / MDPE
Outer Sheath:	HDPE.
Application:	Data, Video & voice transmission with extra rodent protection and strength.

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 ST DOUBLE ARMORED OFC - XXXX	
ST DOUBLE ARMORED OFC	: Multi Mode or Single Steel tape Double armored 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.