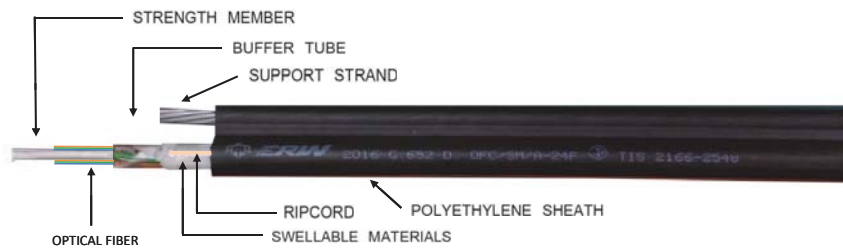


**SINGLE MODE OPTICAL FIBER AERIAL CABLE ( A )**

**TIS 2166-2548**



**CABLE STRUCTURE**

**TECHNICAL DATA**

Optical Fiber : Size 12 Fibers up to 312 Fibers  
 Buffer Tube : Polybutylene terephthalate ( PBT )  
 and gel-filled ( Thixotropic compound )  
 Core Identification : EIA/TIA -598-A  
 Strength member : FRP  
 Lay Up : Reverse Oscillating Lay ( ROL )  
 Technique ( SZ direction )  
 Swellable materials : Water blocking Tape and yarn ,  
 Ripcord : Polyester ripcord  
 Support strand : Galvanized steel strand  
 Sheath : Black High Density Polyethylene (HDPE)

Optical Fiber : Single Mode  
 Temperature installation operation : -10°C to 70°C  
 Reference standard : TIS 2166 - 2548  
 : ITU-T Recommendation G.652.D

**APPLICATION**

For primarily use in outdoor cable plant network, aerial installation by using the support messenger

Number of fiber	Number of tube	Max. number of tube	Overall diameter ( mm. )	Max. pull force ( N. )	Cable weight approx. ( Kg./Km. )	Standard length ( m. )
12	2	6	20.0	7,000	195	4,000/R
24	4	6	20.0	7,000	195	4,000/R
36	3	12	20.0	7,000	195	4,000/R
48	4	12	20.0	7,000	195	4,000/R
60	5	12	20.0	7,000	195	4,000/R
72	6	12	22.5	7,000	290	4,000/R
84	7	12	22.5	7,000	290	4,000/R
96	8	12	22.5	7,000	290	4,000/R
108	9	12	22.5	7,000	290	4,000/R
120	10	12	25.5	7,000	345	4,000/R
144	12	12	25.5	7,000	345	4,000/R
216	18	12	25.5	7,000	345	4,000/R
240	20	12	30.0	7,000	490	4,000/R
264	22	12	30.0	7,000	490	4,000/R
288	24	12	30.0	7,000	490	4,000/R
312	26	12	30.0	7,000	490	4,000/R

R : Packing in Reel

**SINGLE MODE OPTICAL FIBER ARMoured AERIAL CABLE ( AA )**

**TIS 2166-2548**



**CABLE STRUCTURE**

**TECHNICAL DATA**

Optical Fiber : Size 12 Fibers up to 312 Fibers  
 Buffer Tube : Polybutylene terephthalate ( PBT )  
 and gel-filled ( Thixotropic compound )  
 Core Identification : EIA/TIA -598-A  
 Strength member : FRP  
 Lay Up : Reverse Oscillating Lay ( ROL )  
 Technique ( SZ direction )  
 Swellable materials : Water blocking Tape and yarn  
 Inner sheath : Black Polyethylene ( PE )  
 Ripcord : Polyester ripcord and Aramid ripcord  
 Armour : Steel tape ( EGE tape )  
 Support strand : Galvanized steel strand  
 Sheath : Black High Density Polyethylene ( HDPE )

Optical Fiber : Single Mode  
 Temperature installation operation : -10°C to 70°C  
 Reference standard : TIS 2166 - 2548  
 : ITU-T Recommendation G.652.D

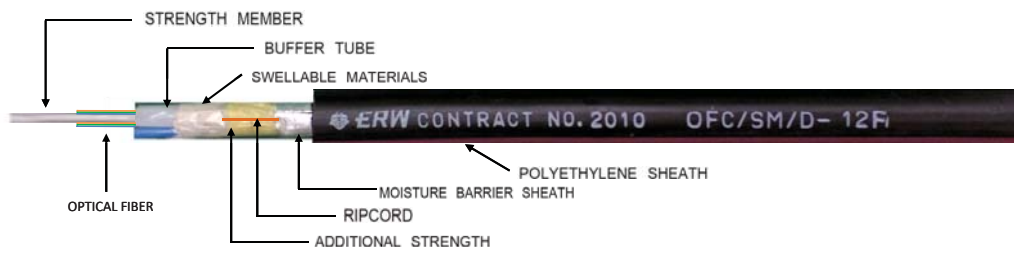
**APPLICATION**

For primarily use in outdoor cable plant network, aerial installation by using the support messenger and shall be applied to relief the cable deteriorations which result from wildfire , squirrel , rodent etc.

Number of fiber	Number of tube	Max. number of tube	Overall diameter ( mm. )	Max. pull force ( N. )	Cable weight approx. ( Kg./Km. )	Standard length ( m. )
12	2	6	23.0	7,000	300	4,000/R
24	4	6	23.0	7,000	300	4,000/R
36	3	12	23.0	7,000	300	4,000/R
48	4	12	23.0	7,000	300	4,000/R
60	5	12	23.0	7,000	300	4,000/R
72	6	12	25.5	7,000	420	4,000/R
84	7	12	25.5	7,000	420	4,000/R
96	8	12	25.5	7,000	420	4,000/R
108	9	12	25.5	7,000	420	4,000/R
120	10	12	28.5	7,000	510	4,000/R
144	12	12	28.5	7,000	510	4,000/R
216	18	12	28.5	7,000	510	4,000/R
240	20	12	33.5	7,000	670	4,000/R
264	22	12	33.5	7,000	670	4,000/R
288	24	12	33.5	7,000	670	4,000/R
312	26	12	33.5	7,000	670	4,000/R

R : Packing in Reel





CABLE STRUCTURE		TECHNICAL DATA	
Optical Fiber	: Size 12 Fibers up to 312 Fibers	Optical Fiber	: Single Mode
Buffer Tube	: Polybutylene terephthalate ( PBT ) and gel-filled ( Thixotropic compound )	Temperature installation operation	: -10°C to 70°C
Core Identification	: EIA/TIA -598-A	Reference standard	: TIS 2165 - 2548 : ITU-T Recommendation G.652.D
Strength member	: FRP	<b>APPLICATION</b>	
Lay Up	: Reverse Oscillating Lay ( ROL ) Technique ( SZ direction )	For primarily use in outdoor cable plant network ,underground installation in duct	
Swellable materials	: Water blocking Tape and yarn ,		
Additional strength	: E-Glass yarn or Aramid yarn (if requirement )		
Ripcord	: Polyester ripcord or Aramid ripcord		
Moisture barrier sheath	: Plastic coated aluminium tape		
Sheath	: Black High Density Polyethylene ( HDPE )		

Number of fiber	Number of tube	Max. number of tube	Overall diameter ( mm. )	Max. pull force ( N. )	Cable weight approx. ( Kg./Km. )	Standard length ( m. )
12	2	6	12.0	2,500	300	4,000/R
24	4	6	12.0	2,500	300	4,000/R
36	3	12	12.0	2,500	300	4,000/R
48	4	12	12.0	2,500	300	4,000/R
60	5	12	12.0	2,500	300	4,000/R
72	6	12	14.1	2,500	420	4,000/R
84	7	12	14.1	2,500	420	4,000/R
96	8	12	14.1	2,500	420	4,000/R
108	9	12	14.1	2,500	420	4,000/R
120	10	12	16.5	2,500	510	4,000/R
144	12	12	16.5	2,500	510	4,000/R
216	18	12	16.5	2,500	510	4,000/R
240	20	12	20.5	2,500	670	4,000/R
264	22	12	20.5	2,500	670	4,000/R
288	24	12	20.5	2,500	670	4,000/R
312	26	12	20.5	2,500	670	4,000/R

R : Packing in Reel

**SINGLE MODE OPTICAL FIBER DIRECT BURIED CABLE ( DB )**

**TIS 2165-2548**



**CABLE STRUCTURE**

**TECHNICAL DATA**

Optical Fiber : Size 12 Fibers up to 312 Fibers  
 Buffer Tube : Polybutylene terephthalate ( PBT )  
 and gel-filled ( Thixotropic compound )  
 Core Identification : EIA/TIA -598-A  
 Strength member : FRP  
 Lay Up : Reverse Oscillating Lay ( ROL )  
 Technique ( SZ direction )  
 Swellable materials : Water blocking Tape and yarn ,  
 Additional strength : E-Glass yarn or Aramid yarn (if requirement )  
 Ripcord : Polyester ripcord or Aramid ripcord  
 Moisture barrier sheath : Plastic coated aluminium tape  
 Inner sheath : Black Polyethylene ( PE )  
 Armour : Steel tape ( EGE tape )  
 Sheath : Black High Density Polyethylene ( HDPE )

Optical Fiber : Single Mode  
 Temperature installation operation : -10°C to 70°C  
 Reference standard : TIS 2165 - 2548  
 : ITU-T Recommendation G.652.D

**APPLICATION**

For primarily use in outdoor cable plant network, installation direct buried to underground and shall be applied to relief the cable deteriorations which result from wildfire, squirrel, rodent etc.

Number of fiber	Number of tube	Max. number of tube	Overall diameter ( mm. )	Max. pull force ( N. )	Cable weight approx. ( Kg./Km. )	Standard length ( m. )
12	2	6	16.9	2,500	260	4,000/R
24	4	6	16.9	2,500	260	4,000/R
36	3	12	16.9	2,500	265	4,000/R
48	4	12	16.9	2,500	265	4,000/R
60	5	12	16.9	2,500	265	4,000/R
72	6	12	17.0	2,500	265	4,000/R
84	7	12	17.6	2,500	290	4,000/R
96	8	12	18.3	2,500	310	4,000/R
108	9	12	18.8	2,500	325	4,000/R
120	10	12	19.5	2,500	345	4,000/R
144	12	12	21.0	2,500	400	4,000/R
216	18	12	21.7	2,500	410	4,000/R
240	20	12	22.4	2,500	440	4,000/R
264	22	12	23.1	2,500	465	4,000/R
288	24	12	23.8	2,500	490	4,000/R
312	26	12	24.6	2,500	520	4,000/R

R : Packing in Reel

## SINGLE MODE OPTICAL FIBER ALL-DIELECTRIC SELF-SUPPORTING CABLE ( ADSS ) TIS 2166-2548



CABLE STRUCTURE	TECHNICAL DATA
<p>Optical Fiber : Size 12 Fibers up to 312 Fibers</p> <p>Buffer Tube : Polybutylene terephthalate ( PBT ) and gel-filled ( Thixotropic compound )</p> <p>Core Identification : EIA/TIA -598-A</p> <p>Strength member : FRP</p> <p>Lay Up : Reverse Oscillating Lay ( ROL ) Technique ( SZ direction )</p> <p>Swellable materials : Water blocking Tape and yarn</p> <p>Additional strength : E-Glass yarn or Aramid yarn (if requirement )</p> <p>Ripcord : Polyester ripcord</p> <p>Sheath : Black High Density Polyethylene ( HDPE ), FR PE or LSZH</p>	<p>Optical Fiber : Single Mode</p> <p>Temperature installation operation : -10°C to 70°C</p> <p>Reference standard : TIS 2166 - 2548 : ITU-T Recommendation G.652.D</p>
	APPLICATION
	<p>For primarily use in outdoor cable plant network ,for aerial application installation or indoor installation and shall be applied to relief the cable.</p>

Number of fiber	Number of tube	Max. number of tube	Overall diameter ( mm.)	Max. pull force ( N.)	Cable weight approx. ( Kg./Km. )	Standard length ( m. )
12	2	6	11.0	1,800	95	4,000/R
24	4	6	11.0	1,800	95	4,000/R
36	3	12	11.0	1,800	95	4,000/R
48	4	12	11.0	1,800	95	4,000/R
60	5	12	11.0	1,800	95	4,000/R
72	6	12	14.0	2,500	120	4,000/R
84	7	12	14.0	2,500	120	4,000/R
96	8	12	14.0	2,500	120	4,000/R
108	9	12	14.5	2,500	140	4,000/R
120	10	12	14.5	2,500	140	4,000/R
144	12	12	14.5	3,000	143	4,000/R
216	18	12	16.5	3,000	275	4,000/R
240	20	12	20.5	3,000	295	4,000/R
264	22	12	20.5	3,000	295	4,000/R
288	24	12	20.5	3,000	295	4,000/R
312	26	12	20.5	3,000	295	4,000/R

R : Packing in Reel

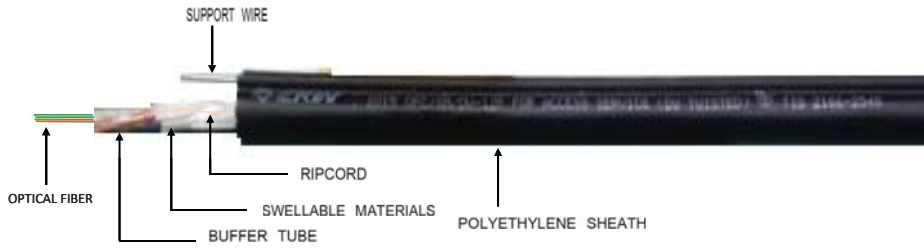
**SINGLE MODE OPTICAL FIBER ANTI-RODENT ARMoured SELF-SUPPORTING CABLE ( ARSS ) TIS 2166-2548**



CABLE STRUCTURE		TECHNICAL DATA	
Optical Fiber	: Size 12 Fibers up to 312 Fibers	Optical Fiber	: Single Mode
Buffer Tube	: Polybutylene terephthalate ( PBT ) and gel-filled ( Thixotropic compound )	Temperature installation operation	: -10°C to 70°C
Core Identification	: EIA/TIA -598-A	Reference standard	: TIS 2166 - 2548 : ITU-T Recommendation G.652.D
Strength member	: FRP	<b>APPLICATION</b>	
Lay Up	: Reverse Oscillating Lay ( ROL ) Technique ( SZ direction )	For primarily use in outdoor cable plant network for aerial application or indoor installation and shall be applied to relief the cable deteriorations which result from wildfire , squirrel , rodent etc.	
Swellable materials	: Water blocking Tape and yarn		
Additional strength	: E-Glass yarn or Aramid yarn (if requirement)		
Ripcord	: Polyester ripcord or Aramid ripcord		
Armour	: Steel tape ( EGE tape )		
Sheath	: Black High Density Polyethylene ( HDPE ), FR PE or LSZH		

Number of fiber	Number of tube	Max. number of tube	Overall diameter ( mm. )	Max. pull force ( N. )	Cable weight approx. ( Kg./Km. )	Standard length ( m. )
12	2	6	11.0	1,800	95	4,000/R
24	4	6	11.0	1,800	95	4,000/R
36	3	12	11.0	1,800	95	4,000/R
48	4	12	11.0	1,800	95	4,000/R
60	5	12	11.0	1,800	95	4,000/R
72	6	12	14.0	2,500	120	4,000/R
84	7	12	14.0	2,500	120	4,000/R
96	8	12	14.0	2,500	120	4,000/R
108	9	12	14.5	2,500	140	4,000/R
120	10	12	14.5	2,500	140	4,000/R
144	12	12	14.5	3,000	143	4,000/R
216	18	12	16.5	3,000	275	4,000/R
240	20	12	20.5	3,000	295	4,000/R
264	22	12	20.5	3,000	295	4,000/R
288	24	12	20.5	3,000	295	4,000/R
312	26	12	20.5	3,000	295	4,000/R

R : Packing in Reel



**CABLE STRUCTURE**

**TECHNICAL DATA**

Optical Fiber : Size 2 Fibers up to 12 Fibers  
 Buffer Tube : Polybutylene terephthalate ( PBT )  
 and gel-filled ( Thixotropic compound )  
 Core Identification : EIA/TIA -598-A  
 Strength member : FRP ( if requirement )  
 Lay Up : Reverse Oscillating Lay ( ROL )  
 Technique ( SZ direction )  
 Swellable materials : Water blocking Tape and yarn ,  
 Ripcord : Polyester ripcord  
 Support wire : Galvanized steel wire  
 Sheath : Black High Density Polyethylene ( HDPE )

Optical Fiber : Single Mode  
 Temperature installation operation : -10°C to 70°C  
 Reference standard : TIS 2166 - 2548  
 : ITU-T Recommendation G.652.D

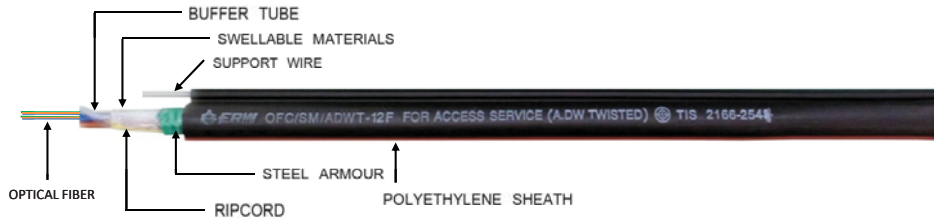
**APPLICATION**

For primarily or access use in outdoor cable plant network,  
 aerial installation by using the support messenger

Number of fiber	Number of tube	Max. number of tube	Overall diameter ( mm. )	Max. pull force ( N. )	Cable weight approx. ( Kg./Km. )	Standard length ( m. )
2	1	2	12.3	1,000	70	4,000/R
4	1	4	12.3	1,000	70	4,000/R
6	1	6	12.3	1,000	70	4,000/R
8	2	4	12.3	1,000	75	4,000/R
12	2	6	12.3	1,000	75	4,000/R

R : Packing in Reel

**SINGLE MODE OPTICAL FIBER CABLE FOR ARMoured ACCESS SERVICE ( ADWT ) TIS 2166-2548**



CABLE STRUCTURE		TECHNICAL DATA	
Optical Fiber	: Size 2 Fibers up to 12 Fibers	Optical Fiber	: Single Mode
Buffer Tube	: Polybutylene terephthalate ( PBT ) and gel-filled ( Thixotropic compound )	Temperature installation operation	: -10°C to 70°C
Core Identification	: EIA/TIA -598-A	Reference standard	: TIS 2166 - 2548 : ITU-T Recommendation G.652.D
Strength member	: FRP ( if requirement )	<b>APPLICATION</b>	
Lay Up	: Reverse Oscillating Lay ( ROL ) Technique ( SZ direction )	For primarily or access use in outdoor cable plant network, aerial installation by using the support messenger and shall be applied to relief the cable deteriorations which result from wildfire, squirrel, rodent etc	
Swellable materials	: Water blocking Tape and yarn ,		
Ripcord	: Polyester ripcord or Aramid ripcord		
Armour	: Steel tape ( EGE tape )		
Support wire	: Galvanized steel wire		
Sheath	: Black High Density Polyethylene ( HDPE )		

Number of fiber	Number of tube	Max. number of tube	Overall diameter ( mm. )	Max. pull force ( N. )	Cable weight approx. ( Kg./Km. )	Standard length ( m. )
2	1	2	12.5	1,800	110	4,000/R
4	1	4	12.5	1,800	110	4,000/R
6	1	6	12.5	1,800	110	4,000/R
8	2	4	12.5	1,800	110	4,000/R
12	2	6	12.5	1,800	110	4,000/R

R : Packing in Reel



## SINGLE MODE OPTICAL FIBER DROP CABLE ROUND TYPE FOR FTTX



CABLE STRUCTURE				TECHNICAL DATA		
Optical Fiber	: Size 1 Fiber up to 8 Fibers			Optical Fiber	: Single Mode	
Tight Buffer	: PBT, TPE , PA, PVC			Temperature installation operation	: -10°C to 70°C	
Core Identification	: EIA/TIA -598-A			Reference standard	: ITU-T Recommendation G.652.D	
Strength member	: Aramid yarn				or ITU-T Recommendation G.657A	
Support strand	: Galvanized steel wire strand				or G657A1	
Sheath	: FR-PE , or LSZH					
APPLICATION						
For primarily or access use in outdoor cable plant network, aerial installation by using the support messenger for the last link in the optical network ( FTTX ) which terminates the fiber from the optical terminal closure or distribution point						
Number of fiber	Number of tube	Max. number of tube	Overall diameter ( mm. )	Max. pull force ( N. )	Cable weight approx. ( Kg./Km. )	Standard length ( m. )
1	3.5	6.7	12.5	800	23	1,000/R
2	3.5	6.7	12.5	800	23	1,000/R
4	5.5	9.1	12.5	800	42	1,000/R
6	5.5	9.1	12.5	800	45	1,000/R
8	6.0	10.8	12.5	800	50	1,000/R

R : Packing in Reel

## OPTICAL FIBER SIMPLEX CABLE

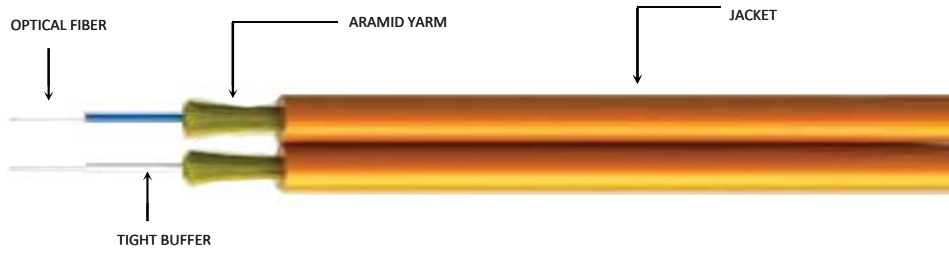


CABLE STRUCTURE	TECHNICAL DATA
Optical Fiber : Size 1 Fiber Tight Buffer : PBT, TPE , PA, PVC Core Identification : EIA/TIA -598-A Strength member : Aramid yarn Jacket : FR-PE , or LSZH , or PVC Jacket color : Yellow for singlemode , Orange for multimode and other colors possible	Optical Fiber : Singlemode or Multimode Temperature installation operation : -10°C to 70°C Reference standard : ITU-T Recommendation G.652.D or ITU-T Recommendation G.657A or G657A1
	APPLICATION
	For use as a path cable in distribution systems as well as for connecting terminals due to the high exibility and small diameter

Cable diameter ( mm.)	Max. pull force ( N.)	Max. crush (N/dm)	Cable weight approx. ( Kg./Km. )	Min. bending radius static (mm.)	Standard length ( m. )
1.6	200	100	2.9	30	300,500/R
1.8	200	100	3.7	30	300,500/R
2.0	300	100	5.0	30	300,500/R
2.1	300	100	5.1	30	300,500/R
2.4	400	150	5.7	30	300,500/R
2.8	400	150	7.9	30	300,500/R
2.9	400	150	8.0	30	300,500/R
3.0	400	150	8.1	30	300,500/R
3.4	400	150	12.0	30	300,500/R

R : Packing in Reel

## OPTICAL FIBER DUPLEX CABLE



### CABLE STRUCTURE

Optical Fiber	: Size 2 Fibers
Tight Buffer	: PBT, TPE , PA, PVC
Core Identification	: EIA/TIA -598-A
Strength member	: Aramid yarn
Jacket	: FR-PE , or LSZH , or PVC
Jacket color	: Yellow for singlemode, Orange for multimode and other colors possible

### TECHNICAL DATA

Optical Fiber	: Singlemode or Multimode
Temperature installation operation	: -10°C to 70°C
Reference standard	: ITU-T Recommendation G.652.D or ITU-T Recommendation G.657A or G657A1

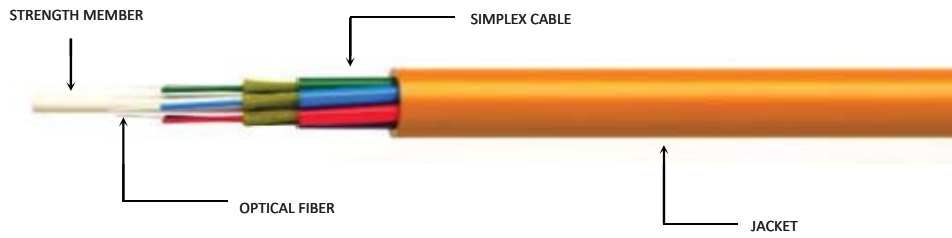
### APPLICATION

For use as a patch cable in distribution systems as well as for connecting terminals due to the high exibility and small diameter

Cable diameter ( mm. )	Max. pull force ( N. )	Max. crush ( N/dm )	Cable weight approx. ( Kg./Km. )	Min. bending radius static (mm.)	Standard length ( m. )
1.6x3.3	400	200	5.8	30	300,500/R
1.8x3.7	400	200	7.4	30	300,500/R
2.0x4.1	400	200	9.0	30	300,500/R
2.1x4.3	400	400	9.0	30	300,500/R
2.4x4.9	400	400	12.6	30	300,500/R
2.8x5.7	600	600	15.8	30	300,500/R
3.0x6.1	600	600	17.5	30	300,500/R

R : Packing in Reel

## OPTICAL FIBER BREAKOUT CABLE



### CABLE STRUCTURE

Optical Fiber	: Size 2 Fibers
Tight Buffer	: PBT, TPE , PA, PVC
Core Identification	: EIA/TIA -598-A
Strength member	: Aramid yarn
Jacket	: FR-PE , or LSZH , or PVC
Jacket color	: Yellow for singlemode , Orange for multimode and other colors possible

### TECHNICAL DATA

Optical Fiber	: Singlemode or Multimode
Temperature installation operation	: -10°C to 70°C
Reference standard	: ITU-T Recommendation G.652.D or ITU-T Recommendation G.657A or G657A1

### APPLICATION

For indoor use as a path cable in distribution systems as well as for connecting terminals or direct connector assembly and installation in the rising and horizontal.

Number of Fibers	Cable diameter (mm.)	Max. pull force ( N.)	Max. crush (N/dm)	Cable weight approx. ( Kg./Km. )	Standard length ( m. )
2	6.0	600	800	35	300,500/R
4	6.0	600	800	35	300,500/R
6	6.9	800	800	47	300,500/R
8	8.3	800	800	69	300,500/R
10	9.9	800	800	105	300,500/R
12	11.0	800	800	119	300,500/R
16	10.7	1,000	800	106	300,500/R

R : Packing in Reel

## OPTICAL FIBER DISTRIBUTION CABLES



### CABLE STRUCTURE

Optical Fiber	: Size 2 - 144 Fibers
Tight Buffer	: PBT, TPE , PA, PVC
Core Identification	: EIA/TIA -598-A
Additional Strength	: Aramid yarn
Strength Member	: FRP (if requirement)
Moisture Resistant	: Water Blocking Tape and Yarn ( if requirement )
Jacket	: FR-PE , or LSZH , or PVC
Jacket color	: Black or customer's requirement

### TECHNICAL DATA

Optical Fiber	: Singlemode or Multimode
Temperature installation operation	: -10°C to 70°C
Reference standard	: ITU-T Recommendation G.652.D or ITU-T Recommendation G.657A or G655

### APPLICATION

For indoor and outdoor distribution systems in -Building backbone, factory floor automation, data center EDA areas and installation in the rising and horizontal.

Number of Fibers	Sub -Unit OD. (mm.)	Cable Diameter (mm.)	Max. pull force ( N.)	Cable weight approx. ( Kg./Km. )	Standard length ( m. )
2	N/A	4.8	550	22	300,500/R
4	N/A	4.8	550	25	300,500/R
6	N/A	4.8	550	31	300,500/R
8	N/A	5.8	660	36	300,500/R
10	N/A	5.8	660	39	300,500/R
12	N/A	5.8	660	43	300,500/R
16	N/A	8.8	1,000	64	300,500/R
24	N/A	8.8	1,000	80	300,500/R
24 ( 6 F/Sub- units )	4.5	13.1	2,000	145	300,500/R
36 ( 6 F/Sub- units )	4.5	16.0	3,300	221	300,500/R
36 ( 12 F/Sub- units )	5.5	14.1	2,000	162	300,500/R
48 ( 12 F/Sub- units )	5.5	15.5	2,800	207	300,500/R
72 ( 12 F/Sub- units )	5.5	19.0	4,200	321	300,500/R
96 ( 12 F/Sub- units )	5.5	22.8	5,500	536	300,500/R
144 ( 12 F/Sub- units )	5.5	25.4	8,400	602	300,500/R

R : Packing in Reel