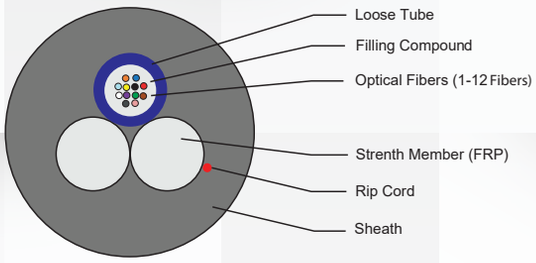
All Dielectric Self-Supporting (mini ADSS)

Multi Tube



Model : W-FOMADSSxx

Standard

- ISO/IEC 9001 : 2008, ISO/IEC 11801
- TIA/EIA-455-170 , IEC60793-1-30
- ANSI/TIA/EIA-568-B.3, ANSI/TIA-568-C.3
- Telcordia (Bellcore) GR-20-CORE, GR-409-CORE
- ANSI/ICEA 696, ANSI/ICEA 596
- IEC60793-2-50 , TIA/EIA-455-25C
- RoHS Compliant
- TIA/EIA-455-37
- ITU-T G.651 (Multi Mode)
- ITU-T G.652D (Single Mode)

Cable Description

The fibers are positioned in a loose tube made of a high modulus plastic. The tubes are filled with filling compound. FRP rods filled . The cable is completed with a polyethylene (PE) sheath. Outer sheath

Application

The actual status of overhead power lines ,covers the general requirements of single jecket ADSS dielectric Cable for aerial or duct

Characteristics

- FRP Filled element make cable hight tension
- Tube filling gel
- Loose tube stranded
- PE sheath outdoor cable Anti water yean protect cable from water
- Non-metallic self-supporting number
- Self supporting aerial outdoor installtion
- Outter jacket protection ultra-violet(UV)
- Loose tube is twisted to trevent the flow of fiber optic and fiberglass reinforce with plastic 2 core

Specification

Table 1 : Cable construction details

Cable construction details	6 , 12 core			
Loose tube and Filler elements	material	PBT		
	diameter	2.2mm+/-0.2mm		
Central strength member	material	FRP		
	diameter	1.8mm+-0.1mm		
Outer sheath	material	PE	Thickness	>1mm.
	diameter	6.8±0.1mm		
Carbon black (%)	15±0.25			

Table 2 : Cable Mechanical characteristic

core	Cable diameter	weight
12	6.8mm+-0.1mm	48±5kg/km
Min Bending Radius(mm)	Long term	10D
Min Bending Radius(mm)	Short term	20D
Min allowable Tensile Strength(N)	Long term	1500
Min allowable Tensile Strength(N)	Short term	1800
Maximum span lengtn	80m	
Min. Allowable Crush Load (N/100mm)	Long term	300
Min. Allowable Crush Load (N/100mm)	Short term	1000
Operation temperature (˚C)	-40+70	
Installation temperature (˚C)	-40+70	
Storage temprature (˚C)	-40+70	

Table 3 : Fiber characteristic

Fiber style		Unit	SM G652 9/125	SM G652D 9/125	MM 50/125	MM 62.5/125	MM OM3-300
condition		nm	1310/1550	1310/1550	850/1300	850/1300	850/1300
attenuation		dB/km	≤0.35 dB/km@1310nm , ≤0.21 dB/km@1550nm , ≤0.23 dB/km@1625nm				
Dispresion	1550 nm	Ps/(nm*km)	----	≤18	----	----	Dispresion
	1625 nm	Ps/(nm*km)	----	≤22	----	----	
Bandwith	850 nm	MHZ.KM	----	----	≧400	≧160	Bandwith
	1300 nm	MHZ.KM	----	----	≧800	≧500	
Zero dispersion wavelength		nm	1300-1324	≧1302,≤1322	----	----	≧1295,≤1320
Zero dispresion slope		nm	≤0.092	≤0.091	----	----	----
PMD Maximum Individual Fiber			≤0.2	≤0.2	----	----	≤0.11
PMD Design Link Value		Ps(nm2*km)	≤0.12	≤0.08	----	----	----
Fibre cutoff wavelength λc		nm	≧1180,	≧1180,≤1330	----	----	----
Cable sutoff wavelength λcc		nm	≤1260	≤1260	----	----	----
MFD	1310 nm	um	9.2+/-0.4	9.2+/-0.4	----	----	----
	1550 nm	um	10.4+/-0.8	10.4+/-0.8	----	----	----
Numerical Aperture(NA)			----	----	0.200+/-0.015	0.275+/-0.015	0.200+/-0.015
Step(mean of bidirectional measurement)		dB	≤0.05	≤0.05	≤0.10	≤0.10	≤0.10
Irregularities over fiber length and point		dB	≤0.05	≤0.05	≤0.10	≤0.10	≤0.10

Table 4 : Dicontinuity

Fiber style	Unit	SM G652 9/125	SM G652D 9/125	MM 50/125	MM 62.5/125	MM OM3-300
Difference backscatter coefficient	dB/km	≤0.05	≤0.03	≤0.08	≤0.10	≤0.08
Attenuation uniformity	dB/km	≤0.01	≤0.01			
Core dimater	um			50+/-1.0	62.5+/-2.5	50+/-1.0
Cladding diameter	um	125.0+/-0.1	125.0+/-0.1	125.0+/-0.1	125.0+/-0.1	125.0+/-0.1
Cladding non-circularity	%	≤1.0	≤1.0	≤1.0	≤1.0	≤1.0
Coating diameter	%	242+/-7	242+/-7	242+/-7	242+/-7	242+/-7
Coating/chaffinch concentrically error	um	≤12.0	≤12.0	≤12.0	≤12.0	≤12.0
Coating non circularity	%	≤6.0	≤6.0	≤6.0	≤6.0	≤6.0
Core/cladding conentricity error	um	≤0.6	≤0.6	≤1.5	≤1.5	≤1.5
Curl(radius)	um	≤4	≤4	----	----	----

Table 5 : The color code of the loose tubes Identification (Standard : TIA/EIA-598-A)

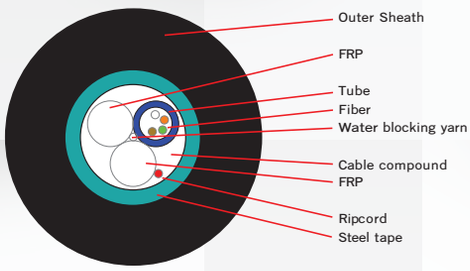
No.	Fiber Color	No.	Fiber Color
1	Blue	7	Red
2	Orange	8	Black
3	Green	9	Yellow
4	Brown	10	Violet
5	Slate	11	Rose
6	White	12	Aqua

Table 6 : Part Number

No.	Description
W-FOMADSS04	“Widen” mini ADSS 4F, SM, Single Jacket
W-FOMADSS06	“Widen” mini ADSS 6F, SM, Single Jacket
W-FOMADSS12	“Widen” mini ADSS 12F, SM, Single Jacket

Anti-Rodent Self Support (mini ARSS)

Multi Tube



Model : W-FOMARSSxx

Cable Description

The fibers are positioned in a loose tube made of a high modulus plastic. The tubes are filled with filling compound. FRP rods filled. The cable is completed with a polyethylene (PE) sheath. Outer sheath

Application

The actual status of overhead power lines ,covers the general requirements of single jecket armored Cable for aerial or duct. Self-Supporting aeriai outdoor installation.

Characteristics

- FRP Filled element make cable hight tension
- Tube filling gel
- Loose tube stranded
- PE sheath outdoor cable Anti water yean protect cable from water Steel tape anti rodent
- ANSI/TIA/EIA 568
- ISO 9001, ISO14001

Specification

Table 1 : Cable construction details

Cable construction details	6 , 12 core	
Loose tube and Filler elements	material	PBT
	diameter	Φ1.8m+-0.1nm
Central strength member	material	FRP
	diameter	1.8mm+-0.1mm
Armored	material	Steel tape
Outer sheath	material	PE
	diameter	8.5±0.1mm

Table 2 : Cable Mechanical characteristic

core	Cable diameter	weight
12	6.8mm+-0.1mm	48±5kg/km
Min Bending Radius(mm)	Long term	10D
Min Bending Radius(mm)	Short term	20D
Min allowable Tensile Strength(N)	Long term	1500
Min allowable Tensile Strength(N)	Short term	1800
Maximum span lengtn	80m	
Min. Allowable Crush Load (N/100mm)	Long term	300
Min. Allowable Crush Load (N/100mm)	Short term	1000
Operation temperature (˚C)	-40+70	
Installation temperature (˚C)	-40+70	
Storage temprature (˚C)	-40+70	

Table 3 : Fiber characteristic

Fiber style		Unit	SM G652 9/125	SM G652D 9/125	MM 50/125	MM 62.5/125	MM OM3-300
condition		nm	1310/1550	1310/1550	850/1300	850/1300	850/1300
attenuation		dB/km	≤	≤	≤	≤3.0/1.0	≤3.0/1.0
			0.36/0.23	0.34/0.22	3.0/1.0	----	----
Dispresion	1550 nm	Ps/(nm*km)	----	≤18	----	----	Dispresion
	1625 nm	Ps/(nm*km)	----	≤22	----	----	----
Bandwith	850 nm	MHZ.KM	----	----	≧400	≧160	Bandwith
	1300 nm	MHZ.KM	----	----	≧800	≧500	
Zero dispersion wavelength		nm	1300-1324	≧1302,≤1322	----	----	≧1295,≤1320
Zero dispresion slope		nm	≤0.092	≤0.091	----	----	----
PMD Maximum Individual Fiber			≤0.2	≤0.2	----	----	≤0.11
PMD Design Link Value		Ps(nm2*km)	≤0.12	≤0.08	----	----	----
Fibre cutoff wavelength λc		nm	≧1180,≤1330	≧1180,≤1330	----	----	----
Cable sutoff wavelength λcc		nm	≤1260	≤1260	----	----	----
MFD	1310 nm	nm	9.2+/-0.4	9.2+/-0.4	----	----	----
	1550 nm	nm	10.4+/-0.8	10.4+/-0.8	----	----	----
Numerical Aperture(NA)			----	----	0.200+/-0.015	0.275+/-0.015	0.200+/-0.015
Step(mean of bidirectional measurement)		dB	≤0.05	≤0.05	≤0.10	≤0.10	≤0.10
Irregularities over fiber length and point		dB	≤0.05	≤0.05	≤0.10	≤0.10	≤0.10

Table 4 : Dicontinuity

Fiber style	Unit	SM G652 9/125	SM G652D 9/125	MM 50/125	MM 62.5/125	MM OM3-300
Difference backscatter	dB/km	≤0.05	≤0.03	≤0.08	≤0.10	≤0.08
Attenuation uniformity	dB/km	≤0.01	≤0.01			
Core dimater	um			50+/-1.0	62.5+/-2.5	50+/-1.0
Cladding diameter	um	125.0+/-0.1	125.0+/-0.1	125.0+/-0.1	125.0+/-0.1	125.0+/-0.1
Cladding non-circularity	%	≤1.0	≤1.0	≤1.0	≤1.0	≤1.0
Coating diameter	um	242+/-7	242+/-7	242+/-7	242+/-7	242+/-7
Coating/chaffinch concentrically error	um	≤12.0	≤12.0	≤12.0	≤12.0	≤12.0
Coating non circularity	%	≤6.0	≤6.0	≤6.0	≤6.0	≤6.0
Core/cladding conentricity error	um	≤0.6	≤0.6	≤1.5	≤1.5	≤1.5
Curl(radius)	um	≤4	≤4	----	----	----

Table 5 : The color code of the loose tubes Identification (Standard : TIA/EIA-598-A)

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

Table 6 : Part Number

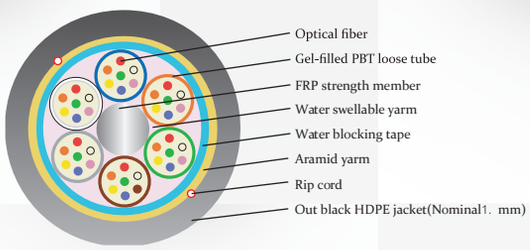
No.	Description
W-FOMARSS04	“Widen” mini ARSS 4F, SM, Single Jacket
W-FOMARSS06	“Widen” mini ARSS 6F, SM, Single Jacket
W-FOMARSS12	“Widen” mini ARSS 12F, SM, Single Jacket

All Dielectric Self-Supporting (ADSS)
SINGLE JACKET

Model : W-FOADSSSX1

Features

The product is use as communication optical cable of overhead high-voltage electricity transmission system. It also can be used as communication optical cable at the areas. Structure cable non armor



Standard

- ISO/IEC 9001 : 2008, ISO/IEC 11801
- ANSI/TIA/EIA-568-B.3, ANSI/TIA-568-C.3
- Telcordia (Bellcore) GR-20-CORE, GR-409-CORE
- ANSI/ICEA 696, ANSI/ICEA 596
- ITU-T G.651 (Multi Mode)
- ITU-T G.652D (Single Mode)
- IEEE802.3 ATM FDDI
- IEC60332-3, IEC60332-1
- IEC61034-2, IEC60754-2
- IEC60793, IEC60794-1-2
- IEA-455 ICEA 640
- EN 50173-1 IEC 60793
- RoHS Compliant

Specification

Table 1 : Geometrical Performance

Item		Specification
Attennuation (dB/km) Single Mode (OS2)		≤ 0.34 @ 1310 nm
		≤ 0.21 @ 1550 nm
		≤ 0.23 @ 1625 nm
Mode Field Diameter		9.2 ± 0.4 m @ 1310 nm 10.4 ± 0.5 µm @ 1550 nm
Material	Core	Germanium doped silica glass
	Cladding	Silica glass
Cladding Diameter		125 ± 1.0 µm
Core Non-circularity (%)		≤ 5
Cladding Non-circularity		≤ 1.0%
Core-Cladding Concentricity error		≤ 0.8 µm
Primary Coating		2 layers of UV curable resin
Coating Diameter (µm)		245 ± 10
Colored Fiber Diameter (µm)		255 ± 10
Coating/Cladding Concentricity error		≤ 12 µm
Zero Dispersion Wavelength (λ_0)		1,300 ≤ λ_0 ≤ 1,324 nm

Table 2 : The construction of the cable

Item		Specification
Fiber Count		12, 24, 48, 60, 96, 120
Filling Compound		Thixotropic Jelly Compound
Loose tube	Material	(PBT) Polybutylene Terephthalate
	Diameter	Nom. 4.2 mm.
	Assembly	Fibers are brought together with the filling compound and placed in the extruded tube
Strength Member		Fiber-reinforced plastic (FRP)
Water Blocking Tape		Thickness 0.3 mm
Rip Cord		Aramid cords
Outer Sheath	Material	High density Polyethylene (HDPE)
	Thickness	1.5 mm
	Diameter	>10.5 mm
Temperature Range	Operation	-40˚C to + 70˚C
	Installation	-40˚C to + 70˚C
	Storage	-40˚C to + 75˚C
Maximum Span Length		< 80 m
Minimum installation Sag		0.1 % of Maximum Span Length
Maximum Tensile Load Short/Long Term		4,000 N / 2,000 N
Maximum Span Length	Installation	20 x External Diameter of Cable
	Operation	10 x External Diameter of Cable

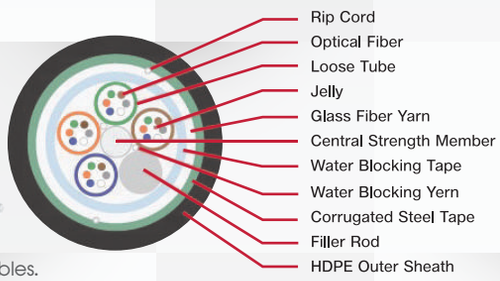
Table 3 : The color code of the loose tubes Identification (Standard : TIA/EIA-598-A)

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

Table 4 : Part Number

No.	Description
W-FOADSSS61	“Widen” ADSS cable 6F SM, Single Jacket
W-FOADSSS121	“Widen” ADSS cable 12F SM, Single Jacket
W-FOADSSS241	“Widen” ADSS cable 24F SM, Single Jacket
W-FOADSSS481	“Widen” ADSS cable 48F SM, Single Jacket
W-FOADSSS601	“Widen” ADSS cable 60F SM, Single Jacket

Anti-Rodent Self Support (ARSS)
SINGLE JACKET



Model : W-FOARSSSx1

General

- This specification covers the requirements for the supply of single-mode optical fiber cables.
- The single-mode optical fiber cable comply with the requirements of this specification and generally meet any latest relevent ITU-T Recommendation G.652D.
- Self-supporting aerial outdoor installation
- Fiber optic type Anti-Rodent Self Support Protection

Fiber charecteristics

- G.652D.
  - Geomertric charecteristics
  - EIA/TIA 568, ANSI/TIA 568
  - ISO 9001, ISO 14001

Specification

Table 1 : Geometrical Performance

Item		Specification
Fiber Type		Single mode (ITU-T G.652D)
Optical fiber	Material	High Grade Silica
Max. Attenuation	1310 nm	≤ 0.34 dB/km
	1383 nm	≤ 0.34 dB/km
	1490 nm	≤ 0.24 dB/km
	1550 nm	≤ 0.21 dB/km
	1625 nm	≤ 0.23 dB/km
Core	Mode Field Diameter	9.2 ± 0.4 µm @ 1310 nm 10 ± 0.6 µm @ 1550 nm
Cladding Diameter		125 ± 1.0 µm
Coating Diameter(Primary Coating)		245 ± 5 µm
Cladding Non-circularity		≤ 1.0%
Core/Cladding Concentricity error		≤ 0.5 µm
Coating/Cladding Concentricity error		≤ 12 µm
Zero Disperson Wavelength		1300 ~1324 nm
Zero Disperson Slope		≤ 0.092 ps/(nm ^{2}.km)
Cable Cut-off Wavelength (cc)		≤ 1260 nm Comply to EIA/TIA-455-170
Attenuation coefficient @1285~1330 nm		≤ Measured attenuation @1310 nm + 0.03 dB/km
Attenuation coefficient @1525~1575 nm		≤ Measured attenuation @1550 nm + 0.02 dB/km
Proof Test Stress		0.69GPa (100 Kpsi) Comply to EIA-455-31B and IEC 60793-1-30
Chromatic Dispersion	1310 nm	≤ 3.5 ps/nm.km
	1550 nm	≤ 18 ps/nm.km
	1625 nm	≤ 22 ps/nm.km
Maximum Individual Fiber PMD and PMD link design value , PMDQ		≤ 0.20 ps/nm.km
Attenuation with macro bending	100 turns, 30 mm radius @ 1550 nm	≤ 0.10 dB
Numerical Aperture		0.130 ± 0.010

Table 2 : cable construction

Item		Specification						
Number of fibers		6 Fiber	12 Fiber	24 Fiber	48 Fiber	60 Fiber	72 Fiber	96 Fiber
Filling Compound	Material	Thixotropic Jelly Compound						
Loose Tube	Material	(PBT) Polybutylene Terephthalate with color coding						
	Diameter	2.1 ± 0.05 mm						
	Fiber per Tube	6			12			
	Number	1	2	4	4	5	6	8
	Assembly	Fiber are brought together with the filling compound and placed in the extruded tube						
Filler Rod	Non-Metallic Material	Plastic rod, natural color						
	Diameter	2.1 ± 0.05 mm						
	Number	4	3	1	2	1	0	0
Stranding	Method	Reverse oscillating lay (ROL) technique (SZ Direction)						
Central Strength Member	Non-Metallic Material	FRP (Fiberglass Reinforce with Plastic)						
	Diameter	1.7 ± 0.05 mm			2.2 ± 0.05 mm			2.5 ± 0.05 mm
	PE coating	1.7 ± 0.05 mm			2.2 ± 0.05 mm			3.5 ± 0.05 mm
Water Blocking Yarn	Material	Suitable Water Swellable Materials (Dry-Core Technology)						
Binder & Wrapping	Material	Polyester yarn						
Water Blocking Tape	Material	Water Blocking Tape						
	Assembry	The tape shall be wrapped longitudinally over the cable core						
Additional Strength Member	Non-Metallic Material	Glass Yarns (quantity=4pcs)						
Ripcord	Material	Polyester ripcord (Ripcords provided under the armour to be diametrically opposite of each other and to provide a means for quick armour and sheath removal for a continuous length of one meter.)						
	Number	2						
Amoured	Material	Corrugated Steel Armour tape coated with a polymer on both sides						
	Thickness	Steel tape : 0.15 mm ± 10% Polymer coated : 0.05 mm						
	Overlap armour	≤ 3.0 nm						
Outer Sheath	Material	UV-Proof, Black High Density Polyethylene						
	Thickness	≤ 1.5 nm						
	Diameter	> 11.00 mm						
Cable Diameter (Approx.)		11.0	11.0	11.0	11.6	11.6	11.6	12.9
Cable Weight (Approx.)		126	126	126	139	136	139	176

Table 3 : HDPE Properties

Parameters	Specification	Test Procedure
1. Carbon Black	2.6 ± 0.25 %	ASTM D1603
2. Minimum Tensile Strength	168 kg/cm^2	ASTM D470
3. Minimum Elongation	300 %	ASTM D470
4. Environment Stress Cracking: Max. Failure From 10 Specimens	2	ASTM D1693
5. Max. Shrinkback	5%	Slap specimens 50x13 mm in the oven at 115 ± 1°C for 4 hours
6. Carbon Black Dispersion	Well dispersed : Grading ≤ 3	IEC 60811 -607
7. Thermal oxidative stability (OIT-Test)	OIT at 200 °C	IEC 60811 -410

Table 4 : Mechanical Specation

Item		Specification
Maximum Span Length		80 m
Initial Sag		0.5% of span length
Maximum Wind Velocity		126 km/hr
Minimum bending Radius (IEC-60794-1-21 E11B)	Installation	20 x External Diameter of Cable
	Operation	10 x External Diameter of Cable
Maximum Tensile load		3,600 N
Maximum Crush resistance		3,400 N/100 mm

Table 5 : Temperature range

	Storage	Installation	Operation
ARSS	-40 ˚C to 70˚C	-40 ˚C to 70˚C	-40 ˚C to 70˚C

Table 6 : The color code of the loose tubes Identification (Standard : TIA/EIA-598-A)

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

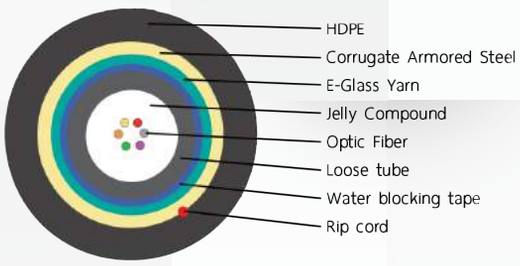
Table 7 : Part Number

No.	Description
W-FOARSSD61	“Widen” ARSS cable 6F,SM Single Jacket , 9/125 um
W-FOARSSD121	“Widen” ARSS cable 12F,SM Single Jacket , 9/125 um
W-FOARSSD241	“Widen” ARSS cable 24F,SM Single Jacket , 9/125 um
W-FOARSSD481	“Widen” ARSS cable 48F,SM Single Jacket , 9/125 um
W-FOARSSD601	“Widen” ARSS cable 60F,SM Single Jacket , 9/125 um

Indoor/ Outdoor with Armored

SINGLE LOOSE TUBE

Model : W-FODSxAx



Features

- Good mechanical and temperature performance
- High strength loosetube that is hydrolysis resistant
- Special tube filling compound ensure a critical protection of fiber
- Crush resistance and flexibility
- Self - supporting aerial outdoor installation
- Outer jacket protection Ultra-violet (UV)
- Stablest & waterproof
- Transfer long length and low price

Standard

- ISO/IEC 9001 : 2008, ISO/IEC 11801
- ANSI/TIA/EIA-568-B.3, ANSI/TIA-568-C.3
- Telcordia (Bellcore) GR-20-CORE, GR-409-CORE
- ANSI/ICEA 696, ANSI/ICEA 596
- ITU-T G.651 (Multi Mode)
- ITU-T G.652D (Single Mode)
- IEEE802.3 ATM FDDI
- IEC60332-3, IEC60332-1
- IEC61034-2, IEC60754-2
- IEC60793, IEC60794-1-2
- IEA-455 ICEA 640
- EN 50173-1 IEC 60793
- RoHS Compliant

Specification

Table 1 : Geometrical Performance

Item		Specification
Attennuation (dB/km)	Multi Mode (OM2)	≤ 2.30 @ 850 nm
	Single Mode (OS2)	≤ 0.34 @ 1310 nm
		≤ 0.21 @ 1550 nm
Mode Field Diameter		50 ± 0.4 m @ 850 nm 9.2 ± 0.4 m @ 1310 nm 10.4 ± 0.5 µm @ 1550 nm
Material	Core	Germanium doped silica glass
	Cladding	Silica glass
Armor Material		Corrugated steel tape
Core / Cladding Diameter (µm)		9 ± 1.0 (SM) , 50 ± 1.0 (MM) / 125 ± 1.0
Core Non-circularity (%)		≤ 5
Cladding Non-circularity		≤ 1.0%
Core-Cladding Concentricity error		≤ 0.8 µm
Primary Coating		2 layers of UV curable resin
Coating Diameter (µm)		245 ± 10
Colored Fiber Diameter (µm)		255 ± 10
Coating/Cladding Concentricity error		≤ 12 µm
Zero Dispersion Wavelength (λ_0)		1,300 ≤ λ_0 ≤ 1,324 nm

Table 2 : The construction of the cable

Item		Specification
Fiber Count		6, 12
Filling Compound		Thixotropic Jelly Compound
Loose tube	Material	(PBT) Polybutylene Terephthalate
	Diameter	Nom. 4.2 mm.
	Assembly	Fibers are brought together with the filling compound and placed in the extruded tube
Strength Member		E-Glass Yarns
Water Blocking Tape		Thickness 0.3 mm
Rip Cord		Aramid cords
Outer Sheath	Material	High density Polyethylene (HDPE)
	Thickness	1.5 mm
Temperature Range	Operation	-40˚C to + 70˚C
	Installation	-40˚C to + 70˚C
	Storage	-40˚C to + 75˚C
Maximum Span Length		< 50 m
Minimum installation Sag		0.1 % of Maximum Span Length
Maximum Tensile Load Short/Long Term		3,000 N / 1,500 N
Maximum Span Length	Installation	20 x External Diameter of Cable
	Operation	10 x External Diameter of Cable

Table 3 : The color code of the loose tubes Identification (Standard : TIA/EIA-598-A)

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

Table 4 : Part Number

No.	Description
W-FODS6A2	“Widen” Indoor/Outdoor with Armored 6F ,MM 50/125 µm Model : W-FODS6A2
W-FODS12A2	“Widen” Indoor/Outdoor with Armored 12F ,MM 50/125 µm Model : W-FODS12A2

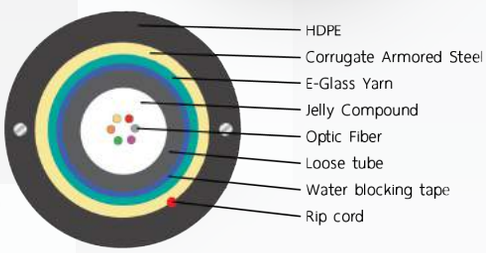
Indoor/Outdoor, Armored

WITH 2 STEEL WIRE

Model : W-FODSxA1-2

Features

- Good mechanical and temperature performance
- High strength loosetube that is hydrolysis resistant
- Special tube filling compound ensure a critical protection of fiber
- Crush resistance and flexibility
- Self – supporting aerial outdoor installation
- Outer jacket protection Ultra-violet (UV)
- Stablest & waterproof
- Transfer long length and low price



Standard

- ISO/IEC 9001 : 2008, ISO/IEC 11801
- ANSI/TIA/EIA-568-B.3, ANSI/TIA-568-C.3
- Telcordia (Bellcore) GR-20-CORE, GR-409-CORE
- ANSI/ICEA 696, ANSI/ICEA 596
- ITU-T G.651 (Multi Mode)
- ITU-T G.652D (Single Mode)
- IEEE802.3 ATM FDDI
- IEC60332-3, IEC60332-1
- IEC61034-2, IEC60754-2
- IEC60793, IEC60794-1-2
- IEA-455 ICEA 640
- EN 50173-1 IEC 60793
- RoHS Compliant

Specification

Table 1 : Geometrical Performance

Item		Specification
Attennuation (dB/km) Single Mode (OS2)		≤ 0.34 @ 1310 nm
		≤ 0.21 @ 1550 nm
		≤ 0.23 @ 1625 nm
Mode Field Diameter		9.2 ± 0.4 m @ 1310 nm 10.4 ± 0.5 µm @ 1550 nm
Material	Core	Germanium doped silica glass
	Cladding	Silica glass
Armor Material		Corrugated steel tape
Cladding Diameter		125 ± 1.0 µm
Core Non-circularity (%)		≤ 5
Cladding Non-circularity		≤ 1.0%
Core-Cladding Concentricity error		≤ 0.8 µm
Primary Coating		2 layers of UV curable resin
Coating Diameter (µm)		245 ± 10
Colored Fiber Diameter (µm)		255 ± 10
Coating/Cladding Concentricity error		≤ 12 µm
Zero Dispersion Wavelength (λ_0)		1,300 ≤ λ_0 ≤ 1,324 nm

Table 2 : The construction of the cable

Item		Specification
Fiber Count		6, 12
Filling Compound		Thixotropic Jelly Compound
Loose tube	Material	(PBT) Polybutylene Terephthalate
	Diameter	Nom. 4.2 mm.
	Assembly	Fibers are brought together with the filling compound and placed in the extruded tube
Strength Member		E-Glass Yarns
Water Blocking Tape		Thickness 0.3 mm
Rip Cord		Aramid cords
Outer Sheath	Material	High density Polyethylene (HDPE)
	Thickness	1.5 mm
Messenger Wire	Material	Steel Wire
	Diameter	Nominal 1.2 mm
Temperature Range	Operation	-40˚C to + 70˚C
	Installation	-40˚C to + 70˚C
	Storage	-40˚C to + 75˚C
Maximum Tensile Load Short/Long Term		3,000 N / 1,500 N
Maximum Bending Radius	Installation	20 x External Diameter of Cable
	Operation	10 x External Diameter of Cable

Table 3 : The color code of the loose tubes Identification (Standard : TIA/EIA-598-A)

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

Table 4 : Part Number

No.	Description
W-FODS6A1-2	“Widen” Fiber optic 2 Steel with 6F,SM Single loose tube with Armored
W-FODS12A1-2	“Widen” Fiber optic 2 Steel with 12F,SM Single loose tube with Armored