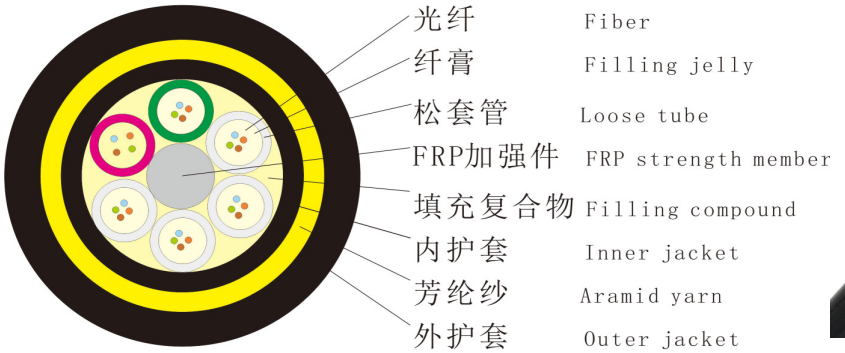
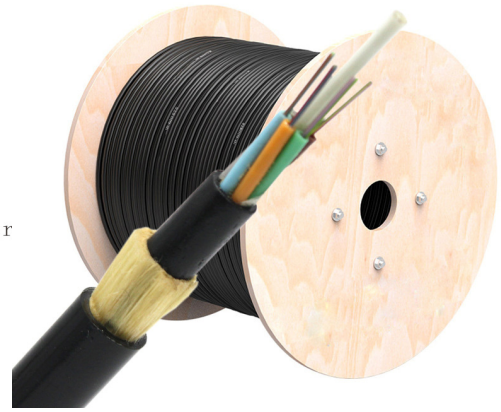
DATASHEET

All Dielectric Self-Supporting Cable-Double Sheath

Make High-speed Optical network Connections.





OMC INDUSTRY CO.LIMTED

2018|En version1.0

www.omcftth.com sales@omcftth.com 0086-755-29163551

All Dielectric Self-Supporting Cable-Double Sheath(4-144F)

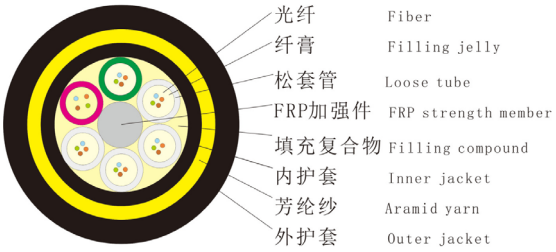
Description

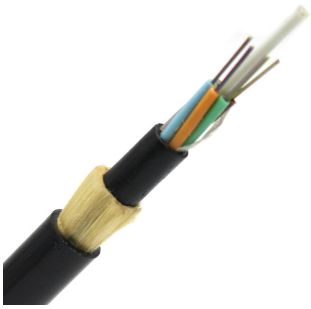
The ADSS structure of the optical cables adopts loose tube twisted structure. 250 um optical fibers are inserted into loose tube made of high modulus polyester and filled with non-metallic reinforcing members (FRP) around the center of the cable to form a round core. The gap in the core is filled with water-blocking ointment, Two layers of aramid yarn are twisted to reinforce the yarn. The gap in the core is filled with water-blocking ointment, and the inner sheath of polyethylene (PE) outside the core is then two-way. Two layers of aramid yarn are twisted to reinforce the yarn. Finally, polyethylene (PE) sheath or AT sheath are extruded.

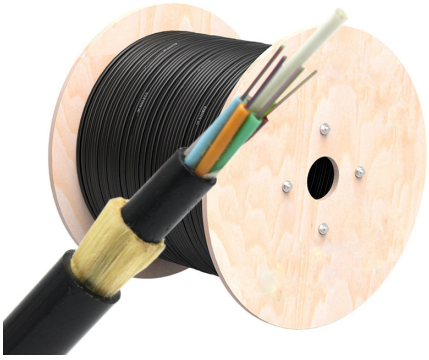
All Dielectric Self-Supporting Cable-Single Sheath (4-144F) is a non-metallic cable which supports its own weight without the use of lashing wires or messenger cables, typically installed in overhead applications along power distribution or transmission

The span length of the cable ranges from 100m to 1500m.

Drawing







Materials Specification

Fibers count	4-144Fibers
No. of Tube	1~12
No. of fiber/Tube	4-12 Fibers
Loose Tube Diameter	PBT：2.0 mm
FRP Strength Member Diameter	2.0mm
Inner Sheath Thickness	1.0mm
Aramid Yarn Section	2.0mm²
Out Sheath Diameter Thickness	1.7mm
Cable Diameter （mm）	See below
Cable Weight	See below
Loose Tube Material	PBT
Filling compound (Tube)	Thixotropic Jelly
Water Blocking	Water Swellable Material
Out sheath	HDPE

Different span length will have different spec for FRP， inner/out sheath Diameter thickness……..

Standard color of fiber and tube

The color code of the tubes and the individual fibers, shall be in accordance with the table as below:

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

All Dielectric Self-Supporting Cable-Double Sheath(4-144F)

Technical Parameters (4-144Cores)

Items	Cable diameter	Net Weight
2cores to 48cores	12±0.5mm	140kg/km
96 cores	13.5±0.5mm	170kg/km
144 cores	16.0±0.5mm	245kg/km
Installation Temperature range	-15--+60	
Operation and transport temperature	-40-+70	

Different span length will have different OD

Features and Advantages

The cable diameter is small, the weight is light, the span can reach 1500M, and the additional load to the tower is low.

High tensile strength, over 90KN

Non-metallic structure, good insulation, lightning protection

The aramid yarn has excellent production technology, uniform force, excellent stress-strain performance, excellent gun-shot resistance and best anti-electric corrosion performance

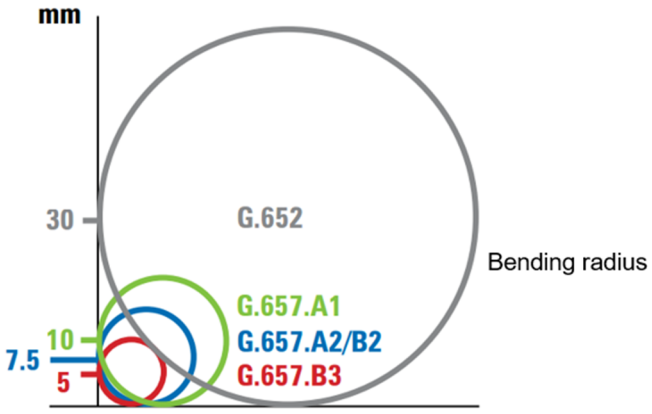
No blackout construction, power line failure does not affect the normal transmission of optical cable

Smooth shape, so that the cable has superior aerodynamic performance

Optical fiber technical parameters-SMF

Item	Unit	Specification
Attenuation	dB/km	1310nm≤0.4 ; 1550nm≤0.3
Dispersion	Ps/nm. km	1285~1330nm≤3.5, 1550nm≤18.0
Zero dispersion wavelength	Nm	1300~1324
Zero dispersion slope	Ps/nm. km	≤0.095
Fiber cutoff wavelength	Nm	≤1260
Mode field diameter	Um	9.2±0.5
Mode field concentricity	Um	≤0.8
Cladding diameter	um	125±1.0
Cladding non-circularity	%	≤1.0
Coating/cladding concentricity error	Um	≤12.5
Coating diameter	um	245±10
Bending, dependence induced attenuation	1550nm, 1turns,32mm diameter 100rums,60mm diameter	≤0.5 dB
Proof test	kpsi	≥100

All Dielectric Self-Supporting Cable-Double Sheath(4-144F)



ITU recommendation G.657 specifies two classes of single-mode bend insensitive fiber patch cables: G.657 A and G.657 B. Each category (A and B) is then divided into two sub-categories: G.657.A1, G.657.A2 and G.657.B1, G.657.B2. The minimum bend radius of G.657.A1 fibers is 10 mm, of the G.657.A2 and G.657.B1 fibers is 7.5 mm and of the G.657.B2 fibers is 5 mm. Among, ITU-T G.657.A1 and ITU-T G.657.A2 fibers are fully compliant with ITU-T G.652.D fibers.

Optical fiber technical parameters-MMF

Item	Unit	Specification	
Attenuation	dB/km	850nm≤3.5	
Bandwidth	MHz*km	50/125μm	62.5/125μm
		850nm≥200	850nm≥160
		1300nm≥200	1300nm≥200
Step	dB	≤0.1	
Irregularities over fiber length and point discontinuity	dB	≤0.1	
Difference backscatter coefficient	dB/km	50/125μm	62.5/125μm
		≤0.08	≤0.1
Cladding diameter	um	125±1.0	
Cladding non-circularity	%	≤1.0	
Coating/cladding concentricity error	Um	≤12.5	
Coating diameter	um	245±10	
Bending, dependence induced attenuation	850nm, 1300nm 100 turns,75mm diameter	≤0.5 dB	
Proof test	kpsi	≥100	

Technical Data-Transmission

Fiber type	Attenuation				OFL bandwidth	Effective modal band-width	10 Gigabit Ethernet SX	Min bend radius
Conditions	1310/1550nm		850/1300nm		850/1300nm	850nm	850nm	/
	Typical	Maximum	Typical	Maximum				
Unit	dB/km	dB/km	dB/km	dB/km	MHZ.km	MHZ.km	m	mm
G652D	0.36/0.22	0.5/0.4	---	---	---	---	---	16
G657A1	0.36/0.22	0.5/0.4	---	---	---	---	---	10
G657A2	0.36/0.22	0.5/0.4	---	---	---	---	---	7.5
50/125	---	---	3.0/1.0	3.5/1.5	≥500/500	---	---	30
62.5/125	---	---	3.0/1.0	3.5/1.5	≥200/500	---	---	30
OM3	---	---	3.0/1.0	3.5/1.5	≥1500/500	≥2000	≤300	30
OM4	---	---	3.0/1.0	3.5/1.5	≥3500/500	≥4700	≤550	30
BIF-OM3	---	---	3.0/1.0	3.5/1.5	≥1500/500	≥2000	≤300	7.5
BIF-OM4	---	---	3.0/1.0	3.5/1.5	≥3500/500	≥4700	≤550	7.5