

Optical Fiber CABLE

TECHNICAL DATA SHEET

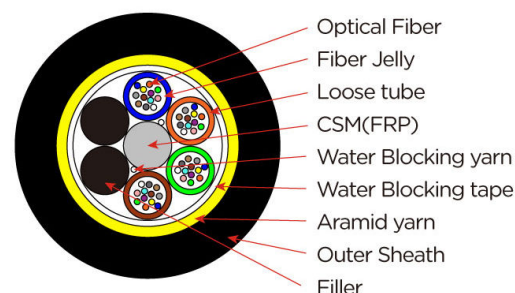
**Single sheath ADSS optical cable
100m span layer-twisted loose tube 48
core**



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Product Description:

Single Sheath ADSS optical fiber cable with a layer-twisted loose tube structure, designed for 100 m span aerial and access-network applications. The cable uses FRP as the central strength member, PBT loose tubes, water-blocking yarns and tapes, aramid yarn as the peripheral strength member, and a black PE outer sheath.



Features

- Can be installed without a power outage.
- Protective cover with superior corrosion resistance.
- Lightweight and small cable diameter.
- Reduces the impact of ice, wind force, and load on towers and supports.
- Precision-controlled aramid armor technology improves tensile performance.
- Precise control of fiber length and cable twisting pitch ensures excellent tensile and temperature characteristics.
- Suitable for aerial deployment.
- Suitable for access and backbone network applications.

Dimensions and Construction

Items	Descriptions	4/6/8	12	24/36	48	72	96	144
Optical Fiber	Fiber Count	G.652D	G.652D	G.652D	G.652D	G.652D	G.652D	G.652D
Optical Fiber	Color	Blue, Orange, Green, Brown, Grey, White, Red, Black, Yellow, Violet, Pink, Aqua	Same	Same	Same	Same	Same	Same
Optical Fiber	Counts	4/6/8	12	24/36	48	72	96	144
Structure	/	1+6	1+6	1+6	1+6	1+6	1+8	1+12
CSM	Material	FRP	Same	Same	Same	Same	Same	Same
Loose Tube	Material	PBT	PBT	PBT	PBT	PBT	PBT	PBT

Loose Tube	Color	Blue, Orange, Green, Brown, Grey, White, Red, Black, Yellow, Violet, Pink, Aqua	Same	Same	Same	Same	Same	Same
Loose Tube	Counts	1/1/2	2	4/6	4	6	8	12
Loose Tube	Fiber per Tube	4/6/4	6	6/6	12	12	12	12
Filler	Number	5/5/4	4	2/0	2	0	0	0
Water-Blocking	Material	Water-blocking yarns and tapes	Same	Same	Same	Same	Same	Same
Ripcord	Number	2 pcs	2 pcs	2 pcs	2 pcs	2 pcs	2 pcs	2 pcs
Peripheral Strength	Material	Aramid yarns	Aramid yarns	Aramid yarns	Aramid yarns	Aramid yarns	Aramid yarns	Aramid yarns

Member								
Outer Sheath	Material	PE	PE	PE	PE	PE	PE	PE
Outer Sheath	Color	Black	Black	Black	Black	Black	Black	Black
Cable Diameter	mm ± 0.5	9.5	9.5	9.5	10.5	10.5	11.8	14.7
Weight	$\pm 10\%$ kg/km	65	70	75	85	100	110	165
Maximum Allowed Tensile (MAT)	N	1900	1900	1900	2300	2500	2700	3100
Span	m	100	100	100	100	100	100	100
Crush	N/100 mm — ShortTerm	1000	1000	1000	1000	1000	1000	1000

Fiber Color Code

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

Mechanical Specifications

Parameter	Specification
Maximum Allowed Tensile (MAT)	1900–3100 N, depending on cable configuration
Short-Term Crush Resistance	1000 N/100 mm
Span	100 m
Bending Radius – Operation	15 × cable diameter
Bending Radius – Installation	15 × cable diameter
Peripheral Strength Member	Aramid yarns
Central Strength Member	FRP
Outer Sheath	PE

Environmental Specifications

Parameter	Specification
Operating Temperature	-40°C to +70°C
Installation Temperature	-20°C to +60°C
Storage & Shipping Temperature	-40°C to +70°C
Operating Bending Radius	15 × Cable Diameter
Installation Bending Radius	15 × Cable Diameter

Applications

- Backbone Networks
- Access Networks
- Duct Installation
- Aerial Installation
- Lashed Installation

Single-Mode Fiber Attenuation

Parameter	G.652D	G.657A1	G.657A2	G.657B3
Wavelength	1310 / 1550 nm	1310 / 1550 nm	1310 / 1550 nm	1310 / 1550 nm
Typical Attenuation	0.35 / 0.21 dB/km	0.35 / 0.21 dB/km	0.35 / 0.21 dB/km	0.35 / 0.21 dB/km
Maximum Attenuation	0.40 / 0.30 dB/km	0.40 / 0.30 dB/km	0.40 / 0.30 dB/km	0.40 / 0.30 dB/km
Zero Dispersion Slope	≤ 0.091 ps/(km·nm ²)	≤ 0.092 ps/(km·nm ²)	≤ 0.092 ps/(km·nm ²)	≤ 0.092 ps/(km·nm ²)
Dispersion (1285–1340 nm)	-3.5 to +3.5 ps/(nm·km)	-3.5 to +3.5 ps/(nm·km)	-3.5 to +3.5 ps/(nm·km)	-3.5 to +3.5 ps/(nm·km)

Mode Field Diameter @1310 nm	$9.1 \pm 0.4 \mu\text{m}$	$8.8 \pm 0.4 \mu\text{m}$	$8.8 \pm 0.4 \mu\text{m}$	$8.6 \pm 0.4 \mu\text{m}$
Cable Cutoff Wavelength	$\leq 1260 \text{ nm}$	$\leq 1260 \text{ nm}$	$\leq 1260 \text{ nm}$	$\leq 1260 \text{ nm}$
Minimum Bend Radius	16 mm	10 mm	7.5 mm	5 mm
Cladding Diameter	$125 \pm 1.0 \mu\text{m}$	$125 \pm 1.0 \mu\text{m}$	$125 \pm 1.0 \mu\text{m}$	$125 \pm 1.0 \mu\text{m}$