

# FIBER OPTIC CABLE PRODUCT

MINI ADSS FIBER OPTIC SINGLE JACKET CABLE.



## PRODUCT DESCRIPTION

The fibers are positioned in a loose tube made of a high modulus plastic.

The tubes are filled with a water-resistant filling compound. FRP rods filled .

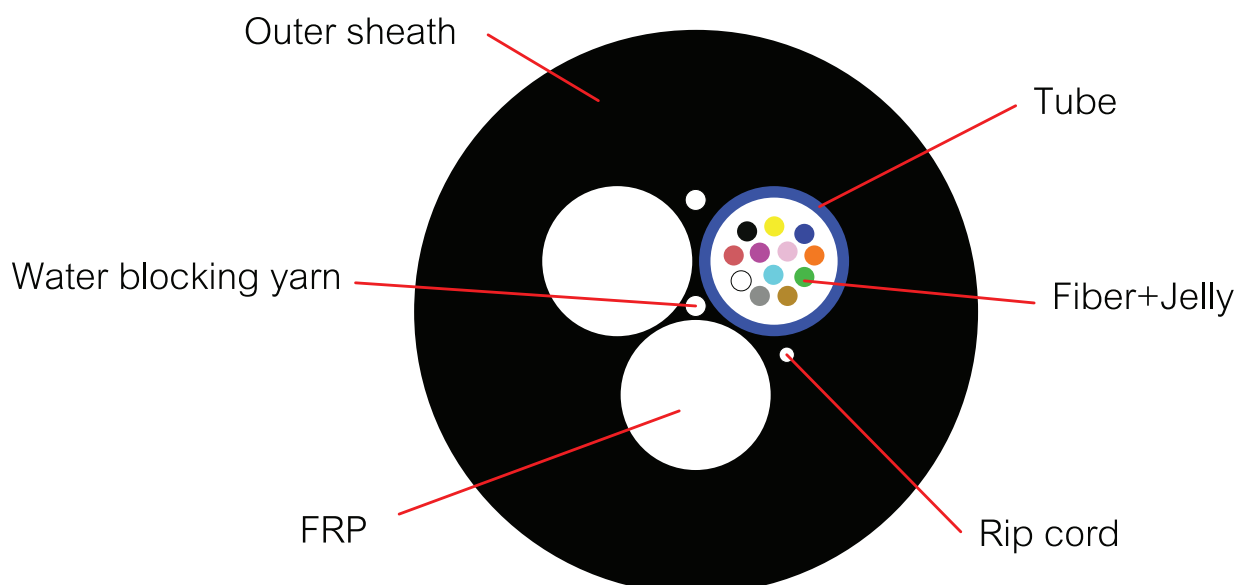
The cable is completed with a polyethylene (PE) sheath.

## APPLICATION

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

## STANDARD

- TIA/EIA-598-A ,TIA/EIA-598-C, ANSI/TIA/EIA-568-B.3, ANSI/ TIA-568-C.3, ANSI/ICEA640
- IEEE802.3 (LAN, Ethernet Fast Ethernet, Gigabit Ethernet and 10 Gigabit Ethernet) ,  
10 GEthernet, ATM, FDDI, FTTX,Fiber Channel,CATV, Communication
- ISO/IEC 11801:2011(Ed.2.2)
- Telcordia (Bellcore) GR-20CORE
- IEC 60793-2B1.3, IEC 60794-1-2, ICEA696, IEC61034-2, IEC60754-2, IEC 60793, IEC 596
- TIS 2166-2548,
- ITU-T G.652D, ITU-T G.657A2 (Singlemode)
- RoHS compliant
- Made in Thailand (MiT)



## CONSTRUCTION

Number of fiber		2~12core
Loose tube and Filler elements	material	PBT
	diameter	Φ1.8mm+0.2mm
Central strength member	material	FRP
	diameter	1.5mm+0.2mm
Outer sheath	material	PE with Rodent Repellent (LS2)
	diameter	6.3±0.3mm
Weight		35±5kg/km
Operationtemperature		-20+60°C
Installationtemperature		-15+60°C
Storage temprature		-20+60°C

## OPTICAL FIBER CHARACTERISTICS

CATEGORY	DESCRIPTION	SPECIFICATIONS
<b>Mechanical Specifications</b>		
Proof test level		≥1.0 %
Fiber curl radius		≥4.0 m
Peak coating strip force		1.3 - 8.9N
Relative humidity		Up to 90%, no frost
Maximum Span Length	Sag 0.5%	40 m.
	Sag 1.0%	80 m.
Maximum Wind Velocity		100 km./hr.
Min allowable Tensile Strength(N)	Long Term	1500 N.
	Short Term	1800 N.
Min. Allowable Crush Load (N/100mm)	Long Term	300
	Short Term	1000
Minimum bending Radius	Installation	20 x Diameter of Cable
	Operation	10 x Diameter of Cable

## IDENTIFICATION COLOR CODE OF FIBER AND LOOSE TUBE

The color code of the loose tubes and the individual fibers within each loose tube shall be in accordance TIA/EIA-598-C (Rev.TIA/EIA-598-A) and EIA-359-A

NO.	FIBER COLOR	LOOSE TUBE COLOR
1	Blue	Blue
2	Orange	Orange
3	Green	Green
4	Brown	Brown
5	Slate	Slate
6	White	White
7	Red	Red
8	Black	Black
9	Yellow	Yellow
10	Violet	Violet
11	Rose	Rose
12	Aqua	Aqua

## OPTICAL FIBER CHARACTERISTICS

CATEGORY	DESCRIPTION	SPECIFICATIONS
<b>Optical Specifications</b>		ITU-T G.652D(Singlemode OS2)
Attenuation	@1310nm	$\leq 0.35/\leq 0.33$ dB/km
	@1383nm	$\leq 0.35/\leq 0.31$ dB/km
	@1490nm	$\leq 0.24$ dB/km
	@1550nm	$\leq 0.21/\leq 0.19$ dB/km
	@1625nm	$\leq 0.23/\leq 0.20$ dB/km
Attenuation discontinuity		$\leq 0.05$ dB
Attenuation vs. Wavelength	1285 -1330 @1310nm	$\leq 0.05$ dB/km
	1525 -1575@1550nm	$\leq 0.05$ dB/km
Zero dispersion wavelength		1300 -1324 nm
Zero dispersion slope		$\leq 0.092$ ps/(nm <sup>2</sup> .km)
Dispersion	@1310nm	$\leq 3.5$ ps/nm.km
	@1550nm	$\leq 18$ ps/nm.km
Polarization mode dispersion(PMD)		$\leq 0.2$ ps/km <sup>1/2</sup>
Cable cutoff wavelength ( $\lambda_{cc}$ )		$\leq 1260$ nm
Effective group index of reaction	@1310nm	1.4675
	@1550nm	1.4681
<b>Geometric Specifications</b>		
Mode field diameter	@1310nm	9.2 ± 0.6 μm
	@1550nm	10.4 ± 0.8 μm
Cladding diameter		125 ± 1 μm
Cladding non -circularity		$\leq 1.0$ %
Coating Material	Material	UV curable acrylate
	Diameter	250 ± 5μm
Coating/Cladding concentricity error		$\leq 12$ μm
Core/Cladding concentricity error		$\leq 0.5$ μm
Color Fiber Diameter		250 μm ± 15 μm (Colored)
Fiber proof-tested		0.69 GPa ( 1.0%, 100kpsi) in accordance with the optical fiber proof test by IEC 60793-1-30

## PACKING AND DRUM

- 1.Packing material: Wooden drum
- 2.Packing length: standard length of cable shall be 2 km. Other cable length is also availabler if required by custome

## TEST REQUIREMENTS

Item	Method	Acceptance criteria
Tensile test	- Max. tensile strength: 1800 N	-Fiber strain at maximum
IEC 60794-1-2-E1A	- Sample length: 100 meters	-Load max. 0.33 %
TIA/EIA-455-33A	- Times: 1 hour	-Attenuation increase $\leq$ 0.1dB
Crush or Compression test	- Load: 1000 N	-No splits or cracks in the outer jacket
IEC 60794-1-2-E3	- Time: 10 minutes	-Attenuation increase $\leq$ 0.10 dB
TIA/EIA-455-41A	- Length: 100 mm	
Impact test	- Impact energy: 450 g	- No splits or cracks in the outer jacket
IEC 60794-1-2-E4	- Height: 1 meter	-Attenuation increase $\leq$ 0.10 dB (after the test)
TIA/EIA-455-25C	- Impact points: min.1	
	- Number of impacts: 5	
Torsion or Twist test	- 1 m cable length with 150 N weight	- No splits or cracks in the outer jacket
IEC 60794-1-2-E7	- $\pm 180^\circ$ ,10 cycles	-Attenuation increase $\leq$ 0.10 dB (after the test)
TIA/EIA-455-85A		
Repeated bending	- Radius = 20 $\times$ cable outer diameter	- No splits or cracks in the outer jacket
Cable bending Test	- 1m cable length with 150 N weight, 30 cycles	-Attenuation increase $\leq$ 0.10 dB (after the test)
IEC 60794-1-2-E6,		
TIA/EIA-455-104A		
IEC 60794-1-2-E11B		
Temperature cycling test	- Temperature step: +20 $^\circ$ C -40 $^\circ$ C+70 $^\circ$ C-40 $^\circ$ C	-Attenuation variation for reference
IEC 60794-1-2-F1	+70 $^\circ$ C+20 $^\circ$ C	value(the attenuation to be measured before
TIA/EIA-455-3A	- Time per each step: 16 hrs.	test at +20 $\pm$ 3 ) $\leq$ 0.10dB/km
	- Number of cycles: 2 cycles	
Water penetration test	- Water height: 1m	-No water leakage at the end of the sample
IEC 60794-1-2-F5	- Sample length:3m	
TIA/EIA-455-82B	- Duration of test: 24hrs	
Drip test	- Five 0.3m samples suspended vertically in a climate	-No filling compound shall drip from tubes after 24 hrs.
IEC 60794-1-2-E14	chamber, raised temperature to +70 $^\circ$ C	

## ORDER INFORMATION

