

# IURON

## IU-ODN-CAB-ADSS-048-120-2KM

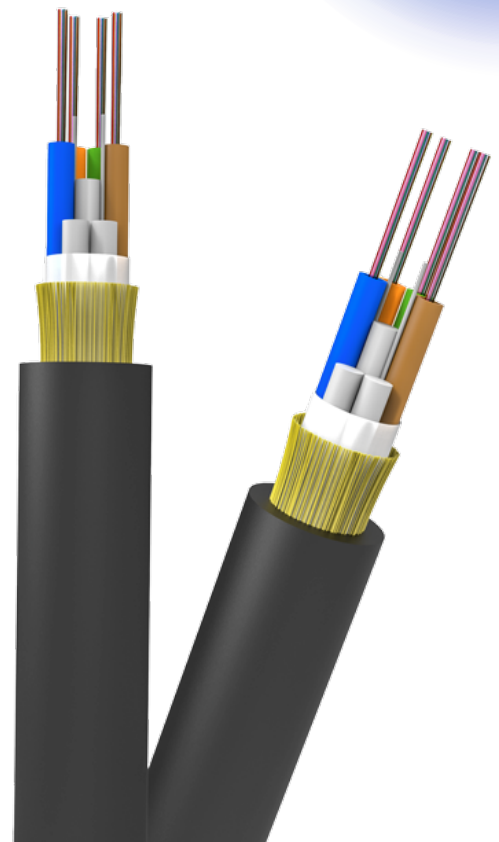
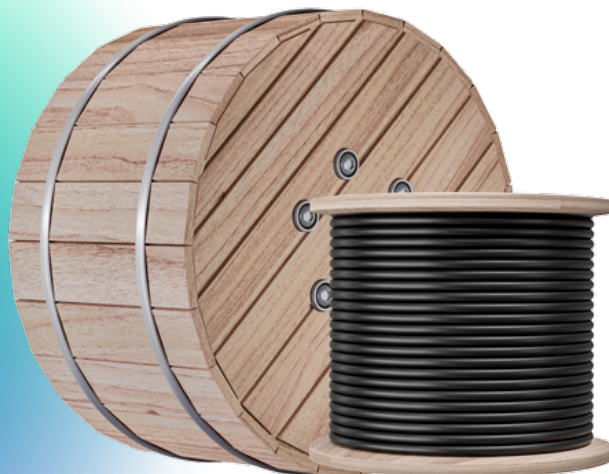
### DESCRIPTION

The fibers are positioned in a loose tube made of a high modulus plastic. The tubes inside are filled with a water-resistant filling compound protect fiber .

The tube is wrapped with a layer of Kevlar. Between the kevlar yarn and the loose tube water-blocking material is applied to keep the cable compact and watertight. The cable is completed with a polyethylene (PE) sheath.

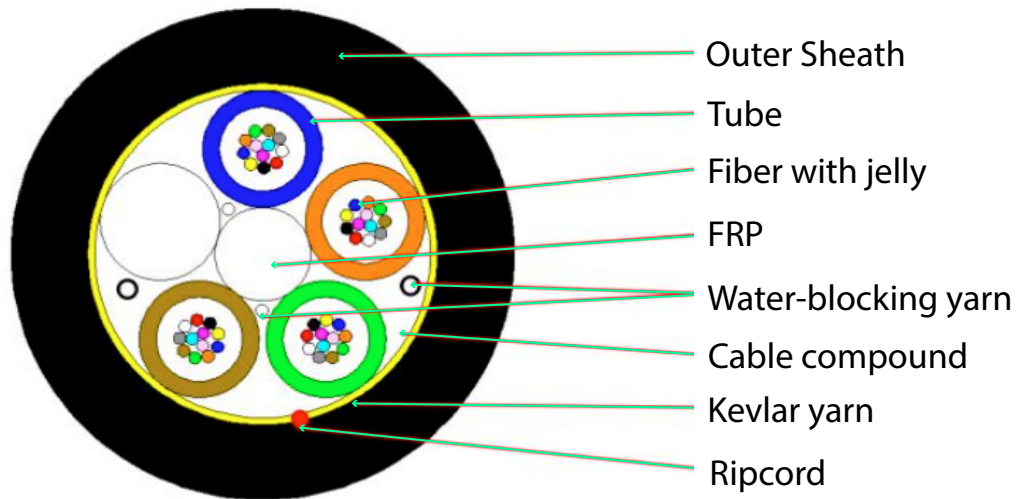
### APPLICATION

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



## FEATURES

- ✓ FRP central strength member
- ✓ Tube filling gel
- ✓ Loose tube stranded
- ✓ PE sheath outdoor cable
- ✓ Kevlar make cable more tensile



## CABLE CONSTRUCTION DETAILS

<b>Number of fiber</b>	48 core	
<b>Moisture Barrier</b>	Water blocking system	
<b>Loose tube and Filler elements</b>	Material	PBT
	Thickness	0.35 mm ± 0.05 mm
	Diameter	Φ2.5 mm ± 0.1 mm
<b>Central strength member</b>	Material	FRP
	Thickness	2.0 mm ± 0.1 mm
<b>Strength member</b>	Material	Kevlar yarn
<b>Outer sheath</b>	Material	PE
	Thickness	1.6 mm ± 0.1 mm
	Diameter	10.5±0.4mm

## FIBER COLOR

<b>Tube Number</b>	1	2	3	4		
	Blue	Orange	Green	Brown		
<b>Number of fiber per tube 12 cores</b>	1	2	3	4	5	6
	Blue	Orange	Green	Brown	Grey	White
	7	8	9	10	11	12
	Red	Black	Yellow	Violet	Pink	Aqua

## CABLE MECHANICAL CHARACTERISTIC

Core	Cable diameter	Weight
48	10.5±0.4mm	108 ± 10 KG
<b>Min Bending Radius(mm)</b>	Long term	10D
<b>Min Bending Radius(mm)</b>	Short term	20D
<b>Anti water</b>	Water blocking yarn & water blocking tape	2 pcs
<b>Max allowable Tensile Strength (N)</b>	Long term	1500
<b>Max allowable</b>	Short term	3000
<b>Max. Allowable Crush Load</b>	Long term	500
<b>Min. Allowable Crush Load (N/100mm)</b>	Short term	1500
<b>Operation temperature (°C)</b>	-40+70	
<b>Installation temperature (°C)</b>	-15+60	
<b>Storage temperature (°C)</b>	-40+70	

## BARE FIBER CHARACTERISTIC

Characteristic	Condition	Specified values	Units
<b>Attenuation</b>	1310nm	$\leq 0.34 \leq 0.36$ after cable	[dB/km]
	1550nm	$\leq 0.20 \leq 0.25$ after cable	[dB/km]
	1383nm after H2-aging	$\leq 0.34$	[dB/km]
	1625nm	$\leq 0.24$	[dB/km]
<b>Attenuation vs. Wavelength Max. <math>\alpha</math> difference</b>	1285-1330nm, in reference to 1310nm	$\leq 0.03$	[dB/km]
	1525-1575nm, in reference to 1550nm	$\leq 0.02$	[dB/km]
<b>Dispersion Coefficient</b>	1285-1340nm	-3.5 to 3.5	[ps/(nm.km)]
	1550nm	$\leq 18$	[ps/(nm.km)]
	1625nm	$\leq 22$	[ps/(nm.km)]
<b>Zero Dispersion Wavelength(<math>\lambda_0</math>)</b>	--	1300-1324	[nm]
<b>Zero Dispersion Slope(<math>S_0</math>)</b>	--	$\leq 0.092$	[ps/(nm <sup>2</sup> .km)]
<b>Typical Value</b>	--	0.086	[ps/(nm <sup>2</sup> .km)]
<b>PMD</b>	--	$\leq 0.1$	
	--	$\leq 0.06$	
	--	0.04	
<b>Cable Cutoff Wavelength (<math>\lambda_{cc}</math>)</b>	--	$\leq 1260$	[nm]
<b>Mode Field Diameter (MFD)</b>	1310nm	8.7-9.5	[nm]
	1550nm	9.8-10.8	[nm]
<b>Effective Group Index Refraction (<math>N_{eff}</math>)</b>	1310nm	1.466	--
	1550nm	1.467	--
<b>Point Discontinuities</b>	1310nm	$\leq 0.05$	[dB]
	1550nm	$\leq 0.05$	[dB]

<b>Geometrical Characteristics</b>			
<b>Cladding Diameter</b>	--	125.0±0.7	[μm]
<b>Cladding Non-Circularity</b>	--	≤1.0	[%]
<b>Coating Diameter</b>	--	235-250	[μm]
<b>Coating-Cladding Concentricity Error</b>	--	≤12.0	[μm]
<b>Coating Non-Circularity</b>	--	≤6.0	[%]
<b>Core-Cladding Concentricity Error</b>	--	≤0.6	[μm]
<b>Curl(radius)</b>	--	≥4	[m]
<b>Environmental Characteristics</b>	1310nm,1550nm&1625nm		
<b>Temperature Dependence Induced Attenuation</b>	-60°C to +85°C	≤0.05	[dB/km]
<b>Temperature-Humidity Cycling Induced Attenuation</b>	-10°C to +85°C, 98% RH	≤0.05	[dB/km]
<b>Water Immersion Dependence induced Attenuation</b>	23°C, for 30 days	≤0.05	[dB/km]
<b>Damp Heat Dependence Induced Attenuation</b>	85°C and 85% RH, for 30 days	≤0.05	[dB/km]
<b>Dry Heat Aging</b>	85°C for 30 days	≤0.05	[dB/km]
<b>Mechanical Specifications</b>			
<b>Proof Test</b>	--	≥9.0	[N]
		≥1.0	[%]
		≥100	[Kpsi]
<b>Macro-bend Induced Loss</b>	1625nm	≤0.05	[dB]
	1310nm and 1550nm	≤0.05	[dB]
	1550nm	≤0.05	[dB]
<b>Coating Strip Force</b>	typical average force	1.5	[N]
	peak force	1.3-8.9	[N]
<b>Dynamic Fatigue Parameter(nd)</b>	--	≥20	--

