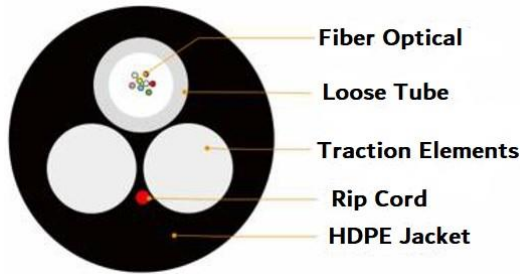


ASU-XX/100-CN

ASU Cable Span 100



Cable Description

Optical fibers are housed in loose tubes that are made of high-modulus plastic and filled with waterproof compounds.

Two FRPs are applied as strength members.

The loose tube is put in the cable and protected by two FRPs.

Polyethylene sheath is applied as an outer sheath.

Reference

The cable offered are designed, manufactured, and tested according to the standards as follows:

ITU-T G.652	Characteristics of a single-mode optical fiber
IEC 60794-1-1	Optical fiber cables-part 1-1: Generic Specification-General
IEC 60794-1-2	Optical fiber cables-part 1-2: Generic Specification-Basic optical cable test procedure
IEC 60794-3	Optical fiber cables-part 3: Sectional Specification-Outdoor cables
IEC 60794-3-10	Optical fiber cables-part 3-10: Outdoor Cables-Family specification for duct and direct buried optical communication cables
IEC 60794-3-11	Optical fiber cables-Part 3-11: Outdoor Cables-Detailed specification for duct and directly buried single-mode optical fiber telecommunication cables

Useful lifetime.

Optical fiber cables supplied in compliance with these specifications can withstand the typical service condition for a period of Twenty-five (25) years without detriment to the operation characteristics of the cable.

Disclaimer: Images are strictly used as reference

Characteristics	Conditions	Specified Values	Units
Optical characteristics			
Attenuation	1310 nm 1550 nm	<0.35 <0.21	[dB/km] [dB/km]
Chromatic Dispersion	1310 nm 1550 nm 1625 nm	≤3.5 ≤18 ≤22	[ps/(nm·km)] [ps/(nm·km)] [ps/(nm·km)]
Zero dispersion wavelength		1312±10	[nm]
Zero dispersion slope		≤0.092	[ps/(nm ² · km)]
PMD Maximum Individual Fibre Link Design Value (M=20, Q=0.01%)		≤0.1 ≤0.06	[ps/km] [ps/km]
Cable cutoff wavelength λ_{cc}		≤1260	[nm]
Mode field diameter (MFD)	1310 nm 1550 nm	9.2±0.4 10.3±0.5	[μ m] [μ m]
Core-clad Concentricity		≤0.5	[μ m]
Cladding diameter		125±1	[μ m]
Cladding Non-circularity		≤0.8	[%]
Coating diameter		245±5	[μ m]
Proof test		≥0.69	[Gpa]

Technical Characteristics

Tube: thermoplastic material containing optical fibers and filled with a suitable water tightness compound.

Peripheral Strength Member: 2 FRP beside of tube.

Outer Sheath: HDPE

In case of aerial installation between poles, the maximum permitted span is 100 meters with 1% installation sag.

The cables withstand the maximum additional loads generated by wind and ice in the following environment:

(a) Temperature -5°C, wind speed 100 km/h

(b) temperature -20°C, wind speed 50 km/h, ice radial thickness 8 mm

The use of proper fittings is recommended to achieve the mentioned performance.

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ASU-XX/100-CN



ASU Cable Span 100

Fiber and Loose Identification

The color code of fibers and loose tube will be identification in accordance with the following color sequence, other sequence also is available.

Fiber Color Code	1	2	3	4	5	6
	Blue	Orange	Green	Brown	Grey	White
	7	8	9	10	11	12
	Red	Black	Yellow	Violet	Pink	Aqua
	13	14	15	16	17	18
	Blue Customized	Orange Customized	Green Customized	Brown Customized	Grey Customized	White Customized
	19	20	21	22	23	24
Red Customized	Black Customized	Yellow Customized	Blue Customized	Pink Customized	Aqua Customized	
Tube Color Code	1					
	Blue					

Dimensions and Descriptions

The standard structure of ASU- From 06FO to 24FO 100M CABLE is shown in the following table, other structure and fiber count are also available according to customer requirements.

Item	Contents	Value	
		4FO / 6FO / 8FO 12FO / 24 Fibers	
Loose tube	Max. fiber counts/tube	4FO / 6FO / 8FO / 12FO	24FO
	Outer diameter (mm)	2.0mm	2.5mm
Strength member	Material	4FO / 6FO / 8FO / 12FO (2 x GFRP)	24FO (2 x GFRP)
	Diameter (mm)	4FO / 6FO / 8FO / 12FO (2.0mm)	24FO (2.1mm)
Sheath	Material	HDPE	
	Color	Black	
Ripcord	Number	1	
	Material	Polyester	
Cable diameter(mm) Approx.		4FO / 6FO / 8FO / 12FO (6.8mm)	24FO (7.5mm)
Cable weight(kg/km) Approx.		40kg/km	

To Order:

ASU-04/100	Mini ADSS Span 100 meters 04 Fibers
ASU-06/100	Mini ADSS Span 100 meters 06 Fibers
ASU-08/100	Mini ADSS Span 100 meters 08 Fibers
ASU-12/100	Mini ADSS Span 100 meters 12 Fibers

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ASU-24/100	Mini ADSS Span 100 meters 24 Fibers
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Main Mechanical and Environmental Performance

Item	Value	
Tensile performance(N)	4FO / 6FO / 8FO / 12FO	24FO
	2136 N	2356 N
Crush(N/100mm)	2000(N/10)	
Operation temperature:	-40°C~+70°C	
Installation temperature	-40°C~+70°C	
Storage temperature	-40°C~+70°C	

Mechanical, Physical and Environmental Test Characteristics

The mechanical and environmental performance of the cable are in accordance with the following table. Unless otherwise specified, all attenuation measurements required in this section shall be performed at 1550nm.

Items	Test Method	Requirements
Tension	IEC 60794-1-2-E1 Static: 400N, 5 min. Dynamic:1000N, 5 min.	Static: ΔI/I fiber ≤ 0.05%, Δα ≤ 0.05 dB under test, reversible Dynamic: ΔI/I fiber ≤ 0.33%, Δα reversible
Crush	IEC 60794-1-2-E3 1000 N/100mm, max. 5 min	ΔI/I fiber ≤ 0.33%, Δα reversible
Impact	IEC 60794-1-2-E4 5 J, 3 impacts, R=300 mm	Δα ≤ 0.05 dB, reversible, no damage
Bend	IEC 60794-1-2-E11A D=15xOD, 5 cycles	Δα ≤ 0.05 dB after test, no damage
Repeated bending	IEC 60794-1-2-E6 R=20xOD, 100N, 100 cycles	No break of fibers or cable`s elements
Torsion	IEC 60794-1-2-E7 ± 90°,2 m, 400N, 5 cycles	Δα ≤ 0.05 dB after test, no damage
Water Penetration	IEC 60794-1-2-F5B 3 m sample,1m water column	No water leakage.
Temperature cycling	IEC 60794-1-2-F1 -40 -> +70 °C, 2 cycles	Δα ≤ 0.05 dB/Km, reversible
Other parameters	According to IEC 60794-1	

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