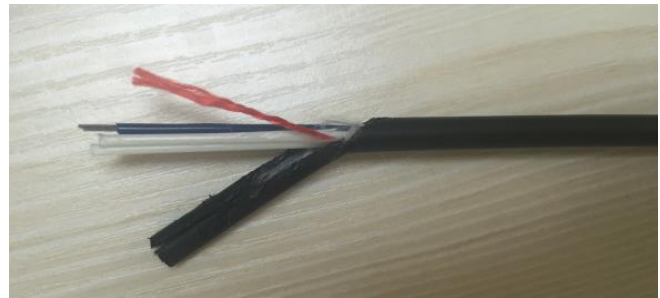
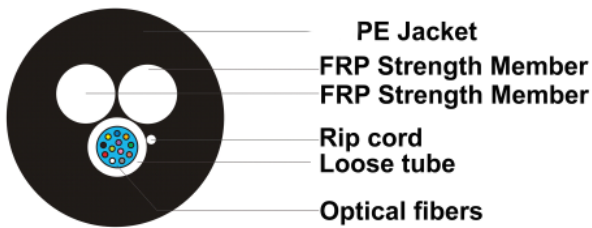


## ASU-100 SPECIFICATION

### 1.Introduction of fiber optical fibers

Central loose tube, Two FRP Strength member, one rip cord; Application for local area Network.

### 2.1 Cable Cross –Section



### 3. Fiber Optical

No.	Items	Unit	Specification	
			G.652D	
1	Mode Field Diameter	1310nm	$\mu\text{m}$	$9.2\pm 0.4$
		1550nm	$\mu\text{m}$	$10.4\pm 0.5$
2	Cladding Diameter	$\mu\text{m}$	$125\pm 0.5$	
3	Cladding Non-Circularity	%	$\leq 0.7$	
4	Core-Cladding Concentricity Error	$\mu\text{m}$	$\leq 0.5$	
5	Coating Diameter	$\mu\text{m}$	$245\pm 5$	
6	Coating Non-Circularity	%	$\leq 6.0$	
7	Cladding-Coating Concentricity Error	$\mu\text{m}$	$\leq 12.0$	
8	Cable Cutoff Wavelength	nm	$\lambda_{cc} \leq 1260$	
9	Attenuation(max.)	1310nm	dB/km	$\leq 0.36$
		1550nm	dB/km	$\leq 0.22$

#### 3.1 Cable

Items	Specifications	
Fiber Count	2~12 fibers	
Span	100m	
Colored Coating Fiber	Dimension	$250\text{mm}\pm 15\mu\text{m}$
	Color	Green、Yellow、White、Blue、Red、Violet、Brown、Pink、Black、Grey、Orange、Aqua
Cable OD(mm)	$7.0\text{mm}\pm 0.2$	
Cable weight	44 KGS/KM	



Loose Tube	Dimension	2.0mm
	Material	PBT
	Color	White
Strength Member	Dimension	2.0mm
	Material	FRP
Outer Jacket	Material	PE
	Color	Black

### 3.2 Mechanical and Environmental Characteristics

Items	Unit	Specifications
Tension (Long Term)	N	1000
Tension (Short Term)	N	1500
Crush (Long Term)	N/100mm	500
Crush (Short Term)	N/100mm	1000
Installation Temperature	°C	-0°C to + 60°C
Operating Temperature	°C	-20°C to + 70°C
Storage Temperature	°C	-20°C to + 70°C

## 4. TEST REQUIREMENTS

Approved by various professional optical and communication product institution, GL also conduct various in-house testing in its own Laboratory and Test Center. She also conduct test with special arrangement with the Chinese Government Ministry of Quality Supervision & Inspection Center of Optical Communication Products (QSICO). GL possess the technology to keep its fiber attenuation loss within Industry Standards.

The cable is in accordance with applicable standard of cable and requirement of customer. The following test items are carried out according to corresponding reference. Routine tests of optical fiber.

Mode field diameter	IEC 60793-1-45
Mode field Core/clad concentricity	IEC 60793-1-20
Cladding diameter	IEC 60793-1-20
Cladding non-circularity	IEC 60793-1-20
Attenuation coefficient	IEC 60793-1-40
Chromatic dispersion	IEC 60793-1-42
Cable cut-off wavelength	IEC 60793-1-44

Tension Loading Test	
Test Standard	IEC 60794-1
Sample length	No less than 50 meters
Load	Max. installation load



Duration time	1 hour
Test results	Additional attenuation: $\leq 0.05\text{dB}$ No damage to outer jacket and inner elements

Crush/Compression Test	
Test Standard	IEC 60794-1
Load	Crush load
Plate size	100mm length
Duration time	1 minute
Test number	1
Test results	Additional attenuation: $\leq 0.05\text{dB}$ No damage to outer jacket and inner elements

Impact Resistance Test	
Test Standard	IEC 60794-1
Impact energy	6.5J
Radius	12.5mm
Impact points	3
Impact number	2
Test result	Additional attenuation: $\leq 0.05\text{dB}$

Repeated Bending Test	
Test Standard	IEC 60794-1
Bending radius	20 X diameter of cable
Cycles	25 cycles
Test result	Additional attenuation: $\leq 0.05\text{dB}$ No damage to outer jacket and inner elements

Torsion/Twist Test	
Test Standard	IEC 60794-1
Sample length	2m
Angles	$\pm 180$ degree
cycles	10
Test result	Additional attenuation: $\leq 0.05\text{dB}$ No damage to outer jacket and inner elements
Temperature cycling Test	

Test Standard	IIEC 60794-1
Temperature step	+20°C → -40°C → +85°C → +20°C
Time per each step	Transition from 0°C to -40°C:2hours; duration at -40 °C :8 hours; Transition from -40 °C to +85 °C :4hours; duration at +85 °C :8 hours; Transition from +85°C to 0°C:2hours
Cycles	5
Test result	Attenuation variation for reference value (the attenuation to be measured before test at +20 ± 3°C) ≤ 0.05 dB/km
Water penetration Test	
Test Standard	IEC 60794-1
Height of water column	1m
Sample length	1m
Test time	1 hour
Test resul	No water leakage from the opposite of the sample

### 5.1 Packing and Marking

Each single length of cable shall be reeled on **Fumigated Wooden Drum**

Covered by plastic buffer sheet

Sealed by strong wooden battens

At least 1 m of inside end of cable will be reserved for testing.

Drum length: Standard drum length is 4, 000m±2%;

### 5.2 Drum Marking(can according to the requirement in the technical specification)

Manufacturer name;

Manufacturing year and month

Roll-- - direction arrow;

Drum length;

Gross/net weight;

