



SELF-SUPPORTING AERIAL FIBER CABLE CABLE F.O. ASU-GYXFTY S.M. 12F SPAN 100MT. SINGLE JACKET KHOMAX

1. Optical Fiber

Optical Fiber supplied in this specification meet the requirements of ITU-T G.652D

Parameter	Specification
MFD (1310nm)	8.7~9.5 μm
Cladding diameter	125 $\pm$ 1.0 μm
Fiber diameter	235~255 μm , with UV coating, and colored to : 250 $\pm$ 15 μm
Core/cladding concentricity error	$\leq 0.6\mu\text{m}$
Coating/cladding concentricity error	$\leq 12.0\mu\text{m}$
Cladding non circularity	$\leq 1.0\%$
Cut off wavelength	$\lambda_{cc} \leq 1260\text{nm}$
Attenuation coefficient	1310nm: 0.35dB/km max after cabling 1550nm: 0.21dB/km max after cabling
Bending-loss performance of optical fiber @1310nm&1550nm	$\leq 0.05\text{dB}$ (100 turns around a mandrel of 50mm diameter)
Polarization mode dispersion maximum individual fiber	$\leq 0.2\text{ps}/\sqrt{\text{km}}$
Polarization mode dispersion link value	$\leq 0.1\text{ps}/\sqrt{\text{km}}$
Zero-dispersion wavelength	1300~1324nm



Zero-dispersion slope	$\leq 0.092 \text{ps/nm}^2 \cdot \text{km}$
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2. Cross Section of Cable

3. Fiber and Loose Tube Identification

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

The color of the fillers will be natural

Color Code	1	2	3	4	5	6
	Blue	Orange	Green	Brown	Grey	White
	7	8	9	10	11	12
	Red	Black	Yellow	Purple	Pink	Aqua

4. Dimensions and Descriptions

The standard optical cable structure is shown in the following table, other structure and fiber count are also available according to customer requirements.

Span		100m
No. of cable		12
Fiber Model		G.652D
Loose Tube	Material	PBT
	Diameter	2.0 ± 0.06 mm
	Thickness	0.32 ± 0.03 mm
	<u>Colour</u>	White
Strength Member	Material	FRP
	<u>Diameter</u>	2.0 ± 0.05 mm
Outer Sheath	Material	HDPE
	Thickness	1.0 ± 0.1 mm
Cable Diameter		7 ± 0.5 mm
Allowable Tensile Strength		1500N
Allowable Crush Resistance		2200N/100mm
Min. bending radius	Without Tension	$10.0 \times \text{Cable- } \phi$
	Under Maximum Tension	$20.0 \times \text{Cable- } \phi$
Temperature range (°C)	Installation	-20~+60
	<u>Transport&Storage</u>	-40~+70
	Operation	-40~+70



5. 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-EIA IEC 60794-1-2-EIB IEC 60794-2-50	Load 1500N(2000N) for 10 minutes .Variation of attenuation $\leq$ 0.1dB .Fibers strain $\leq$ 0.20%
Crush	IEC 60794-1-2-E3 IEC 60794-2-50	Load 2000N for 3 minutes .Variation of attenuation $\leq$ 0.1dB
Impact	IEC 60794-1-2-E4 IEC 60794-2-50	Energy=1 J on surface of 12.5mm radius,3 times .Variation of attenuation $\leq$ 0.1dB
Repeated bending	IEC 60794-1-2-E18A Procedure no.2	Load 100N for 5 minutes Radius of curvature = 10 $\times$ O.D Variation of attenuation $\leq$ 0.1dB



Outer sheath removal	IEC 60794-2-50 IEC 60793-2-50-E21	Load $\leq 15\text{N}$ for removing sheath
Thermal Cycles	IEC 60794-1-2-F1 IEC 60794-2-20	Range $-40^{\circ}\text{C}/+70^{\circ}\text{C}$ @1550nm .Variation of attenuation $\leq 0.1\text{dB}$
UV Resistant	CEI EN 50289-4-17 Method A	$\pm 30\%$ after aging

6. Sheath marking

The optical fiber drop cable shall have sequentially numbered length marking at intervals of approximately 1 meter. The starting number of ordering length for any coil shall begin with zero meter. The accuracy of the measurement of length marking shall be held within the limits of $\pm 1\%$.

- Manufacturer's name
- Type of wire
- Year and month of manufacture
- Length marking each meter along the wire

