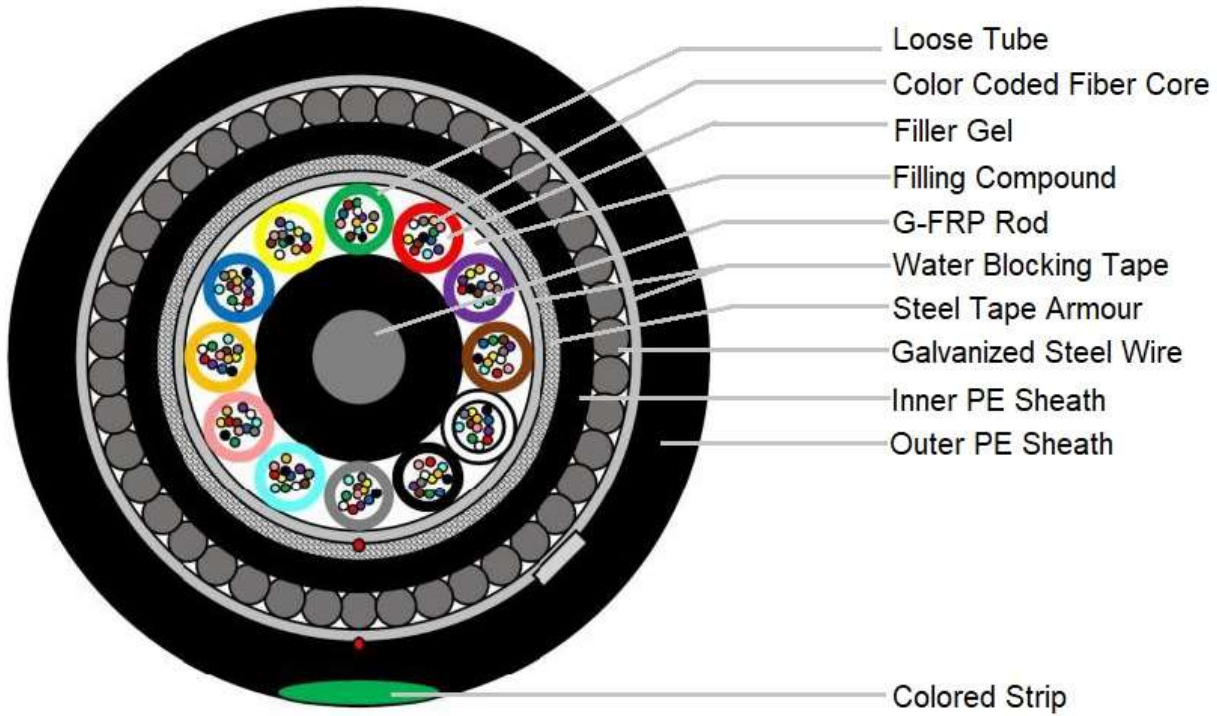


LUMIFIBER FIBER OPTIC SOLUTION



GYTFA33 DIRECT BURIED/UNDERWATER ARMoured FIBER OPTIC CABLE

This type of fiber cable can vary from 2 – 144 fiber cores, with the extra layer of steel wires armouing, it is suitable in direct buried environment and underwater application. Due to the cable design, it also is a great rodent resistant cable



CABLE SPECIFICATION

Fiber count		2 - 144
Loose Tube	OD (mm)	2.2 ± 0.1
	Material	PBT
Central Strength Member	OD (mm)	3.0 / 6.8 ± 0.1
	Material	G-FRP
Water Blocking Material		Water Blocking Tape
Armoured Material	Inner Armour	Steel Tape
	OD (mm)	1.2 ± 0.1 * 42
	Outer Armour	Galvanized Steel Wire
Sheath	Inner Thickness (mm)	1.2 ± 0.1
	Outer Thickness (mm)	2.0 ± 0.1
	Material	Medium Density Polyethylene (MDPE)
OD of cable (mm)		22.6 ± 0.3
Net Weight (Kg/km)		700 ± 15%
Loading tensile	Long Term	1500N
	Short Term	3000N
Crush Resistance	Long Term	4000N/100mm
	Short Term	8000N/100mm
Temperature Range	Installation	-20°C to 60°C
	Operation	-20°C to 60°C
	Storage and Transport	-20°C to 60°C

FIBER AND LOOSE TUBE IDENTIFICATION

NO.	1	2	3	4	5	6	7	8	9	10	11	12
Color	Blue	Orange	Green	Brown	Slate	White	Red	Black	Yellow	Violet	Pink	Aqua

FIBER OPTIC SPECIFICATION

Item	Unit	Specification	
		G652D	G657A
Fiber Type		G652D	G657A
Attenuation	dB/km	1310nm ≤ 0.36 1550nm ≤ 0.22	
Chroma Dispersion	ps/nm.km	1310nm ≤ 3.5 1550nm ≤ 18 1625nm ≤ 22	
Zero Dispersion Slope	ps/nm.km	≤ 0.092	
Zero Dispersion Wavelength	nm	1300 ~ 1324	
Cut-off Wavelength (λ _{cc})	Nm	≤ 1260	
Attenuation vs. Bending	db	(30mm radius, 100ring) ≤ 0.1 @ 1625nm	(10mm radius, 1ring) ≤ 1.5 @ 1625nm
Mode Field Diameter	μm	9.2 ± 0.4 @ 1310nm	
Core-clad Concentricity	μm	≤ 0.5	
Cladding Diameter	μm	125 ± 1	
Cladding Non-circularity	%	≤ 0.8	
Coating Diameter	μm	245 ± 5	
Proof Test	Gpa	≥ 0.69	

MAIN MECHANICAL & ENVIRONMENTAL PERFORMANCE TEST

Item	Test Method	Requirements
Tensile performance	IEC 60794-1-21-E1 Load: Maximum allowed tensile Cable length under tension: Not less than 50m. Duration of load sustain: 1min. Velocity of transfer device: 10mm/min	The increase in attenuation shall not exceed 0.1dB, and fiber strain should not higher than 0.2% under long term load. The increase in attenuation shall not exceed 0.1dB, and fiber strain should not higher than 0.6% under short term load. No attenuation increased after test at 1550nm. Under visual examination without magnification, no damage to the sheath or to the cable elements after test.
Crush	IEC 60794-1-21-E3 Load and Duration: Short term load 5000N for 1 min. Number of tests: 3 Spacing between test places: 500 mm	Under short term load, the increase in attenuation shall less than 0.1dB at 1550 nm after the test. Under visual examination without magnification, no damage to the sheath or to the cable elements. The imprint of the striking surface on the sheath is not considered mechanical damage.
Impact	IEC 60794-1-21-E4 Striking surface Radius: 300mm Impact energy: 10J Number of impacts: 1, each at 3 different places spaced not less than 500mm apart.	No change in attenuation after test at 1550nm. Under visual examination without magnification, no damage to the sheath or to the cable elements. The imprint of the striking surface on the sheath is not considered mechanical damage.
Temperature cycling	IEC 60794-1-22-F1 Sample length: at least 1000m Temperature range: -40°C~+70°C Cycles:2 Temperature cycling test dwell time: 12 hours	The change in attenuation coefficient shall be less than 0.10 dB/km at 1550nm.
Water Penetration	IEC 60794-1-22-F5B Time: 24 hours Sample length: 3m Water height: 1m	No water shall be detected at the unsealed end of the sample during and at the end of the test. The steel wire armor layer does not require water resistance.
Other parameters	According to IEC 60794	

CABLE SHEATH AND MARKING

Unless otherwise specified, the cable sheath marking shall be in accordance with follows:

Contents: Brand, the type of cable, the year of manufacture, length

Marking Interval: 1m

PACKAGING AND MARKING

1. Reel Length

Standard reel length: 2km/reel, other length is also available.

2. Labelling

The direction of rotation of the colour scheme is shown by marking the clockwise and anti-clockwise ends with red and green adhesive tape respectively

The markings are on both sides of the flanges as follows:

- A. Cable Type/Size
- B. Cable Length
- C. Gross Weight.
- D. Brand
- E. Shipping mark.
- F. Cable Packing

Both cable ends are provided with protection against water penetration and firmly secured to the drum, so the cable cannot move, and the turns cannot slide when it moves, handled, or laid. The inner end has at least 3 meters of accessible length to perform reception tests.

STORAGE

Recommended storage place: warehouse, not in the open air.

ORDERING INFORMATION

PRODUCT NUMBER	Fiber core number	Fiber type
LM-GYFTA33	02 = 2core 04 = 4core 06 = 6core 08 = 8core 12 = 12 core 24 = 24 core 36 = 36 core 48 = 48 core 72 = 72 core 96 = 96 core 144 = 144 core 192 = 192 core	SM = Single Mode OS1 OM2 = Multi Mode OM2 OM3 = Multi Mode OM3 OM4 = Multi Mode OM4 OM5 = Multi Mode OM5