

SHENZHEN HANXIN COMMUNICATION OPTICAL FIBER CABLE CO.,LTD

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OUTDOOR FIBER OPTIC CABLE SPECIFICATION OM2/OM2+/OM3/OM4- GYXTW 2-24 CORE



OM2+/OM3/OM4
Multimode Fibre

OM2+ Multimode Fibre Complies with or exceeds ISO.IEC 11801 OM2 specification IES 60793-2-10 type A1a.1 Optical Fiber Specification, and TIA/EIA-492AAAB-A detail specification.

OM3/OM4 Multimode Febers comply with or exceeded ISO/IEC 11801 OM3/OM4 specification, IEC 60793-2-10 type A1a.2 and A1a.3 Optical Fibre Specification, and TIA/EIA-492AAAC/492AAAD deatil specification.



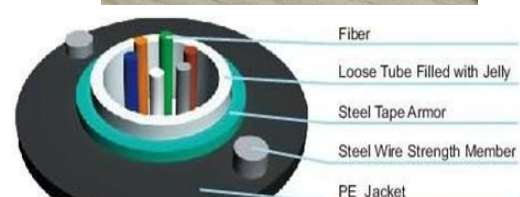
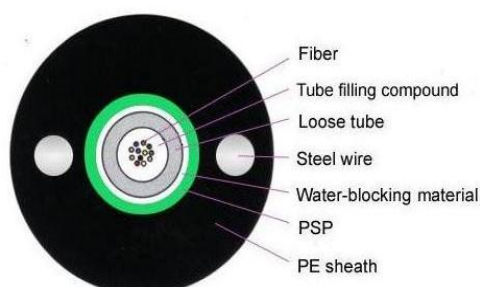
Temperature Range
Operating -40°C to $+70^{\circ}\text{C}$
Storage -50°C to $+70^{\circ}\text{C}$
Installation -30°C to $+70^{\circ}\text{C}$
Bending Radius:
Static 10D
Dynamic 20D

Features

- Up to 24 fibers
- 850nm laser-optimized
- Extremely refined refractive index profile
- Low differential mode delay (DMD)
- Low attenuation
- Uni tube gel-filled construction for supenor fiber protection
- Corrugated steel tape armor to protect cable from mechanical damage
- Superior geometry, uniformity
- Two parallel steel wite or Non-metallic FRP wite to enhance tensile resistant
- UV and moisture-resistant desigs.

Benefits and Applications

- Data centers
- Storage Area networks
- High performance computing centers
- Central offices
- Local Area Network
- 1&10&40&100 Gb/s Ethernet
- Optimized performance in tighr-buffer cable applications
- High resistance to micro-bending
- Stable performance over a wide range of environmental conditions.



Cable Structure

GYXTW

OUTDOOR CABLE

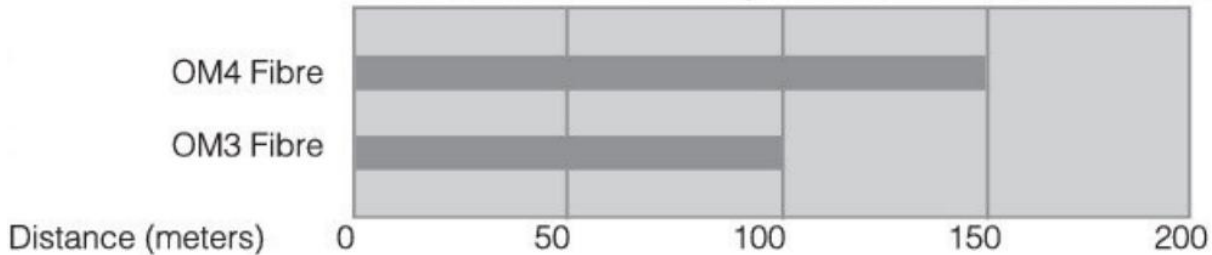
Description – OM2+/OM3/OM4

The fibers, 200/250um, are positioned in a loose tube made of a high modulus plastic. The tubes are filled with a water-resistant filling compound. The tube is wrapped with a layer of PSP longitudinally. Between the PSP and the loose tube water-blocking material is applied to keep the cable compact and watertight. Two parallel steel wires are placed at the two sides of the steel tape. The cable is completed with a polyethylene (PE) sheath.

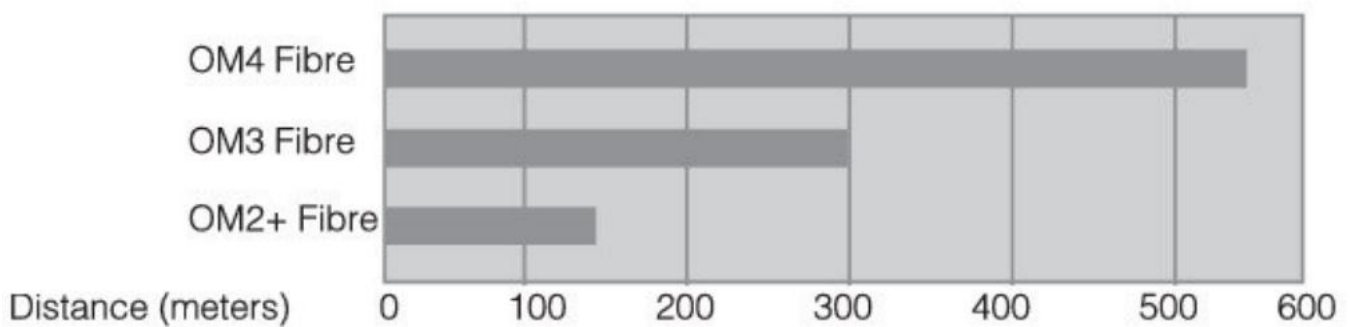
Armored Uni – Tube Single Jacket/Single Armored cable is designed with the flexibility and versatility required for today's most demanding installations including direct buried. The metallic armor is used when mechanical protection is desired.

System Link Length

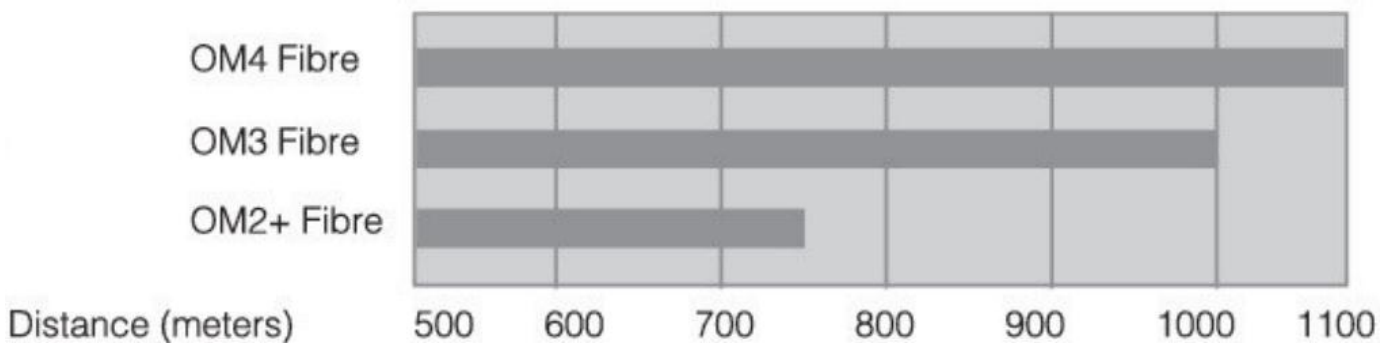
40 & 100 Gb/s Link Length @850nm Based on IEEE802.3ba



10 Gb/s Link Length @850nm Based on IEEE802.3ae



1 Gb/s Link Length @850nm Based on IEEE802.3z



1. Construction

- 1.1 :PE jacket
- 1.2 Parallel steel strength member
- 1.3 Corrugated steel taps armored (PSP)
- 1.4 Water blocking tapsPBT Loose Tube
- 1.5 Jelly core fibers

2. Fiber Parameters – OM2+/OM3/OM4

Characteristics	Conditions	Specified Values	Units
Geometry Characteristics			
Core Diameter		50±2.5	(µm)
Core Non-Circularity		≤ 50	(%)
Cladding Diameter		125.0±1.0	(µm)
Cladding Non-Circularity		≤0.1	(%)
Coating Diameter		245±7	(µm)
Coating/Cladding Concentricity Error		≤ 10.0	(µm)
Coating Non-Circularity		≤ 6.0	(%)
Core/Cladding Concentricity Error		≤ 1.0	(µm)
Delivery Length		Up to 8.8	(km.reel)
Optical Characteristics			
Attenuation	850nm	≤ 2.4	(dB/km)
	1300nm	≤ 0.6	(dB/km)
		OM2+/OM3/OM4	
Overfilled Modal Bandwidth	850nm	≥ 700/≥1500/≥3500	(MHz-km)
	1300nm	≥ 700/≥500/≥500	(MHz-km)
Effective Modal Bandwidth	850nm	≥ 950/≥2000/≥4700	(MHz-km)
Application support distance on			
40&100 Gigabit Ethernet	850nm	-/100/150	(m)
10GBASE-SR	850nm	150/300/550	(m)
1000BASE-SX	850nm	750/1000/1100	(m)
DMD Specification	Compliant with and more stringent than the requirements of IEC 60793-2-10		
Numerical Aperture		0.200±0.015	
Group Refractive Index	850nm	1.482	
	1300nm	1.477	
Zero Dispersion Wavelength, λ _o		1295-1340	(nm)
Zero Dispersion Slope, S _o	1295nm ≤ λ _o < 1310nm	≤0.105	(ps/nm ² -km)
	1310nm ≤ λ _o ≤ 1340nm	≤0.000375(1590- λ _o)	(ps/nm ² -km)
Macrobending Loss			
100 Turns @37.5mm Radius	850nm	≤0.50	(dB)
	1300nm	≤0.50	(dB)
2 Turns @15mm Radius	850nm	≤1.0	(dB)
	1300nm	≤1.0	(dB)
Backscatter Characteristics			
	1300nm		
Step (Mean of Bidirectional Measurement)		≤0.10	(dB)

GYXTW		OUTDOOR CABLE	
Irregularities Over Fibre Length and Point Discontinuity		≤0.10	(dB)
Attenuation Uniformity		≤0.08	(dB/km)
Environmental Characteristics			
Temperature Cycling	-60°C to +85 °C	≤0.10	(dB/km)
Temperature-Humidity Cycling	-10°C to +85 °C, 4% to 98%RH	≤1.0	(dB/km)
Water Immersion	23 °C, 30 days	≤1.0	(dB/km)
Dry Heat	85 °C, 30 days	≤1.0	(dB/km)
Damp Heat	85 °C, 85% RH, 30 days	≤1.0	(dB/km)
Mechanical Specification			
Proof test		≥9.0 ≥1.0 ≥100	(N) (%) (kpsi)
Coating Strip Force	Typical average force Peck force	1.5 ≥ 1.3 ≤ 8.9	(N) (N)
Dynamic Stress Corrosion Susceptibility Parameter (nd, Typical)		27	

OM2 CABLE Muti mode 02-24FO -50/125

		G.652	G.655	50/125µm	62.5/125µm
Attenuation	@850nm			≤3.0dB/km	≤3.0dB/km
(+20°C)	@1300nm			≤1.0dB/km	≤1.0dB/km
	@1310nm	≤0.36dB/km	--		
	@1550nm	≤0.22dB/km	≤0.23dB/km		
Bandwidth (Class A)	@850			≥500MHZ·km	≥500MHZ·km
	@1300			≥1000MHZ·km	≥600MHZ·km
Numerical Aperture				0.200±0.015NA	0.275±0.015 NA
Cable Cut-off Wavelength λ _{cc}	≤1260nm	≤1480nm			

3. Fiber color code

The fiber in the loose tube is colored according to the following color code. Each color is distinguishable from the other under normal light conditions

No	1	2	3	4	5	6	7	8	9	10	11	12
Color	1	2	3	4	5	6	7	8	9	10	11	12
No	13	14	15	16	17	18	19	20	21	22	23	24
Color	1	2	3	4	5	6	7	8	9	10	11	12

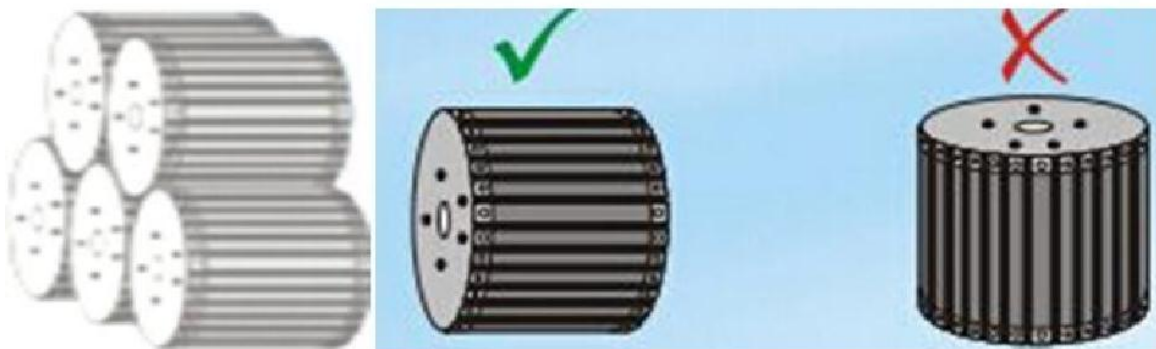
Noted: For 24 core unitube fiber optic cable.the fiber color will mark with Ink on fiber

4. Cable technical Parameters

Cable Type	Cable Diameter mm	Cable Weight Kg/km	Tensile Strength Long/Short Term N	Crush Resistance Long/ShortTerm N/100m	Bending Radius Static/Dynamic mm
GYXTW-2~12	8	80	250/550	300/1000	15D/30D
GYXTW-14~24	8	80	250/550	300/1000	15D/30D

5. Packing and Drum

- Each single length of cable shall be reeled on Drum suitable for long-distance Shipment.
- Cables should be protected from moisture; kept away from high temperature and fire sparks; protected from over bending and crushing; protected from mechanical stress and damage





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