

SHENZHEN HANXIN COMMUNICATION OPTICAL FIBER CABLE CO.,LTD

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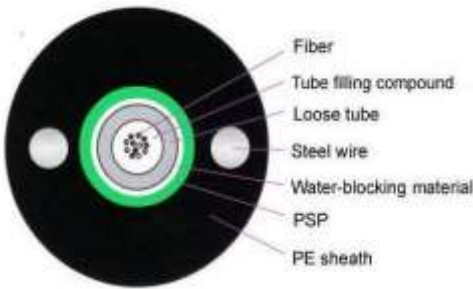
CABLE SPECIFICATION  
CABLE SINGLE MODE GYXTW-04/24 CORE – with Armord  
Mode: GYXTW - xxFO-G.652D - 9/125

Cable contruction:



Temperature Range  
Opeating -40<sup>0</sup>C to +70<sup>0</sup>C  
Storage -50<sup>0</sup>C to +70<sup>0</sup>C  
Installation -30<sup>0</sup>C to +70<sup>0</sup>C  
Bending Radius:  
Static 10D  
Dynamic 20D  
Two parallel steel  
wite or Non-  
metallic FRP wite  
to enhance tensile  
resistant  
UV and moisture-  
resistant designs

Features  
04 to 24 fibers  
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  
.



Cable Structure

**Benefits and Applications**

- Data centers
- Storage Area networks
- High performance computing centers
- Central offices
- Local Area Network
- Optimized performance in tighr-buffer cable applications
- High resistance to micro-bending
- Stable performance over a wide range of environmental conditions.

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**Information:**

| ITEMS                    |            | DESCRIPTION             |
|--------------------------|------------|-------------------------|
| Fiber count              |            | 04-24FO                 |
| Loose tube               | OD(mm)     | ( $\geq 2.0\text{mm}$ ) |
|                          | Materia    | PBT                     |
| Water Block material     |            | Water bloking compound  |
| Armored                  |            | Corrugation Steel tape  |
| Strength Number ( steel) |            | 0.8mm $\pm$ 2           |
| Sheath                   | Thichness: | 2.2mm                   |
|                          | Materil:   | MDPE                    |
| ODF of cable (mm)        |            | 7.0                     |

**Description:**

The fibers 9/125, are positioned in a loose tube made of a high modulus plastic. The tubes are filled with a water- resistant afilling 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 flexibilty and versatility required for today’s most demanding installations including direct baried. The metallic armor is used when mechanica protection is desired.

| Characteristics                | Conditions | Specified Values | Units             |
|--------------------------------|------------|------------------|-------------------|
| <b>Geomery Characteristics</b> |            |                  |                   |
| Core Diameter                  |            | 9 $\pm$ 2.5      | ( $\mu\text{m}$ ) |
| Core Non-Circularity           |            | $\leq 50$        | (%)               |
| Cladding Diameter              |            | 125.0 $\pm$ 1.0  | ( $\mu\text{m}$ ) |
| Cladding Non-Circularity       |            | $\leq 0.1$       | (%)               |

|                                      |             |             |            |
|--------------------------------------|-------------|-------------|------------|
| 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 fiber type                   |             | Single mode | G652       |
| Waveband                             |             | 1310/1550   | nm         |
| IL                                   | 1310 nm     | 0.36        | dB         |
|                                      | 1550 nm     | 0.23        | dB         |
| Max.Tension                          | Long-term   | 250         | M          |
|                                      | Short- Term | 550         | M          |
| Max. Crushing Resistance             | Long-term   | 300         | N/100mm    |
|                                      | Short- Term | 1000        | N/100mm    |
| Min. Bending Radius                  | Long-term   | 30D         | ( Dynamic) |
|                                      | Short- Term | 15D         | ( Static)  |

### Construction

- 1.1 jacket
- 1.2 Parallel steel strengthmember
- 1.3 Corrugated steel taps armored (PSP)
- 1.4 Water blocking taps PBT LooseTube
- 1.5 Jelly core fibers

### Fiber colorcode

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 |

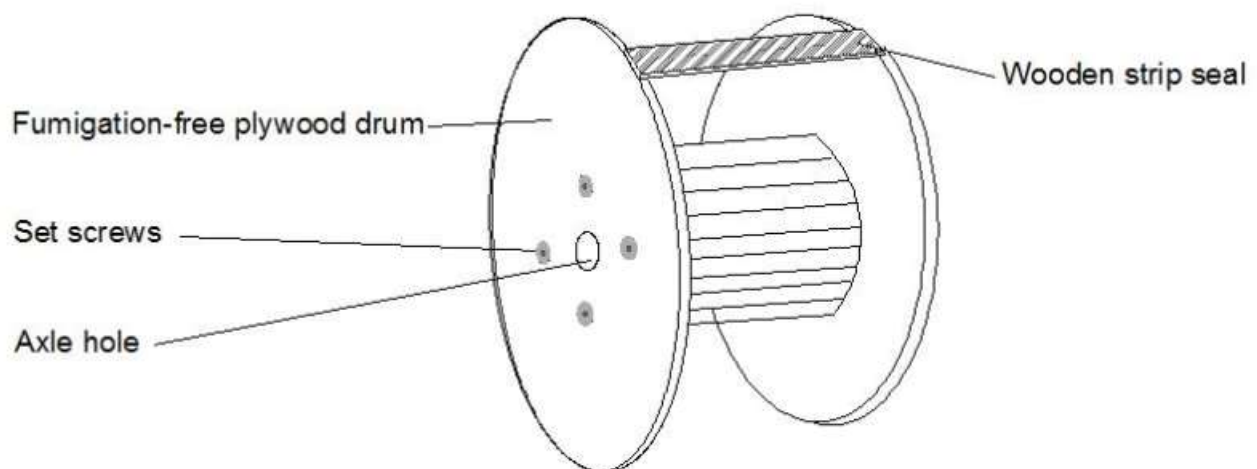
### Testing Cable:

| No | ITEMS                  | TEST METHOD                                                                                                    | ACCEPTANCE CRITERIA                                                                |
|----|------------------------|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| 1  | Tendile Loading Test   | #test method: IEC 60797-1-E1<br>- Long-tensile load: 600N<br>- Short-tensile load: 1500N<br>-Cable lenth: ≥50m | - Attenuation<br>incermant@1550nm≤0.1dB<br>- No jacket cracking and fiber brackage |
| 2  | Crush Resistance Test  | #Test method: IEC 60794-1-E4<br>- Long load: 300N/100mm<br>- Short Load: 1000N/100mm<br>- Load time: 1 minutes | - Attenuation<br>incermant@1550nm≤0.1dB<br>- No jacket cracking and fiber brackage |
| 3  | Impact Resistance Test | #Test method: IEC 60794-1-E4<br>- Impact height: 1m<br>- Impact weigh: 450g                                    | - Attenuation<br>incermant@1550nm≤0.1dB<br>- No jacket cracking and fiber          |

|   |                          |                                                                                                                                                                                                         |                                                                                                  |
|---|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
|   |                          | - Impact point: $\geq 5$<br>- Impact frequency: $\geq 3/\text{point}$                                                                                                                                   | brackage                                                                                         |
| 4 | Repeated Bending         | #Test method: IEC 60794-1-E6<br>- Mandre diameter: 20D (D=cable diameter)<br>- Subject weight: 15kg<br>- Bending frequency: 30 times<br>- Bending speed: 2s/time                                        | - Attenuation<br>incermant@1550nm $\leq 0.1\text{dB}$<br>- No jacket cracking and fiber brackage |
| 5 | Torsion Test             | #Test method: IEC 60794-1-E7<br>- Length: 1m<br>- Subject weight: 25kg<br>- AngleL $\pm 180$ degree<br>- Frequency: $\geq 10/\text{point}$                                                              | - Attenuation<br>incermant@1550nm $\leq 0.1\text{dB}$<br>- No jacket cracking and fiber brackage |
| 6 | Water Penetration Test   | #Test method: IEC 60794-1-F5B<br>- Height of pressure head: 1m<br>- Length of specmen: 3m<br>- Test time: 24 hours                                                                                      | - no leakage through the open cable end                                                          |
| 7 | Tempearture Cycling Test | #Test method: IEC 60794-1-F1<br>- Temperature steps: $+20^{\circ}\text{C}$ to $40^{\circ}\text{C}$ , $+70^{\circ}\text{C}$ , $+20^{\circ}\text{C}$<br>- Testing time 24 hours/ step<br>- Cycle index: 2 | - Attenuation<br>incermant@1550nm $\leq 0.1\text{dB}$<br>- No jacket cracking and fiber brackage |
| 8 | Drop performance         | #Test method: IEC 60794-1-E14<br>- Testing length: 30cm<br>- Temperature range: $70\pm 2^{\circ}\text{C}$<br>- Testinng time: 24 hours                                                                  | - No filling compound drop out                                                                   |
| 9 | Temperature              | Operating: $-40^{\circ}\text{C}$ to $+60^{\circ}\text{C}$<br>Store/ Transport: $-50^{\circ}\text{C}$ to $+70^{\circ}\text{C}$<br>Installation : $-20^{\circ}\text{C}$ to $+60^{\circ}\text{C}$          |                                                                                                  |

### Packing andDrum

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





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