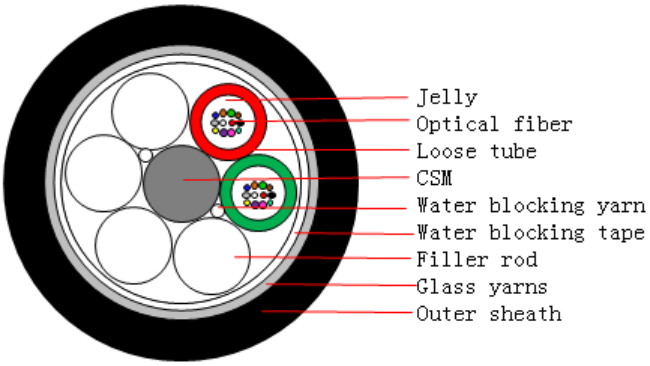
GYFY

1. Cable cross-section



2. Cable Specification

2.1 Introduction

Loose tube construction, tubes jelly filled, elements (tubes and filler rods) laid up around non-metallic central strength member, polyester yarns used to bind the cable core, water blocking tape wrapped around cable core, glass yarns as peripheral strength member, then HDPE(UV Resistant) outer sheath.

2.2 Fiber color code

Fiber color in each tube starts from No. 1 Red.

1	2	3	4	5	6	7	8	9	10	11	12
Red	Green	Blue	Yellow	White	Grey	Brown	Violet	Turquoise	Black	Orange	Pink

2.3 Color codes for loose tube & filler rod

Tube color starts from No. 1 Red. If there are fillers, the color is nature.

1	2	3	4	5	6	7	8	9	10	11	12
Red	Green	Blue	Yellow	White	Grey	Brown	Violet	Turquoise	Black	Orange	Pink

If there is the second layer, the tube color is identifiable in accordance with the following color sequence.

1	2	3~15
Red	Green	Nature

2.4 Cable structure and parameter

SN	Item	Unit	Value					
1	No. of fibers	count	12	24	48	96	144	288
2	No. of fibers per tube	count	12	12	12	12	12	12
3	No. of elements	count	6	6	6	8	12	9+15
4	Outer sheath thickness	mm	1.5	1.5	1.5	1.5	1.6	1.6
5	Cable diameter	mm	10.6	10.6	10.6	12.0	14.9	18.4
6	Cable weight	kg/km	78	81	85	117	175	261
7	Short term tension	N	2500	2500	2500	2500	2500	5000
8	Short term crush	N/100mm	1500	1500	1500	1500	1500	1500

3. Characteristic of Optical Cable

3.1 Min. bending radius for installation

Static: 10 x cable diameter

Dynamic: 20 x cable diameter

3.2 Application temperature range

Operation: - 30℃ ~ +50℃

Installation: -10℃ ~ +40℃

Storage/transportation: - 30℃ ~ +50℃

3.3 Main mechanical & environmental performance test

Item	Test Method	Acceptance Condition
Tensile Strength IEC 794-1-2-E1	- Load: Short term tension - Length of cable: about 50m - Load time: 1min	- Fiber strain ≤ 0.6% - No fiber break and no sheath damage.
Crush Test IEC 60794-1-2-E3	- Load: Short term crush - Load time: 1min	- Loss change ≤ 0.1dB@1550nm - No fiber break and no sheath damage.

4. Characteristic of Optical Fiber

G652D fiber information

Mode field diameter (1310nm):	9.2μm±0.4μm
Mode field diameter (1550nm):	10.4μm±0.8μm
Cut off wavelength of cabled fiber (λ_{cc}):	≤1260nm
Attenuation at 1310nm:	≤0.35dB/km
Attenuation at 1383nm:	≤0.35dB/km
Attenuation at 1550nm:	≤0.22dB/km
Attenuation at 1625nm:	≤0.24dB/km
Bending loss at 1550nm (100 turns, 30mm radius):	≤0.05dB
Dispersion in the range 1288 to 1339nm:	≤3.5ps/ (nm•km)
Dispersion at 1550nm:	≤18ps/ (nm•km)
Dispersion slope at zero dispersion wavelength:	≤0.092ps/ (nm^2•km)
Polarization mode dispersion link value:	≤0.1ps/√km

5. Delivery Information

5.1 Packing

5.1.1 Each single length of cable shall be reeled on **Non-fumigated Iron-wooden Drum or Non-fumigated wooden Drum** suitable for long-distance shipment.

5.1.2 Covered by plastic buffer sheet.

5.1.3 Sealed by strong wooden battens.

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

5.1.5 Drum length: Standard drum length is **4km±3%**.

5.2. Marking

5.2.1 Cable marking

Year – Cable type-Fibre count - Fibre type - Manufacturer - Metric marking

5.2.2 The marking contains the following information: type, length, name of manufacturer, and year of manufacture. The type designation depends on the design of the cable. The marking is done at 1 m intervals. Other customer information such as contract no., project no. and delivery destination available upon request.

5.2.2 Cable identification documents

- Product qualified certificate
- Test report

5.3. Lifetime Declaration

Optical fiber cables supplied in compliance with this specification is capable to withstand the typical service condition for a period of twenty-five (25) years without detriment to the operation characteristics of the cable.