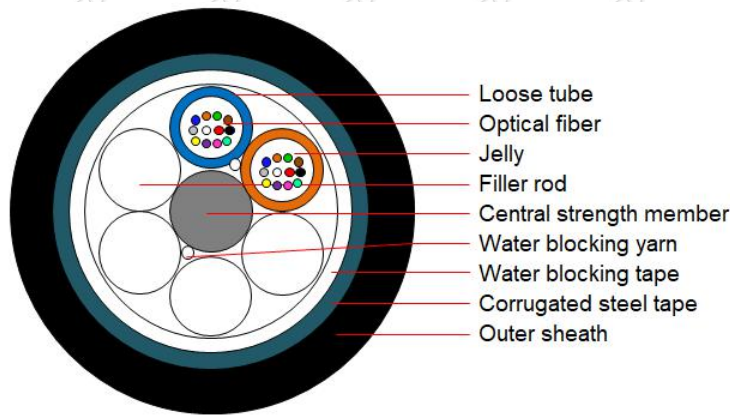


# GYFS

## 1. Cable cross-section



## 2. Cable Specification

### 2.1 Introduction

Loose tube construction, tubes jelly filled, elements (tubes and filler rods) and water blocking yarns laid up around non-metallic central strength member, polyester yarns used to bind the cable core, water blocking tape, dry core, then steel tape and PE outer sheath .

### 2.2 Fiber color code

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

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

### 2.3 Color codes for loose tube

Tube color starts from No. 1 Blue.

1	2	3	4
Blue	Orange	Green	Brown

### 2.4 Cable structure and parameter

Item	Unit	Value	
No. of fibers	count	24	48
No. of fibers per tube	count	12	12
No. of elements	count	6	6
Cable diameter( $\pm 5\%$ )	mm	11.7	11.7
Cable weight( $\pm 10\%$ )	mm	118	120
Short term tension	N	1500	1500
Short term crush	N/100mm	1000	1000

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### 3. Characteristic of Optical Cable

#### 3.1 Min. bending radius for installation

Static: 10x cable diameter

Dynamic: 20x cable diameter

#### 3.2 Application temperature range

Operation: -20°C ~ +60°C

Installation: -10°C ~ +60°C

Storage/transportation: -20°C ~ +60°C

#### 3.3 Main mechanical & environmental performance test

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

### 4. Characteristic of Optical Fiber

#### G652D fiber information

Mode field diameter (1310nm):	$9.2\mu\text{m}\pm 0.4\mu\text{m}$
Mode field diameter (1550nm):	$10.4\mu\text{m}\pm 0.8\mu\text{m}$
Cut off wavelength of cabled fiber ( $\lambda_{cc}$ ):	$\leq 1260\text{nm}$
Attenuation at 1310nm:	$\leq 0.36\text{dB/km}$
Attenuation at 1550nm:	$\leq 0.22\text{dB/km}$
Bending loss at 1550nm (100 turns, 30mm radius):	$\leq 0.05\text{dB}$
Zero dispersion wavelength:	1300nm-1324nm
Dispersion in the range 1288 to 1339nm:	$\leq 3.5\text{ps}/(\text{nm}\cdot\text{km})$
Dispersion in the range 1271 to 1360nm:	$\leq 5.3\text{ps}/(\text{nm}\cdot\text{km})$
Dispersion in the range 1480 to 1580nm:	$\leq 20\text{ps}/(\text{nm}\cdot\text{km})$
Dispersion at 1550nm:	$\leq 18\text{ps}/(\text{nm}\cdot\text{km})$
Dispersion at 1625nm:	$\leq 22\text{ps}/(\text{nm}\cdot\text{km})$
Dispersion slope at zero dispersion wavelength:	$\leq 0.092\text{ps}/(\text{nm}^2\cdot\text{km})$

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