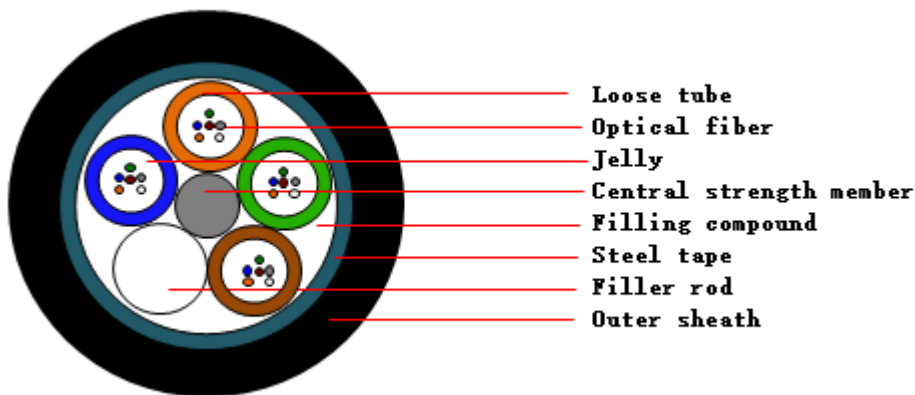


GYTS

1. Cable cross-section



2. Cable Specification

2.1 Introduction

Loose tube construction, tubes jelly filled, elements (tubes and filler rods) laid up around metallic central strength member, polyester yarns used to bind the cable core, filling compound filled in the apertures of the cable 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

SN	Item	Unit	Value	
1	No. of fibers	count	12/24	24
2	No. of fibers per tube	count	6	12
3	No. of elements	count	5	5
4	Cable diameter($\pm 5\%$)	mm	8.7	9.6
5	Cable weight($\pm 10\%$)	kg/km	91	104
6	Short term tension	N	1500	1500
7	Short term crush	N/100mm	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: - 40°C ~ +60°C

Installation: -20°C ~ +60°C

Storage/transportation: - 40°C ~ +70°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

Item	Contents	Value
G652D Optical characteristics		
Attenuation	@1310nm	$\leq 0.36\text{dB/km}$
	@1383nm	$\leq 0.35\text{dB/km}$
	@1550nm	$\leq 0.22\text{dB/km}$
	@1625nm	$\leq 0.25\text{dB/km}$
Dispersion	@1288nm~1339nm	$\leq 3.5\text{ps}/(\text{nm}\cdot\text{km})$
	@1550nm	$\leq 18\text{ps}/(\text{nm}\cdot\text{km})$
	@1625nm	$\leq 22\text{ps}/(\text{nm}\cdot\text{km})$
Zero-Dispersion wavelength		1300nm~1324nm
Zero-Dispersion slope		$\leq 0.092\text{ps}/(\text{nm}^2\cdot\text{km})$
Mode field diameter (MFD)	@1310nm	$9.2\pm 0.4\mu\text{m}$
	@1550nm	$10.4\pm 0.5\mu\text{m}$
Cable cutoff wavelength λ_{cc} (nm)		$\leq 1260\text{nm}$
Micro bending Attenuation	@1550nm (1turns; $\Phi 32\text{mm}$)	$\leq 0.05\text{dB}$
	@1550nm (100turns; $\Phi 60\text{mm}$)	$\leq 0.05\text{dB}$
Link polarization dispersion (PMD _D)		$\leq 0.1\text{ps}/\text{km}^{1/2}$
Geometrical characteristics		
Cladding diameter		$125\pm 1.0\mu\text{m}$
Cladding non-circularity		$\leq 1\%$
Core/cladding concentricity error		$\leq 0.6\mu\text{m}$
Fiber diameter with coating (uncolored)		$242\pm 7\mu\text{m}$
Cladding/coating concentricity error		$\leq 12.0\mu\text{m}$
Mechanical characteristics		

Proof stress	≥0.69GPa
Fiber curl	≥4m
Coating strip force	1.0~8.9N
Environmental characteristics	
Temperature induced attenuation(-60~+85℃)	≤0.05dB/km
Dry heat induced attenuation (85℃±2℃, 30 days)	≤0.05dB/km
Water immersion induced attenuation (23℃±2℃, 30 days)	≤0.05dB/km
Damp heat induced attenuation (85℃±2℃, RH85%, 30 days)	≤0.05dB/km

Item	Contents	Value
G657A2 Optical characteristics		
Attenuation	@1310nm	≤0.36dB/km
	@1383nm	≤0.35dB/km
	@1550nm	≤0.22dB/km
	@1625nm	≤0.25dB/km
Zero-Dispersion wavelength		1300nm~1324nm
Zero-Dispersion slope		≤0.092ps/(nm ² ·km)
Mode field diameter (MFD)	@1310nm	8.6±0.4μm
	@1550nm	9.6±0.5μm
Cable cutoff wavelength λ _{cc} (nm)		≤1260nm
Micro bending Attenuation	@1550nm (10turns;Φ30mm)	≤0.03dB
	@1550nm (1turns;Φ20mm)	≤0.1dB
	@1550nm (1turns;Φ15mm)	≤0.4dB
Link polarization dispersion (PMD _D)		≤0.1ps/km ^{1/2}
Geometrical characteristics		
Cladding diameter		125±1.0μm
Cladding non-circularity		≤1%
Core/cladding concentricity error		≤0.6μm
Fiber diameter with coating (uncolored)		242±7μm
Cladding/coating concentricity error		≤12.0μm
Mechanical characteristics		
Proof stress		≥0.69GPa
Fiber curl		≥4m
Coating strip force		1.3~8.9N
Environmental characteristics		
Temperature induced attenuation(-60~+85℃)		≤0.05dB/km
Dry heat induced attenuation (85℃±2℃, 30 days)		≤0.05dB/km
Water immersion induced attenuation (23℃±2℃, 30 days)		≤0.05dB/km
Damp heat induced attenuation (85℃±2℃, RH85%, 30 days)		≤0.05dB/km