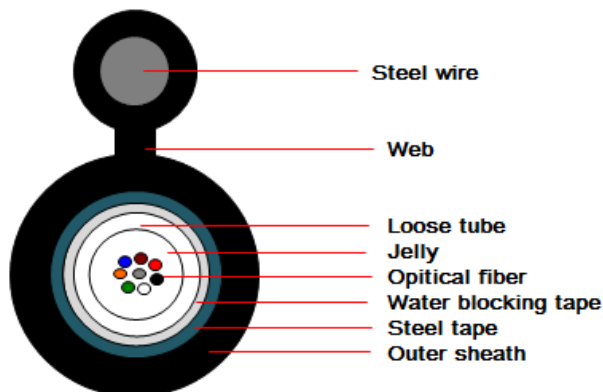


GYXTC8S

1. Cable cross-section



2. Cable Specification

2.1 Introduction

Central single loose tube construction, jelly compound filled, water blocking tape and steel tape then PE outer sheath with messenger wire combined.

2.2 Color code

The tube color is natural. Fiber color in the 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 Cable structure and parameter

SN	Item	Unit	Value
1	No. of fibers	count	12
2	Tube diameter	mm	2.6
3	Messenger wire	mm	1.6
4	Cable diameter($\pm 5\%$)	mm	6.9
5	Cable height($\pm 10\%$)	mm	11.9
6	Cable weight($\pm 10\%$)	kg/km	75
7	Short term tension	N	1500
8	Short term crush	N/100mm	1000

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 ~ +50°C

Storage/transportation: - 50°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: 5min	- 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.
Impact Test IEC 60794-1-2-E4	- Points of impact: 5 - Times of per point: 5 - Impact energy: 4.5J - Striking surface radius: 12.5mm	- Loss change $\leq 0.1\text{dB}@1550\text{nm}$ - No fiber break and no sheath damage.
Repeated Bending IEC 60794-1-2-E6	- Bending radius: 20 x OD - No. of cycle: 30	- Loss change $\leq 0.1\text{dB}@1550\text{nm}$ - No fiber break and no sheath damage.
Torsion IEC 60794-1-2-E7	- Length: 1m - Twist angle: $\pm 180^\circ$ - No. of cycle: 10	- Loss change $\leq 0.1\text{dB}@1550\text{nm}$ - No fiber break and no sheath damage.
Compound flow IEC 60794-1-2-E14	- Length: 30cm - Temperature: $70^\circ\text{C} \pm 2^\circ\text{C}$ - Period: 24h	- No outflow or dripping
Water Penetration IEC 60794-1-2-F5B	- Height of water: 1m - Sample length: 3m - Time: 24h	- No water leak from the cable core of the opposite end
Temperature Cycling IEC 60794-1-2-F1	- Temperature: $-40^\circ\text{C} \sim +60^\circ\text{C}$ - Time of each step: 12h - Number of cycle: 2	- Loss change $\leq 0.05\text{dB/km}@1550\text{nm}$ - 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):	$10.4\mu\text{m} \pm 0.8\mu\text{m}$
Cladding diameter:	$125\mu\text{m} \pm 1.0\mu\text{m}$
Core/cladding concentricity error:	$\leq 0.6\mu\text{m}$
Cladding non-circularity:	$\leq 1.0\%$
Coating diameter:	$245\mu\text{m} \pm 7\mu\text{m}$
Cladding coating concentricity error	$\leq 12\mu\text{m}$
Cut off wavelength of cabled fiber (λ_{cc}):	$\leq 1260\text{nm}$
Attenuation at 1310nm:	$\leq 0.35\text{dB/km}$
Attenuation at 1383nm:	$\leq 0.35\text{dB/km}$
Attenuation at 1550nm:	$\leq 0.21\text{dB/km}$
Attenuation at 1625nm:	$\leq 0.30\text{dB/km}$

Zero dispersion wavelength:	1300nm-1324nm
Dispersion in the range 1288 to 1339nm:	$\leq 3.5\text{ps/ (nm}\cdot\text{km)}$
Dispersion in the range 1271 to 1360nm:	$\leq 5.3\text{ps/ (nm}\cdot\text{km)}$
Dispersion at 1550nm:	$\leq 18\text{ps/ (nm}\cdot\text{km)}$
Dispersion at 1625nm:	$\leq 22\text{ps/ (nm}\cdot\text{km)}$
Dispersion slope at zero dispersion wavelength:	$\leq 0.092\text{ps/ (nm}^2\cdot\text{km)}$