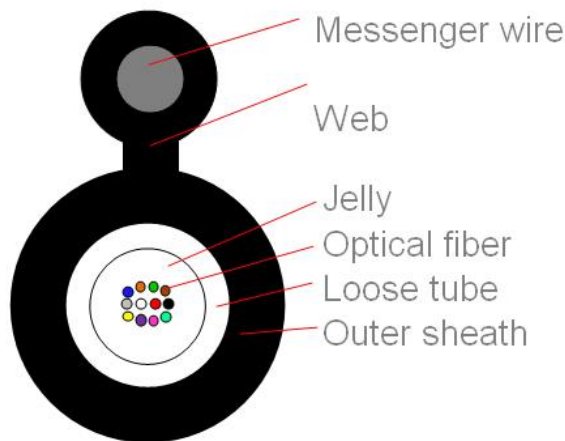


GYXTC8Y

Outdoor self-supporting optical cable for communication in an "8" shape configuration, featuring a metal reinforcing messenger wire, central tube filling, and a polyethylene bonded sheath.

Cable cross-section



Cable Specification

1 Introduction

Central single loose tube construction, jelly compound filled, and PE outer sheath with a steel messenger wire combined.

2 Color code

The tube color is nature. And fiber color in the tube starts from No. 1 Blue.

No.	1	2	3	4	5	6
Color	Blue	Orange	Green	Brown	Gray	White
No.	7	8	9	10	11	12
Color	Red	Black	Yellow	Purple	Pink	Aqua
No.	13	14	15	16	17	18
Color	S100Blue	S100Orange	S100Green	S100Brown	S100Gray	S100White
No.	19	20	21	22	23	24
Color	S100Red	S100Nature	S100Yellow	S100Purple	S100Pink	S100Aqua

Note: S100 means interval 100mm black circle.

3 Cable structure and parameter

SN	Item	Unit	Value	
1	No. of fibers	count	2~12	16-24
2	Tube diameter($\pm 5\%$)	mm	3.0	3.6
3	Messenger wire(NOM.)	mm	1.6	1.6
4	Outer sheath thickness(NOM.)	mm	1	1
5	Cable diameter($\pm 5\%$)	mm	5.1	5.7

6	Cable height($\pm 10\%$)	Mm	10.1	10.7
7	Cable weight($\pm 10\%$)	kg/km	47	52
8	Short term tension	N	1000	1000
9	Short term crush	N/100mm	500	500

Characteristic of Optical Cable

1 Min. bending radius for installation

Static: 10 x cable diameter

Dynamic: 20 x cable diameter

2 Application temperature range

Operation: $-20^{\circ}\text{C} \sim +60^{\circ}\text{C}$

Installation: $-20^{\circ}\text{C} \sim +50^{\circ}\text{C}$

Storage/transportation: $-20^{\circ}\text{C} \sim +70^{\circ}\text{C}$

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	- 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: 3 - Times of per point: 1 - Impact energy: 1J	- 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.
Cable bend IEC 60794-1-2-E11	- Diameter of mandrel: 20 x OD - Number of turns: 4 - Number of cycles: 3	- 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

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 (λ_{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):	$\leq 0.05\text{dB}$
Dispersion in the range 1288 to 1339nm:	$\leq 3.5\text{ps/ (nm}\cdot\text{km)}$
Dispersion at 1550nm:	$\leq 18\text{ps/ (nm}\cdot\text{km)}$
Dispersion slope at zero dispersion wavelength:	$\leq 0.092\text{ps/ (nm}^2\cdot\text{km)}$