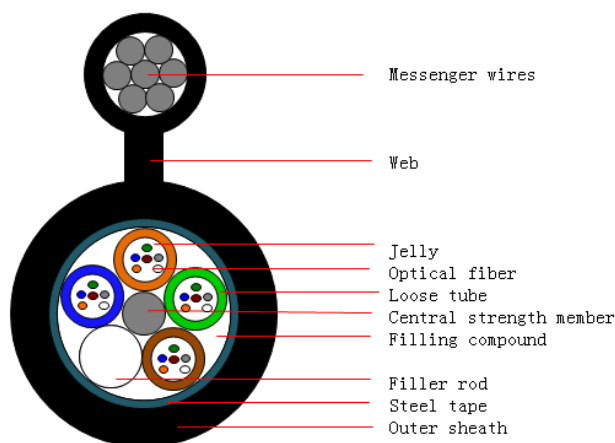


GYTC8S

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

Cable cross-section



Cable Specification

1 Introduction

Loose tube construction, tubes jelly filled, elements (tubes and filler rods) laid up around metallic central strength member, filling compound filled in the apertures of the cable core, then steel tape and PE outer sheath with messenger wires combined.

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

3 Color codes for loose tube

12-144F: Tube color 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

244F: Tube color starts from No. 1 Blue.

Inner layer

1	2	3	4	5	6	7	8	9
Blue	Orange	Green	Brown	Gray	White	Red	Black	Yellow

Outer layer

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

4 Cable structure and parameter

SN	Item	Unit	Value		
1	No. of fibers	count	12/24	36	48

2	No. of fibers per tube (max.)	count	6	6	12
3	No. of elements	count	5	6	5
4	Messenger wires (nom.)	mm	7*1.0	7*1.0	7*1.0
5	Cable diameter ($\pm 5\%$)	mm	8.7	9.1	9.6
6	Cable height ($\pm 5\%$)	mm	16.1	16.5	17.0
7	Cable weight (approx.)	kg/km	152	164	167
8	Short term tension	N	4000	4000	4000
9	Short term crush	N/100mm	1000	1000	1000

SN	Item	Unit	Value		
1	No. of fibers	count	72	96	144
2	No. of fibers per tube (max.)	count	12	12	12
3	No. of elements	count	6	8	12
4	Messenger wires (nom.)	mm	7*1.0	7*1.0	7*1.0
5	Cable diameter ($\pm 5\%$)	mm	10.2	11.7	14.4
6	Cable height ($\pm 5\%$)	mm	17.6	19.1	21.8
7	Cable weight (approx.)	kg/km	195	220	280
8	Short term tension	N	4000	4000	4000
9	Short term crush	N/100mm	1000	1000	1000

SN	Item	Unit	Value
1	No. of fibers	count	244
2	No. of fibers per tube (max.)	count	12
3	No. of elements	count	9+15
4	Messenger wires (nom.)	mm	7*1.0
5	Cable diameter ($\pm 5\%$)	mm	16.6
6	Cable height ($\pm 5\%$)	mm	24.0
7	Cable weight (approx.)	kg/km	355
8	Short term tension	N	4000
9	Short term crush	N/100mm	1000

Characteristic of Optical Cable

1 Min. bending radius

Static: 15 x cable diameter

Dynamic: 20 x cable diameter

2 Application temperature range

Operation: - 40°C ~ +60°C

Installation: - 15°C ~ +60°C

Storage/transportation: - 40°C ~ +60°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 $\leq 0.1\text{dB}@1550\text{nm}$ after test - No fiber break and no sheath damage.

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:	$\leq 3.5\text{ps}/(\text{nm}\cdot\text{km})$
Dispersion at 1550nm:	$\leq 18\text{ps}/(\text{nm}\cdot\text{km})$
Dispersion slope at zero dispersion wavelength:	$\leq 0.092\text{ps}/(\text{nm}^2\cdot\text{km})$