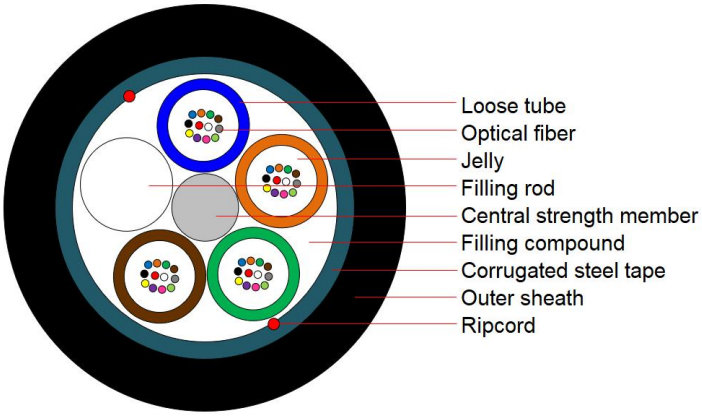
GYTS

Outdoor optical cable for communication with metal reinforcing member, loose tube stranded and filled, steel-polyethylene bonded sheath

Cable cross-section (only for reference, not to scale)



Cable description

Loose tube construction, tubes jelly filled, elements (tubes and fillers when necessary) 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, two ripcords, steel tape armored, then PE outer sheath.

Fiber & tube color

Fiber color code.

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	Violet	Pink	Aqua

Loose tubes color code.

No.	1	2	3	4	5	6
Color	Blue	Orange	Green	Brown	Gray	White
No.	7	8				
Color	Red	Black				

Structure parameter

Item	Contents	Unit	Value			
Fiber count	Number	/	12	24	48	96
Cable structure	/	/	1+5	1+5	1+5	1+8
Fiber No. per tube	Number	/	12			
Loose tube	Number	/	1	2	4	8
Central strength member	Material	/	Steel wire with cushion when necessary			
Outer sheath	Nominal thickness	mm	1.6	1.6	1.6	1.7
Cable diameter	±5%	mm	9.6	9.6	9.6	11.9
Cable weight	±10%	kg/km	93	94	98	146
Max. tensile load	Short term	N	1500	1500	1500	3000
Breaking force	/	N	3000	3000	3000	4000

Note: Sheath thickness not consider ripcord portion, sizes and values without tolerances are nominal values.

Mechanical & Environmental Performance

Item	Contents	Value
Max. crush resistance	Short term	1500 N/100mm
Min. bending radius	Installation	20 x cable diameter
	Operation	15 x cable diameter
Temperature range	Operation	-40℃ ~ +60℃
	Installation	-10℃ ~ +60℃
	Storage/transportation	-40℃ ~ +60℃

Main mechanical & environmental performance test

Item	Test Method	Acceptance Condition
Tensile Strength IEC 60794-1-21-E1	- Load: Short term tension - Length of cable: ≥ 50m - Load time: 1min	- Fiber strain ≤ 0.6% - Loss change ≤ 0.1dB@1550nm after test. - No fiber break and no sheath damage.
Crush Test IEC 60794-1-21-E3	- Load: Short term crush - Load time: 1min	- Loss change ≤ 0.1dB@1550nm after test. - No fiber break and no sheath damage.
Impact Test IEC 60794-1-21-E4	- Points of impact: 3 - Times of per point: 1 - Impact energy: 4.5J	- Loss change ≤ 0.1dB@1550nm after test. - No fiber break and no sheath damage.
Repeated Bending IEC 60794-1-21-E6	- Bending radius: 20 x OD - No. of cycle: 25	- Loss change ≤ 0.1dB@1550nm after test. - No fiber break and no sheath damage.
Torsion IEC 60794-1-21-E7	- Length: 1m - Twist angle: ±90° - No. of cycle: 10	- Loss change ≤ 0.1dB@1550nm after test. - No fiber break and no sheath damage.
Water Penetration IEC 60794-1-22-F5	- Height of water: 1m - Sample length: 3m	- No water leak from the cable core of the opposite end.

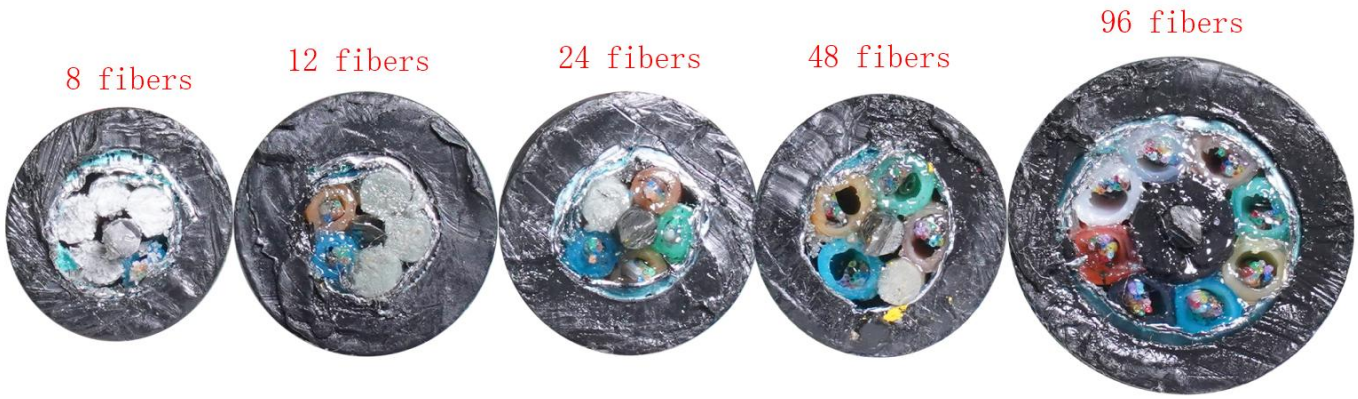
Item	Test Method	Acceptance Condition
	- Time: 24h	
Temperature Cycling IEC 60794-1-22-F1	- Temperature: -40℃~+60℃ - Time of each step: 12h - Number of cycles: 2	- Loss change ≤ 0.1dB/km @1550nm. - No fiber break and no sheath damage.

Remark: “No attenuation changes” is considered as the attenuation changes ≤ 0.05 dB.

OPTICAL FIBER

Item	Contents	Value
G.652D Optical characteristics		
Attenuation	@1310nm	≤0.36dB/km
	@1550nm	≤0.22dB/km
Dispersion	@1288nm～1339nm	≤3.5ps/(nm·km)
	@1550nm	≤18ps/(nm·km)
Zero-Dispersion wavelength		1300nm～1324nm
Zero-Dispersion slope		≤0.092ps/(nm^2·km)
Mode field diameter (MFD)	@1310nm	9.2±0.4μm
	@1550nm	10.4±0.5μm
Cable cutoff wavelength λcc(nm)		≤1260nm
Micro bending Attenuation	@1550nm (100turns; Φ60mm)	≤0.05dB
Link polarization dispersion (PMD_Q)		≤0.1ps/km$^{1/2}$

Product Display



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For reference only, the actual product shall prevail