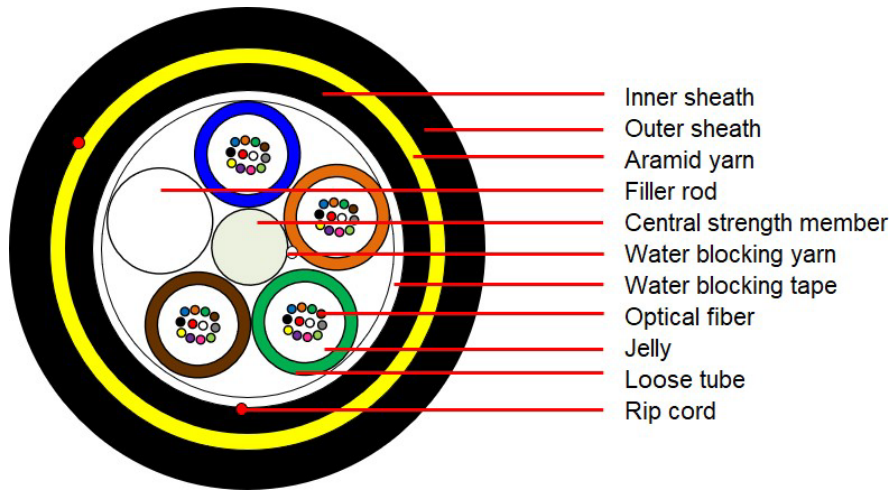


All-Dielectric Duct Cable

Optowire U-S(DS)-Duble Sheath

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



(Not to scale, color is only for showing, may be not exact same as real product color)

2. Cable description

Loose tube construction, tubes with jelly filled, elements (tubes and filler rods when necessary) laid up around non-metallic central strength member, yarns used to bind the cable core, water blocking tape wrapped, 1 ripcord, PE inner sheath, aramid yarns reinforced, 1 ripcord and then PE outer sheath.

3. Fiber & tube color

3.1 Fiber color code.

No.	1	2	3	4	5	6
Color	Blue	Orange	Green	Brown	Slate	White
No.	7	8	9	10	11	12
Color	Red	Black	Yellow	Violet	Pink	Aqua

3.2 Loose tube color code.

No.	1	2	3	4
Color	Blue	Orange	Green	Brown

3.3 For filler rods, the color will be nature.

4. Structure parameter

Item	Value				
Fiber count (G.652D)	24	48	72	96	144
No of loose tube / filler	2/4	4/2	6/0	8/0	12/0
Fiber No. per tube	12				
Armor layer	Aramid yarns				
Cable OD	12.0±5%mm		12.0±5%mm		12.0±5%mm
Cable weight	112kg/km±15%		130kg/km±15%		190kg/km±15%
Operation temperature range	-30 deg C to + 70 deg C				
Installation temperature range	-10 deg C to + 50 deg C				
Transport and storage temperature range	-40 deg C to + 70 deg C				
Tensile load	Short term: ≥2700N; long term: ≥601N				
Crush resistance	2200 N/10cm (Short term)				
Minimal installation bending radius	20 x OD				
Minimal operation bending radius	10 x OD				

Note: Sizes and values without tolerances are nominal values.

It's advised to notch the cable before splitting the sheath for better ripping.

5. Mechanical & Environmental Performance

Item	Contents	Value
Max. tensile load	MAT	2700 N
Max. crush resistance	Short term	2200 N/100mm
Min. bending radius	Installation	20 x cable diameter
	Operation	10 x cable diameter
Temperature range	Operation	-30°C ~ +70°C
	Installation	-10°C ~ +60°C
	Storage/transportation	-40°C ~ +70°C

6. Main mechanical & environmental performance test

Item	Test Method	Acceptance Condition
Tensile Strength IEC 60794-1-21-E1	- Load: MAT - Length of cable: ≥ 50m - Load time: 1min	- Fiber strain ≤ 0.33%. - 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	- Radius: 300 mm - Points of impact: 3 - Times of per point: 1 - Impact energy: 10J	- Loss change ≤ 0.1dB@1550nm after test. - No fiber break and no sheath damage.
Water Penetration IEC 60794-1-22-F5B	- Height of water: 1m - Sample length: 3m - Time: 24h	- No water leak from the cable core of the opposite end.
Temperature Cycling IEC 60794-1-22-F1	- Temperature: -30°C~+70°C - Time of each step: 12h - Number of cycle: 2	- Loss change ≤ 0.15dB/km @1550nm. - No fiber break and no sheath damage.

7. OPTICAL FIBER

Item	Contents	Value
G.652D Optical characteristics		
Attenuation	@1310nm	≤0.35dB/km
	@1550nm	≤0.21dB/km
Dispersion	@1288nm~1339nm	≤3.5ps/(nm·km)
	@1550nm	(13.3-18.6)ps/(nm·km)
Zero-Dispersion wavelength		1310nm~1324nm
Zero-Dispersion slope		≤0.092ps/(nm ² ·km)
Mode field diameter (MFD)	@1310nm	9.2±0.4μm
	@1550nm	10.4±0.5μm
Coating diameter(uncolored)		242 ± 7μm
Cable cutoff wavelength λ_{cc}(nm)		≤1260nm
Macro-bend loss	@1550nm (100turns;Φ60mm)	≤0.05dB
Link polarization dispersion (PMD₀)		≤0.1ps/km ^{1/2}

Other parameters meet standard ITU-T G.652.