Spec No: 2023100601

Revision:1.0

Date: 2023-10-06

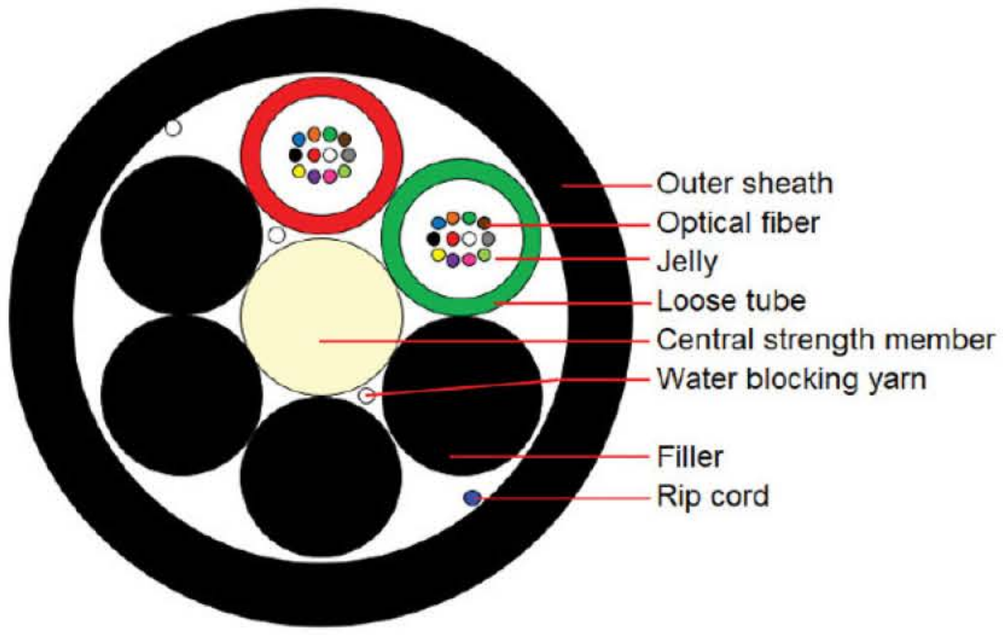
Technical Specification

Air blowing Cable

Order codes

WKO-12-9-MLT-52
WKO-24-9-MLT-52
WKO-48-9-MLT-52
WKO-72-9-MLT-52
WKO-96-9-MLT-62
WKO-144-9-MLT-80

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



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

2. Cable description

Loose tube construction, tubes jelly filled, elements (tubes and filler rods when necessary) and water blocking yarn laid up around non-metallic central strength member, yarns used to bind the cable core, a ripcord and UV resistant PE outer sheath..

3. Fiber & tube color

3.1 Fiber color.

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

3 .2 Tube color for 12~144cores

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

4. Structure parameter

Item	Contents	Unit	Value			
Fiber	Count	/	12	24	36	48
	Diameter	μm	245	245	245	245
	Component	/	12*G657A1	24*G657A1	48*G657A1	48*G657A1
Cable structure	/	/	1+6	1+6	1+6	1+6
Fiber No. per tube	Number	/	12	12	12	12
Loose tube	Number	/	1	2	3	4
	Diameter	±0.1mm	1.4	1.4	1.4	1.4
Outer sheath	Thickness	mm	⩾0.3	⩾0.3	⩾0.3	⩾0.3
	Color	/	Black	Black	Black	Black
Cable diameter	/	mm	5.2±0.4	5.2±0.4	5.2±0.4	5.2±0.4
Cable weight	±10%	kg/km	20	21	22	23

Item	Contents	Unit	Value			
Fiber	Count	/	60	72	96	144
	Diameter	μm	245	245	245	245
	Component	/	60*G657A1	72*G657A1	96*G657A1	144*G657A1
Cable structure	/	/	1+6	1+6	1+8	1+12
Fiber No. per tube	Number	/	12	12	12	12
Loose tube	Number	/	5	6	8	12
	Diameter	±0.1mm	1.4	1.4	1.4	1.4
Outer sheath	Thickness	mm	⩾0.3	⩾0.3	⩾0.3	⩾0.3
	Color	/	Black	Black	Black	Black
Cable diameter	/	mm	5.2±0.4	5.2±0.4	6.2±0.3	8.0±0.3
Cable weight	±10%	kg/km	24	25	38	57

Note1: sheath thickness not consider ripcord portion, sizes and values without tolerances are nominal values.

5. Mechanical & Environmental Performance

Item	Contents	Value
Max. tensile load	Short term	250N for cables ≤ 72F 600N for 96-144F
Max. crush resistance	Short term	1000 N/100 mm
Min. bending radius	Installation	20 x cable diameter
	Operation	10 x cable diameter
Temperature range	Operation	-30℃ ~ +70℃
	Installation	-15℃ ~ +50℃
	Storage/transportation	-40℃ ~ +70℃

6. 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: 1min	- Fiber strain ≤ 0.5% - No fiber break and no sheath damage. - Additional attenuation≤ 0.1dB@1550nm after test
Crush Test IEC 60794-1-2-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 60794-1-2-E4	- Points of impact: 3 - Times of per point: 1 - Impact energy: 3J - Impact hammer radius: 300mm	- Loss change ≤ 0.1dB@1550nm after test. - No fiber break and no sheath damage.
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: -30℃~+60℃ - Time of each step: 8h - Number of cycle: 2	- Loss change ≤ 0.1dB@1550nm after test. - No fiber break and no sheath damage.
Other parameters	According to IEC 60794.	

7. Optical fiber

G657A1 Characteristic of Optical Fiber

Item		Unit	Specification
			G. 657A1
Mode field diameter	1310nm	μm	9.2 ± 0.4
	1550nm	μm	10.4 ± 0.5
Cladding diameter		μm	125.0 ± 1
Cladding non-circularity		%	≤1.0
Core concentricity error		μm	≤0.6
Coating diameter (non-colored)		μm	200 ± 10 245 ± 10
Coating diameter (colored)		μm	200 ± 15 245 ± 15
Coating/cladding concentricity error		μm	≤12
Cable cut-off wavelength		nm	≤ 1260
Attenuation Coefficient	1310nm	dB/km	≤0.36
	1383nm	dB/km	≤0.36
	1550nm	dB/km	≤0.22
Macro-bend loss (1 turn, 10mm radius)	1550nm	dB	≤0.75
	1625nm	dB	≤1.5
Proof stress level		kpsi	≥100

Other parameters meet standard ITU-T G.657