

## ODVA(MPO&MTP) Outdoor Cable Assemblies Specification



### Application

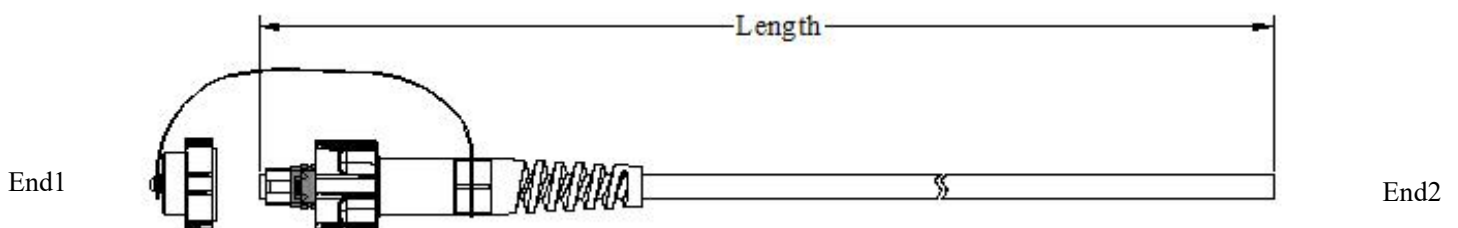
- 1.Multi-purpose Outdoor.
- 2.For connection between distribution box and RRH.
- 3.Deployment in Remote Radio Head cell tower applications.

### Features

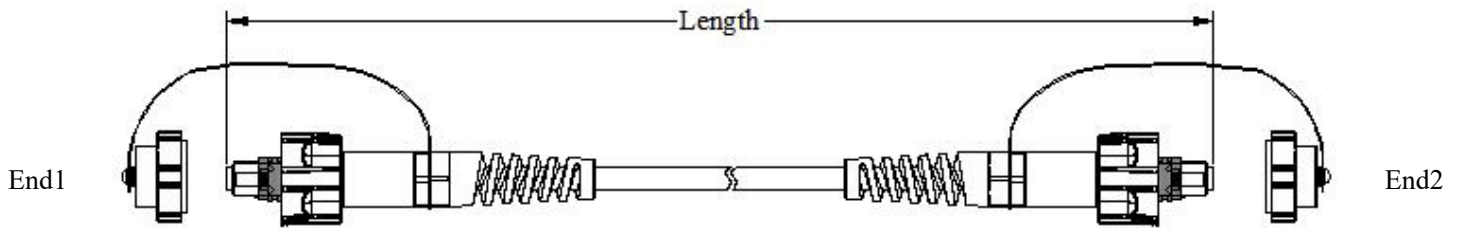
- 1.Cost effective solution for in house termination.
- 2.Low insertion loss and added loss.
- 3.Height of attenuation.
- 4.IP67 water, dust proof and corrosion resistant
- 5.The material in the jumpel cable are all-weather and UV-resistant.
- 6.Mechanical performance: IEC 61754-7 standard.
- 7.RoHS and REACH materials compliant.

### Dimensional Diagrams

1. ODVA(MPO&MTP) Outdoor Cable Assemblies



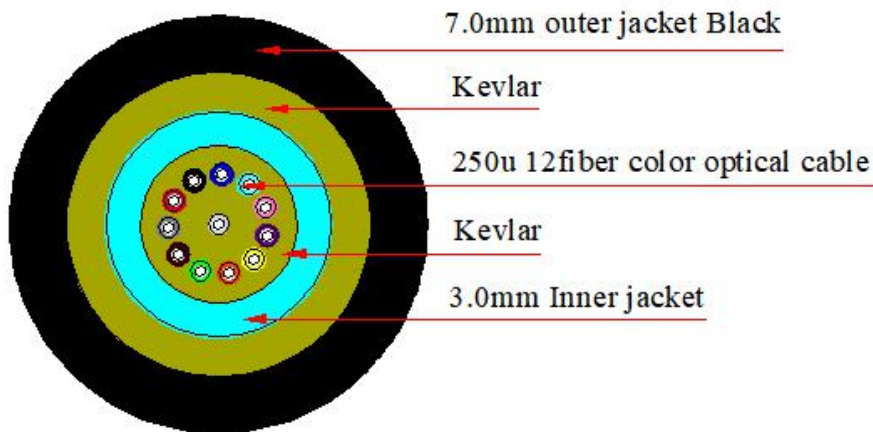
2. ODVA(MPO&MTP) Outdoor Cable Assemblies



Patch cord versions

Jumper tolerance requirement	
Overall length (L) (M)	length of tolerance (CM)
$0 < L \leq 20$	+10/-0
$20 < L \leq 40$	+15/-0
$L > 40$	+0.5%L/-0

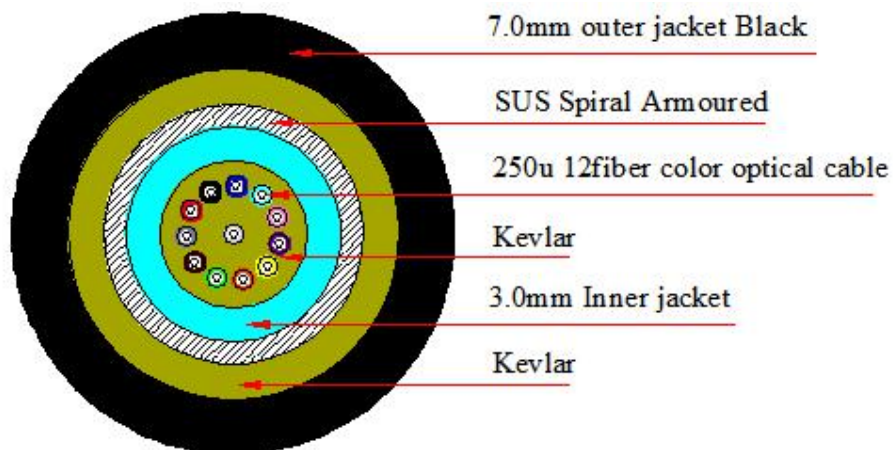
Cable Structure



Cable Parameters

Cable Count	Out sheath Diameter (MM)	Weight (KG)	Minimum allowable Tensile Strength (N)		minimum allowable Crush Load (N/100mm)		Minimum Bending Radius (MM)		Storage temperature (°C)
			short term	long term	short term	long term	short term	long term	
8/12/24	7.0±0.3	35	600	250	800	300	20D	10D	-20 ~ +70

### Cable Structure



### Cable Parameters

Cable Count	Out sheath Diameter (MM)	Weight (KG)	Minimum allowable Tensile Strength (N)		minimum allowable Crush Load (N/100mm)		Minimum Bending Radius (MM)		Storage temperature (°C)
			short term	long term	short term	long term	short term	long term	
8/12/24	7.0±0.3	45	1000	600	3000	1000	20D	10D	-20 ~ +70

### MPO&MTP Optical Characteristics

Item	Parameter				Reference
	Single mode		Multimode		
	Standard	Elite	Standard	Elite	
Insertion loss	Typical≤0.30dB Max≤0.75dB	Typical≤0.15dB Max≤0.35dB	Typical≤0.50dB Max≤0.25dB	Typical≤0.10dB Max≤0.35dB	IEC 61300-3-34
Return loss	≥ 50dB (PC) ≥ 60dB (APC)	≥ 55dB (PC) ≥ 65dB (APC)	≥30dB(PC)	≥30dB(PC)	IEC 61300-3-6

### LC/SC/FC/ST Optical Characteristics

Item	Parameter		Reference
	Single mode	Multimode	
Insertion loss	Typical value≤0.15dB;Maximum≤0.30	Typical value≤0.15dB;Maximum≤0.30	IEC 61300-3-34
Return loss	≥ 60dB (APC); ≥ 50dB (UPC)	≥30dB (UPC)	IEC 61300-3-6

### LC/SC/FC/ST End-Face Geometry

Item	UPC (Ref: IEC 61755-3-1)	APC (Ref: IEC 61755-3-2)
Radius of curvature (mm)	10 to 25	5 to 12
Fiber height (nm)	-100 to 100	-100 to 100
Apex offset (μm)	0 to 50	0 to 50
APC angle (°)	/	8° ±0.2°
Key error (°)	/	0.2° max

### MPO&MTP End-Face Geometry

Ferrule parameter		IEC-61300-3-30	
		Minimum	Maximum
ROC	ROC-X:	2000mm	∞
	ROC-Y:	50mm	∞
Angle	Angle-X:	-0.2°	0.2°
	Angle-Y:	PC	0.2°
		APC	7.85°
Fiber Hight:		1000nm	3500nm
Max.DH.All:		-300nm	300nm
DH.Adj:		-300nm	300nm
DH.Ave Fiber:		-300nm	300nm
Core Dip:	MM	-200nm	300nm
	SM	N/A	N/A
Ferrule height		7.9mm	8.05mm

### End-Face Quality (SM)

Zone	Range (μm)	Scratches	Defects	Reference
A: Core	0 to 25	None	None	IEC 61300-3-35:2015
B: Cladding	25 to 115	None	None	
C: Adhesive	115 to 135	None	None	
D: Contact	135 to 250	None	None	
E: Rest of ferrule		None	None	

## End-Face Quality (MM)

Zone	Range (μm)	Scratches	Defects	Reference
A: Core	0 to 65	None	None	IEC 61300-3-35:2015
B: Cladding	65 to 115	None	None	
C: Adhesive	115 to 135	None	None	
D: Contact	135 to 250	None	None	
E: Rest of ferrule		None	None	

## Mechanical Characteristics

Test	Conditions	Reference
Endurance	500 matings	IEC 61300-2-2
Vibration	Frequency: 10 to 55Hz, Amplitude: 0.75mm	IEC 61300-2-1
Cable retention	400N (main cable); 50N (connector part)	IEC 61300-2-4
Strength of coupling mechanism	80N for 2 to 3mm cable	IEC 61300-2-6
Cable torsion	15N for 2 to 3mm cable	IEC 61300-2-5
Fall	10 drops, 1m drop height	IEC 61300-2-12
Static lateral load	1N for 1h (main cable); 0.2N for 5min (ranch part)	IEC 61300-2-42
Cold	-25°C, 96h duration	IEC 61300-2-17
Dry heat	+70°C, 96h duration	IEC 61300-2-18
Change of temperature	-25°C to +70°C, 12 cycles	IEC 61300-2-22
Humidity	+40°C at 93%, 96h duration	IEC 61300-2-19