

## ODVA LC 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

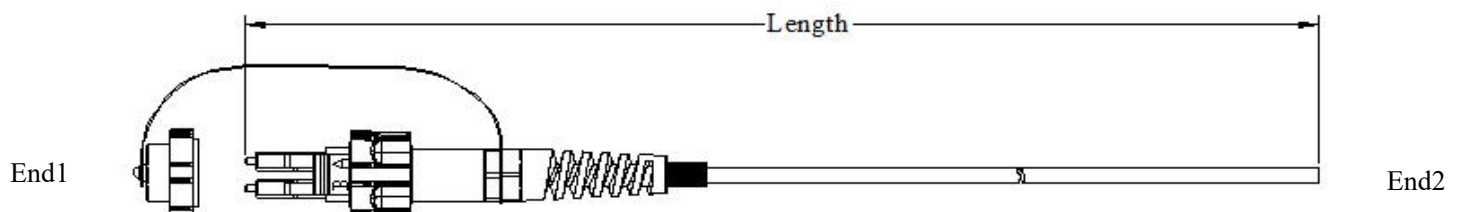
1. Cost effective solution for in house termination.
2. Low insertion loss and added loss.
3. Height of attenuation.
4. IP67 water, dust proof and corrosion resistant
5. The material in the jumpel cable are all-weather and UV-resistant.
6. Mechanical performance: IEC 61754-20
7. RoHS and REACH materials compliant.

### Connector Types

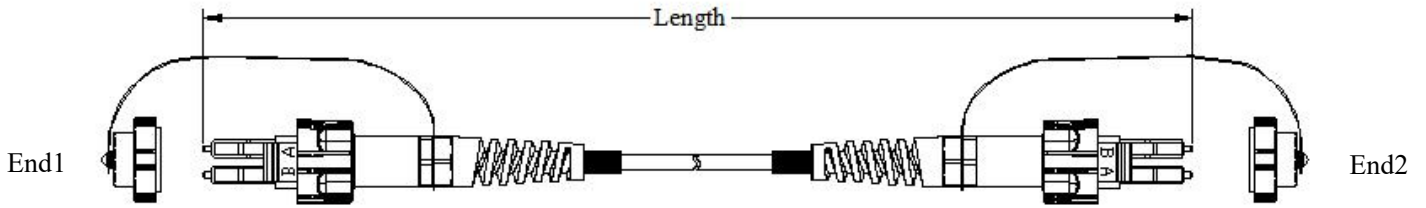
Type	Reference	Note	
LC	IEC 61754-20	Single mode duplex	APC: Green connectors UPC: Blue connectors
		Multimode duplex	UPC: Grey Connectors

### Dimensional Diagrams

1. ODVA(LC) Outdoor Cable Assemblies



2.ODVA(LC) 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

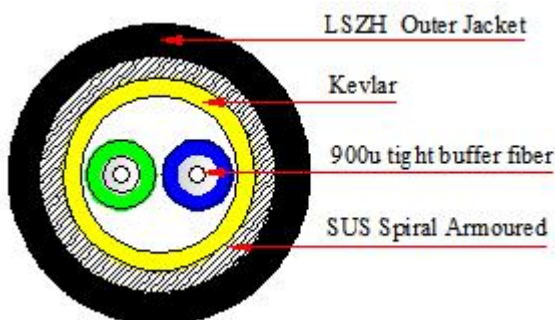
Cable Structure



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	
2	5.0±0.2	30	800	400	2000	1000	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	
2	5.0±0.2	45	400	800	2000	3000	20D	10D	-20~+70

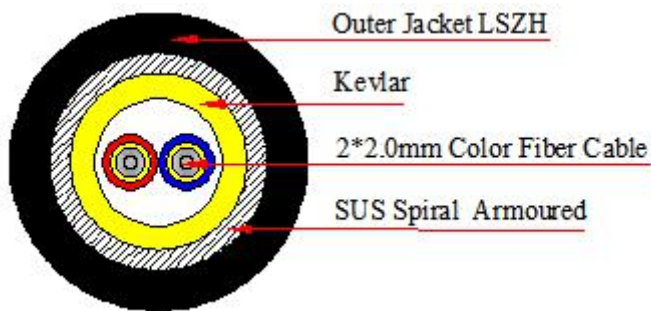
### Cable Structure



### 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	
2	7.0±0.3mm	50	600	1000	1000	2000	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	
2	7.0±0.3	68	600	1000	2000	3000	20D	10D	-20~+70

## Optical Characteristics

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

## End-Face Geometry LC

Item	UPC (Ref: IEC 61755-3-1)	APC (Ref: IEC 61755-3-2)
Radius of curvature (mm)	7 to 25	5 to 12
Fiber height (nm)	-100 to 100	-100 to 100
Apex offset ( $\mu$ m)	0 to 50	0 to 50
APC angle ( $^{\circ}$ )	/	$8^{\circ} \pm 0.2^{\circ}$
Key error ( $^{\circ}$ )	/	$0.2^{\circ}$ max

## End-Face Quality (SM)

Zone	Range ( $\mu$ m)	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 ( $\mu$ m)	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