



FXL-780-NHR

FXL-780, HELIAX® Flexible Coaxial Cable, smoothwall aluminum, 7/8 in, black non-halogenated, fire retardant, low smoke, riser rated polyolefin jacket

OBSOLETE

This product was discontinued on: **December 31, 2017**

Replaced By

AVA5RK-50	AVA5-50, HELIAX® Andrew Virtual Air™ Coaxial Cable, corrugated copper, 7/8 in, black non-halogenated, fire retardant polyolefin jacket B2ca- s1a, d1,a1
AVA5-50	AVA5-50, HELIAX® Andrew Virtual Air™ Coaxial Cable, corrugated copper, 7/8 in, black PE jacket
AVA5-50FX	AVA5-50FX, HELIAX® Andrew Virtual Air™ Coaxial Cable, corrugated copper, 7/8 in, black PE jacket

Product Classification

Brand	HELIAX®
Product Series	FXL-780
Product Type	Coaxial wireless cable

Standards And Qualifications

EN50575 CPR Cable EuroClass	Dca s2 d2
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Construction Materials

Jacket Material	Non-halogenated, fire retardant polyolefin
Outer Conductor Material	Smoothwall aluminum
Dielectric Material	Foam PE
Flexibility	Flexible
Inner Conductor Material	Copper
Jacket Color	Black

Dimensions

Nominal Size	7/8 in
Cable Weight	0.25 lb/ft 0.37 kg/m
Diameter Over Jacket	1.090 in 27.700 mm
Inner Conductor OD	0.3750 in 9.5000 mm
Outer Conductor OD	1.005 in 25.500 μm

Electrical Specifications

Cable Impedance	50 ohm ±1 ohm
Capacitance	23.0 pF/ft 75.0 pF/m
dc Resistance, Inner Conductor	1.005 ohms/kft 3.300 ohms/km
dc Resistance, Outer Conductor	0.350 ohms/kft 1.150 ohms/km
dc Test Voltage	6000 V
Inductance	0.190 μH/m 0.058 μH/ft

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Insulation Resistance	100000 Mohms•km
Jacket Spark Test Voltage (rms)	8000 V
Operating Frequency Band	100 – 5300 MHz
Peak Power	86.0 kW
Velocity	88%

Environmental Specifications

Installation Temperature	-40 °C to +60 °C (-40 °F to +140 °F)
Operating Temperature	-40 °C to +60 °C (-40 °F to +140 °F)
Storage Temperature	-40 °C to +60 °C (-40 °F to +140 °F)

General Specifications

Brand	HELIAX®
Ordering Note	CommScope® non-standard product Not available in the United States or Canada

Mechanical Specifications

Bending Moment	26.0 ft lb 35.0 N-m
Fire Retardancy Test Method	IEC 60332-3-24 UL 1666/CATVR/CMR
Flat Plate Crush Strength	170.0 lb/in 3.0 kg/mm
Minimum Bend Radius, Multiple Bends	203.20 mm 8.00 in
Minimum Bend Radius, Single Bend	127.00 mm 5.00 in
Number of Bends, minimum	8
Smoke Index Test Method	IEC 61034
Tensile Strength	550 lb 249 kg
Toxicity Index Test Method	IEC 60754-1 IEC 60754-2

Note

Performance Note	Values typical, unless otherwise stated
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Standard Conditions

Attenuation, Ambient Temperature	20 °C 68 °F
Average Power, Ambient Temperature	40 °C 104 °F
Average Power, Inner Conductor Temperature	100 °C 212 °F

Return Loss/VSWR

Frequency Band	VSWR	Return Loss (dB)
680–960 MHz	1.13	24.30
1700–2000 MHz	1.13	24.30
2300–2700 MHz	1.13	24.30

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Attenuation

Frequency (MHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)	Average Power (kW)
0.5	0.079	0.024	86.00
1	0.112	0.034	61.28
1.5	0.137	0.042	50.00
2	0.158	0.048	43.27
10	0.356	0.109	19.24
20	0.506	0.154	13.55
30	0.622	0.189	11.03
50	0.807	0.246	8.50
85	1.059	0.323	6.47
88	1.078	0.329	6.36
100	1.152	0.351	5.95
108	1.198	0.365	5.72
150	1.42	0.433	4.83
174	1.534	0.468	4.47
200	1.65	0.503	4.15
204	1.667	0.508	4.11
300	2.041	0.622	3.36
400	2.377	0.724	2.88
450	2.53	0.771	2.71
500	2.677	0.816	2.56
512	2.711	0.826	2.53
600	2.951	0.899	2.32
700	3.207	0.977	2.14
800	3.447	1.051	1.99
824	3.503	1.068	1.96
894	3.662	1.116	1.87
960	3.807	1.16	1.80
1000	3.893	1.186	1.76
1218	4.338	1.322	1.58
1250	4.401	1.341	1.56
1500	4.869	1.484	1.41
1700	5.221	1.591	1.31
1794	5.381	1.64	1.27
1800	5.391	1.643	1.27
2000	5.721	1.744	1.20
2100	5.88	1.792	1.17
2200	6.037	1.84	1.14
2300	6.192	1.887	1.11
2500	6.493	1.979	1.06
2700	6.785	2.068	1.01
3000	7.209	2.197	0.95
3400	7.75	2.362	0.88
3700	8.141	2.481	0.84
4000	8.521	2.597	0.80
5000	9.72	2.963	0.71

* Values typical, guaranteed within 5%

Regulatory Compliance/Certifications

Agency	Classification
UL/ETL Certification	CATVR/CMR
RoHS 2011/65/EU	Compliant

Product Specifications

COMMScope®

FXL780-NHR

ISO 9001:2008
CENELEC

Designed, manufactured and/or distributed under this quality management system
EN 50575 compliant, Declaration of Performance (DoP) available

