



EW85, HELIAX® Standard Elliptical Waveguide, 8.5–9.8 GHz, black non-halogenated, fire retardant polyolefin jacket

Product Classification

Brand	HELIAX®
Product Type	Elliptical waveguide

Construction Materials

Jacket Material	Non-halogenated, fire retardant polyolefin
Conductor Material	Corrugated copper
Jacket Color	Black

Dimensions

Cable Volume	390.0 L/km 4.2 ft ³ /kft
Cable Weight	0.50 kg/m 0.33 lb/ft
Diameter Over Jacket (E Plane)	33.50 mm 1.32 in
Diameter Over Jacket (H Plane)	22.90 mm 0.90 in

Electrical Specifications

Operating Frequency Band	8.5 – 9.8 GHz
eTE11 Mode Cutoff	6.460 GHz
Group Delay	143 ns/100 ft @ 9.200 GHz 468 ns/100 m @ 9.200 GHz

Environmental Specifications

Installation Temperature	-25 °C to +60 °C (-13 °F to +140 °F)
Operating Temperature	-30 °C to +80 °C (-22 °F to +176 °F)
Storage Temperature	-30 °C to +80 °C (-22 °F to +176 °F)

Mechanical Specifications

Fire Retardancy Test Method	UL 1666/CATVR/CMR
Maximum Twist	3.00 °/m 1.00 °/ft
Minimum Bend Radius, Multiple Bends (E Plane)	200.00 mm 8.00 in
Minimum Bend Radius, Multiple Bends (H Plane)	480.00 mm 19.00 in
Minimum Bend Radius, Single Bend (E Plane)	200.00 mm 8.00 in
Minimum Bend Radius, Single Bend (H Plane)	480.00 mm 19.00 in

Note

Performance Note Values typical, unless otherwise stated

Standard Conditions

Attenuation, Ambient Temperature	24 °C 75 °F
Average Power, Ambient Temperature	40 °C 104 °F
Average Power, Temperature Rise	42 °C 76 °F

Return Loss/VSWR

Frequency Band	VSWR	Return Loss (dB)
8.5–9.8 GHz	1.17	22.10

* VSWR/Return Loss indicated is for lengths up to 300 ft (91.4 m)

* VSWR/Return Loss is guaranteed for factory-fit and typical for field-fit assemblies

* Custom length performance: Call 828-324-2200 or 1-800-982-1708 (toll free), or your local CommScope representative

Attenuation

Frequency (GHz)	Attenuation (dB/100 ft)	Attenuation (dB/100 m)	Average Power (kW)	Group Velocity %
8.5	3.448	11.311	1.463	65
8.7	3.328	10.917	1.516	67
8.9	3.227	10.589	1.563	68.8
9.1	3.142	10.31	1.606	70.4
9.3	3.069	10.07	1.644	71.9
9.5	3.006	9.863	1.678	73.3
9.7	2.951	9.681	1.71	74.6

Regulatory Compliance/Certifications

Agency

UL/ETL Certification
 RoHS 2011/65/EU
 ISO 9001:2015
 China RoHS SJ/T 11364-2014

Classification

CATVR/CMR
 Compliant
 Designed, manufactured and/or distributed under this quality management system
 Below Maximum Concentration Value (MCV)

