



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

Product Classification

Product Type	Elliptical waveguide
Product Brand	HELIAX®

General Specifications

Jacket Color	Black
Performance Note	Values typical, unless otherwise stated

Dimensions

Diameter Over Jacket (E Plane)	33.5 mm 1.319 in
Diameter Over Jacket (H Plane)	22.9 mm 0.902 in
Cable Volume	390 L/km 4.198 ft³/kft

Electrical Specifications

eTE11 Mode Cutoff	6.46 GHz
Group Delay at Frequency	143 ns/100 ft @ 9.200 GHz 468 ns/100 m @ 9.200 GHz
Operating Frequency Band	8.5 – 9.8 GHz

VSWR/Return Loss

Frequency Band	VSWR	Return Loss (dB)
8.5–9.8 GHz	1.17	22.13

Attenuation

Frequency (GHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)	Average Power (kW)	Group Velocity %
8.5	11.311	3.448	1.463	65
8.7	10.917	3.328	1.516	67
8.9	10.589	3.227	1.563	68.8

9.1	10.31	3.142	1.606	70.4
9.3	10.07	3.069	1.644	71.9
9.5	9.863	3.006	1.678	73.3
9.7	9.681	2.951	1.71	74.6

Material Specifications

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

Mechanical Specifications

Minimum Bend Radius, Multiple Bends (E Plane)	200 mm 7.874 in
Minimum Bend Radius, Multiple Bends (H Plane)	480 mm 18.898 in
Minimum Bend Radius, Single Bend (E Plane)	200 mm 7.874 in
Minimum Bend Radius, Single Bend (H Plane)	480 mm 18.898 in
Maximum Twist	3.281 °/m 1 °/ft

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)
Average Power, Ambient Temperature	104 °F 40 °C
Average Power, Temperature Rise	42 °C 107.6 °F
Fire Retardancy Test Method	UL 1666/CATVR/CMR

Packaging and Weights

Cable weight	0.5 kg/m 0.336 lb/ft
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Regulatory Compliance/Certifications

Agency	Classification
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system
REACH-SVHC	Compliant as per SVHC revision on www.commscope.com/ProductCompliance
ROHS	Compliant
UL/ETL Certification	CATVR/CMR

