EW90

EW90, HELIAX® Standard Elliptical Waveguide, 10.2–11.7 GHz, black PE 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)	20.3 mm | 0.799 in
Cable Volume	334 L/km | 3.595 ft³/kft

Electrical Specifications

eTE11 Mode Cutoff	6.5 GHz
Group Delay at Frequency	125 ns/100 ft @ 11.200 GHz | 410 ns/100 m @ 11.200 GHz
Operating Frequency Band	10.2 – 11.7 GHz

Attenuation

Frequency (GHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)	Average Power (kW)	Group Velocity %
10.2	10.649	3.246	1.509	77.1
10.4	10.503	3.201	1.53	78.1
10.6	10.371	3.161	1.549	79
10.8	10.253	3.125	1.567	79.9
11.0	10.146	3.093	1.584	80.7
11.2	10.049	3.063	1.599	81.4

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11.4	9.961	3.036	1.613	82.2
11.6	9.88	3.012	1.626	82.8

VSWR/Return Loss

Frequency Band	VSWR	Return Loss (dB)
10.2–11.7 GHz	1.15	23.13

Material Specifications

Conductor Material	Corrugated copper
Jacket Material	PE

Mechanical Specifications

Minimum Bend Radius, Multiple Bends (E Plane)	180 mm | 7.087 in
Minimum Bend Radius, Multiple Bends (H Plane)	480 mm | 18.898 in
Minimum Bend Radius, Single Bend (E Plane)	150 mm | 5.906 in
Minimum Bend Radius, Single Bend (H Plane)	330 mm | 12.992 in
Maximum Twist	6.562 °/m | 2 °/ft

Environmental Specifications

Installation temperature	-40 °C to +60 °C (-40 °F to +140 °F)
Operating Temperature	-55 °C to +85 °C (-67 °F to +185 °F)
Storage Temperature	-70 °C to +85 °C (-94 °F to +185 °F)
Attenuation, Ambient Temperature	75 °F | 23.889 °C
Average Power, Ambient Temperature	104 °F | 40 °C
Average Power, Temperature Rise	42 °C | 107.6 °F

Packaging and Weights

Cable weight	0.48 kg/m | 0.323 lb/ft

Regulatory Compliance/Certifications

Agency	Classification
CHINA-ROHS	Below maximum concentration value
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

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