

# EW90

EW90, HELIAX® Standard Elliptical Waveguide, 10.2–11.7 GHz, black PE jacket



## Product Classification

<b>Product Type</b>	Elliptical waveguide
<b>Product Brand</b>	HELIAX®

## General Specifications

<b>Jacket Color</b>	Black
<b>Performance Note</b>	Values typical, unless otherwise stated

## Dimensions

<b>Diameter Over Jacket (E Plane)</b>	33.5 mm   1.319 in
<b>Diameter Over Jacket (H Plane)</b>	20.3 mm   0.799 in
<b>Cable Volume</b>	334 L/km   3.595 ft <sup>3</sup> /kft

## Electrical Specifications

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

## VSWR/Return Loss

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

## 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

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<b>10.8</b>	10.253	3.125	1.567	79.9
<b>11.0</b>	10.146	3.093	1.584	80.7
<b>11.2</b>	10.049	3.063	1.599	81.4
<b>11.4</b>	9.961	3.036	1.613	82.2
<b>11.6</b>	9.88	3.012	1.626	82.8

## Material Specifications

<b>Conductor Material</b>	Corrugated copper
<b>Jacket Material</b>	PE

## Mechanical Specifications

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

## Environmental Specifications

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

## Packaging and Weights

<b>Cable weight</b>	0.48 kg/m   0.323 lb/ft
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## Regulatory Compliance/Certifications

<b>Agency</b>	<b>Classification</b>
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 <a href="http://www.commscope.com/ProductCompliance">www.commscope.com/ProductCompliance</a>
ROHS	Compliant

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