

EW180, HELIAX® Standard Elliptical Waveguide, 17.3–19.7 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>	20.1 mm   0.791 in
<b>Diameter Over Jacket (H Plane)</b>	12.4 mm   0.488 in
<b>Cable Volume</b>	111 L/km   1.195 ft <sup>3</sup> /kft

## Electrical Specifications

<b>eTE11 Mode Cutoff</b>	11.15 GHz
<b>Group Delay at Frequency</b>	127 ns/100 ft @ 18.700 GHz   416 ns/100 m @ 18.700 GHz
<b>Operating Frequency Band</b>	17.7 – 19.7 GHz

## VSWR/Return Loss

Frequency Band	VSWR	Return Loss (dB)
17.7–19.7 GHz	1.15	23.13

## Attenuation

Frequency (GHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)	Average Power (kW)	Group Velocity %
17.7	20.111	6.13	0.537	77.7
18.1	19.799	6.035	0.546	78.8

<b>18.5</b>	19.523	5.951	0.553	79.8
<b>18.9</b>	19.278	5.876	0.56	80.7
<b>19.3</b>	19.06	5.81	0.567	81.6
<b>19.7</b>	18.865	5.75	0.573	82.4

## Material Specifications

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

## Mechanical Specifications

<b>Minimum Bend Radius, Multiple Bends (E Plane)</b>	150 mm   5.906 in
<b>Minimum Bend Radius, Multiple Bends (H Plane)</b>	380 mm   14.961 in
<b>Minimum Bend Radius, Single Bend (E Plane)</b>	150 mm   5.906 in
<b>Minimum Bend Radius, Single Bend (H Plane)</b>	380 mm   14.961 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>	0.22 kg/m   0.148 lb/ft
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## Regulatory Compliance/Certifications

<b>Agency</b>	<b>Classification</b>
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system

