

# EW220

EW220, HELIAX® Standard Elliptical Waveguide, 21.2–23.6 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)	17.8 mm   0.701 in
Diameter Over Jacket (H Plane)	11.2 mm   0.441 in
Cable Volume	74 L/km   0.797 ft³/kft

## Electrical Specifications

eTE11 Mode Cutoff	13.338 GHz
Group Delay at Frequency	127 ns/100 ft @ 22.400 GHz   415 ns/100 m @ 22.400 GHz
Operating Frequency Band	21.2 – 23.6 GHz

## VSWR/Return Loss

Frequency Band	VSWR	Return Loss (dB)
21.2–23.6 GHz	1.15	23.13

## Attenuation

Frequency (GHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)	Average Power (kW)	Group Velocity %
21.2	28.042	8.547	0.398	77.7
21.6	27.799	8.473	0.401	78.7
22.0	27.577	8.406	0.404	79.5

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22.4	27.376	8.344	0.407	80.3
22.8	27.192	8.288	0.41	81.1
23.2	27.024	8.237	0.413	81.8
23.6	26.87	8.19	0.415	82.5

## Material Specifications

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

## Mechanical Specifications

<b>Minimum Bend Radius, Multiple Bends (E Plane)</b>	120 mm   4.724 in
<b>Minimum Bend Radius, Multiple Bends (H Plane)</b>	230 mm   9.055 in
<b>Minimum Bend Radius, Single Bend (E Plane)</b>	120 mm   4.724 in
<b>Minimum Bend Radius, Single Bend (H Plane)</b>	230 mm   9.055 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>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>	0.18 kg/m   0.121 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

