

EWP77-71W, HELIAX® Premium Elliptical Waveguide, 7.125–8.5 GHz, unjacketed

## Product Classification

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

## General Specifications

<b>Performance Note</b>	Values typical, unless otherwise stated
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## Dimensions

<b>Diameter Over Jacket (E Plane)</b>	43.6 mm   1.717 in
<b>Diameter Over Jacket (H Plane)</b>	25.4 mm   1 in
<b>Cable Volume</b>	585 L/km   6.297 ft <sup>3</sup> /kft

## Electrical Specifications

<b>eTE11 Mode Cutoff</b>	4.72 GHz
<b>Group Delay at Frequency</b>	128 ns/100 ft @ 7.800 GHz   419 ns/100 m @ 7.800 GHz
<b>Operating Frequency Band</b>	7.125 – 8.5 GHz

## VSWR/Return Loss

Frequency Band	VSWR	Return Loss (dB)
7.125–8.5 GHz	1.06	30.72

## Attenuation

Frequency (GHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)	Average Power (kW)	Group Velocity %
7.125	6.258	1.907	3.122	74.9
7.33	6.107	1.861	3.199	76.5
7.53	5.982	1.823	3.266	77.9
7.73	5.875	1.791	3.326	79.2
7.93	5.782	1.762	3.379	80.4
8.13	5.701	1.738	3.427	81.4
8.33	5.631	1.716	3.47	82.4

## Material Specifications

<b>Conductor Material</b>	Corrugated copper
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**Jacket Material** Unjacketed

## Mechanical Specifications

**Minimum Bend Radius, Multiple Bends (E Plane)** 230 mm | 9.055 in  
**Minimum Bend Radius, Multiple Bends (H Plane)** 635 mm | 25 in  
**Minimum Bend Radius, Single Bend (E Plane)** 180 mm | 7.087 in  
**Minimum Bend Radius, Single Bend (H Plane)** 510 mm | 20.079 in  
**Maximum Twist** 3.281 °/m | 1 °/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** 0.67 kg/m | 0.45 lb/ft

## Regulatory Compliance/Certifications

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

