



EWP77-71W, HELIAX® Premium Elliptical Waveguide, 7.125–8.5 GHz, black non-halogenated, fire retardant polyolefin jacket

## Product Classification

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

## Construction Materials

<b>Jacket Material</b>	Non-halogenated, fire retardant polyolefin
<b>Conductor Material</b>	Corrugated copper
<b>Jacket Color</b>	Black

## Dimensions

<b>Cable Volume</b>	585.0 L/km   6.3 ft <sup>3</sup> /kft
<b>Cable Weight</b>	0.67 kg/m   0.45 lb/ft
<b>Diameter Over Jacket (E Plane)</b>	43.60 mm   1.72 in
<b>Diameter Over Jacket (H Plane)</b>	25.40 mm   1.00 in

## Electrical Specifications

<b>Operating Frequency Band</b>	7.125 – 8.5 GHz
<b>eTE11 Mode Cutoff</b>	4.720 GHz
<b>Group Delay</b>	128 ns/100 ft @ 7.800 GHz 419 ns/100 m @ 7.800 GHz

## 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)

## Mechanical Specifications

<b>Fire Retardancy Test Method</b>	UL 1666/CATVR/CMR
<b>Maximum Twist</b>	3.00 °/m   1.00 °/ft
<b>Minimum Bend Radius, Multiple Bends (E Plane)</b>	230.00 mm   9.00 in
<b>Minimum Bend Radius, Multiple Bends (H Plane)</b>	635.00 mm   25.00 in
<b>Minimum Bend Radius, Single Bend (E Plane)</b>	180.00 mm   7.00 in
<b>Minimum Bend Radius, Single Bend (H Plane)</b>	510.00 mm   20.00 in
<b>Toxicity Index Test Method</b>	IEC 60754-2

## Note

### Performance Note

Values typical, unless otherwise stated

## Standard Conditions

<b>Attenuation, Ambient Temperature</b>	24 °C   75 °F
<b>Average Power, Ambient Temperature</b>	40 °C   104 °F
<b>Average Power, Temperature Rise</b>	42 °C   76 °F

## Return Loss/VSWR

Frequency Band	VSWR	Return Loss (dB)
7.125–8.5 GHz	1.06	30.70

\* VSWR/Return Loss indicated is for lengths up to 300 ft (91.4 m)

\* VSWR/Return Loss is guaranteed for factory-fit and typical for field-fit assemblies

\* Custom length performance: Call 828-324-2200 or 1-800-982-1708 (toll free), or your local CommScope representative

## Attenuation

Frequency (GHz)	Attenuation (dB/100 ft)	Attenuation (dB/100 m)	Average Power (kW)	Group Velocity %
7.1	1.907	6.258	3.122	74.9
7.3	1.863	6.113	3.196	76.4
7.5	1.825	5.988	3.263	77.8
7.7	1.792	5.88	3.323	79.1
7.9	1.764	5.786	3.377	80.3
8.1	1.739	5.705	3.425	81.4
8.3	1.717	5.634	3.468	82.4

## Regulatory Compliance/Certifications

### Agency

UL/ETL Certification  
 RoHS 2011/65/EU  
 ISO 9001:2015  
 China RoHS SJ/T 11364-2014

### Classification

CATVR/CMR  
 Compliant  
 Designed, manufactured and/or distributed under this quality management system  
 Below Maximum Concentration Value (MCV)

