

**EWP90-107****EWP90, HELIAX® Premium Elliptical Waveguide, 10.7–11.7 GHz, black PE jacket**

## Construction Materials

Jacket Material	PE
Conductor Material	Corrugated copper
Jacket Color	Black

## Dimensions

Cable Volume	334.0 L/km		3.6 ft <sup>3</sup> /kft
Cable Weight	0.48 kg/m		0.32 lb/ft
Diameter Over Jacket (E Plane)	33.50 mm		1.32 in
Diameter Over Jacket (H Plane)	20.30 mm		0.80 in

## Electrical Specifications

Operating Frequency Band	10.7 – 11.7 GHz
eTE11 Mode Cutoff	6.500 GHz
Group Delay	125 ns/100 ft @ 11.200 GHz 410 ns/100 m @ 11.200 GHz

## 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)

## General Specifications

Brand	HELIAX®
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## Mechanical Specifications

Maximum Twist	6.00 °/m		2.00 °/ft
Minimum Bend Radius, Multiple Bends (E Plane)	180.00 mm		7.00 in
Minimum Bend Radius, Multiple Bends (H Plane)	480.00 mm		19.00 in
Minimum Bend Radius, Single Bend (E Plane)	150.00 mm		6.00 in
Minimum Bend Radius, Single Bend (H Plane)	330.00 mm		13.00 in

## Note

Performance Note	Values typical, unless otherwise stated
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## Standard Conditions

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

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## Return Loss/VSWR

Frequency Band	VSWR	Return Loss (dB)
10.7–11.7 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 %
10.7	3.143	10.311	1.559	79.4
10.9	3.108	10.198	1.576	80.3
11.1	3.077	10.096	1.592	81.1
11.3	3.049	10.004	1.606	81.8
11.5	3.024	9.92	1.62	82.5
11.7	3	9.843	1.633	83.1

## Regulatory Compliance/Certifications

Agency	Classification
RoHS 2011/65/EU	Compliant
China RoHS SJ/T 11364-2006	Below Maximum Concentration Value (MCV)
ISO 9001:2008	Designed, manufactured and/or distributed under this quality management system

