

# EWP90-105

EWP90, HELIAX® Premium Elliptical Waveguide, 10.2–10.7 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> | 33.5 mm   1.319 in                    |
| <b>Diameter Over Jacket (H Plane)</b> | 20.3 mm   0.799 in                    |
| <b>Cable Volume</b>                   | 334 L/km   3.595 ft <sup>3</sup> /kft |

## Electrical Specifications

|                                 |  |
|---------------------------------|--|
| <b>eTE11 Mode Cutoff</b>        | 6.5 GHz  |
| <b>Group Delay at Frequency</b> | 125 ns/100 ft @ 11.200 GHz   410 ns/100 m @ 11.200 GHz |
| <b>Operating Frequency Band</b> | 10.2 – 10.7 GHz  |

## VSWR/Return Loss

| Frequency Band | VSWR | Return Loss (dB) |
|----------------|------|------------------|
| 10.2–10.7 GHz  | 1.06 | 30.72            |

## Attenuation

| Frequency (GHz) | Attenuation (dB/100 m) | Attenuation (dB/100 ft) | Average Power (kW) | Group Velocity % |
|-----------------|------------------------|-------------------------|--------------------|------------------|
| 10.2            | 10.649                 | 3.246                   | 1.509              | 77.1             |
| 10.4            | 10.503                 | 3.201                   | 1.53               | 78.1             |

# EWP90-105

10.6 10.371 3.161 1.549 79

## Material Specifications

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

## Mechanical Specifications

|  |                    |
|--|--------------------|
| <b>Minimum Bend Radius, Multiple Bends (E Plane)</b> | 180 mm   7.087 in  |
| <b>Minimum Bend Radius, Multiple Bends (H Plane)</b> | 480 mm   18.898 in |
| <b>Minimum Bend Radius, Single Bend (E Plane)</b>    | 150 mm   5.906 in  |
| <b>Minimum Bend Radius, Single Bend (H Plane)</b>    | 330 mm   12.992 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> | 0.48 kg/m   0.323 lb/ft |
|---------------------|-------------------------|

## Regulatory Compliance/Certifications

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

