

EWP90-105W

EWP90, HELIAX® Premium Elliptical Waveguide, 10.5–11.7 GHz, black PE jacket



OBSOLETE

This product was discontinued on: January 2, 2024

Product Classification

| | |
|-----------------------|------------------------------|
| Product Type | Premium elliptical waveguide |
| Product Brand | HELIAX® |
| Product Series | Premium |

General Specifications

| | |
|-------------------------|-----------------------------------------|
| Jacket Color | Black |
| Performance Note | Values typical, unless otherwise stated |

Dimensions

| | |
|---------------------------------------|--------------------------|
| Diameter Over Jacket (E Plane) | 33.5 mm 1.319 in |
| Diameter Over Jacket (H Plane) | 20.3 mm 0.799 in |
| Cable Volume | 334 L/km 3.595 ft³/kft |

Electrical Specifications

| | |
|---------------------------------|--------------------------------------------------------|
| eTE11 Mode Cutoff | 6.5 GHz |
| Group Delay at Frequency | 125 ns/100 ft @ 11.200 GHz 410 ns/100 m @ 11.200 GHz |
| Operating Frequency Band | 10.5 – 11.7 GHz |

VSWR/Return Loss

| Frequency Band | VSWR | Return Loss (dB) |
|----------------|------|------------------|
| 10.5–11.7 GHz | 1.06 | 30.72 |

EWP90-105W

Attenuation

| Frequency (GHz) | Attenuation (dB/100 m) | Attenuation (dB/100 ft) | Average Power (kW) | Group Velocity % |
|-----------------|------------------------|-------------------------|--------------------|------------------|
| 10.5 | 10.435 | 3.181 | 1.54 | 78.5 |
| 10.7 | 10.311 | 3.143 | 1.559 | 79.4 |
| 10.9 | 10.198 | 3.108 | 1.576 | 80.3 |
| 11.1 | 10.096 | 3.077 | 1.592 | 81.1 |
| 11.3 | 10.004 | 3.049 | 1.606 | 81.8 |
| 11.5 | 9.92 | 3.024 | 1.62 | 82.5 |
| 11.7 | 9.843 | 3 | 1.633 | 83.1 |

Material Specifications

| | |
|---------------------------|-------------------|
| Conductor Material | Corrugated copper |
| Jacket Material | PE |

Mechanical Specifications

| | |
|------------------------------------------------------|--------------------|
| Minimum Bend Radius, Multiple Bends (E Plane) | 180 mm 7.087 in |
| Minimum Bend Radius, Multiple Bends (H Plane) | 480 mm 18.898 in |
| Minimum Bend Radius, Single Bend (E Plane) | 150 mm 5.906 in |
| Minimum Bend Radius, Single Bend (H Plane) | 330 mm 12.992 in |
| Maximum Twist | 6.562 °/m 2 °/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 | 0.48 kg/m 0.323 lb/ft |
|---------------------|-------------------------|

Regulatory Compliance/Certifications

EWP90-105W

Agency

ISO 9001:2015

**Classification**

Designed, manufactured and/or distributed under this quality management system