



## EW85

**EW85, HELIAX® Standard Elliptical Waveguide, 8.5–9.8 GHz, black PE jacket**

### Construction Materials

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

### Dimensions

|                                |            |  |                          |
|--------------------------------|------------|--|--------------------------|
| Cable Volume                   | 390.0 L/km |  | 4.2 ft <sup>3</sup> /kft |
| Cable Weight                   | 0.50 kg/m  |  | 0.33 lb/ft               |
| Diameter Over Jacket (E Plane) | 33.50 mm   |  | 1.32 in                  |
| Diameter Over Jacket (H Plane) | 22.90 mm   |  | 0.90 in                  |

### Electrical Specifications

|                          |                                                       |
|--------------------------|-------------------------------------------------------|
| Operating Frequency Band | 8.5 – 9.8 GHz                                         |
| eTE11 Mode Cutoff        | 6.460 GHz                                             |
| Group Delay              | 143 ns/100 ft @ 9.200 GHz<br>468 ns/100 m @ 9.200 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® |
|-------|---------|

### Mechanical Specifications

|                                               |           |  |           |
|-----------------------------------------------|-----------|--|-----------|
| Maximum Twist                                 | 3.00 °/m  |  | 1.00 °/ft |
| Minimum Bend Radius, Multiple Bends (E Plane) | 200.00 mm |  | 8.00 in   |
| Minimum Bend Radius, Multiple Bends (H Plane) | 480.00 mm |  | 19.00 in  |
| Minimum Bend Radius, Single Bend (E Plane)    | 200.00 mm |  | 8.00 in   |
| Minimum Bend Radius, Single Bend (H Plane)    | 480.00 mm |  | 19.00 in  |

### 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  |

### Return Loss/VSWR

| Frequency Band | VSWR | Return Loss (dB) |
|----------------|------|------------------|
|----------------|------|------------------|

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8.5–9.8 GHz

1.17

22.10

\* 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 +1-800-255-1479 (N. America), 1-779-435-6500 (Int'l.), or your local Andrew representative

## Attenuation

| Frequency (GHz) | Attenuation (dB/100 ft) | Attenuation (dB/100 m) | Average Power (kW) | Group Velocity % |
|-----------------|-------------------------|------------------------|--------------------|------------------|
| 8.5             | 3.448                   | 11.311                 | 1.463              | 65               |
| 8.7             | 3.328                   | 10.917                 | 1.516              | 67               |
| 8.9             | 3.227                   | 10.589                 | 1.563              | 68.8             |
| 9.1             | 3.142                   | 10.31                  | 1.606              | 70.4             |
| 9.3             | 3.069                   | 10.07                  | 1.644              | 71.9             |
| 9.5             | 3.006                   | 9.863                  | 1.678              | 73.3             |
| 9.7             | 2.951                   | 9.681                  | 1.71               | 74.6             |

## Regulatory Compliance/Certifications

### Agency

RoHS 2002/95/EC

China RoHS SJ/T 11364-2006

ISO 9001:2008

### Classification

Compliant

Below Maximum Concentration Value (MCV)

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

