



EW90

EW90, HELIAX® Standard Elliptical Waveguide, 10.2–11.7 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 ³ /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 | 10.2 – 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® |
|-------|---------|

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 |
|------------------|---|

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 |

EW90

Return Loss/VSWR

| Frequency Band | VSWR | Return Loss (dB) |
|----------------|------|------------------|
| 10.2–11.7 GHz | 1.15 | 23.10 |

* 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 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 % |
|-----------------|-------------------------|------------------------|--------------------|------------------|
| 10.2 | 3.246 | 10.649 | 1.509 | 77.1 |
| 10.4 | 3.201 | 10.503 | 1.53 | 78.1 |
| 10.6 | 3.161 | 10.371 | 1.549 | 79 |
| 10.8 | 3.125 | 10.253 | 1.567 | 79.9 |
| 11 | 3.093 | 10.146 | 1.584 | 80.7 |
| 11.2 | 3.063 | 10.049 | 1.599 | 81.4 |
| 11.4 | 3.036 | 9.961 | 1.613 | 82.2 |
| 11.6 | 3.012 | 9.88 | 1.626 | 82.8 |

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 |

