



EW77, HELIAX® Standard Elliptical Waveguide, 7.125–8.5 GHz, black non-halogenated, fire retardant polyolefin jacket

Product Classification

| | |
|---------------------|----------------------|
| Brand | HELIAX® |
| Product Type | Elliptical waveguide |

Construction Materials

| | |
|---------------------------|--|
| Jacket Material | Non-halogenated, fire retardant polyolefin |
| Conductor Material | Corrugated copper |
| Jacket Color | Black |

Dimensions

| | |
|---------------------------------------|---------------------------------------|
| Cable Volume | 585.0 L/km 6.3 ft ³ /kft |
| Cable Weight | 0.67 kg/m 0.45 lb/ft |
| Diameter Over Jacket (E Plane) | 43.60 mm 1.72 in |
| Diameter Over Jacket (H Plane) | 25.40 mm 1.00 in |

Electrical Specifications

| | |
|---------------------------------|---|
| Operating Frequency Band | 7.125 – 8.5 GHz |
| eTE11 Mode Cutoff | 4.720 GHz |
| Group Delay | 128 ns/100 ft @ 7.800 GHz 419 ns/100 m @ 7.800 GHz |

Environmental Specifications

| | |
|---------------------------------|--------------------------------------|
| Installation Temperature | -25 °C to +60 °C (-13 °F to +140 °F) |
| Operating Temperature | -30 °C to +80 °C (-22 °F to +176 °F) |
| Storage Temperature | -30 °C to +80 °C (-22 °F to +176 °F) |

Mechanical Specifications

| | |
|--|----------------------|
| Fire Retardancy Test Method | UL 1666/CATVR/CMR |
| Maximum Twist | 3.00 °/m 1.00 °/ft |
| Minimum Bend Radius, Multiple Bends (E Plane) | 230.00 mm 9.00 in |
| Minimum Bend Radius, Multiple Bends (H Plane) | 635.00 mm 25.00 in |
| Minimum Bend Radius, Single Bend (E Plane) | 180.00 mm 7.00 in |
| Minimum Bend Radius, Single Bend (H Plane) | 510.00 mm 20.00 in |
| Toxicity Index Test Method | IEC 60754-2 |

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 |

Return Loss/VSWR

| Frequency Band | VSWR | Return Loss (dB) |
|----------------|------|------------------|
| 7.125–8.5 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 % |
|-----------------|-------------------------|------------------------|--------------------|------------------|
| 7.1 | 1.907 | 6.258 | 3.122 | 74.9 |
| 7.3 | 1.863 | 6.113 | 3.196 | 76.4 |
| 7.5 | 1.825 | 5.988 | 3.263 | 77.8 |
| 7.7 | 1.792 | 5.88 | 3.323 | 79.1 |
| 7.9 | 1.764 | 5.786 | 3.377 | 80.3 |
| 8.1 | 1.739 | 5.705 | 3.425 | 81.4 |
| 8.3 | 1.717 | 5.634 | 3.468 | 82.4 |

Regulatory Compliance/Certifications

Agency

UL/ETL Certification

RoHS 2011/65/EU

ISO 9001:2015

China RoHS SJ/T 11364-2014

Classification

CATVR/CMR

Compliant

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

Below Maximum Concentration Value (MCV)

