

EWP180-180, HELIAX® Premium Elliptical Waveguide, 17.7–19.7 GHz, black non-halogenated, fire retardant polyolefin jacket



Product Classification

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

General Specifications

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

Dimensions

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|---------------------------------------|--------------------------|
| Diameter Over Jacket (E Plane) | 20.1 mm 0.791 in |
| Diameter Over Jacket (H Plane) | 12.4 mm 0.488 in |
| Cable Volume | 111 L/km 1.195 ft³/kft |

Electrical Specifications

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|---------------------------------|--|
| eTE11 Mode Cutoff | 11.15 GHz |
| Group Delay at Frequency | 127 ns/100 ft @ 18.700 GHz 416 ns/100 m @ 18.700 GHz |
| Operating Frequency Band | 17.7 – 19.7 GHz |

VSWR/Return Loss

| Frequency Band | VSWR | Return Loss (dB) |
|----------------|------|------------------|
| 17.7–19.7 GHz | 1.09 | 27.32 |

Attenuation

| Frequency (GHz) | Attenuation (dB/100 m) | Attenuation (dB/100 ft) | Average Power (kW) | Group Velocity % |
|-----------------|------------------------|-------------------------|--------------------|------------------|
| 17.7 | 20.111 | 6.13 | 0.537 | 77.7 |
| 18.1 | 19.799 | 6.035 | 0.546 | 78.8 |

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|------|--------|-------|-------|------|
| 18.5 | 19.523 | 5.951 | 0.553 | 79.8 |
| 18.9 | 19.278 | 5.876 | 0.56 | 80.7 |
| 19.3 | 19.06 | 5.81 | 0.567 | 81.6 |
| 19.7 | 18.865 | 5.75 | 0.573 | 82.4 |

Material Specifications

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

Mechanical Specifications

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|--|--------------------|
| Minimum Bend Radius, Multiple Bends (E Plane) | 150 mm 5.906 in |
| Minimum Bend Radius, Multiple Bends (H Plane) | 280 mm 11.024 in |
| Minimum Bend Radius, Single Bend (E Plane) | 150 mm 5.906 in |
| Minimum Bend Radius, Single Bend (H Plane) | 380 mm 14.961 in |
| Maximum Twist | 6.562 °/m 2 °/ft |

Environmental Specifications

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|---|--------------------------------------|
| 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) |
| 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 |
| Fire Retardancy Test Method | UL 1666/CATVR/CMR |
| Toxicity Index Test Method | IEC 60754-2 |

Packaging and Weights

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|---------------------|-------------------------|
| Cable weight | 0.22 kg/m 0.148 lb/ft |
|---------------------|-------------------------|

Regulatory Compliance/Certifications

| Agency | Classification |
|----------------------|--|
| ISO 9001:2015 | Designed, manufactured and/or distributed under this quality management system |
| UL/ETL Certification | CATVR/CMR |

