

EWP77-77

EWP77, HELIAX® Premium Elliptical Waveguide, 7.725–8.5 GHz, black PE jacket



Product Classification

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

General Specifications

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

Dimensions

| | |
|---------------------------------------|---------------------------------------|
| Diameter Over Jacket (E Plane) | 43.6 mm 1.717 in |
| Diameter Over Jacket (H Plane) | 25.4 mm 1 in |
| Cable Volume | 585 L/km 6.305 ft ³ /kft |

Electrical Specifications

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|---|--|
| Attenuation, Ambient Temperature | 75 °F 23.889 °C |
| eTE11 Mode Cutoff | 4.72 GHz |
| Group Delay at Frequency | 128 ns/100 ft @ 7.800 GHz 419 ns/100 m @ 7.800 GHz |
| Operating Frequency Band | 7.725 – 8.5 GHz |

VSWR/Return Loss

| Frequency Band | VSWR | Return Loss (dB) |
|----------------|------|------------------|
| 7.725–8.5 GHz | 1.06 | 30.72 |

Attenuation

| Frequency (GHz) | Attenuation (dB/100 m) | Attenuation (dB/100 ft) | Average Power (kW) | Group Velocity % |
|-----------------|------------------------|-------------------------|--------------------|------------------|
| 7.725 | 5.877 | 1.791 | 3.324 | 79.2 |
| 7.93 | 5.782 | 1.762 | 3.379 | 80.4 |

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|-------------|-------|-------|-------|------|
| 8.13 | 5.701 | 1.738 | 3.427 | 81.4 |
| 8.33 | 5.631 | 1.716 | 3.47 | 82.4 |

Material Specifications

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

Mechanical Specifications

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|--|--------------------|
| Minimum Bend Radius, Multiple Bends (E Plane) | 230 mm 9.055 in |
| Minimum Bend Radius, Multiple Bends (H Plane) | 635 mm 25 in |
| Minimum Bend Radius, Single Bend (E Plane) | 180 mm 7.087 in |
| Minimum Bend Radius, Single Bend (H Plane) | 510 mm 20.079 in |
| Maximum Twist | 1 °/ft 3.281 °/m |

Environmental Specifications

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|---|--------------------------------------|
| 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) |
| Average Power, Ambient Temperature | 104 °F 40 °C |
| Average Power, Temperature Rise | 42 °C 107.6 °F |

Packaging and Weights

| | |
|---------------------|-------------------------|
| Cable weight | 0.67 kg/m 4.846 lb/ft |
|---------------------|-------------------------|

Regulatory Compliance/Certifications

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

