EWP63S, HELIAx® Super Premium Elliptical Waveguide, 6.425–7.125 GHz, unjacketed

Product Classification

Brand: HELIAx®
Product Type: Elliptical waveguide

Construction Materials

Jacket Material: Unjacketed
Conductor Material: Corrugated copper

Dimensions

Cable Volume: 855.0 L/km
Cable Weight: 0.76 kg/m
Diameter Over Jacket (E Plane): 51.10 mm | 2.01 in
Diameter Over Jacket (H Plane): 29.50 mm | 1.16 in

Electrical Specifications

Operating Frequency Band: 6.425 – 7.125 GHz
eTE11 Mode Cutoff: 4.001 GHz
Group Delay at Frequency: 126 ns/100 ft @ 6.775 GHz | 413 ns/100 m @ 6.775 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)

Mechanical Specifications

Maximum Twist: 1.00 °/ft
Minimum Bend Radius, Multiple Bends (E Plane): 260.00 mm | 10.24 in
Minimum Bend Radius, Multiple Bends (H Plane): 740.00 mm | 29.13 in
Minimum Bend Radius, Single Bend (E Plane): 180.00 mm | 7.09 in
Minimum Bend Radius, Single Bend (H Plane): 510.00 mm | 20.08 in

Note

Performance Note: Values typical, unless otherwise stated

Standard Conditions
### Regulatory Compliance/Certifications

#### Agency
- RoHS 2011/65/EU  
- ISO 9001:2015  
- China RoHS SJ/T 11364-2014

#### Classification
- Compliant  
- Designed, manufactured and/or distributed under this quality management system  
- Below Maximum Concentration Value (MCV)

### Attenuation

<table>
<thead>
<tr>
<th>Frequency (GHz)</th>
<th>Attenuation (dB/100 ft)</th>
<th>Attenuation (dB/100 m)</th>
<th>Average Power (kW)</th>
<th>Group Velocity %</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.4</td>
<td>1.396</td>
<td>4.58</td>
<td>4.739</td>
<td>78.2</td>
</tr>
<tr>
<td>6.6</td>
<td>1.37</td>
<td>4.496</td>
<td>4.828</td>
<td>79.7</td>
</tr>
<tr>
<td>6.8</td>
<td>1.348</td>
<td>4.423</td>
<td>4.908</td>
<td>81.0</td>
</tr>
<tr>
<td>7</td>
<td>1.329</td>
<td>4.36</td>
<td>4.979</td>
<td>82.2</td>
</tr>
</tbody>
</table>

### Return Loss/VSWR

<table>
<thead>
<tr>
<th>Frequency Band</th>
<th>VSWR</th>
<th>Return Loss (dB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.425–7.125 GHz</td>
<td>1.05</td>
<td>32.30</td>
</tr>
</tbody>
</table>

* 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, Ambient Temperature
- 24 °C | 75 °F

### Average Power, Ambient Temperature
- 40 °C | 104 °F

### Average Power, Temperature Rise
- 42 °C | 76 °F