

222040-6

EWP77-71W, HELIAX® Premium Elliptical Waveguide, 7.125–8.5 GHz, unjacketed

Product Classification

Product Type Elliptical waveguide

Product Brand HELIAX®

General Specifications

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 | 6.297 ft³/kft

Electrical Specifications

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 7.125 – 8.5 GHz

VSWR/Return Loss

Frequency Band	VSWR	Return Loss (dB)
7.125–8.5 GHz	1.06	30.72

Attenuation

Frequency (GHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)	Average Power (kW)	Group Velocity %
7.125	6.258	1.907	3.122	74.9
7.33	6.107	1.861	3.199	76.5
7.53	5.982	1.823	3.266	77.9
7.73	5.875	1.791	3.326	79.2
7.93	5.782	1.762	3.379	80.4
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

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Jacket Material	Unjacketed
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Mechanical Specifications

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	3.281 °/m 1 °/ft

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)
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 0.45 lb/ft
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Regulatory Compliance/Certifications

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

