

222040-4

EWP127A-117W, HELIAX® Premium Elliptical Waveguide, 11.7–13.25 GHz, unjacketed

Product Classification

Product Type	Elliptical waveguide
Product Brand	HELIAX®

General Specifications

Performance Note	Values typical, unless otherwise stated
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Dimensions

Diameter Over Jacket (E Plane)	28.2 mm 1.11 in
Diameter Over Jacket (H Plane)	17.1 mm 0.673 in
Cable Volume	251 L/km 2.702 ft³/kft

Electrical Specifications

eTE11 Mode Cutoff	7.67 GHz
Group Delay at Frequency	128 ns/100 ft @ 12.700 GHz 419 ns/100 m @ 12.700 GHz
Operating Frequency Band	11.7 – 13.25 GHz

VSWR/Return Loss

Frequency Band	VSWR	Return Loss (dB)
11.7–13.25 GHz	1.08	28.3

Attenuation

Frequency (GHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)	Average Power (kW)	Group Velocity %
11.7	12.276	3.742	1.196	75.5
11.95	12.086	3.684	1.214	76.7
12.2	11.918	3.633	1.232	77.8
12.45	11.769	3.587	1.247	78.8
12.7	11.634	3.546	1.262	79.7
12.95	11.514	3.509	1.275	80.6
13.2	11.405	3.476	1.287	81.4

Material Specifications

Conductor Material	Corrugated copper
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Jacket Material Unjacketed

Mechanical Specifications

Minimum Bend Radius, Multiple Bends (E Plane)	150 mm 5.906 in
Minimum Bend Radius, Multiple Bends (H Plane)	380 mm 14.961 in
Minimum Bend Radius, Single Bend (E Plane)	130 mm 5.118 in
Minimum Bend Radius, Single Bend (H Plane)	280 mm 11.024 in
Maximum Twist	6.562 °/m 2 °/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)
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

Packaging and Weights

Cable weight 0.43 kg/m | 0.289 lb/ft

Regulatory Compliance/Certifications

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

