

EW20, HELIAX® Standard Elliptical Waveguide, 2.3–2.4 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)	127.5 mm 5.02 in
Diameter Over Jacket (H Plane)	71.9 mm 2.831 in
Cable Volume	5621 L/km 60.504 ft³/kft

Electrical Specifications

eTE11 Mode Cutoff	1.57 GHz
Group Delay at Frequency	128 ns/100 ft @ 2.600 GHz 418 ns/100 m @ 2.600 GHz
Operating Frequency Band	2.3 – 2.4 GHz

VSWR/Return Loss

Frequency Band	VSWR	Return Loss (dB)
2.3–2.4 GHz	1.15	23.13

Attenuation

Frequency (GHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)	Average Power (kW)	Group Velocity %
2.3	1.534	0.468	31.501	73.1
2.4	1.484	0.452	32.559	75.6

Material Specifications

Conductor Material	Corrugated copper
Jacket Material	Unjacketed

Mechanical Specifications

Minimum Bend Radius, Multiple Bends (E Plane)	660 mm 25.984 in
Minimum Bend Radius, Multiple Bends (H Plane)	1800 mm 70.866 in

Minimum Bend Radius, Single Bend (E Plane)	460 mm 18.11 in
Minimum Bend Radius, Single Bend (H Plane)	1270 mm 50 in
Maximum Twist	0.098 °/m 0.03 °/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	2.76 kg/m 1.855 lb/ft
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Regulatory Compliance/Certifications

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

