

K/Ka-Band Lens Horn Antenna

22 to 33 GHz, WR34, 30 dBi Gain

DESCRIPTION

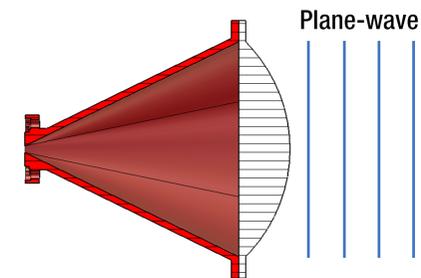
Anteral's Lens Horn Antennas are conical horn antennas with a **plano-convex** high-density polyethylene (HDPE) lens added in the aperture, in order to apply phase correction and achieve high gain, low VSWR and low side-lobes, with minimum size.

The LHA-30-WR34 model operates at the K-band between 22 and 33 GHz with 30 dBi nominal mid-band gain and a typical VSWR of 1.25.

APPLICATIONS

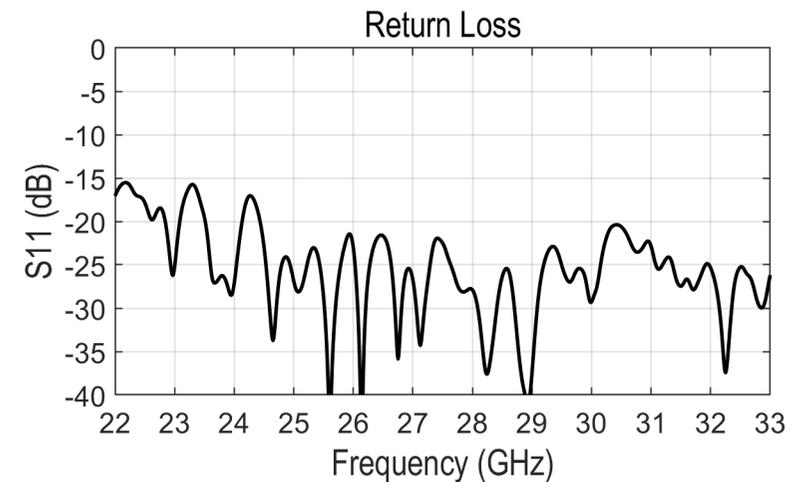
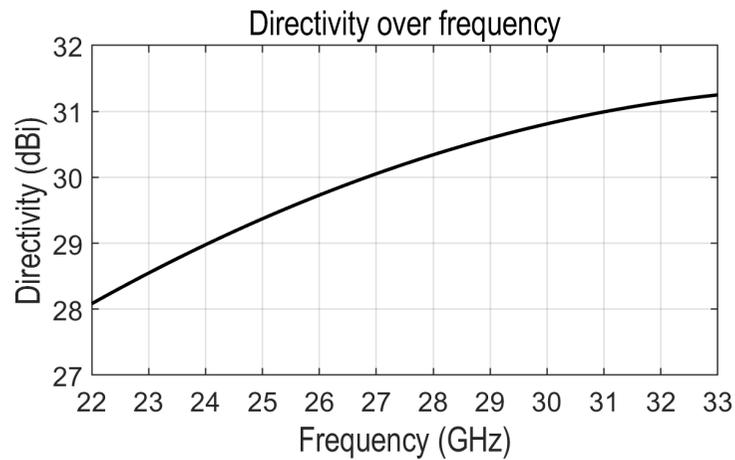
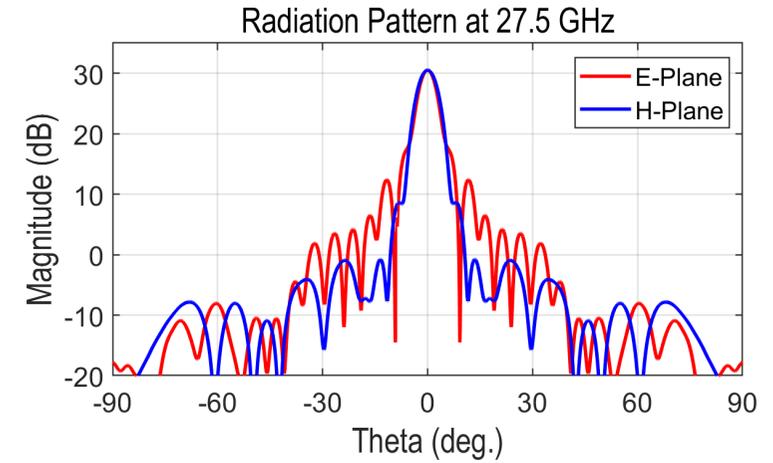
Lens Horn Antennas are especially useful when high gain is required with the minimum size. Therefore, these antennas are widely used in radar applications, communication links and meteorological systems among others.

Anteral also offers their **Focusing Lens Horn Antennas** with double-convex lenses to exhibit very well define focusing beams with short focal distances which makes them optimal for testing and material characterization.



ELECTRICAL SPECIFICATIONS

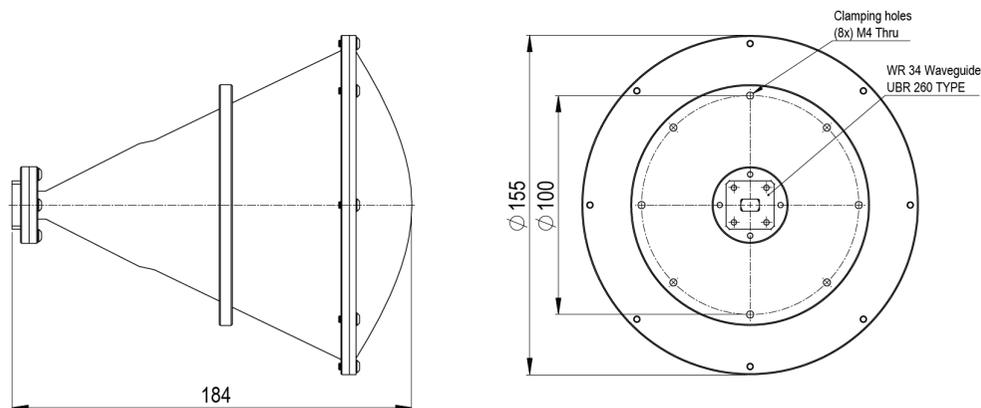
Parameter	Typical value
Frequency	22 - 33 GHz
Gain	30 dBi
3 dB Beamwidth, E-plane	4.75 deg
3 dB Beamwidth, H-plane	5.5 deg
Sidelobe, E-plane	-18 dB
Sidelobe, H-plane	-18 dB
S11	-18 dB



MECHANICAL SPECIFICATIONS

Parameter	Description
Antenna Port*	WR-34 (8.636 mm x 4.318 mm)
Flange	UBR 260
Total length	184 mm
Total diameter	155 mm
Total weight	600 g
Horn Material	Aluminum
Lens Material	HDPE
External Color	Ruby Red

MECHANICAL OUTLINE

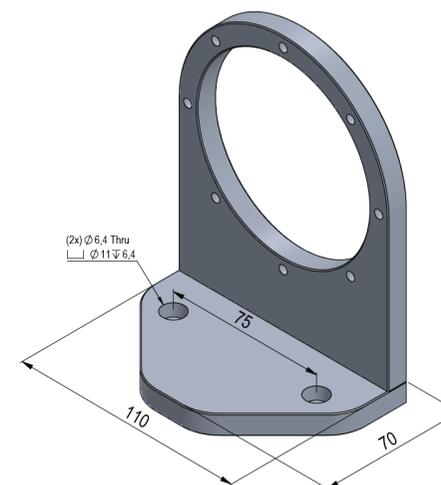


CLAMPING STRUCTURE

Anteral's Lens Horn Antennas are drilled with some threads for clamping purpose. See the mechanical outline. Anteral also offers clamping structure for the LHA-30-WR34 with the following specifications.

Model	Material	Weight (g)
LHA-30-WR34-CLAMP	Aluminum	340

*The base is drilled with 4 through holes but any custom holes can be added.



Additional notes

Gain, return loss and radiation pattern data are simulated. Actual values have been checked experimentally but they could vary slightly. The return loss performance of all items is checked before delivery. Last version: 14/03/2023

