

# Ka-Band Focusing Lens Horn Antenna

## 26.5 to 40 GHz, WR28

### DESCRIPTION

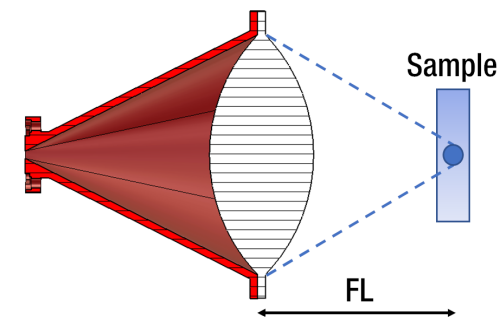
Anteral's Focusing Lens Horn Antennas are conical horn antennas with a double-convex Teflon (PTFE) lens added in the aperture, in order to apply phase correction and achieve superior focusing performance with minimum size.

The FLHA-F-WR28 model operates at the Ka-band between 26.5 and 40 GHz with a focal length of 146 mm and a diameter beam focus of 13 mm.

### APPLICATIONS

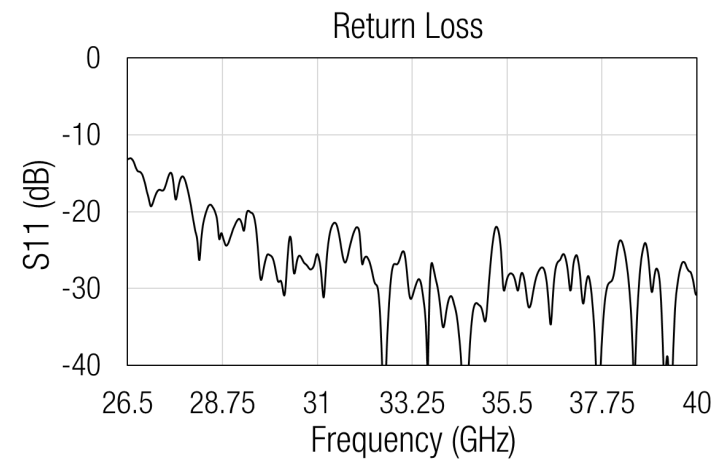
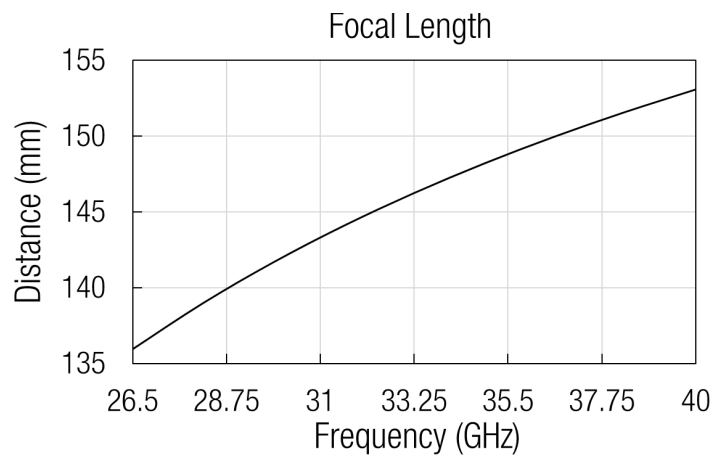
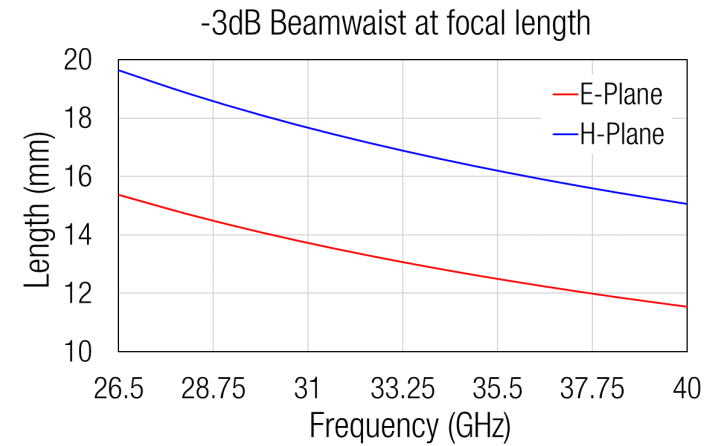
Focusing Lens Horn Antennas are especially useful when focusing beam is required with short focal distances. Therefore, these antennas are widely used in testing and material characterization.

Anteral also offers their **Lens Horn Antennas** with plano-convex lenses to exhibit high gain (>30 dB) in a very compact size which makes them optimal for radar applications, communication links or meteorological systems among others.



### ELECTRICAL SPECIFICATIONS

Parameter	Minimum	Typical	Maximum
Frequency	26.5 GHz	33.25 GHz	40 GHz
Focal Length	135.9 mm	146.2 mm	153.1 mm
3 dB Beamwaist, E-plane		13.1 mm	
3 dB Beamwaist, H-plane		16.9 mm	
S11		-20 dB	-15 dB

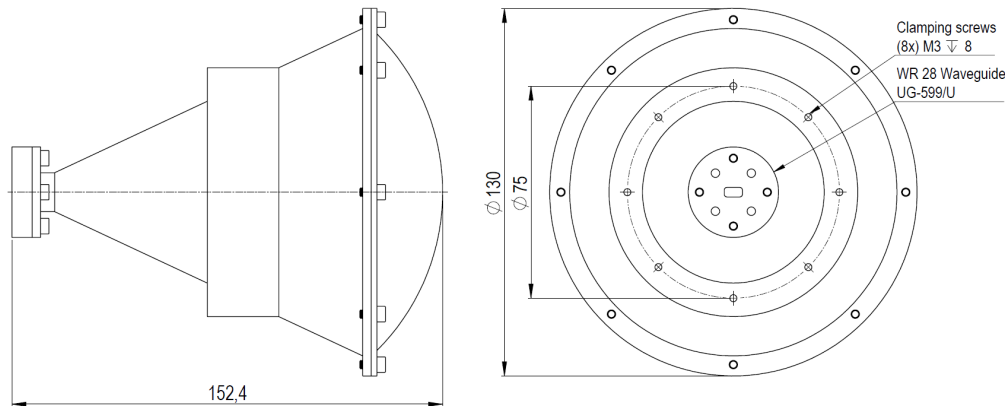


### MECHANICAL SPECIFICATIONS

Parameter	Description
Antenna Port*	WR-28 (7.112 mm x 3.556 mm)
Flange	UG-599/U
Total length	152.4 mm
Total diameter	130 mm
Total weight	840 g
Horn Material	Aluminum
Lens Material	PTFE
External Color	Ruby Red

\*The antenna includes a rectangular to circular waveguide transition (WR-28 to WC-290)

### MECHANICAL OUTLINE



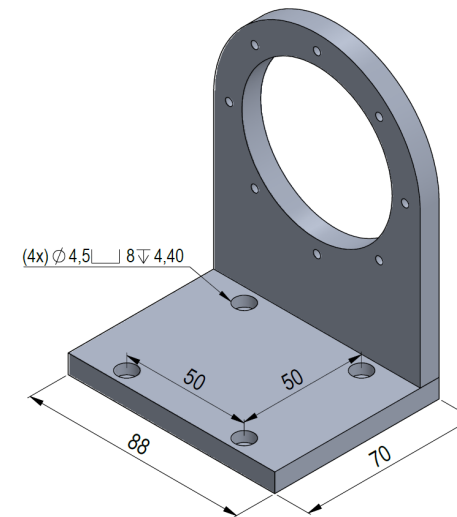
### CLAMPING STRUCTURE

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-F-WR28 with the following specifications.

Model	Material	Weight (g)
LHA-F-WR28-CLAMP	Aluminum	260

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



### Additional notes

Focal length and beamwaist data are measured from a sample. Actual values could vary slightly. Return loss data is measured from a sample. Actual values could vary slightly. The return loss performance of all items is checked before delivery.