



## W-Band Lens Corrected Antenna, 75 to 110 GHz, 26 dBi Gain

### Description:

**Model SAL-7531142607-10-S1** is a W-band lens corrected antenna that operates from 75 to 110 GHz. At a center frequency of 92.5 GHz, the antenna delivers 26 dBi nominal gain, 7 degrees typical half power beamwidth on the E-plane, and 9 degrees typical half power beamwidth on the H-plane. The antenna employs a low loss lens to offer excellent aperture efficiency and low sidelobe levels to support linear polarized waveform. The lens corrected antenna is equipped with a standard WR-10 waveguide and UG-387/U-M flange as its input port. It supports linear polarized waveforms.



### Features:

- Center Fed
- Low Sidelobes
- Low Cross Polarization

### Applications:

- Radar Systems
- Communication Systems
- Sensor Systems

### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	75 GHz	92.5 GHz	110 GHz
Gain	24 dBi	26 dBi	28 dBi
3 dB Beamwidth, E-Plane		7°	
3 dB Beamwidth, H-Plane		9°	
Sidelobes, E-Plane		-17 dB	-16 dB
Sidelobes, H-Plane		-25 dB	-24 dB
Polarization		Linear	
Return Loss		20 dB	
Specification Temperature		+25 °C	
Operating Temperature	-40 °C		+85 °C

### Mechanical Specifications:

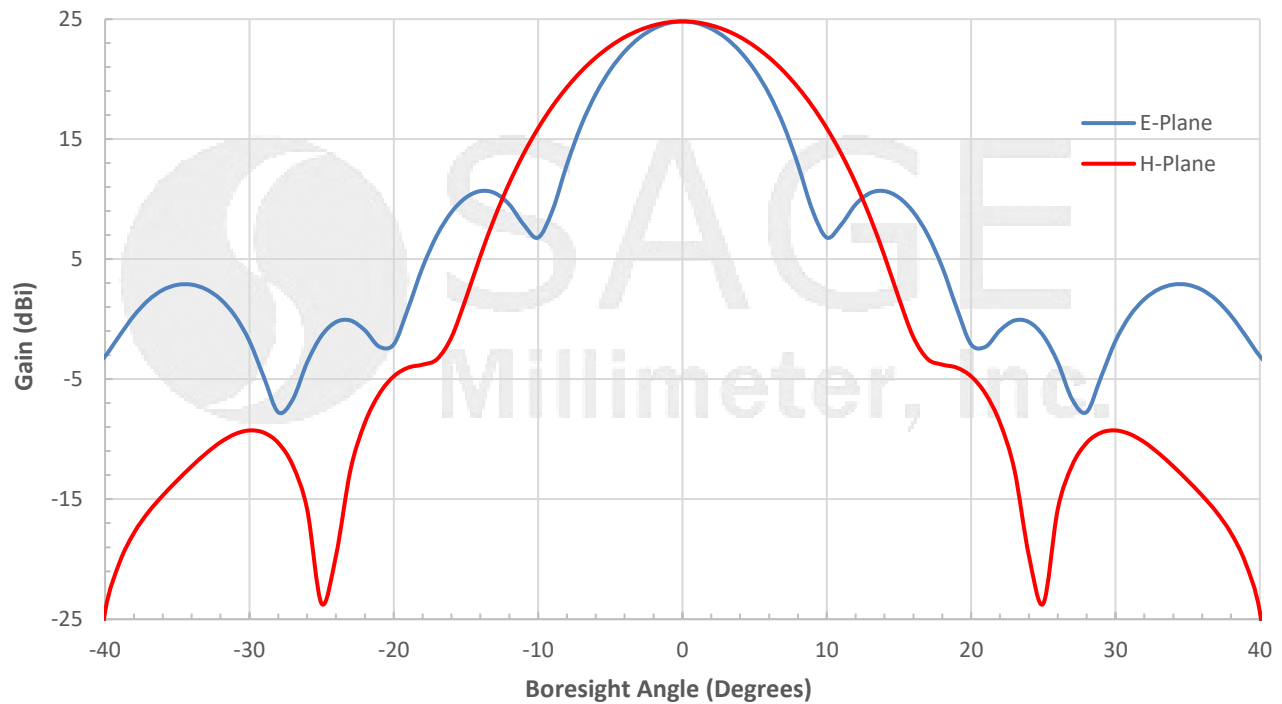
Item	Specification
Antenna Port	WR-10 Waveguide with UG-387/U-M Flange
Lens Diameter	1.00"
Dimensions	1.10" (Ø) x 1.75" (L)
Horn Material	Aluminum
Finish	Gold Plated
Weight	2.2 Oz
Outline	AL-RW26



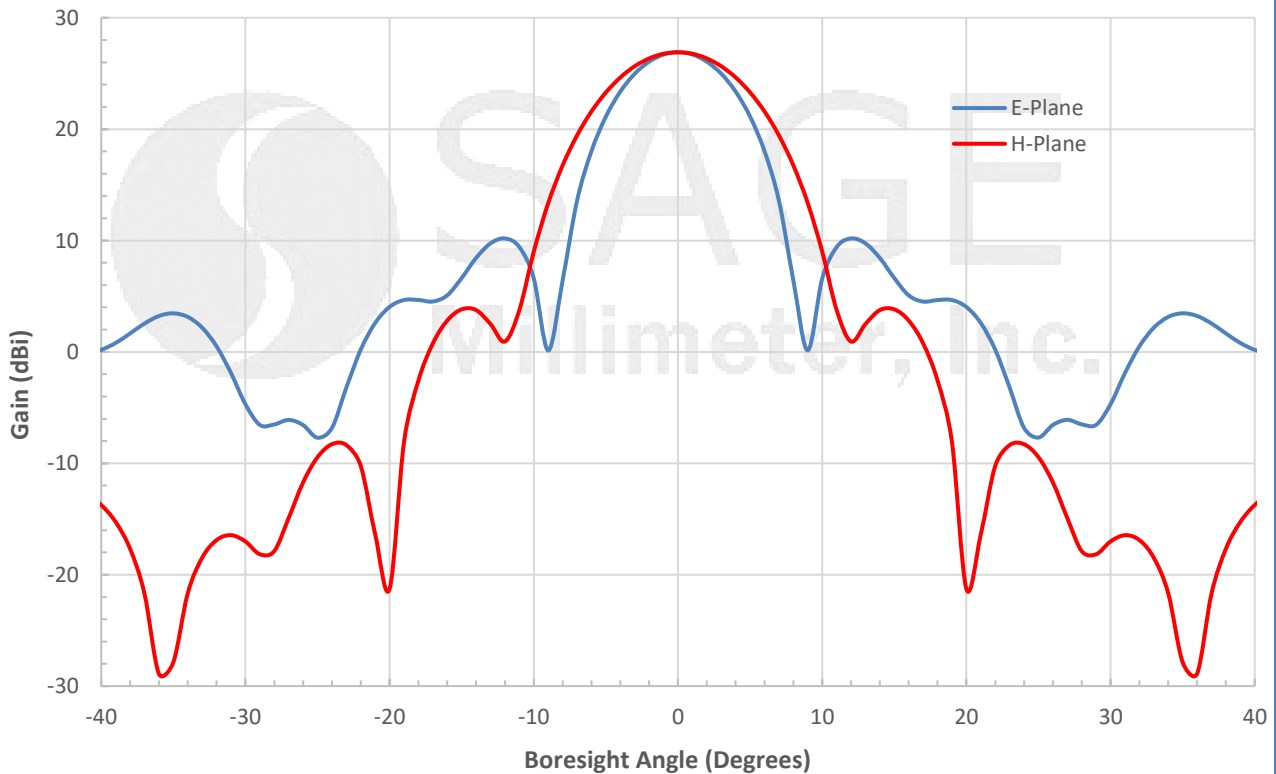


## W-Band Lens Corrected Antenna, 75 to 110 GHz, 26 dBi Gain

### Simulated Antenna Pattern @ 75 GHz



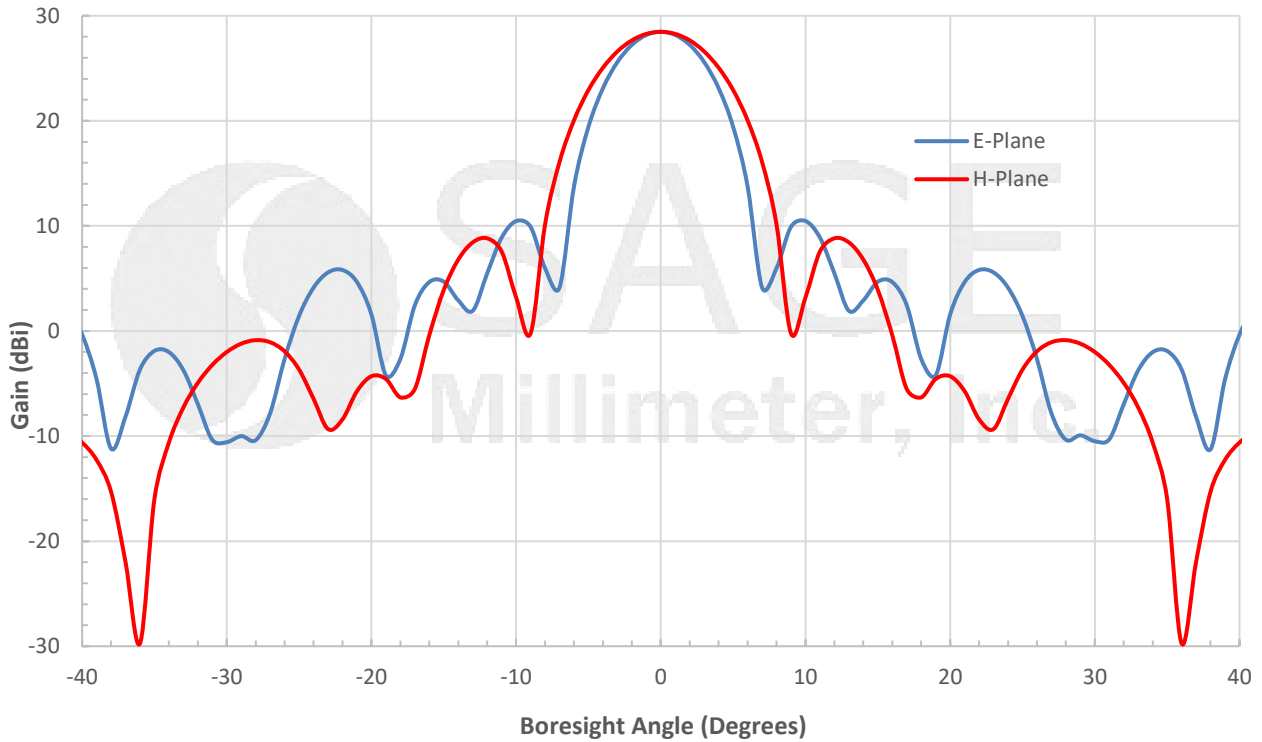
### Simulated Antenna Pattern @ 92.5 GHz



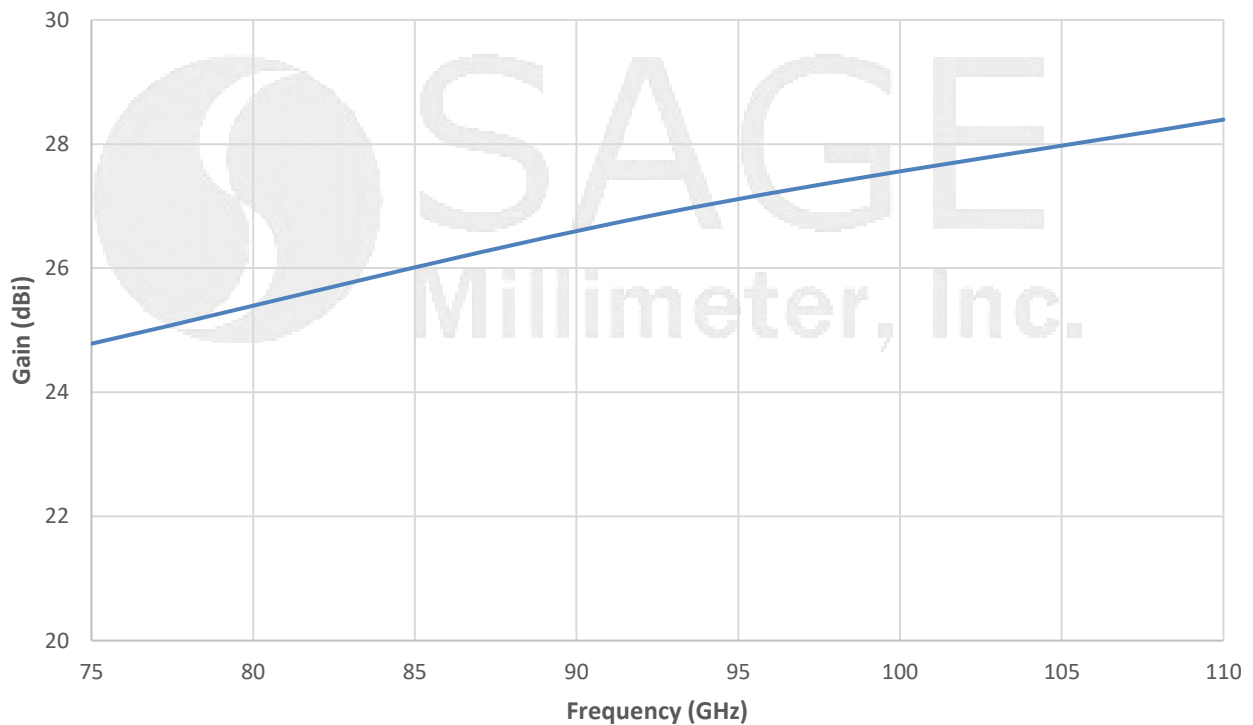


## W-Band Lens Corrected Antenna, 75 to 110 GHz, 26 dBi Gain

### Simulated Antenna Pattern @ 110 GHz



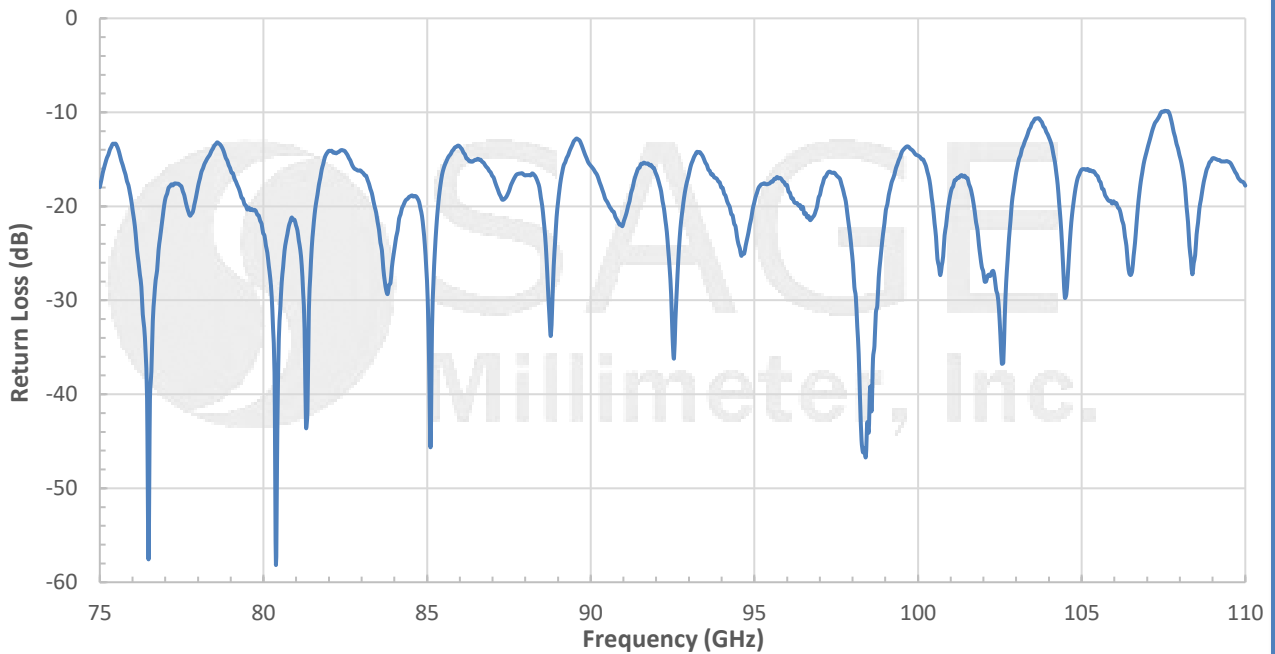
### Simulated Gain vs. Frequency



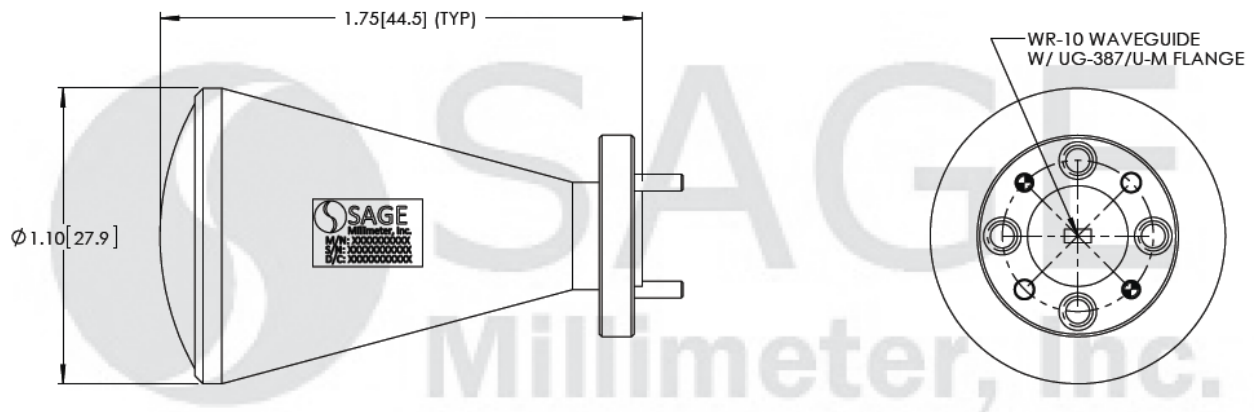


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### Measured Return Loss vs. Frequency



### Mechanical Outline: (Unless otherwise specified, all dimensions are in inches [millimeters])



#### Note:

- Pattern and Gain data are simulated. Actual data may vary, slightly.
- Return loss data presented is collected from a sample lot. Actual data may vary unit to unit, slightly.
- All testing was performed under +25°C room temperature.
- SAGE Millimeter, Inc. reserves the right to change the information presented without notice.

#### Caution:

- Foreign objects in the waveguide will affect the antenna performance and may damage the antenna.



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