



## K Band Gaussian Optics Antenna, 20 to 24.5 GHz, 3.2 Degree

### Description:

**Model SAG-2032533403-42-S1** is a 12" K-Band Gaussian antenna that operates from 20 to 25 GHz. The Gaussian antenna delivers a 34 dBi nominal gain and 3.2 degree half power beamwidth. The antenna supports both linear and circular polarized waveforms and employs a corrugated feed horn to offer excellent aperture efficiency, high cross polarization rejections, and low sidelobe levels. This model is equipped with a WR-42 waveguide and UG-599/U flange as its input port. By removing the mode transition, SAGE Millimeter model number SWT-42396-SB, the input port becomes a 0.396" circular waveguide, which can support both circular and linear polarized waveforms.



### Features:

- Center Fed
- Low Sidelobes
- Low Cross Polarization

### Applications:

- Radar Systems
- Communication Systems
- Plasma Systems

### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range*	20 GHz		24.5 GHz
Gain		34 dBi	
3 dB Beamwidth		3.2°	
Sidelobes		-25 dB	-20 dB
Cross Polarization		-20 dB	
Polarization		Linear	
Return Loss		20 dB	
Specification Temperature		+25 °C	
Operating Temperature	-40 °C		+85 °C

\*Note: Can operate from 18 to 26.5 GHz if the dominant model is maintained and slight performance degradation is allowed.

### Mechanical Specifications:

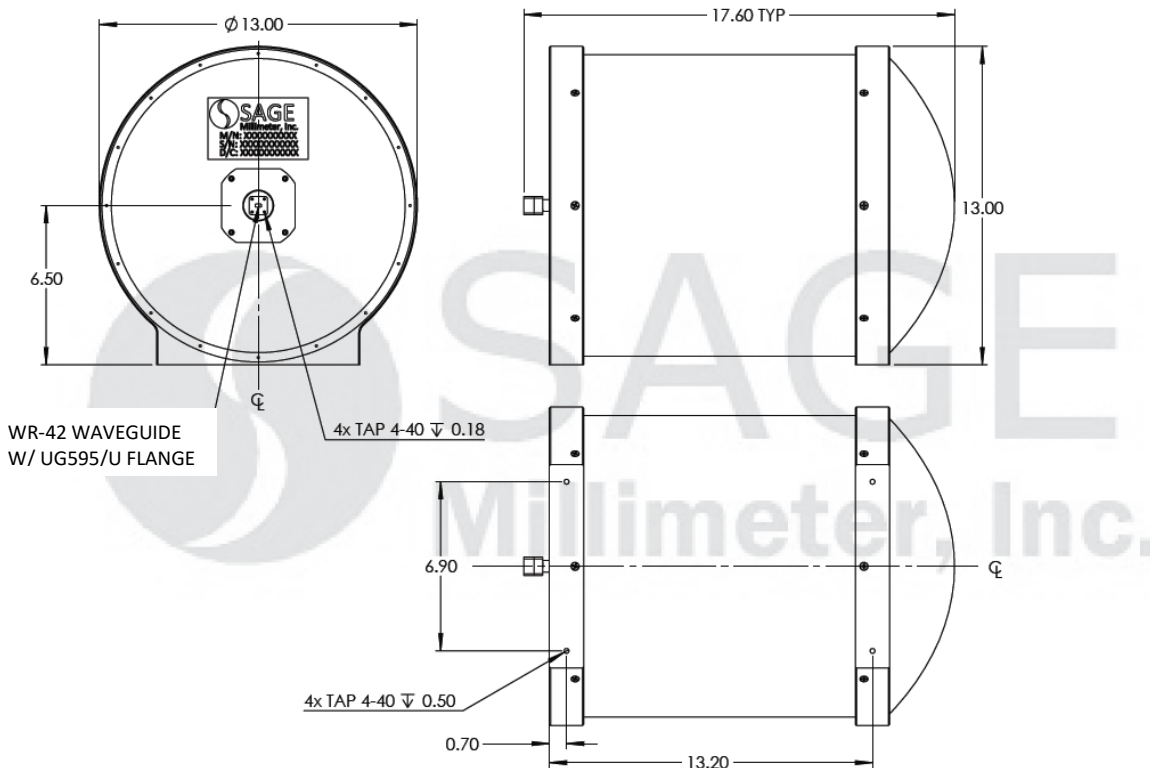
Item	Specification
Antenna Port	WR-42 Waveguide with UG-599/U Flange
Lens Diameter	12.0"
Dimensions	13.00" (Ø) x 17.53" (L)
Material	Aluminum
Finish	Black Anodized
Weight	19.5 lb
Outline	AG-RK34-42





## K Band Gaussian Optics Antenna, 20 to 24.5 GHz, 3.2 Degree

**Mechanical Outline:** (Unless otherwise specified, all dimensions are in inches)



**Note:**

- SAGE Millimeter, Inc. reserves the right to change the information presented without notice.
- The operation frequency of the antenna can be extended to a wider range with small performance degradation at the edges of the band.

**Caution:**

- Any foreign objects in the waveguide will cause performance degradation and possible device damage.

