



## W Band Cassegrain Antenna, 87 to 100 GHz, 50 dBi, 24” Dish

### Description:

**Model SAY-8731045005-10-S1** is a Cassegrain antenna that offers a nominal gain of 50 dBi and a half power beamwidth of 0.5 degrees typically across the frequency range of 87 to 100 GHz. The main reflector is fabricated with fiber glass to offer a light weight and rugged mechanical structure. The corrugated horn is used to provide the best feed efficiency and the most uniform illumination. The input port is a WR-10 waveguide with a UG-387/U-M flange. The antenna can support linear polarized waveform and is designed and manufactured for indoor applications. By removing the mode transition, SAGE Millimeter model SWT-10094-SB, the input port becomes a 0.094” diameter circular waveguide that can support both linear and circular polarized waveforms.



### Features:

- Rugged Configuration and Low Profile
- Low Loss and High Gain
- High Return Loss

### Applications:

- Communication Systems
- Radar Systems
- EW Systems

### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	87 GHz		100 GHz
Gain		50 dBi	
3 dB Beamwidth		0.5°	
Side Lobes		-15 dB	
Return Loss		14 dB	
Specification Temperature		+25 °C	
Operating Temperature	-40 °C		+85 °C

\*The antenna will cover a broader frequency range with some performance degradations

### Mechanical Specifications:

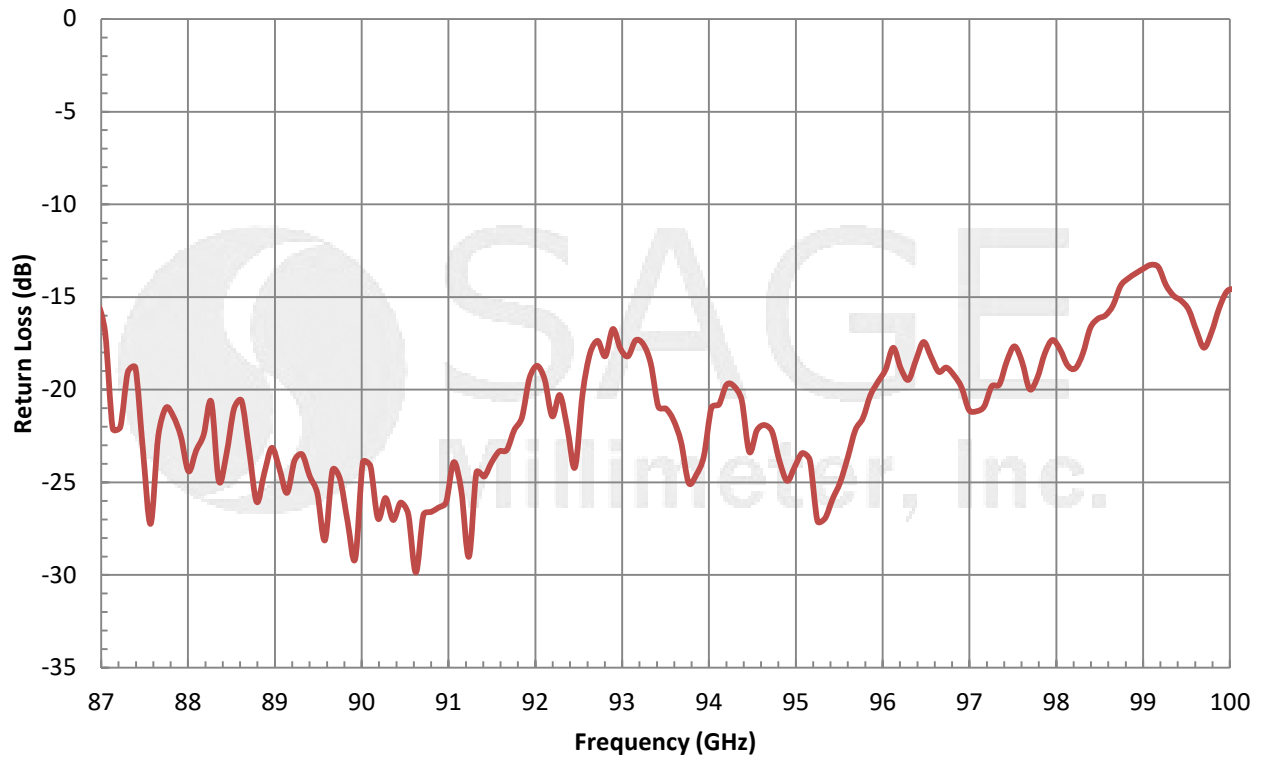
Item	Specification
RF Connector	WR-10 Waveguide with a UG-387/U-M Flange
RF Connector Material	Brass
RF Connector Finish	Gold Plated
Reflector Material	Fiber Glass
Reflector Finish	Polyamide Epoxy Paint
Weight	12 Lbs.
Reflector Diameter	24”
Outline	AY-CW50-24



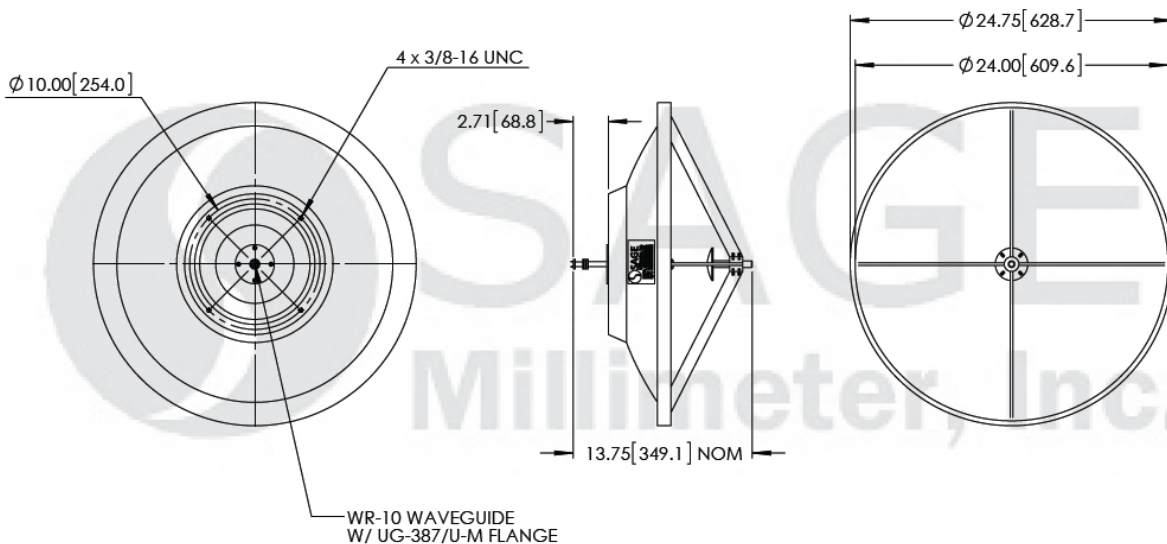


## W Band Cassegrain Antenna, 87 to 100 GHz, 50 dBi, 24" Dish

### Typical Return Loss vs. Frequency



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





## W Band Cassegrain Antenna, 87 to 100 GHz, 50 dBi, 24” Dish

### Note:

- The aiming scope is provided to assist the antenna’s directional alignment.
- The 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:

- Any mechanical impact will damage the antenna.
- Any foreign objects in the waveguide will degrade the performance of the antenna or damage the antenna.

