FEATURES

- Linear and circular polarization applicable
- Low side lobes
- High performance
- High gain

ALC Series

APPLICATIONS

- Radar systems
- Communication systems
- Sensor sub-assemblies

DESCRIPTION

ALC series lens corrected horn antennas are offered to cover the frequency range of 18 to 110 GHz. These antennas offer high gain, phase error corrected beam form and low side lobes. The dielectric lens provides not only the phase error correction, but also rugged waterproof structure. The interface of these lens corrected horn antennas are offered in standard circular and rectangular waveguide, respectively. These antennas are widely used in Radar, communication systems and sensor sub-assemblies.

TYPICAL SPECIFICATIONS

Parameters	Typical Range
Frequency Range (Typical)	18 to 110 GHz
Lens Diameter (Typical)	1 to 12 Inches
Gain (Typical)	20 to 40 dB
3 dB Beamwidth (Typical)	3 to 20 Degrees
Sidelobe Level (Typical)	-18 to -25 dB
VSWR (Typical)	1.3:1
Cross Polarization (Typical)*	-25 dB

* Only for Rectangular interface version.

HOW TO ORDER

Specify Model Number:

ALC - DDD CF BW GG -XX ← Factory Reserve

- DDD: Circular Waveguide Diameter in Mils
- CF: in GHz
- BW: in Degrees
- GG: Gain in dB

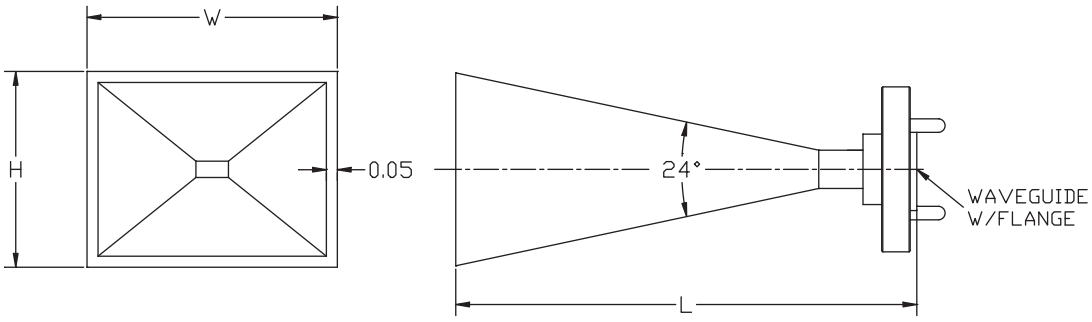
OR

ALC - WG CF BW GG -XX ← Factory Reserve

- WG: Rectangular waveguide size
- CF: in GHz
- BW: in Degrees
- GG: Gain in dB

Example: To order a lens corrected horn antenna with input circular waveguide 0.250" diameter and 22 dBi gain, specify ALC-25022-XX.

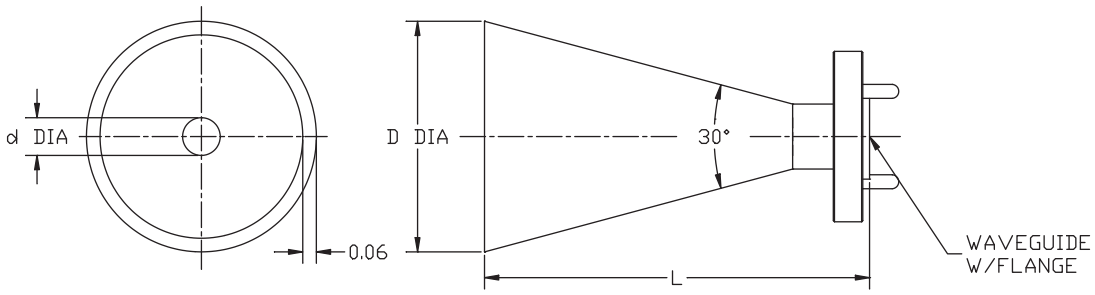
WT-B-1



Band	Frequency	Flange	W x H x L			
			Gain=15dB, BW=22°	Gain=20dB, BW=12°	Gain=23dB, BW=9°	Gain=25dB, BW=7°
K	24GHz	UG595/U	1.56 x 1.21 x 2.80	2.69 x 2.08 x 4.80	3.76 x 2.89 x 6.80	4.71 x 3.62 x 8.40
Ka	35GHz	UG599/U	1.10 x 0.86 x 2.10	1.88 x 1.46 x 3.40	2.61 x 2.02 x 4.80	3.26 x 2.51 x 6.00
Q	42GHz	UG383/U	0.93 x 0.74 x 1.70	1.58 x 1.23 x 2.80	2.19 x 1.70 x 3.90	2.73 x 2.11 x 4.90
U	50GHz	UG383/U-M	0.80 x 0.63 x 1.50	1.34 x 1.05 x 2.50	1.86 x 1.44 x 3.40	2.31 x 1.79 x 4.30
V	60GHz	UG385/U	0.68 x 0.54 x 1.40	1.14 x 0.89 x 2.20	1.56 x 1.22 x 3.00	1.94 x 1.51 x 3.60
E	77GHz	UG387/U	0.55 x 0.45 x 1.20	0.91 x 0.72 x 1.80	1.24 x 0.97 x 2.40	1.54 x 1.20 x 3.00
W	94GHz	UG387/U-M	0.47 x 0.38 x 1.00	0.76 x 0.60 x 1.50	1.03 x 0.81 x 2.10	1.28 x 1.00 x 2.50

Dimensions are in inches

WT-B-2



Band	Frequency	Flange	D x d x L			
			Gain=15dB, BW=24°	Gain=20dB, BW=13°	Gain=23dB, BW=9°	Gain=25dB, BW=7°
K	24GHz	UG595/U	1.31 x 0.368 x 2.30	2.36 x 0.368 x 4.40	3.39 x 0.368 x 6.30	4.34 x 0.368 x 8.00
Ka	35GHz	UG599/U	0.93 x 0.250 x 1.70	1.65 x 0.250 x 3.00	2.36 x 0.250 x 4.30	3.01 x 0.250 x 5.50
Q	42GHz	UG383/U	0.80 x 0.219 x 1.30	1.40 x 0.219 x 2.50	1.99 x 0.219 x 3.60	2.53 x 0.219 x 4.60
U	50GHz	UG383/U-M	0.69 x 0.188 x 1.20	1.19 x 0.188 x 2.10	1.69 x 0.188 x 3.10	2.14 x 0.188 x 3.90
V	60GHz	UG385/U	0.60 x 0.141 x 1.10	1.02 x 0.141 x 1.80	1.43 x 0.141 x 2.60	1.81 x 0.141 x 3.30
E	77GHz	UG387/U	0.49 x 0.125 x 0.90	0.82 x 0.125 x 1.50	1.14 x 0.125 x 2.10	1.43 x 0.125 x 2.70
W	94GHz	UG387/U-M	0.42 x 0.094 x 0.70	0.69 x 0.094 x 1.20	0.96 x 0.094 x 1.80	1.20 x 0.094 x 2.30

Dimensions are in inches

The flange pattern shown is for illustration purpose. Refer to Technical Reference Section for flange pattern details. The outline drawings shown are standard versions. Contact factory for your specific package requirements.