

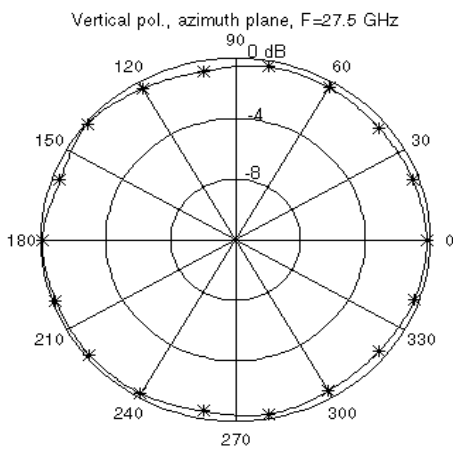






## OMNI – DIRECTIONAL ANTENNAS (24 to 43GHz)

	HORIZONTAL	VERTICAL
Frequency Range (GHz)	24.0-43.0	24.0-43.0
Bandwidth (%)	3	7
Beamwidth (Elevation)	8°	8°
Beamwidth (Azimuth)	360°	360°
Gain (dB)	9.5	10
Cross Polarization (dB)	20	24
VSWR	1.4	1.4
Power Handling (Watts)	100	500
Operating Temperature (°C)	-40 to +50	-40 to +50
Humidity (%)	0 to 100	0 to 100
Wind Velocity (meters/second)	50	50
Weight (kg)	0.5	4.5
Outline Drawing	Fig. A	Fig. B



Azimuth plane

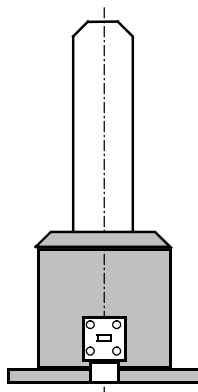
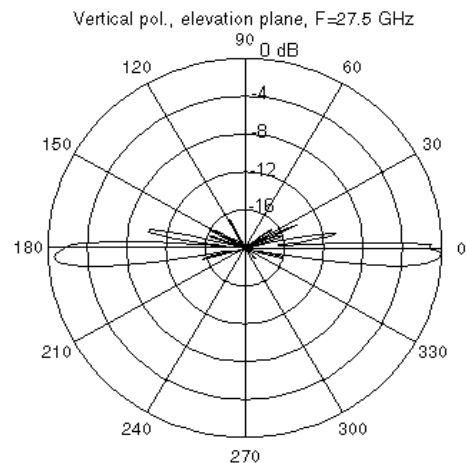


Fig. A



Elevation plane

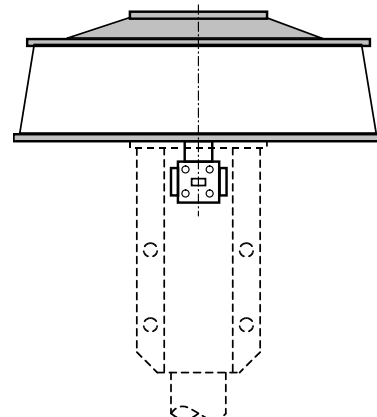
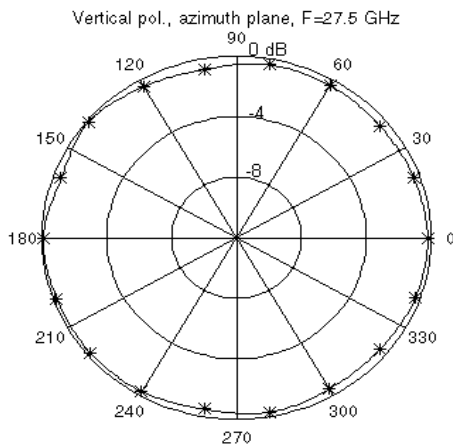


Fig. B

## OMNI – DIRECTIONAL ANTENNAS (27.5 to 42.5GHz)

MODEL	OMNI-28H	OMNI-28V	OMNI-28-VW	OMNI-41-V
Polarization	Horizontal	Vertical	Vertical	Vertical
Type	High Gain	High Gain	Wide Beam	Wide Beam
Frequency Range (GHz)	27.5-28.5	27.5-28.5	27.5-28.5	40.5-42.5
Beamwidth (Elevation.)	8.2°	8.2°	15.5°	9.0°
Beamwidth (Azimuth.)	360°	360°	360°	360°
Gain (dB)	9.5	9.5	7.0	8.5
Gain Ripple (dB)	1.5	1.5	1.5	2.0
Cross Polarization (dB)	-24	-24	-24	-20
Sidelobe Level (dB)	-15	-15	-15	-15
VSWR	1.40	1.40	1.40	1.5
Power Handling (Watts)	60	60	60	20
Operating Temperature (°C)	-35 to +50	-40 to +50	-35 to +50	-35 to +50
Humidity (%)	0 to 100	0 to 100	0 to 100	0 to 100
Wind Velocity (meters/second)	50	50	50	50
Outline Drawing	Fig. A	Fig. B	Fig. B	Fig. B



Azimuth plane

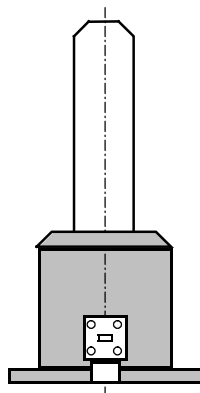
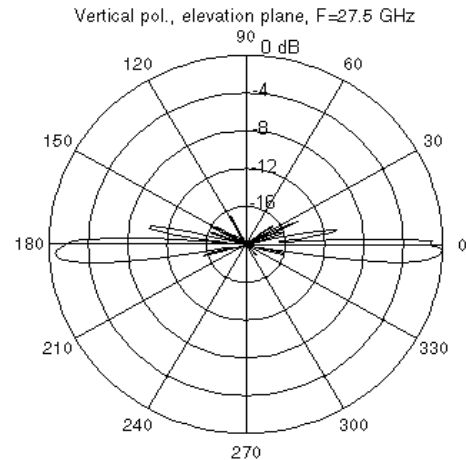


Fig. A



Elevation plane

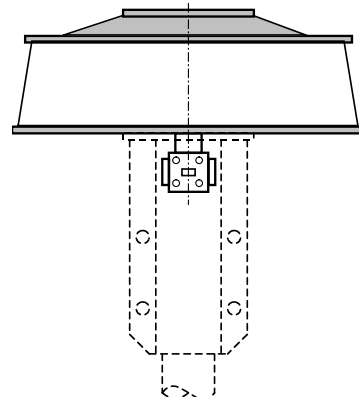


Fig. B

## CSC<sup>2</sup> SECTOR HORN ANTENNAS FOR LMDS

### HIGH GAIN NULL FREE SECTOR ANTENNAS FOR LMDS AND OTHER POINT TO MULTIPOINT APPLICATIONS

Dorado International has unveiled a new series of sector horn antennas for use in point to multipoint communication systems for millimeter wave frequencies between 18 and 44GHz. A unique cosecant squared (CSC<sup>2</sup>) elevation pattern design is utilized to provide an optimum signal distribution below the horizon and only a few percent of the energy is lost above the horizon. They are available for 90°, 60°, 45° and 30° azimuth sector patterns.

These antennas incorporate a new low loss lens that not only reduces the aperture size but also enables the antenna to provide an ideal distribution of energy with the highest gain directed at the horizon and a gradual reduction in gain as the signal is distributed below the antenna with no nulls. The overall size is shown below for our sector horn antennas with a choice of either Horizontal and Vertical polarization available. Special mounting arrangements can be accommodated.



FREQUENCY RANGE (GHZ)	24.25-27.0 GHz	25.0-27.5 GHz	27.5-29.5 GHz	31.0-31.3 GHz	37.0-40.0 GHz	40.0-43.5 GHz
Waveguide Type (Waveguide Option)	WR-42 (WR-34)	WR-34 (WR-28)	WR-28 (WR-34)	WR-28 (WR-34)	WR-28 (WR-22)	WR-22 (WR-19)
Azimuth Beamwidth	Model No.	Model No.	Model No.	Model No.	Model No.	Model No.
30°	SHC25-30*	SHC26-30*	SHC28-30*	SHC31-30*	SHC38-30*	SHC42-30*
45°	SHC25-45*	SHC26-45*	SHC28-45*	SHC31-45*	SHC38-45*	SHC42-45*
60°	SHC25-60*	SHC26-60*	SHC28-60*	SHC31-60*	SHC38-60*	SHC42-60*
90°	SHC25-90*	SHC26-90*	SHC28-90*	SHC31-90*	SHC38-90*	SHC42-90*

Polarization: \* Add "V" to Model No. For Vertical and "H" for Horizontal

Gain for 30° Beamwidth is 22 dBi (max 1.5 dB ripple over beamwidth)

Gain for 45° Beamwidth is 21 dBi (max 1.5 dB ripple over beamwidth)

Gain for 60° Beamwidth is 19.5 dBi (max 1.5 dB ripple over beamwidth)

Gain for 90° Beamwidth is 18 dBi (max 1.5 dB ripple over beamwidth)

Cross Polarization is -22 dB minimum at all angles (Relative gain)

Backlobe is -50 dB minimum at ±180 degrees (Relative gain)

Maximum Input Return Loss is 12.5 dB

Power Handling is 25 Watts

Operating Temperature Range -35°C to +60°C

Survival Temperature Range -40°C to +80°C

Environmental Specifications per ETSI 300 019-1-4, T4.1

Typical Outline Dimensions: ~12.5 x 8.0 x 2.0 inches (~ 31.7 x 20.3 x 5.1cm) (frequency dependent)

SPECIAL PERFORMANCE REQUIREMENTS CAN BE ACCOMODATED (ETSI, FCC etc).