



ANTENNA EXPERTS

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Model # SD9-400 Frequency 380 – 420 MHz. 9dBd. Omni, 12dBd. Offset Gain

OMNI-DIRECTIONAL HIGH GAIN TETRA BAND STACKED DIPOLE ARRAY

DESIGN FEATURES: The SD9-400 ultra high performance TETRA band stacked dipole array is designed for use with highly populated radio sites requiring long haul omni-directional coverage. The SD9-400 is heavy duty stacked dipole array features, wide bandwidth, high gain, high power handling capacity, low VSWR, low noise performance and null filling coverage with omni-directional characteristics. This stacked dipole array maintains constant gain and VSWR over its entire 40 MHz bandwidth, making it highly suitable as base station antennas for TETRA systems, repeater, paging and any other multi-channel communication systems.

CONSTRUCTIONS: The stacked dipole array uses 6063T6 ultra corrosion resistant architectural anodized aluminum, consists of Eight folded dipoles stacked vertically, fed in phase. The center fed dipole ends and cable connections to the dipoles are sealed in epoxy at the end of the boom for protection against weather and imparting rigidity and strength to the dipoles structure. All the fasteners are made of marine grade SS.

RADIATION PATTERN: When the EIGHT dipoles are arranged 90 degrees apart around the central mast, 9dBd. omni directional radiation pattern results. Aligning the EIGHT dipoles collinearly (facing in one direction) a 12dBd. offset radiation pattern is obtained. The radiation pattern can be changed in the field by use of common hand tools. The Vertical stacking distance is factory adjusted for highest possible efficiency.

PHASING HARNESS: Specially designed center fed phasing harness ensures equal and in phase signal distribution to all the eight dipoles. All power splitter joints are molded to avoid use of connector/adapters to minimize loss and molded N-Female antenna termination connector ensures complete waterproofing.

DIRECT GROUND: The SD9-400 TETRA band High gain stacked dipole array operates at D.C. ground for protection against lightning. The dipoles are mounted on a tubular boom made of high strength aluminum alloy, which offers a low resistance discharge path against any lightning strike during the stormy weather.

SHIPPING: The 6 Meters long central mast for mounting the dipoles is shipped in two sections of 3 Meters each for easy of shipping. The stacked dipole array is supplied with standard stainless steel pole mounting hardware. Side mounting hardware which includes the 1.35 Meters long two horizontal arms to hold the antenna on the side of the antenna tower can be supplied optionally.

ELECTRICAL SPECIFICATIONS:

Frequency Range	380 - 420 MHz.
Gain	9 dBd. Omni or 12 dBd. Offset
Bandwidth	40 MHz.
Polarization	Vertical
Input Impedance	50 Ohms.
Radiation Pattern (Horizontal Beam-width)	Omni Directional (360 Degrees)
Vertical Beam-width –Half Power Points	9 Degrees
VSWR	1.5 : 1
RF Power Handling Capacity	500 Watts
Input Termination	N-Female
Lightning Protection	Direct Ground

MECHANICAL SPECIFICATIONS:

Mounting Hardware	Stainless Steel
Wind Rating	200 Km/Hr.
Overall Length	6 Meters
Support Pipe Aluminum – Outer Diameter	51 mm
Dipoles Aluminum – Outer Diameter	12.7 mm
Shipping Length	3 Meters
Maximum Mount Pipe Diameter	52 mm (2 Inches)
Gross Weight	18 Kg

ENVIRONMENTAL SPECIFICATIONS:

Operating Temperature	(-)30 to +70 Degrees Celsius
Storage Temperature	(-)40 to +80 Degrees Celsius
Humidity	0 to 95% RH



Note: All information contained in the datasheet is subject to change without any prior notice.