

#### TECHNICAL DATA SHEET

Description: 890-960 MHz 11 dBi 7-Element Yagi, Black, All-Welded, N-female connector

**PART NUMBER: YA5900W** 

## Features:

- 890-960 MHz
- Gain 11.1 dBi
- N connector
- 7 Elements
- All-Welded Aluminum
- Black Powder Coat
- Includes "U"-Bolt Bracket for maximum 3 in. diameter pole
- Wind loading 164 km/h = 100 MPH

# **Applications:**

- Harsh Environmental Conditions
- Highly Directional
- Remote Monitoring / Scada
- Mining, Industrial
- Oil / Gas
- · Utility and SmartGrid
- · Wastewater, Irrigation
- Municipal / Transportation



All dimensions are in mm / inches

Issue: 1835

In the effort to improve our products, we reserve the right to make changes judged to be necessary. CONFIDENTIAL AND PROPRIETARY INFORMATION

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Pulse Worldwide Headquarters 15255 Innovation Drive #100 San Diego, CA 92128 USA Tel:1-858-674-8100 Pulse/Larsen Antennas 18110 SE 34th St Bldg 2 Suite 250 Vancouver, WA 98683 USA Tel: 1-360-944-7551

Europe Headquarters Pulse GmbH & Do, KG Zeppelinstrasse 15 Herrenberg, Germany Tel: 49 7032 7806 0 Pulse (Suzhou) Wireless Products Co, Inc. 99 Huo Ju Road(#29 Bldg,4<sup>th</sup> Phase Suzhou New District Jiangsu Province, Suzhou 215009 PR China Tel: 86 512 6807 9998



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Series: Yagi

### **ELECTRICAL SPECIFICATIONS**

Antenna Type Yagi-Uda Frequency 890-960 MHz Nominal Impedance 50  $\Omega$  VSWR 2:1 Max Gain 11.1 dBi Horizontal / Vertical -3 dB Bandwidth 54  $^{\circ}$  / 44  $^{\circ}$ 

Horizontal / Vertical Side Lobe Level -13 dB / -17 dB

Front to Back Ratio -14 dB min

Polarization Linear
Power Withstanding 300 W

### MECHANICAL SPECIFICATIONS

Overall Length 762 mm Weight 704 g

Antenna Color Powder Coat Black

Antenna Material Aluminum

Connector type N Female

Fixing System Pole Clamp

Azimuth Adjustment 360 °





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### **ENVIRONMENTAL SPECIFICATIONS**

Operating Temperature -40 to +85 ° C Storage Temperature -40 to +85 ° C

Cyclic -40 to +55 ° C (5 ° C/min)

Wind-loading 164 km/h / 100 mi/h

Humidity 93% @ +30 ° C

Cyclic 95% @ +30 ° C

Rain 15 mm/min (30 min)
Salt Mist 7 Days

Industrial Atmosphere 4 Days

Sinusoidal Vibration Displacement 3 mm - 2/9 Hz

Sinusoidal Vibration Acceleration 10 m/s^2 - 9/200 Hz

Random Vibration Level (ASD) 1 m<sup>2</sup>/s<sup>2</sup> - 10/200 Hz

0.3 m<sup>2</sup>/s<sup>3</sup> - 200/2000 Hz

Shocks 100 m/s^2

Drop Test 1.0 m

RoHS Compliant Yes



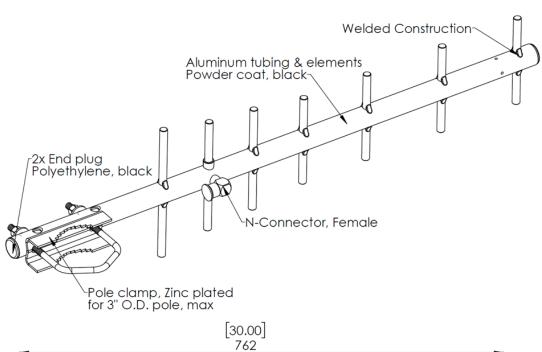


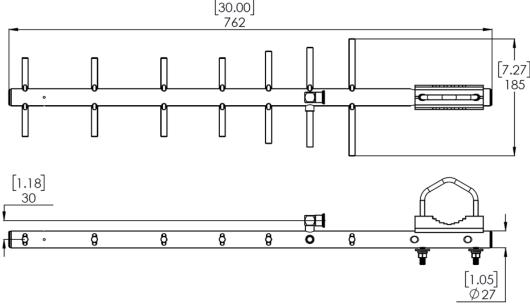
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# **MECHANICAL DRAWING**





Unit: mm [in]





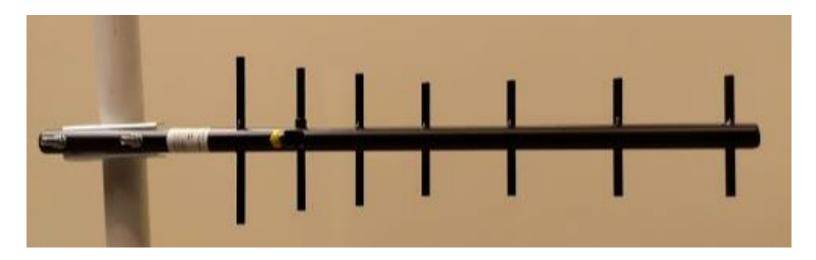


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## **TEST SETUP**



Antenna mounted vertically on post with insulator on driven element facing up

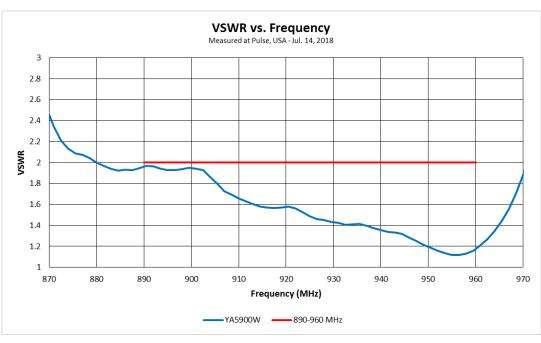


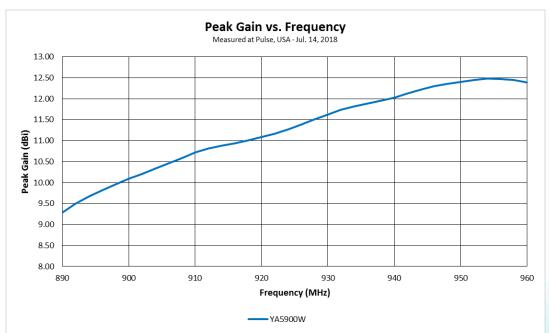
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# **CHARTS**









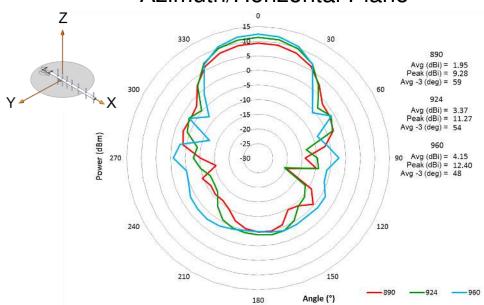
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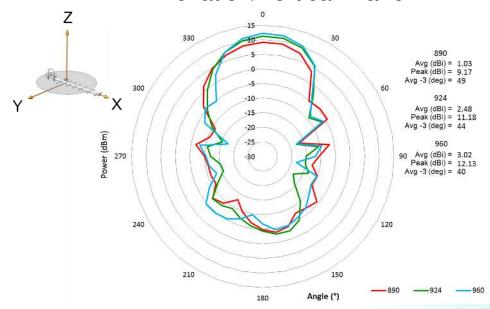
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### **CHARTS**

# Azimuth/Horizontal Plane



# Elevation/Vertical Plane





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# **PACKAGING**

1 cardboard box containing:

- 1 antenna
- 1 cardboard partition
- 1 plastic bag containing:
  - 1 bracket kit
  - 1 instructions for antenna installation
  - 1 warning regarding electrocution hazards
- 1 bag of air

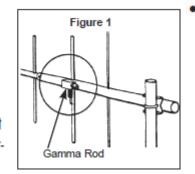
1 label on cardboard box with part number, date code, characteristics

# **ASSEMBLY**

### INSTALLATION INSTRUCTIONS

### PRE-INSTALLATION

- Larsen Yagis are designed to mount vertically.
- YA3 Series (UHF): Gamma rod must be facing down for weather considerations (see Figure 1).



YA5 and YA6 Series: The insulated side of the driven element should be facing up (see Figure 2).

