

Black Optimized Yagi Antennas, No Tune



PCTEL's BMOY yagis have been optimized using a genetic algorithm to achieve superior performance over the entire 800/900 MHz and UHF frequency bands. These antennas feature solid 3/8" elements attached to a seamless aluminum boom with 360° welds, and are finished with a black polyester powder coating. Each antenna has a type N termination located at the end of the boom, with a fully sealed driven element for complete protection against humidity, acid rain, or salt spray. A solid aluminum mounting bracket allows for either vertical or horizontal polarization. The BMOY's sturdy construction and advanced engineering design provides outstanding durability and superior performance in all weather conditions.

Features

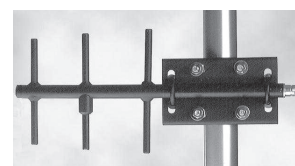
- Broadband performance covering all 800/900 MHz frequencies and no tuning required. Provides optimal performance, minimizes inventory requirements, and reduces installation time.
- 360° welds at element and boom interface provide complete protection of the antenna's internal mechanism against moisture.
- Solid aluminum mounting clamps with stainless steel hardware. Ensures a robust installation and allows the antenna to be mounted for horizontal or vertical polarization.
- End-fed type N connector. Makes connector accessible for easier installations and protects the electrical connection from moisture and other extreme weather influences.
- Fully enclosed low loss feed system. No exposed gamma match to corrode or deteriorate.
- Black polyester powder-coated finish. Provides an added layer of protection, maximizing performance and durability under the toughest weather conditions.
- DC grounded



BMOY4065



BMOY8905



BMOY8903



BWC1001 mount

STANDARD CONFIGURATION

Model	Cable	Connector	Elements	Mount
BMOY4065	Mating cable assembly sold separately (all models)	N Female	5	BWC1001 Clamp bracket for 1/2"-7/8" diameter yagis. Mounts to masts 1.25"-2.4" OD (included with all models)
BMOY4405		N Female	5	
BMOY4705		N Female	5	
BMOY8905		N Female	5	
BMOY8903		N Female	3	

ELECTRICAL SPECIFICATIONS - RF ANTENNA

Model	Frequency Range	Gain	Bandwidth @ 1.5:1 VSWR	Azimuth Half Power Beamwidth	Elevation Half Power Beamwidth	Front to Back Ratio	Maximum Power	Nominal Impedance
BMOY4065	406-440 MHz	11.15dBi	34 MHz	52°	45°	> 15 dB	150 watts	50 ohms
BMOY4405	440-480 MHz	11.15dBi	40 MHz	52°	45°	> 15 dB	150 watts	50 ohms
BMOY4705	470-512 MHz	11.15dBi	42 MHz	52°	45°	> 15 dB	150 watts	50 ohms
BMOY8905	890-960 MHz	11.15dBi	70 MHz	52°	45°	> 15 dB	150 watts	50 ohms
BMOY8903	890-960 MHz	8.55dBi	70 MHz	100°	54°	> 20 dB	150 watts	50 ohms

PCTEL, Inc.
471 Brighton Dr. Bloomington, Illinois 60108, USA

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MECHANICAL SPECIFICATIONS

Model	Dimensions	Weight	Radiator Material
BMOY4065	Boom Length: 34", Boom Diameter: .75"	2 lbs (0.91 kg)	3/8" solid 6061-T6 aluminum
BMOY4405	Boom Length: 34", Boom Diameter: .75"	2 lbs (0.91 kg)	3/8" solid 6061-T6 aluminum
BMOY4705	Boom Length: 34", Boom Diameter: .75"	2 lbs (0.91 kg)	3/8" solid 6061-T6 aluminum
BMOY8905	Boom Length: 20.5", Boom Diameter: .75"	0.9 lbs (0.41 kg)	3/8" solid 6061-T6 aluminum
BMOY8903	Boom Length: 14", Boom Diameter: .75"	0.7 lbs (0.32 kg)	3/8" solid 6061-T6 aluminum

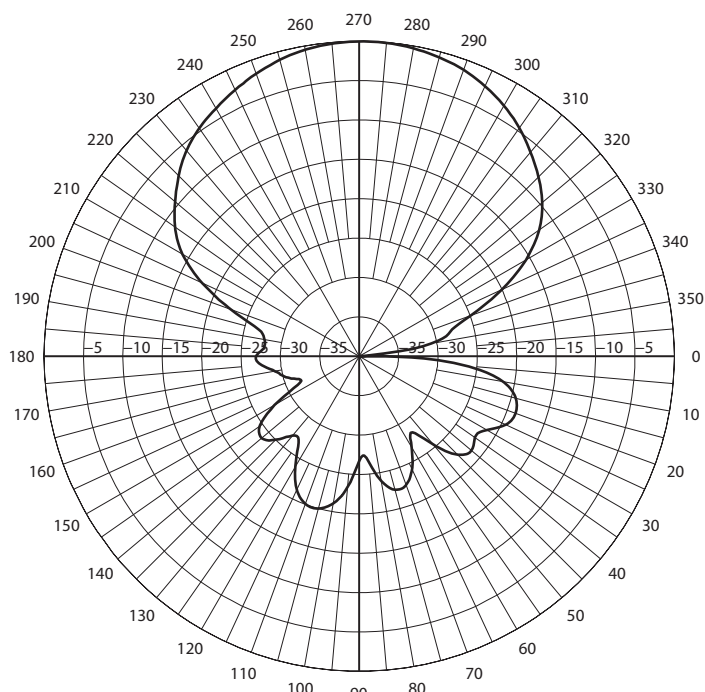
MECHANICAL SPECIFICATIONS

Model	Bending Moment @ 125 mph Wind	Lateral Thrust @ 125 mph Wind	Equivalent Flat Plate Area	Boom Length	Boom Diameter
BMOY4065	32.4 ft-lbs	24.2 lbs	.31 sq ft	34"	.75"
BMOY4405	32.4 ft-lbs	24.2 lbs	.31 sq ft	34"	.75"
BMOY4705	32.4 ft-lbs	24.2 lbs	.31 sq ft	34"	.75"
BMOY8905	9.5 ft-lbs	12.6 lbs	.16 sq ft	20.5"	.75"
BMOY8903	3.9 ft-lbs	7.9 lbs	.10 sq ft	14"	.75"

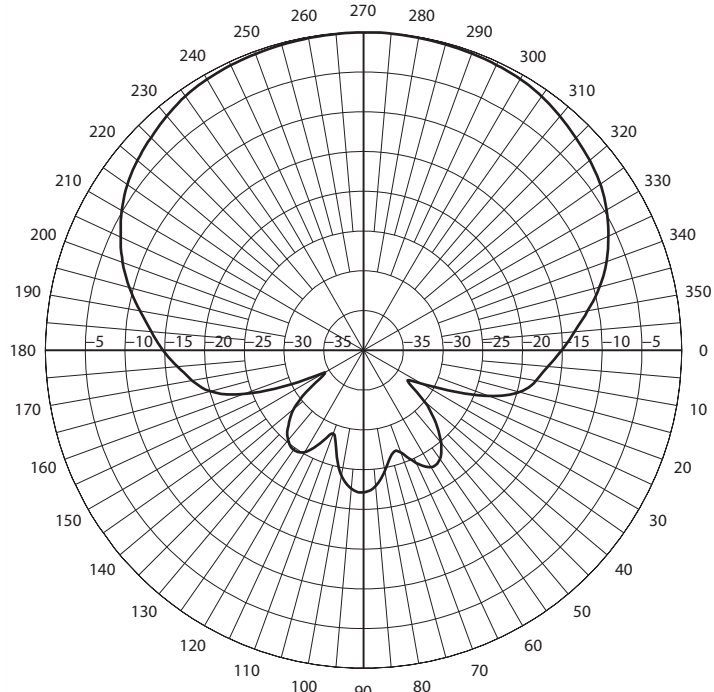
ENVIRONMENTAL SPECIFICATIONS

Model	Wind Load Rating	ESD Protection
BMOY4065	wind survival: 200 mph with no ice. It will survive up to 110 mph with 0.5" radial ice build-up.	DC grounded
BMOY4405	wind survival: 200 mph with no ice. It will survive up to 110 mph with 0.5" radial ice build-up.	DC grounded
BMOY4705	wind survival: 200 mph with no ice. It will survive up to 110 mph with 0.5" radial ice build-up.	DC grounded
BMOY8905	wind survival: 200 mph with no ice. It will survive up to 110 mph with 0.5" radial ice build-up.	DC grounded
BMOY8903	wind survival: 200 mph with no ice. It will survive up to 110 mph with 0.5" radial ice build-up.	DC grounded

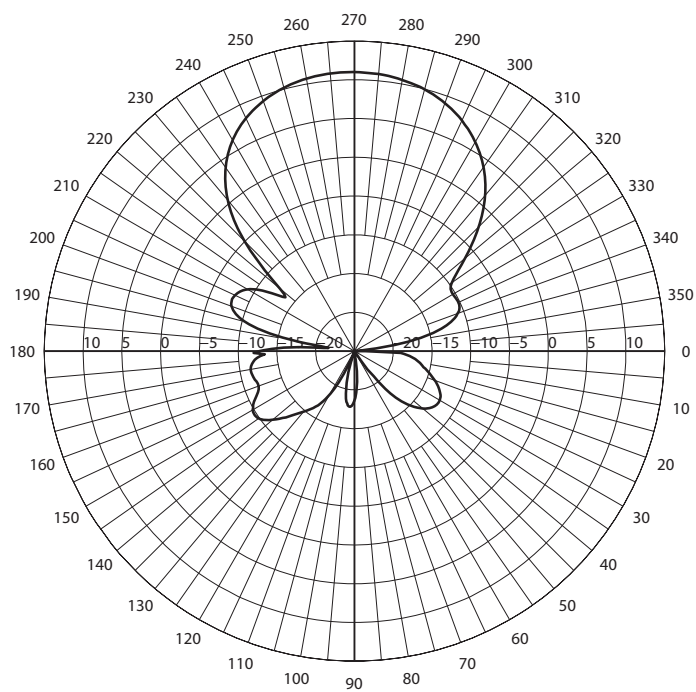
Radiation Pattern



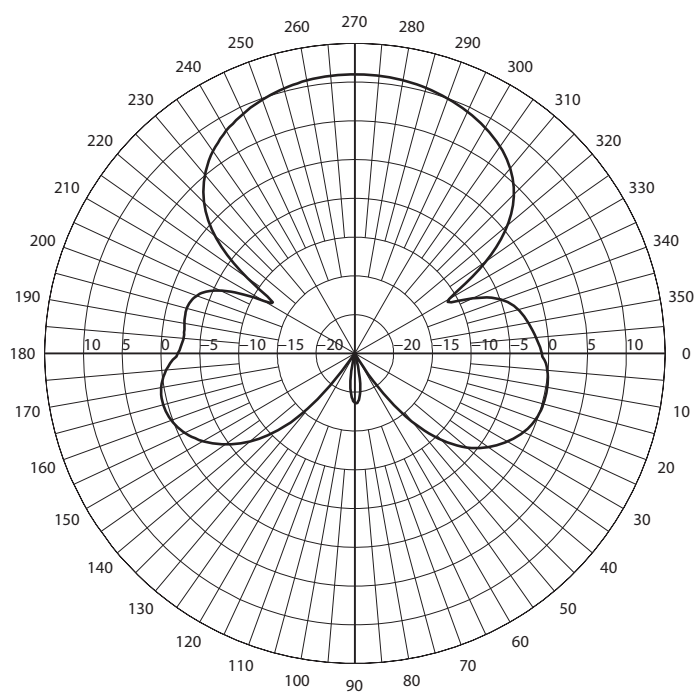
BMOY8903 Elevation Cut



BMOY8903 Azimuth Cut



BMOY8905 Elevation Cut



BMOY8905 Azimuth Cut

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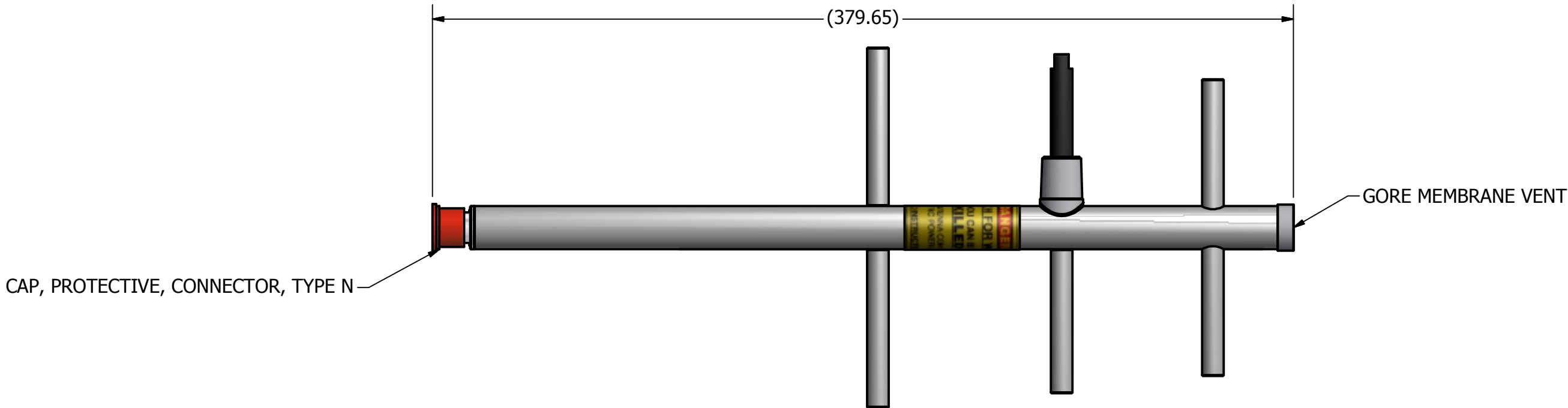
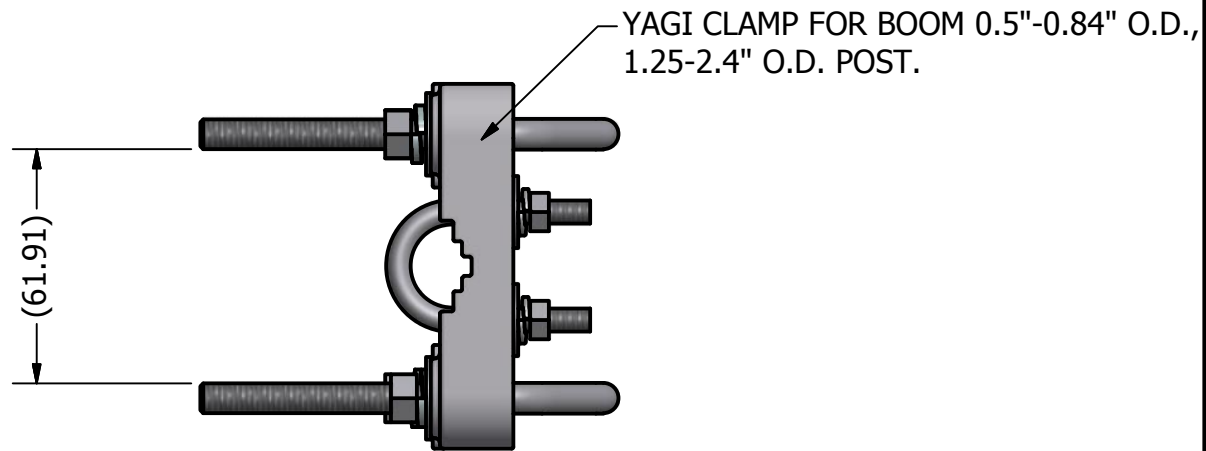
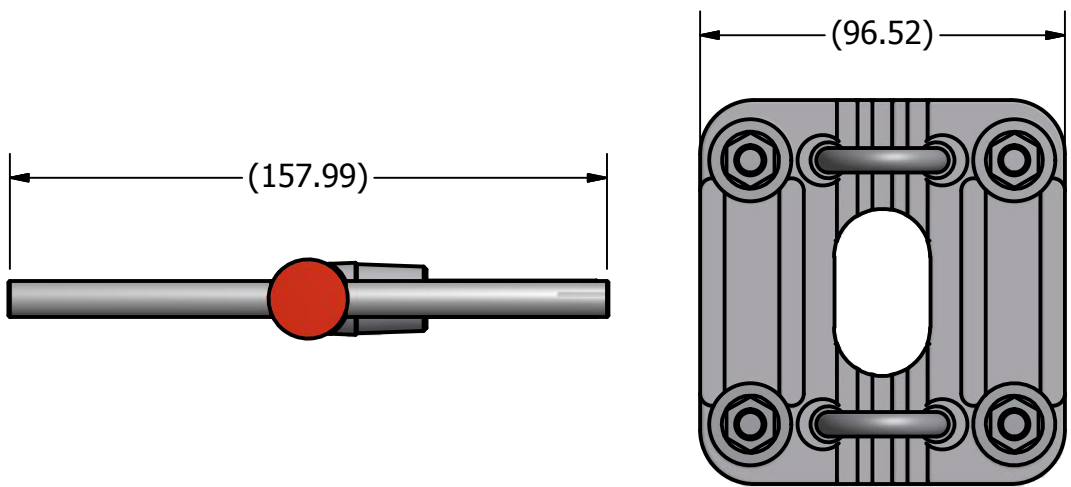
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REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED
1	OPT, YAGI, 890-960 MHZ, 3ELE, 64 DB, 6.4 DBD	2/12/2016	CE

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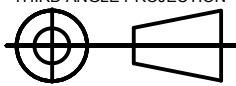


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[] Accept drawing/specification: No changes needed: [] This part is RoHS compliant [] This part is REACH compliant [] Accept drawing/specification. Notes/Mark-ups added [] Cannot accept drawing/spec. Notes/Mark-ups added Supplier Projected Outgoing Quality:	FOR TOLERANCES NOT SPECIFIED USE: [X mm ± 3 mm] [X.X mm ± .3 mm] [X.XX mm ± .13 mm] ANGULAR± 1°	CHECKED IP	DATE 8/25/2016	
	THIRD ANGLE PROJECTION 	MATERIAL: SEE COMPONENT PRINTS	DESCRIPTION OPT, YAGI, 890-960 MHz, 5 ELEMENT, 8.55dBi	
		FINISH: SEE COMPONENT PRINTS		
SIGMA LEVEL : _____ or PPM: _____	PCTEL PROPRIETARY DATA THE INFORMATION AND/OR DRAWINGS CONTAINED IN THIS DOCUMENT IS CONFIDENTIAL AND PROPRIETARY TO PCTEL, INC. AND MAY NOT BE USED, REPRODUCED, IN WHOLE OR IN PART, OR MODIFIED IN ANY WAY WITHOUT THE EXPRESS WRITTEN PERMISSION OF AN AUTHORIZED REPRESENTATIVE OF PCTEL, INC.			DRAWING NO. BMOY8903
Signature _____ Date: _____	SIZE B		SCALE 1:2	SHEET 1 OF 1

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