

Model Number: PLS-P830970  
Product Line: Peerless Gold

Revision: Rev 1\_0  
Date: 8-Sep-09

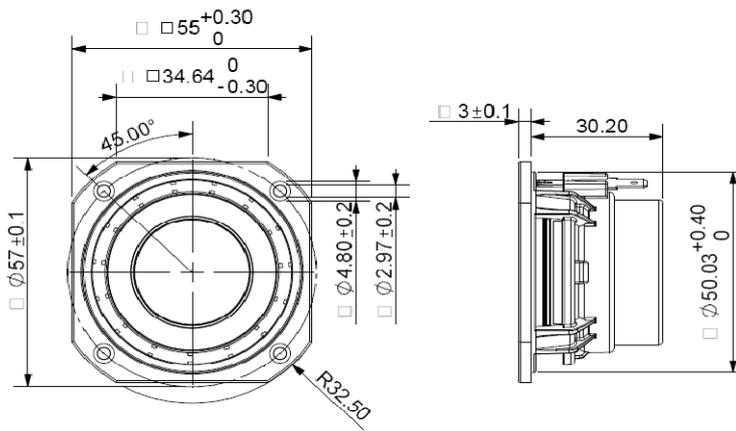


**Product Description:**

This 2 inch 4 ohm member of the PLS family sets a high standard, for compact full range drivers intended for applications such as television soundbars and compact music systems. Design features in this family include a damped plastic basket with venting under the spider to aid cooling of the motor, a neodymium magnet motor with copper cap to lower coil inductance, providing low distortion at low frequencies and extended high frequency response. A black anodized aluminium cone is employed on the driver, along with a black anodized aluminium dust cap coupled directly to the voice coil. Additionally, the cones come equipped with special-designed large roll rubber surrounds, which allow for a dynamic linear response to high excursion input signals.



**Mechanical 2D Drawing:**

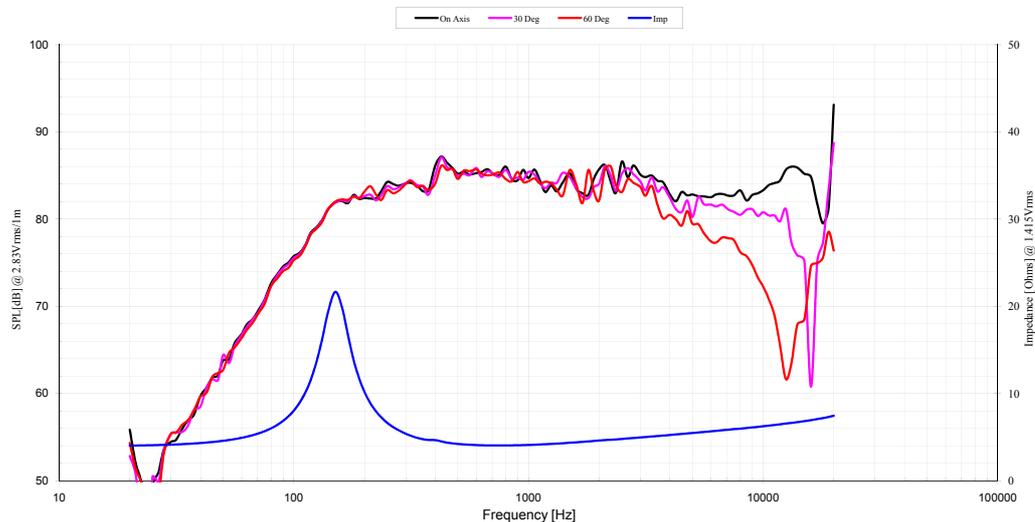


**Specifications:**

DC Resistance	$R_{evc}$	$\Omega$	3.6	5.0%	Energy Bandwidth Product	EBP	$(1/Q_{es}) \cdot f_s$	247
Minimum Impedance	$Z_{min}$	$\Omega$	4.0	7.5%	Moving Mass	$M_{ms}$	g	1.39
Voice Coil Inductance	$L_e$	mH	0.03		Suspension Compliance	$C_{ms}$	um/N	661.1
Resonant Frequency	$f_s$	Hz	166	15.0%	Effective Cone Diameter	D	cm	4.2
Mechanical Q Factor	$Q_{ms}$	-	3.9		Effective Piston Area	$S_D$	cm <sup>2</sup>	13.9
Electrical Q Factor	$Q_{es}$	-	0.67		Equivalent Volume	$V_{as}$	L	0.18
Total Q Factor	$Q_{ts}$	-	0.57		Motor Force Factor	BL	T·m	2.79
Ratio $f_s / Q_{ts}$	F	$f_s / Q_{ts}$	290		Motor Efficiency Factor	$\beta$	$(T \cdot m^2) / \Omega$	2.16
Half Space Sensitivity @ 2.83V	dB@2.83V/1m	dB	85.3	$\pm 1.0^1$	Voice Coil Former Material	VC <sub>m</sub>	-	Aluminum
Sensitivity @ 1W/1m	1W/1m	dB	82.7	$\pm 1.0^1$	Voice Coil Inner Diameter	VC <sub>d</sub>	mm	25.7
					Gap Height	Gh	mm	3.0
Rated Noise Power (IEC 2685 18.1)	P	W	7		Maximum Linear Excursion	$X_{max}$	mm	1.65
Test Spectrum Bandwidth	150Hz - 20kHz		12 dB/Oct		Ferrofluid Type	FF		N/A
					Transducer Size	-	inch	2
					Transducer Mass	-	kg	0.14

1 - Piston Band Sensitivity Tolerance

**Frequency and Impedance Response:**



F088-0713A