

NSD1095N

Neo High Frequency Driver

Key Features

- 110 dB SPL 1W / 1m average sensitivity
- 1 inch exit throat
- 1,75 inch voice coil diameter
- 100W program power handling
- True Piston Motion TiN coated titanium diaphragm
- Neodymium ring magnetic structure
- Proprietary phase plug design
- Excellent thermal exchange



General Description

The NSD1095N 1 inch exit neodymium compression driver has been designed for situations where the highest quality is required.

Equipped with proprietary phase plug architecture, the NSD1095N has been designed to give a smooth coherent wavefront at the horn entrance across the whole working frequency range. The phase plug short openings and high flare rate value assure low distortion and overall, this kind of phase plug demonstrates remarkable improvements in mid-high frequency reproduction.

A further innovation in the NSD1095N is the titanium diaphragm nitrogen treatment, a proprietary technology defined as True Piston Motion - TPM technology developed after extensive research by Eighteen Sound. The coating is realized in a PVD - Physical Vapor Deposition - vacuum chamber. With its very high value of elasticity modulus (six times higher than titanium and two times higher than beryllium), the nitride thin film is capable of doubling the diaphragm overall stiffness with obvious benefits in terms of impulse response and intermodulation distortion reduction. The frequency response is then extended by 25%, showing a predictable, ideal pistonic behavior, avoiding top-end spurious resonances.

An edge-wound copper-clad aluminum voice coil, wound on proprietary treated Nomex, completes the diaphragm assembly. Nomex shows a 30% higher value of tensile elongation at a working operative temperature (200°C) when compared to Kapton. Moreover, this proprietary former material is also suitable for use in high moisture content environments.

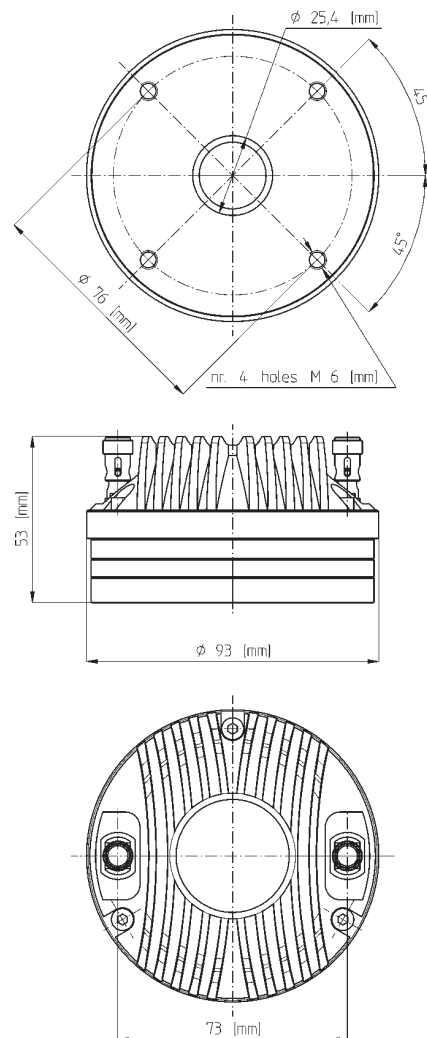
The powerful neodymium magnet assembly has been designed to obtain 20KGauss in the gap giving major benefits in transient response.

A copper ring on the pole piece reduces inductance above 10 kHz, improving phase and impedance linearization.

The custom designed O-ring creates a tight seal between the plate and the cover assuring air chamber loading. Excellent heat dissipation and thermal exchange are guaranteed by the direct contact between the magnetic structure and the aluminum cover which leads to a lower power compression value.

A special treatment has been applied to the magnet and the top and back plates of the magnetic structure making the driver more resistant to the corrosive effects of salts and oxidization.

0421T8N410 8Ohm
0421T6N410 16Ohm



NEODYMIUM HF DRIVERS

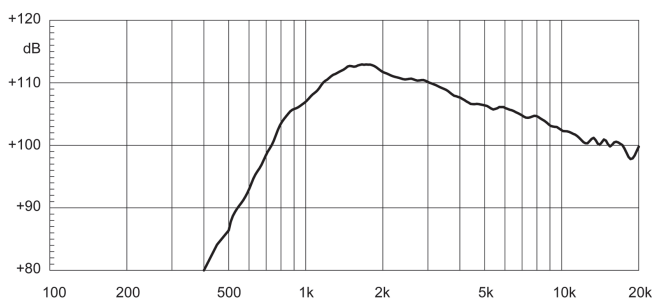
GENERAL SPECIFICATIONS

THROAT DIAMETER	25,4 mm (1 in)
RATED IMPEDANCE	8 ohm
DC RESISTANCE	5,3 Ohm
MINIMUM IMPEDANCE	7 Ohm at 4000Hz
LE (AT 1KHZ)	67 µH
AES POWER (1)	50 W above 1,6 kHz
PROGRAM POWER (2)	100 W above 1,6 kHz
SENSITIVITY (1W@1M) (3)	110 dB
FREQUENCY RANGE	1600Hz ÷ 20kHz
RECOMM. XOVER FREQUENCY	1600Hz (12dB/oct slope)
DIAPHRAGM MATERIAL	TiN coated Titanium
VOICE COIL DIAMETER	44,4 mm (1 3/4 in)
VOICE COIL WINDING MATERIAL	Edge-wound aluminum
MAGNET MATERIAL	Neodymium
FLUX DENSITY	2 T
BL FACTOR	9,1 N/A
POLARITY	Positive voltage on "+" terminal gives positive pressure in the throat

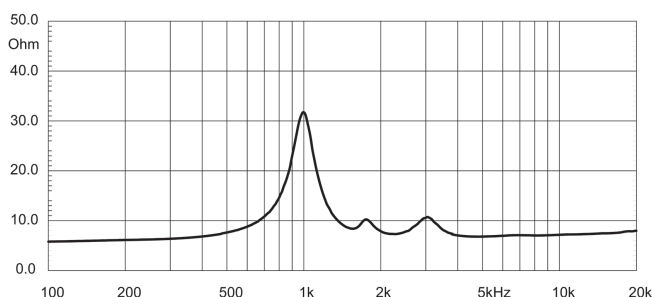
MOUNTING INFORMATION

Overall diameter	93 mm (3,7 in)
Mounting holes diameter	4 M6 holes 90° at Ø 76 mm (3 in)
Bolt circle diameter	76 mm (3 in)
Total depth	53 mm (2,1 in)
Net weight	1,2 Kg (2,6 lb)
Shipping weight	1,3 Kg (2,9 lb)
CardBoard Packaging dimensions	97x97x58 mm (3,8x3,8x2,3 in)

NSD1095N MEASURED WITH 1W INPUT ON RATED IMPEDANCE AT 1M DISTANCE ON XT1086 HORN MOUTH AXIS



FREE AIR IMPEDANCE MAGNITUDE CURVE



NOTES

- (1) AES power rating is tested with a pink noise input having a 6 dB crest factor for two hours duration within the specified range. Power calculated on minimum impedance.
- (2) Program power rating is defined as 3 dB greater than AES rating, and is a conservative expression of the transducer ability to handle music program material.
- (3) Sensitivity is measured at 1W input on rated impedance at 1m on axis from the mouth of XT1086 horn averaged between 1 kHz and 4 kHz.