NSD1480N

Neodymium High Frequency Driver

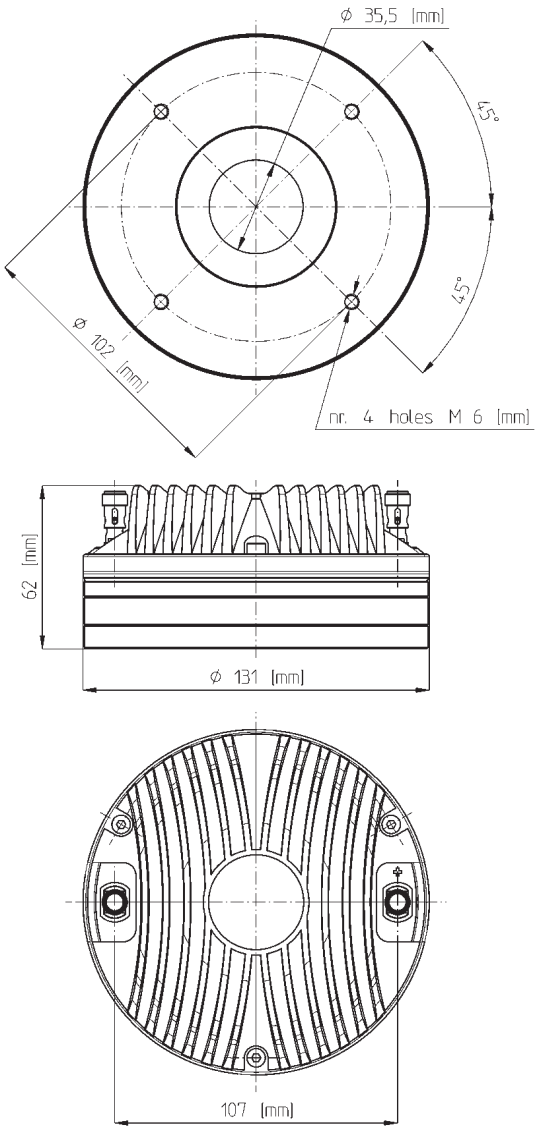
Key Features

111 dB 1W / 1m average sensitivity
1,4 inch exit throat
3 inch voice coil diameter
160 W continuous program power handling
Titanium Nitride Coating Dome
True Piston Motion (TPM) Technology
Powerfully Neodymium magnetic structure
Excellent thermal exchange

General Description

The NSD1480N has been designed for top quality sound systems application. With a 1.4-inch throat diameter, it has been developed to match the XT1464 Constant Directivity Horn.
A further innovation in the NSD1480N, when compared to excellent performances of the ND1480, is a new titanium material treatment that was found after extensive research by Eighteen Sound.
The special titanium nitride coated dome dramatically improves stiffness with obvious benefits in transient and intermodulation distortion response. With its very high value of elasticity modulus, (six times higher than titanium and two times higher than beryllium), this nitride thin film is capable of doubling the titanium stiffness.
The piston frequency range motion extends frequency by 25%, showing a predictable, ideal frequency response decay and avoiding top-end spurious resonances. The nitride-free ellipsoidal suspension shape has been designed to maintain constant titanium stiffness, assuring a 3rd harmonic distortion lower than 0.05% over the whole working frequency range.
The titanium diaphragm is produced in-house and has been developed to assure unmatched transient response. The diaphragm assembly is made joining the former directly to the titanium dome on its upper bend edge. In comparison with a usual straight former joint, the driver design assures extended frequency energy transfer for improved response linearity and unparallel reliability. This feature allows proper motion control of the dome in real working conditions. A proprietary treated Nomex former is used as 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 higher moisture content environments.
The NSD1480N's powerful neodymium magnet assembly has been designed to obtain 22KGauss in the gap for major benefits in transient response. The motor structure, throughout the precisely coherent phase plug with 3 circumferential slots and copper ring on the pole piece, reduces inductance effect and distortion. Four top plate air ducts have been designed to act as a loading chamber for the diaphragm, implementing mid band distortion and response figures.
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 gives a lower power compression value. Finally, a special treatment is 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.

0422T6N600 16 Ohm
0422T8N600 8 Ohm



NEODYMIUM HF DRIVERS

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Neodymium High Frequency Driver

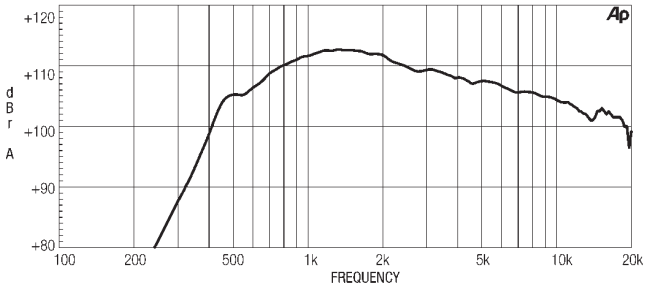
GENERAL SPECIFICATIONS

THROAT DIAMETER	35,5 mm (1,4 in)
RATED IMPEDANCE	8 ohm
DC RESISTANCE	6,2 ohm
MINIMUM IMPEDANCE	8 ohm at 3500 Hz
LE (AT 1KHZ)	124 µH
POWER HANDLING	(800 ÷ 20000 Hz)
CONTINUOUS PINK NOISE (1)	80 W above 1,2 kHz
CONTINUOUS PROGRAM (2)	160 W above 1,2 kHz
SENSITIVITY(1W@1M) (3)	111 dB
FREQUENCY RANGE	500 Hz ÷ 20 kHz
RECOMM. XOVER FREQUENCY	above 800 Hz (12 dB/octave)
DIAPHRAGM MATERIAL	Treated Titanium
VOICE COIL DIAMETER	74,4 mm (2,93 in)
VOICE COIL WINDING MATERIAL	Edge-wound aluminum
MAGNET MATERIAL	Neodymium
FLUX DENSITY	2,2 T
BL FACTOR	15,5 N/A
POLARITY	Positive voltage on red terminal gives positive pressure in the throat

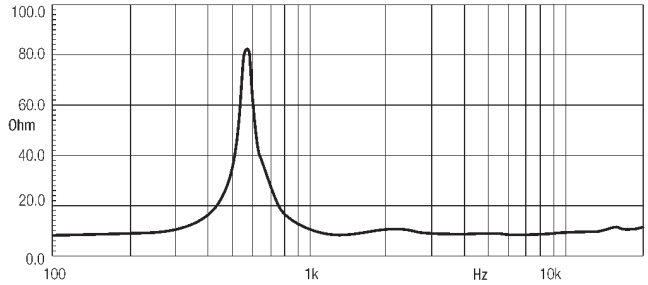
MOUNTING INFORMATIONS

Overall diameter	131 mm (5,1 in)
Mounting holes diameter	4 M6 holes 90° at Ø102 mm (4 in)
Bolt circle diameter	102mm (4 in)
Total depth	62 mm (2,5 in)
Net weight	3,1 Kg (6,98 lb)
Shipping weight	3,3 Kg (7,25 lb)
CardBoard Packaging dimensions	132x132x68 mm (5,2x5,2x2,7 in)

NSD1480N MEASURED WITH 1W INPUT ON RATED IMPEDANCE AT 1 M DISTANCE ON AXISFROM THE MOUTH OF XT1464 HORN



FREE AIR IMPEDANCE MAGNITUDE CURVE



NOTES

(1) Continuous pink noise power rating is tested with a pink noise input having a 6 dB crestfactor for two hours duration, per AES standard

(2) Continuous program power is defined as 3 dB greater than continuous pink noise and is aconservative expression of the transducer ability to handle music program material

(3) Sensitivity is measured on 1 W input on rated impedance at 1 m on axis from the mouth ofXT 1464 averaged between 1 kHz and 4 kHz.