

LM10n

Wide Band Planar Ribbon Driver

Speakers based on drivers with thin-film diaphragms deliver exceptional sound quality in mid- and high-frequency ranges. Radian Planar Ribbon drivers embody the latest advancements and production know-how based on nearly four decades of experience in the development of this technology for a wide range of applications.

At the heart of Radian's planar ribbon series lays a symmetric push-pull, FEA-optimized magnetic structure based on very high MGO energy neodymium magnets with very even magnetic flux distribution. A lot of care has been applied to the metal parts design to minimize stray flux, maximize efficiency, and reduce and even eliminate distortion related to the magnetic structure. Special focus has been given to the mechanical design to ensure dimensional stability, longevity, and toughness of the drivers for the most demanding applications.

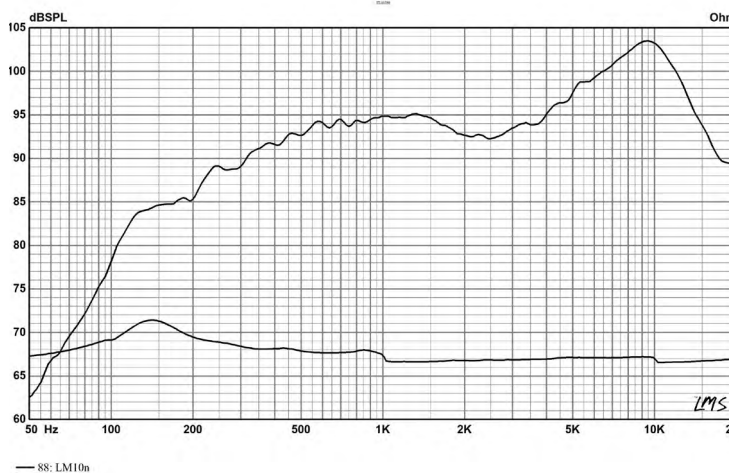
The Radian LM10n is a wide band planar ribbon driver with a recommended operating frequency band 150Hz-20kHz. Its flat pattern of straight conductors is evenly distributed over a stretched polymer diaphragm and disposed in a symmetric magnetic structure. As a result, the inductive component of input impedance is eliminated and hence intermodulation distortion is minimized.

LM10n Unique Attributes:

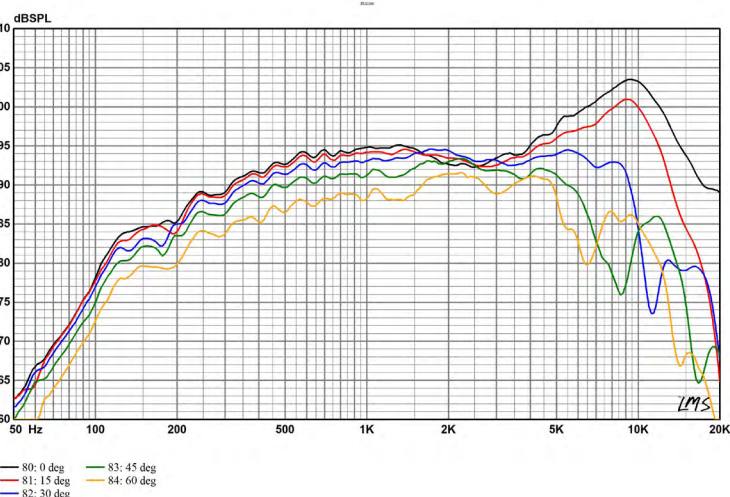
- Exceptional midrange band reproduction
- Superior sonic transparency and resolution
- Textbook constant directivity in horizontal plane
- High energy Neodymium magnets
- Advanced polymer diaphragm with extremely linear operation over wide dynamic range
- Symmetric push-pull balanced system
- Resistive impedance with negligible inductive component
- Structurally inert design optimized for long-term operational stability
- Thermally conductive polymer frames
- Optimized for line array application

Specifications

| | |
|--|--|
| Nominal size | 10"/250 mm |
| Power handling, AES ¹ | 70 W |
| Long-term maximum power, IEC ¹ | 100 W |
| Short-term maximum power, IEC ¹ | 200 W |
| Sensitivity ² | 94 dB |
| Effective frequency range ³ | 120 Hz – 20 kHz |
| Horizontal coverage angle, dipole (open back) ⁴ | 120 deg |
| Vertical coverage angle ⁴ | 30 deg |
| Diaphragm | Advanced high temperature stabilized polymer |
| Current carrying conductors | Aluminum foil |
| Displacement limit for diaphragm | 1.2 mm |
| Minimum impedance = Re (inductive component is absent) | Impedance is predominantly constant @ Re=6.8 Ω |
| Magnet material | Neodymium |
| Driver plates material | Powder coated steel |
| Recommended minimum XO point 12 dB/Oct. 6 dB/Oct. | 150 Hz 200 Hz |
| Net weight | 1.35 kg (3 lb.) |
| Terminals, gold plated | Positive 0.205", negative 0.187" |



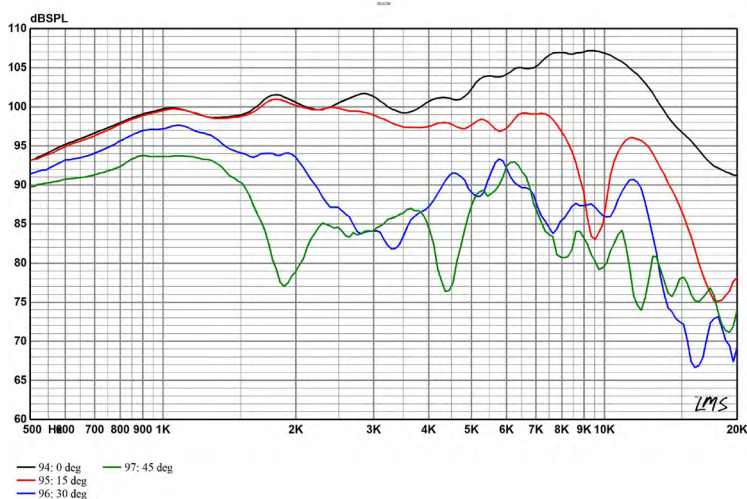
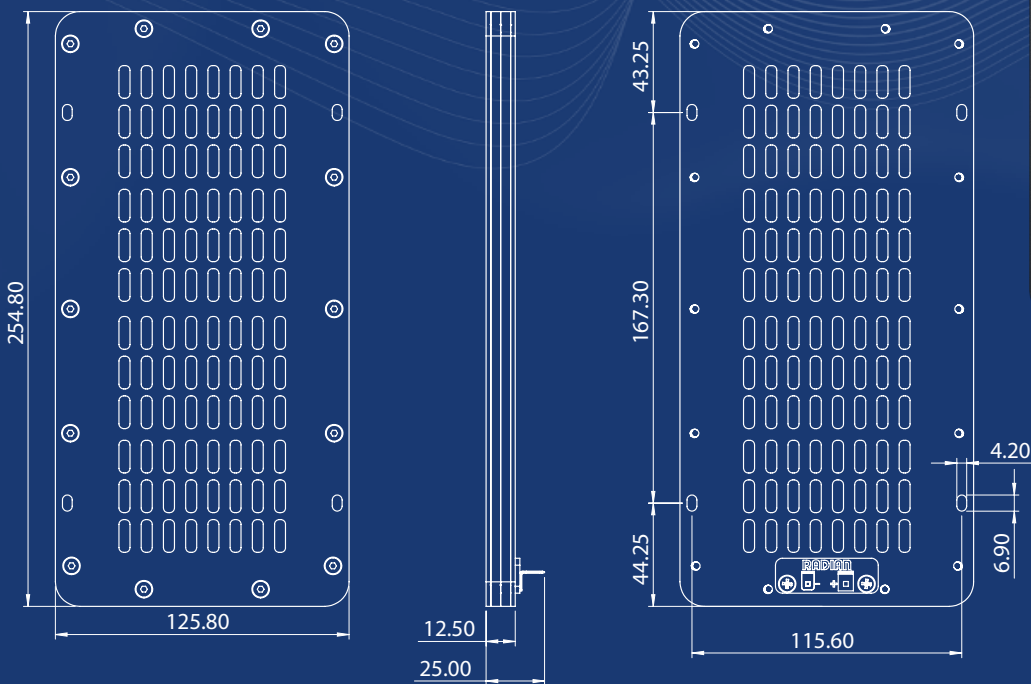
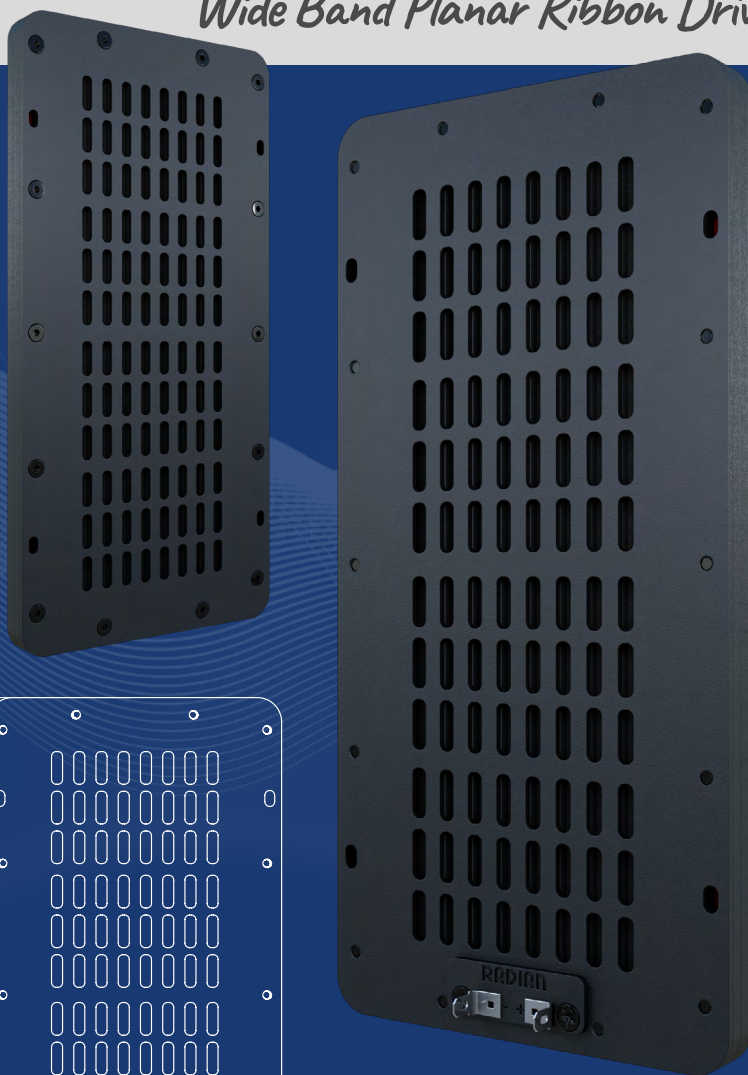
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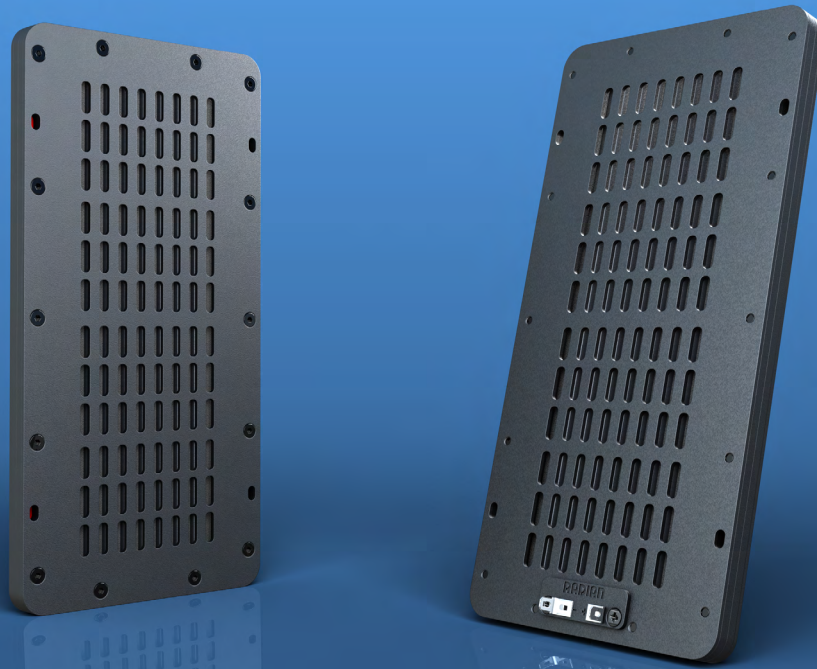
— 80: 0 deg — 83: 45 deg
— 81: 15 deg — 84: 60 deg
— 82: 30 deg

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1. AES refers to AES2-1984 Rev.2003. IEC refers to IEC 60268-5. AES power handling tested using IEC60268-1 noise signal for duration of 2 hours in effective frequency range in free air.
2. Frequency response and sensitivity of LM10n as an open back planar ribbon transducer is highly dependent on its acoustic alignment. Specified number is an average of 1W/1m data within 500Hz- 5 kHz range. Measured at 1m at 2.83V in simulated free field conditions.
3. Highly dependent on acoustic alignment and application. Maximum recommended LF extension is 150Hz for speech reproduction applications. High output applications would benefit from 200Hz X_o point. Measured in accordance with IEC 60268-5, defined at -10 dB below SPL averaged in 250 Hz - 5 kHz range.
4. Coverage angles dependent on acoustic alignment. Trapezoidal baffle with 5.5"(top)x 13"(bottom)x 12" (high) size was used for directivity measurements. Defined at -6dB, averaged in 500 Hz- 5 kHz range. Vertical coverage angle is defined at 2 kHz.



LM10n Applications

Optimal application as a midrange paired with Radian LT3 or LT2 tweeters.

Open back/dipole configurations would result in very airy, spacious, three-dimensional presentation. Closed back alignment results in a more direct, immediate and focused sonic images.

The LM10n is a great choice for line arrays having a maximized ratio of active radiating area

to overall driver height (an array of LT3s or LT2s is recommended for ultimate performance), including coplanar/coaxially located arrays.

The Radian LM10n can be used for open back near field monitors, augmented with a subwoofer, delivering a holographic sonic reality for the ultimate in desktop high performance.

Discover Our Expanded Planar Ribbon Driver Family



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