CELESTION

Professional Loudspeakers
& Compression Drivers


CDM-1445

Contents

Front cover picture: Celestion's FTX1225 Coaxial, Cast aluminium chassis driver.
Professional Loudspeakers and Compression Drivers, 2014.

CELESTION

About Celestion

The Development Team

Operating in the most demanding sound reinforcement applications, Celestion professional loudspeakers and compression drivers have earned an enviable global reputation for innovative design, exceptional performance and superior reliability.

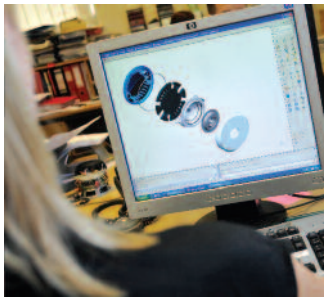
The pursuit of excellence begins with a world-leading team of R&D engineers, headed by experienced Development Director Ian White, and supported by state-of-the-art design, development, analysis and testing tools, all housed within a purpose-built facility in Ipswich, England.

Project engineers are supported by an experienced technical drawing team and specialist development technicians, with the resources on-site to prototype, test and measure the performance of new designs.

In addition to developing our standard range, the R&D team also works with our OEM customers to establish the parameters of a specific project and identify the best way to fulfill the design brief, either by modifying an existing model or developing a new product 'from the ground up'.

Celestion's R&D department also calls upon the expertise of the Group Research team, headed by Mark Dodd. Its remit is to discover and develop new technologies, techniques and processes that add value to the fast-expanding portfolio of Celestion professional audio products. Mark is a participating member of the Audio Engineering Society, and one of the foremost contributors of authoritative papers on compression driver and loudspeaker technology.

Design

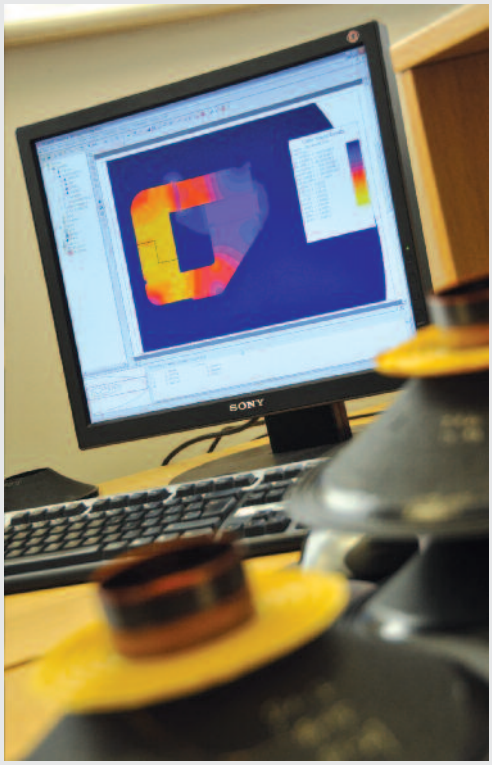


Celestion has access to the latest design software employing the principles and methods of Finite Element Analysis (FEA) for efficient loudspeaker development, as well as design tools such as 3-D CAD for technical drawing.

With more than 100 years of combined experience in loudspeaker design and development, the Celestion team has pushed the boundaries of these tools to achieve new levels of flexibility in modelling and accuracy in measurement, and created custom interfaces to enable more revealing presentation of data.

Pioneering users of FEA for the prediction of mechanical and thermal properties, Celestion was the first loudspeaker manufacturer to use FEA for vibro-acoustic modelling and to predict magnetic inductance, subsequently combining these results with magneto-static modelling to provide a complete, voltage-coupled model.

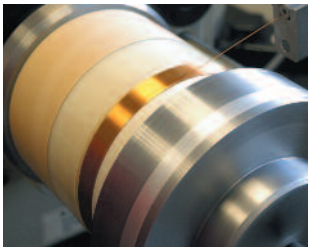
Such innovations empower the Celestion team to take new product concepts and make finite element models of their electrical, mechanical and acoustical properties, combining these to create a ‘Virtual Prototype’. This advanced technique builds greater accuracy, flexibility and creativity into the development process.



Prototyping and Analysis

At Celestion, the development process is dramatically enhanced by the ability to produce prototypes and sample runs on site. The Ipswich facility is equipped with a full production line plus lathes, presses, coil winders and all the other machinery required to build short runs for testing, measurement, approval and production engineering.

Celestion engineers make extensive use of the industry-standard Klippel® Distortion Analyser, measuring actual physical prototypes to verify the results achieved in FEA modelling. The system provides detailed analysis of motor design, voice coil alignment and cone suspension to achieve the Bl and stiffness (K) symmetry necessary for low distortion performance.



By bringing these processes together in one place, the Celestion team is fully resourced to develop sound reinforcement loudspeaker and compression driver solutions that match and exceed the performance and cost requirements of an impressive list of systems builders.

Test and Listening

These resources include a set of plane wave tubes located in the development lab for the measurement of compression drivers. Additionally, a hemi-anechoic chamber provides a reflection-free environment for the precision measurement of key physical properties including frequency response and sound pressure level.

Alongside scientific testing facilities, Celestion has also created a quite exceptional environment for analytical listening in a Philip Newell-designed listening room. Freed from the constraints of working within an existing or converted building, Newell has been able to realise fully his design for a ‘Non-Environment’, a room within a room in which new loudspeaker designs can be auditioned and compared in an acoustically neutral listening space.

Throughout the development process a new product is subject to a rigorous testing regime enabling Celestion to confidently claim that each product is consistently capable of delivering the same high quality and trouble-free performance now and for years to come.

Manufacturing and Logistics

Celestion is part of the Gold Peak group with an annual turnover of more than US $1 Billion. Manufacturing takes place at our own, ISO9000 and ISO14000-accredited, 30,000m^2 facility where more than 1400 highly-trained employees share a singular commitment to quality.

Here, modern production lines make use of the latest automated machinery for in-house coil winding, as well as on-line gluing systems and high-voltage magnetisers enabling Celestion to achieve exceptional productivity.

In addition, the manufacturing facility replicates the Ipswich test and listening facilities, incorporating its own hemi-anechoic chamber and acoustically neutral listening room, and industry-standard measurement equipment such as the Klippel® Distortion Analyser. This ensures the highest degree of accuracy and consistency from design inception right through to final manufacture. With warehousing facilities in Europe, China and on the east and west coasts of the US, Celestion customers enjoy efficient logistics and day-to-day contact with local account managers based in all major territories.

Thanks to the streamlined integration of research and development, manufacturing and logistics operations, Celestion delivers an unrivalled combination of product performance, service and value.

HF Neo

Neodymium magnet compression drivers

Range Overview

Celestion neodymium magnet compression drivers offer system designers a comprehensive range of high performance, light weight devices encompassing 1", 1.4" and 2" throat exits, and 1.4" to 3" voice coil diameters.

The range includes the light weight and compact 17 Series with titanium or PETP film diaphragms, and the 14 Series super-compact compression drivers which feature aluminium diaphragms.

Designed at our loudspeaker R&D facility in the UK, Celestion compression drivers benefit from advanced FEA modelling in the development stage to optimise acoustic, mechanical and electromagnetic properties. Production takes place at our ultra-modern, purpose-built plant in China, where exacting manufacturing and testing standards ensure long term reliability.

HF Neo Range

	Magnet Type	Voice Coil Diameter	Throat Exit	Mounting	Diaphragm Material	Power Rating*	Impedance	Sensitivity	Frequency Range	Min Crossover Frequency	Unit Weight
CDX20-3000	Neodymium	75mm/3in	2in/50mm	Flange	Titanium	75Wrms	8/16Ω	107dB	500-18,000Hz	800Hz	2.0kg/4.4lb
CDX14-3050	Neodymium	75mm/3in	1.4in/35mm	Flange	Titanium	75Wrms	8/16Ω	106.5dB	500-18,000Hz	1000Hz	1.7kg/3.7lb
CDX14-2420	Neodymium	60mm/2.4in	1.4in/35mm	Flange	Titanium	70Wrms	8/16Ω	106.5dB	800-20,000Hz	1200Hz	1.5kg/3.3lb
CDX1-1720	Neodymium	44mm/1.75in	1in/25mm	Flange	Titanium	50Wrms	8Ω	107dB	800-20,000Hz	1500Hz	0.65kg/1.4lb
CDX1-1730	Neodymium	44mm/1.75in	1in/25mm	Flange	PETP film	40Wrms	8/16Ω	110dB	1200-20,000Hz	2200Hz	0.65kg/1.4lb
CDX1-1731	Neodymium	44mm/1.75in	1in/25mm	Screw	PETP film	40Wrms	8/16Ω	110dB	1200-20,000Hz	2200Hz	0.65kg/1.4lb
CDX1-1430	Neodymium	35mm/1.4in	1in/25mm	Flange	Aluminium	50Wrms	8Ω	108dB	2000-20,000Hz	2500Hz	0.47kg/1.0lb
CDX1-1425	Neodymium	35mm/1.4in	1in/25mm	Flange	Aluminium	25Wrms	8/16Ω	108dB	2000-20,000Hz	2500Hz	0.39kg/0.9lb
CDX1-1415	Neodymium	35mm/1.4in	1in/25mm	Flange	Aluminium	20Wrms	8Ω	104dB	2000-20,000Hz	2500Hz	0.25kg/0.6lb
CDX07-1075	Neodymium	25mm/1in	19mm/0.75in	Flange	Polyimide	15Wrms	8Ω	109dB	1500-18,000Hz	2500Hz	0.16kg/0.35lb

*AES Standard

Key Technologies

A number of models in Celestion's HF Neo range make use of the ground-breaking MMS™ (Maximum Modal Suppression) phase plug design. Applying advanced mathematical analysis to the motion of a curved diaphragm, Celestion's Group Research team developed a new method for calculating the width and position of the slots used in a phase plug. Building on long-established technology, this patented design significantly reduces the occurrence of unwanted resonances in the cavity between the diaphragm and the phase plug itself. The result is greater modal suppression and reduced air non-linearity. The benefit is a better time domain response and much lower distortion than the existing industry standard.

Incorporated into this ground-breaking new design is a titanium diaphragm that has been "deep-drawn" (manufactured with a taller dome shape) to improve stiffness. The deep-drawn diaphragm exhibits first modal break up around 15 kHz. In comparison, a typical compression driver diaphragm starts to break up in the 8-10 kHz range. The higher threshold frequency of the diaphragm avoids the break-up (and hence distortion) within the critical mid-range listening band that is associated with lower profile diaphragms.

- **Patented phase plug design for greater modal suppression and reduced air non-linearity**
- **Deep-drawn diaphragms for increased stiffness and lower distortion**
- **Comprehensive range including 1", 1.4" and 2" throat exit diameters; PETP film, titanium and aluminium diaphragms; and flange and screw mountings**
- **Proprietary Sound Castle™ clamping ensures even pressure of diaphragm surround, while enabling the use of the full internal volume of the rear cover**
- **FEA optimised magnetic and acoustic design for light weight and low distortion**

Patented phase plug design improves modal suppression

Typical annular slot phase plug

Celestion annular slot phase plug

A new design methodology re-calculates slot width and slot positioning ratios. The result is improved modal suppression within the phase plug, hence lower distortion when compared to a typical compression driver

Deep-drawn titanium diaphragm increases stiffness

Diaphragm from typical large format compression driver

Celestion deep-drawn diaphragm for large format compression drivers

The deep-drawn diaphragm exhibits first modal break up around 15kHz, compared with a typical compression driver where the diaphragm starts to break up in the 8-10kHz range, which can add distortion to the critical mid-range listening band.

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CDX20-3000

Neodymium magnet compression driver

General Specifications

Power rating[1]	75Wrms
Nominal impedance	8Ω
Sensitivity[2]	107dB
Frequency range	500-18,000Hz
Recommended min. crossover (12dB/oct)	800Hz
Voice coil diameter	75mm/3in
Voice coil material	Edgewound copper clad aluminium
Magnet type	Neodymium
Diaphragm material	Titanium
Surround material	Polyimide

Mounting Information

Width	125mm/5.0in
Depth	94mm/3.7in
Weight	2.0kg/4.4lb
Fitting	Flange (4 x M6 holes on 102mm/4in PCD)
Throat exit	50.8mm/2in

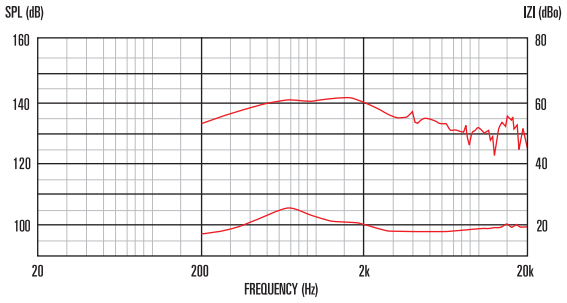
Packed Dimensions & Weight

Single pack size W x D x H	140mm x 135mm x 112mm /5.5in x 5.3in x 4.4in
Single pack weight	2.4kg/5.3lb
Multi pack (6) size W x D x H	500mm x 365mm x 145mm /19.7in x 14.4in x 5.7in
Multi pack (6) weight	13.5kg/29.7lb

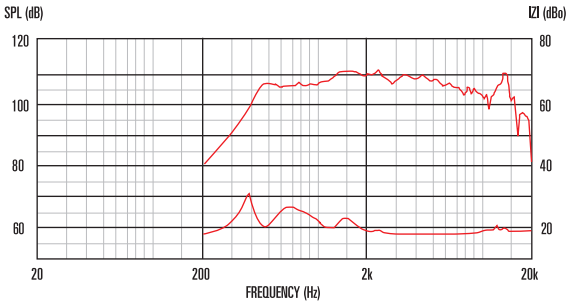
Features

- 2" exit, neodymium magnet, 3" voice coil compression driver provides 75Wrms (AES standard) power handling and 107dB sensitivity
- Patented phase plug design method suppresses cavity resonances at higher frequencies
- Titanium diaphragm, deep drawn to increase stiffness and reduce distortion
- Lower compression ratio reduces air non-linearity and allows for higher maximum SPL
- Rolled polyimide surround improves stiffness control, further lowering distortion
- Curved coherent wavefront, optimised for horn loading

Frequency Response and Impedance Curves



Measured - Plane Wave Tube



Measured - Exponential Horn 80° x 60° radiation pattern

1. Tested for two hours on plane wave tube using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance.
2. Measured on axis at 1W, 1m, using typical horn, in 2π anechoic environment.

Also available in 16Ω, data available on request

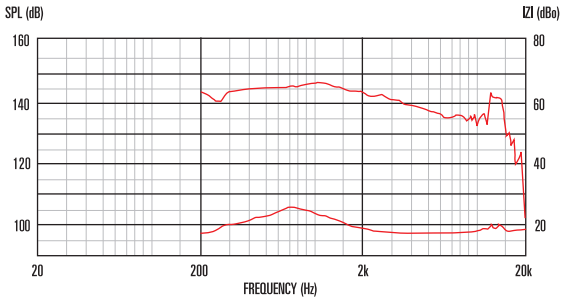
CDX14-3050

Neodymium magnet compression driver

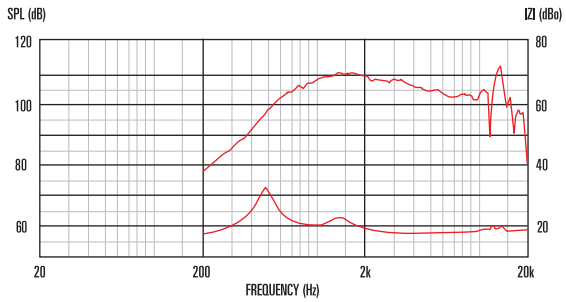
Features

- 1.4" exit, neodymium magnet, 3" voice coil compression driver provides 75Wrms (AES standard) power handling and 106.5dB sensitivity
- Patented phase plug design method suppresses cavity resonances at higher frequencies
- Titanium diaphragm, deep drawn to increase stiffness and reduce distortion
- Lower compression ratio reduces air non-linearity and allows for higher maximum SPL
- Rolled polyimide surround improves stiffness control, further lowering distortion
- Curved coherent wavefront, optimised for horn loading

Frequency Response and Impedance Curves



Measured - Plane Wave Tube



Measured - Exponential Horn 80° x 60° radiation pattern

1. Tested for two hours on plane wave tube using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance.
2. Measured on axis at 1W, 1m, using typical horn, in 2π anechoic environment.

Also available in 16Ω, data available on request

General Specifications

Power rating[1]	75Wrms
Nominal impedance	8Ω
Sensitivity[2]	106.5dB
Frequency range	500-18,000Hz
Recommended min. crossover (12dB/oct)	1000Hz
Voice coil diameter	75mm/3in
Voice coil material	Edgewound copper clad aluminium
Magnet type	Neodymium
Diaphragm material	Titanium
Surround material	Polyimide

Mounting Information

Width	125mm/5.0in
Depth	56mm/2.2in
Weight	1.7kg/3.7lb
Fitting	Flange (4 x M6 holes on 102mm/4in PCD)
Throat exit	35.6mm/1.4in

Packed Dimensions & Weight

Single pack size W x D x H	130mm x 130mm x 65mm /5.1in x 5.1in x 2.6in
Single pack weight	2.0kg/4.4lb
Multi pack (6) size W x D x H	500mm x 365mm x 90mm 19.7in x 14.4in x 3.5in
Multi pack (6) weight	11.5 kg/25.3lb

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CDX14-2420

Neodymium magnet compression driver

General Specifications

Power rating[1]	70Wrms
Nominal impedance	16Ω
Sensitivity[2]	106.5dB
Frequency range	800-20,000Hz
Recommended min. crossover (12dB/oct)	1200Hz
Voice coil diameter	60mm/2.4in
Voice coil material	Edgewound copper clad aluminium
Magnet type	Neodymium
Diaphragm material	Titanium
Surround material	Polyimide

Mounting Information

Width	116mm/4.6in
Depth	56mm/2.2in
Weight	1.5kg/3.3lb
Fitting	Flange (4 x M6 holes on 102mm/4in PCD)
Throat exit	35.6mm/1.4in

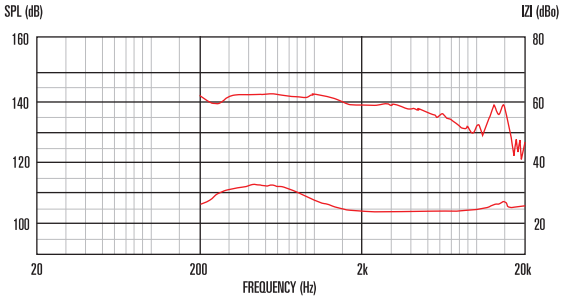
Packed Dimensions & Weight

Single pack size W x D x H	172mm x 135mm x 69mm /6.8in x 5.3in x 2.7in
Single pack weight	1.8kg/3.9lb
Multi pack (6) size W x D x H	500mm x 365mm x 90mm 19.7in x 14.4in x 3.5in
Multi pack (6) weight	11.5 kg/25.3lb

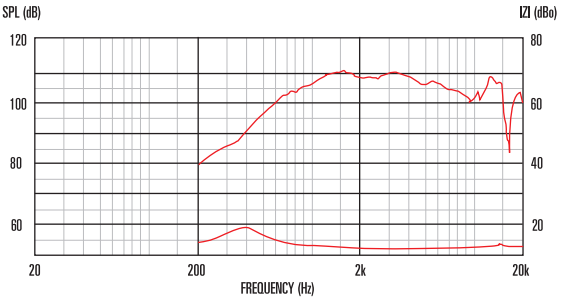
Features

- 1.4" exit, neodymium magnet, 60mm (2.4") voice coil compression driver provides 70Wrms (AES standard) power handling and 106.5dB sensitivity
- Patented phase plug design method suppresses cavity resonances at higher frequencies
- Titanium diaphragm, deep drawn to increase stiffness and reduce distortion
- Lower compression ratio reduces air non-linearity and allows for higher maximum SPL
- Rolled polyimide surround improves stiffness control, further lowering distortion
- Curved coherent wavefront, optimised for horn loading

Frequency Response and Impedance Curves



Measured - Plane Wave Tube



Measured - Exponential Horn 80° x 60° radiation pattern

1. Tested for two hours on plane wave tube using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance.
2. Measured on axis at 1W, 1m, using typical horn, in 2π anechoic environment.

Also available in 8Ω, data available on request

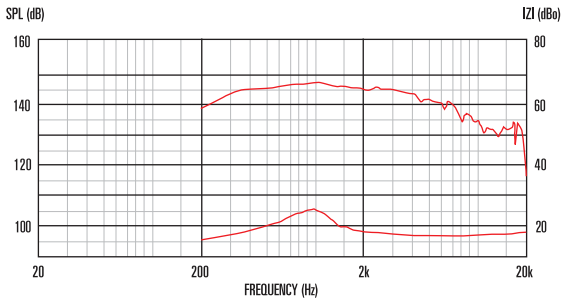
CDX1-1720

Neodymium magnet compression driver

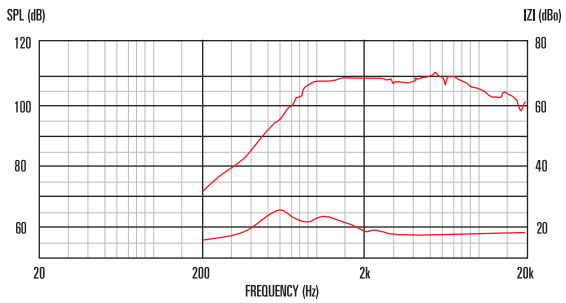
Features

- 1" exit, lightweight and compact compression driver featuring neodymium magnet and 1.75" diameter titanium diaphragm
- 50Wrms (AES standard) power handling and 107dB sensitivity
- Rolled polyimide surround improves stiffness control, further lowering distortion
- Lower resonance enabling lower crossover frequency
- Patented phase plug design method suppresses cavity resonances at frequencies higher than that of convential designs
- Lower compression ratio reduces air non-linearity and allows for higher maximum SPL
- Curved coherent wavefront, optimised for horn loading

Frequency Response and Impedance Curves



Measured - Plane Wave Tube



Measured - Exponential Horn 90° x 40° radiation pattern

1. Tested for two hours on plane wave tube using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance.
2. Measured on axis at 1W, 1m, using typical horn, in 2π anechoic environment.

General Specifications

Power rating[1]	50Wrms
Nominal impedance	8Ω
Sensitivity[2]	107dB
Frequency range	800-20,000Hz
Recommended min. crossover (12dB/oct)	1500Hz
Voice coil diameter	44mm/1.75in
Voice coil material	Edgewound copper clad aluminium
Magnet type	Neodymium
Diaphragm material	Titanium
Surround material	Polyimide

Mounting Information

Maximum width	88.5mm/3.48in
Minimum width	82.0mm/3.23in
Depth	55mm/2.2in
Weight	0.65kg/1.4lb
Fitting	Flange (4 x M6 holes on 76mm/3in PCD)
Throat exit	25.4mm/1in

Packed Dimensions & Weight

Single pack size W x D x H	90mm x 90mm x 60mm /3.5in x 3.5in x 2.4in
Single pack weight	0.75kg/1.65lb
Multi pack (16) size W x D x H	500mm x 485mm x 110mm /19.7in x 19.1in x 4.3in
Multi pack (16) weight	11.2kg/24.9lb

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CDX1-1730

Neodymium magnet compression driver

General Specifications

Power rating[1]	40Wrms
Nominal impedance	8Ω
Sensitivity[2]	110dB
Frequency range	1200-20,000Hz
Recommended min. crossover (12dB/oct)	2200Hz
Voice coil diameter	44mm/1.75in
Voice coil material	Edgewound copper clad aluminium
Magnet type	Neodymium
Diaphragm and surround material	PETP film

Mounting Information

Maximum width	88.5mm/3.48in
Minimum width	82.0mm/3.23in
Depth	55mm/2.2in
Weight	0.65kg/1.4lb
Fitting	Flange (4 x M6 holes on 76mm/3in PCD)
Throat exit	25.4mm/1in

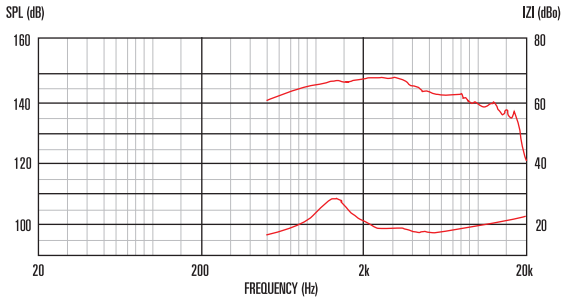
Packed Dimensions & Weight

Single pack size W x D x H	90mm x 90mm x 60mm /3.5in x 3.5in x 2.4in
Single pack weight	0.75kg/1.7lb
Multi pack (16) size W x D x H	500mm x 485mm x 110mm /19.7in x 19.1in x 4.3in
Multi pack (16) weight	11.2kg/24.9lb

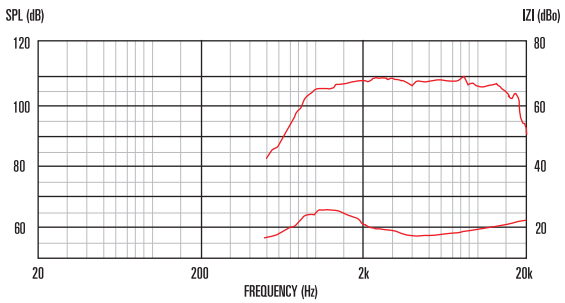
Features

- **1" exit, neodymium magnet compression driver with 1.75" edgewound copper clad aluminium voice coil**
- **40Wrms (AES standard) power handling and 110dB sensitivity**
- **Designed with Sound Castle™ clamping to ensure uniform pressure on diaphragm assembly for reduced acoustic distortion**
- **One piece PETP film diaphragm and surround**
- **Advanced Finite Element Analysis (FEA) tools used to create a very light weight, high powered compression driver**

Frequency Response and Impedance Curves



Measured - Plane Wave Tube



Measured - Exponential Horn 90° x 40° radiation pattern

1. Tested for two hours on plane wave tube using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance.
2. Measured on axis at 1W, 1m, using typical horn, in 2π anechoic environment.

Also available in 16Ω, data available on request

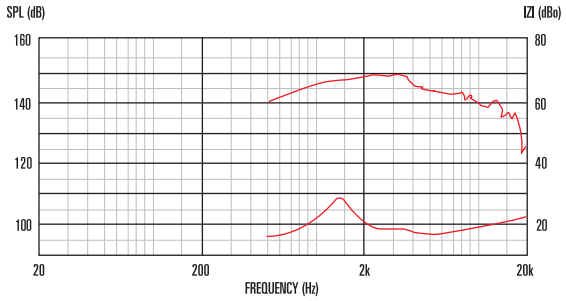
CDX1-1731

Neodymium magnet compression driver

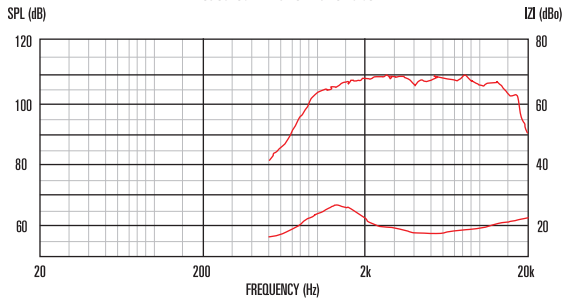
Features

- 1" exit, neodymium magnet compression driver with 1.75" edgewound copper clad aluminium voice coil
- 40Wrms (AES standard) power handling and 110dB sensitivity
- Designed with Sound Castle™ clamping to ensure uniform pressure on diaphragm assembly for reduced acoustic distortion
- One piece PETP film diaphragm and surround
- Advanced Finite Element Analysis (FEA) tools used to create a very light weight, high powered compression driver

Frequency Response and Impedance Curves



Measured - Plane Wave Tube



Measured - Exponential Horn 90° x 40° radiation pattern

1. Tested for two hours on plane wave tube using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance.
2. Measured on axis at 1W, 1m, using typical horn, in 2π anechoic environment.

Also available in 16Ω, data available on request

General Specifications

Power rating[1]	40Wrms
Nominal impedance	8Ω
Sensitivity[2]	110dB
Frequency range	1200-20,000Hz
Recommended min. crossover (12dB/oct)	2200Hz
Voice coil diameter	44mm/1.75in
Voice coil material	Edgewound copper clad aluminium
Magnet type	Neodymium
Diaphragm and surround material	PETP film

Mounting Information

Maximum width	88.5mm/3.48in
Minimum width	82.0mm/3.23in
Depth	57mm/2.3in
Weight	0.65kg/1.4lb
Fitting	Screw (35mm, 1.38in dia)
Throat exit	25.4mm/1in

Packed Dimensions & Weight

Single pack size W x D x H	90mm x 90mm x 60mm /3.5in x 3.5in x 2.4in
Single pack weight	0.75kg/1.7lb
Multi pack (16) size W x D x H	500mm x 485mm x 110mm /19.7in x 19.1in x 4.3in
Multi pack (16) weight	11.2kg/24.6lb

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CDX1-1430

Neodymium magnet compression driver

General Specifications

Power rating[1]	50Wrms
Nominal impedance	8Ω
Sensitivity[2]	108dB
Frequency range	2000-20,000Hz
Recommended min. crossover (12dB/oct)	2500Hz
Voice coil diameter	35mm/1.4in
Voice coil material	Copper clad aluminium
Magnet type	Neodymium
Diaphragm material	Aluminium
Surround material	Elastomer

Mounting Information

Width	90mm/3.5in
Depth	58mm/2.3in
Weight	0.47kg/1.0lb
Fitting	Flange (2 x M6 holes on 76mm/3.0in PCD)
Throat exit	25.4mm/1in

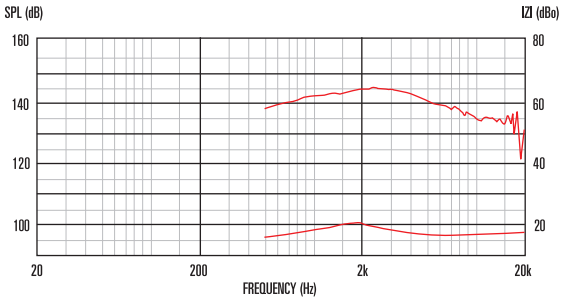
Packed Dimensions & Weight

Single pack size W x D x H	90mm x 90mm x 60mm /3.5in x 3.5in x 2.4in
Single pack weight	0.6kg/1.3lb
Multi pack (24) size W x D x H	345mm x 370mm x 245mm /13.6in x 14.6in x 9.6in
Multi pack (24) weight	12.5kg/28lb

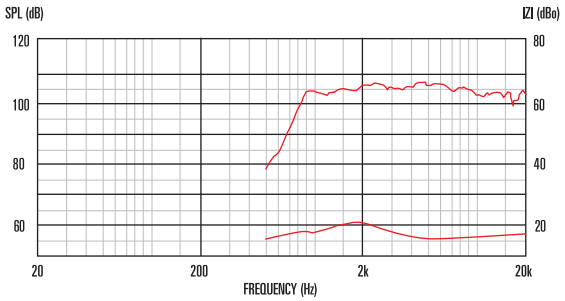
Features

- **1" exit neodymium compression driver with 1.4" copper clad aluminium voice coil**
- **50Wrms power handling (AES standard) and 108dB sensitivity**
- **Copper sleeve on pole reduces inductive rise for improved HF performance**
- **Ferrofluid in magnet gap prevents sensitivity loss through thermal compression**
- **Aluminium diaphragm combined with elastomer surround delivers lower distortion performance**
- **Finite Element Analysis (FEA) used to optimise both magnet and acoustic design**
- **Screw mounting adaptor available**

Frequency Response and Impedance Curves



Measured - Plane Wave Tube



Measured - Exponential Horn 90° x 40° radiation pattern

1. Tested for two hours on plane wave tube using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance.
2. Measured on axis at 1W, 1m, using typical horn, in 2π anechoic environment.

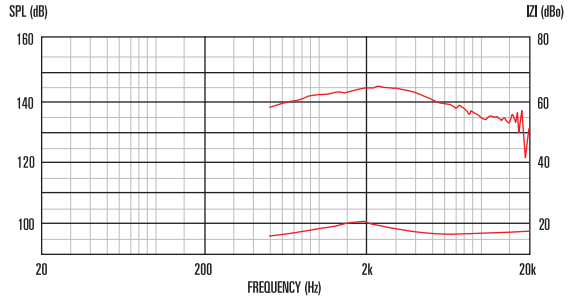
CDX1-1425

Neodymium magnet compression driver

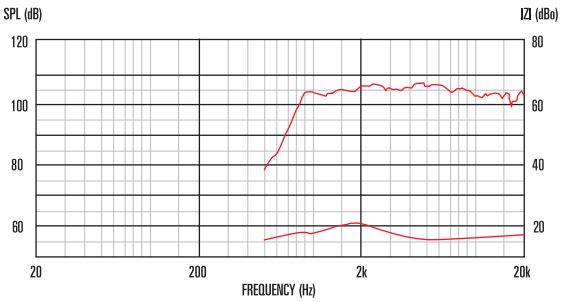
Features

- 1" exit neodymium compression driver with 1.4" copper clad aluminium voice coil
- 25Wrms power handling (AES standard) and 108dB sensitivity
- Copper sleeve on pole reduces inductive rise for improved HF performance
- Ferrofluid in magnet gap prevents sensitivity loss through thermal compression
- Aluminium diaphragm combined with elastomer surround delivers lower distortion performance
- Finite Element Analysis (FEA) used to optimise both magnet and acoustic design
- Suitable for 2-way and 3-way systems, and line arrays

Frequency Response and Impedance Curves



Measured - Plane Wave Tube



Measured - Exponential Horn 90° x 40° radiation pattern

1. Tested for two hours on plane wave tube using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance.
2. Measured on axis at 1W, 1m, using typical horn, in 2π anechoic environment.

Also available in 16Ω, data available on request

General Specifications

Power rating[1]	25Wrms
Nominal impedance	8Ω
Sensitivity[2]	108dB
Frequency range	2000-20,000Hz
Recommended min. crossover (12dB/oct)	2500Hz
Voice coil diameter	35mm/1.4in
Voice coil material	Copper clad aluminium
Magnet type	Neodymium
Diaphragm material	Aluminium
Surround material	Elastomer

Mounting Information

Width	90mm/3.5in
Depth	58mm/2.3in
Weight	0.39kg/0.9lb
Fitting	Flange (2 x M6 holes on 76mm/3.0in PCD)
Throat exit	25.4mm/1in

Packed Dimensions & Weight

Single pack size W x D x H	90mm x 90mm x 60mm /3.5in x 3.5in x 2.4in
Single pack weight	0.5kg/1.1lb
Multi pack (24) size W x D x H	250mm x 350mm x 290mm /9.8in x 13.8in x 11.4in
Multi pack (24) weight	10kg/22lb

CDX1-1415

Neodymium magnet compression driver

General Specifications

Power rating[1]	20Wrms
Nominal impedance	8Ω
Sensitivity[2]	104dB
Frequency range	2000-20,000Hz
Recommended min. crossover (12dB/oct)	2500Hz
Voice coil diameter	35mm/1.4in
Voice coil material	Copper clad aluminium
Magnet type	Neodymium
Diaphragm material	Aluminium
Surround material	Elastomer

Mounting Information

Width	90mm/3.5in
Depth	57mm/2.2in
Weight	0.25kg/0.6lb
Fitting	Flange (2 x M6 holes on 76mm/3.0in PCD)
Throat exit	25.4mm/1in

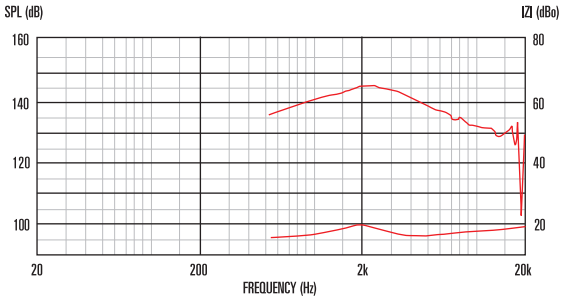
Packed Dimensions & Weight

Single pack size W x D x H	90mm x 90mm x 60mm /3.5in x 3.5in x 2.4in
Single pack weight	0.5kg/1.1lb
Multi pack (24) size W x D x H	250mm x 350mm x 290mm /9.8in x 13.8in x 11.4in
Multi pack (24) weight	7kg/15lb

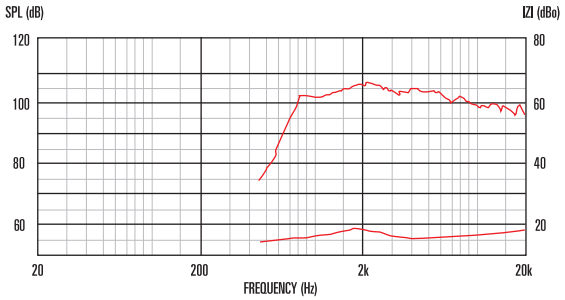
Features

- 1" exit neodymium compression driver with 1.4" copper clad aluminium voice coil
- 20Wrms power handling (AES standard) and 104dB sensitivity
- Copper sleeve on pole reduces inductive rise for improved HF performance
- Ferrofluid in magnet gap prevents sensitivity loss through thermal compression
- Aluminium diaphragm combined with elastomer surround delivers lower distortion performance
- Compact pot magnet design reduces weight and minimises stray flux
- Suitable for 2-way and 3-way systems

Frequency Response and Impedance Curves



Measured - Plane Wave Tube



Measured - Exponential Horn 90° x 40° radiation pattern

1. Tested for two hours on plane wave tube using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance.
2. Measured on axis at 1W, 1m, using typical horn, in 2π anechoic environment.

CDX07-1075

Neodymium magnet compression driver

General Specifications

Power rating[1]	15Wrms
Nominal impedance	8Ω
Sensitivity[2]	109dB
Frequency range	1500-18,000Hz
Recommended min. crossover (12dB/oct)	2500Hz
Voice coil diameter	25mm/1in
Voice coil material	Copper clad aluminium
Magnet type	Neodymium
Diaphragm & surround material	Polyimide

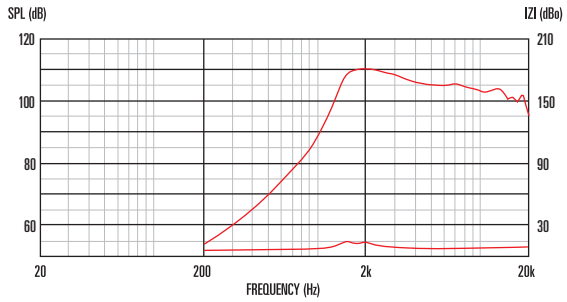
Mounting Information

Width	60mm/2.4in
Depth	35mm/1.3in
Weight	0.16kg/0.35lb
Fitting	Flange (2xM4 holes on 53mm/2.1in PCD)
Throat exit	19mm/0.75in

Features

- **Extremely lightweight and compact 0.75" exit, neodymium compression driver**
- **1" copper clad aluminium voice coil with single piece polyimide diaphragm assembly**
- **15Wrms power handling (AES Standard) and 109dB sensitivity**
- **Advanced Finite Element Analysis (FEA) techniques used to optimise both magnetic and acoustic design**
- **Optimised for compact applications where close packing of multiple devices may be required**

Frequency Response and Impedance Curves



Measured - Conical Horn, 90mm Diameter

1. Tested for two hours on plane wave tube using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance.
2. Measured on axis at 1W, 1m, using typical horn, in 2π anechoic environment.

HF Ferrite

Ferrite magnet compression drivers

Range Overview

Together, Celestion's ferrite and neodymium magnet compression drivers create an extremely comprehensive product range, providing professional audio systems builders with optimised high frequency performance at every price point.

The ferrite magnet range has been designed to offer a choice of power handling levels (with 1" to 3" diameter voice coils), and throat exit sizes (1", 1.4" and 2" are available). Additionally, the range offers titanium, PETP film, or polyimide diaphragms, as well as flange or screw mounting options.

So whether it's the super-compact and lightweight CDX1-1010, or the high performance, very low distortion, large format CDX14-3060 and CDX20-3075 devices, there's a Celestion compression driver for almost every application.

HF Ferrite Range

	Magnet Type	Voice Coil Diameter	Throat Exit	Mounting	Diaphragm Material	Power Rating*	Impedance	Sensitivity	Frequency Range	Min Crossover Frequency	Unit Weight
CDX20-3075	Ferrite	75mm/3in	2in/50mm	Flange	Titanium	75Wrms	8Ω	107dB	500-18,000Hz	800Hz	4.9kg/10.8lb
CDX14-3060	Ferrite	75mm/3in	1.4in/35mm	Flange	Titanium	75Wrms	8Ω	106.5dB	500-18,000Hz	1000Hz	4.9kg/10.8lb
CDX14-3030	Ferrite	75mm/3in	1.4in/35mm	Flange	Titanium	75Wrms	8Ω	106.5dB	500-18,000Hz	1000Hz	4.9kg/10.8lb
CDX1-1747	Ferrite	44mm/1.75in	1in/25mm	Flange	Polyimide	60Wrms	8Ω	110dB	1500-20,000Hz	2200Hz	2.3kg/5.1lb
CDX1-1745	Ferrite	44mm/1.75in	1in/25mm	Flange	PETP film	40Wrms	8/16Ω	110dB	1200-20000Hz	2200Hz	2.3kg/5.1lb
CDX1-1746	Ferrite	44mm/1.75in	1in/25mm	Screw	PETP film	40Wrms	8Ω	110dB	1200-20,000Hz	2200Hz	2.3kg/5.1lb
CDX1-1440	Ferrite	35mm/1.4in	1in/25mm	Flange	Titanium	25Wrms	8Ω	106dB	1500-20,000Hz	2200Hz	1kg/2.2lb
CDX1-1445	Ferrite	35mm/1.4in	1in/25mm	Flange	PETP film	20Wrms	8/16Ω	106dB	1500-20,000Hz	2200Hz	1kg/2.2lb
CDX1-1446	Ferrite	35mm/1.4in	1in/25mm	Screw	PETP film	20Wrms	8Ω	106dB	1500-20,000Hz	2200Hz	1kg/2.2lb
CDX1-1010	Ferrite	25mm/1in	1in/25mm	Flange	PETP film	15Wrms	8Ω	107dB	1500-20,000Hz	2200Hz	0.83kg/1.8lb
CDX1-1020	Ferrite	25mm/1in	1in/25mm	Flange	PETP film	15Wrms	8Ω	107dB	1500-20,000Hz	2200Hz	0.6kg/1.3lb

*AES Standard

Key Technologies

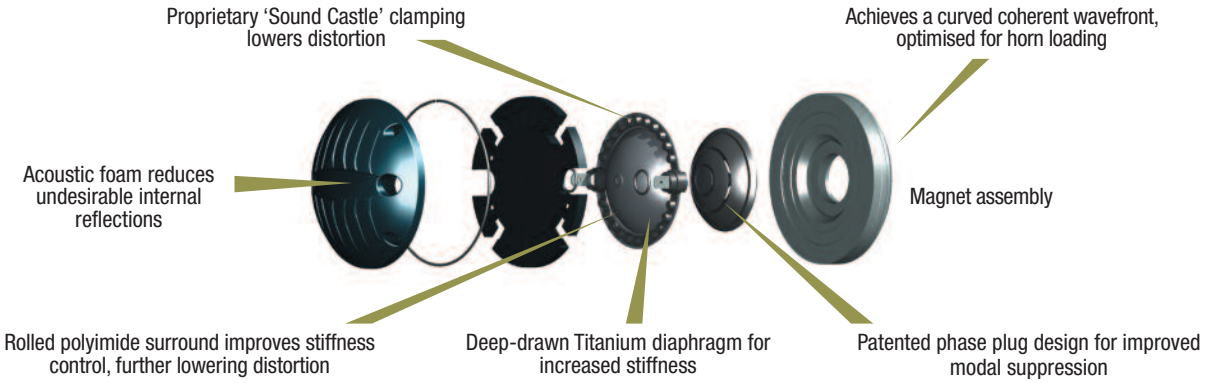
Celestion's next generation 'soft' Sound Castles™ continue to ensure even pressure on the diaphragm assembly, with the additional benefit of reducing the stress that the diaphragm is placed under when clamped. This results in a further decrease in distortion, and even greater consistency of performance.

Several models feature a patented phase plug design that significantly reduces the occurence of unwanted resonances in the cavity between the diaphragm and the phase plug resulting in greater modal suppression and reduced air non-linearity. Additional features include a next generation, deep-drawn diaphragm for increased stiffness and lower distortion.

Acoustic foam minimises unwanted cavity resonances and reduces undesirable internal reflections. For models such as the CDX1-1445, the diaphragm is located by a rigid, glass-reinforced high-temperature engineering plastic cover held in place with a precision aluminium carrier, ensuring consistent, reliable performance throughout the lifetime of the sound reinforcement system.

- **Comprehensive range including 1", 1.4" and 2" throat exit diameters; PETP film, titanium and polyimide diaphragms; and flange and screw mountings**
- **Next-generation Sound Castle™ soft clamping assembly reduces diaphragm stress for decreased distortion and even greater reliability of performance**
- **Patented phase plug design for greater modal suppression and reduced air non-linearity**
- **Deep-drawn diaphragms for increased stiffness and lower distortion**
- **FEA optimised magnetic and acoustic design for light weight and low distortion**

Anatomy of a compression driver



CDX20-3075

Ferrite magnet compression driver

General Specifications

Power rating[1] 75Wrms
Nominal impedance 8Ω
Frequency range 500-18,000Hz
Sensitivity[2] 107dB
Recommended min. crossover (12dB/oct) 800Hz
Voice coil diameter 75mm/3in
Voice coil material . . . . . Edgewound copper clad aluminium
Diaphragm material . . . . . Titanium
Magnet material . . . . . Ferrite
Surround material . . . . . Titanium

Mounting Information

Width 180mm/7.09in
Depth 71mm/2.8in
Weight 4.8kg/10.6lb
Fitting. . . . . Flange (4 x M6 holes on 102mm/4.02inch PCD)
Throat exit 50mm/2in

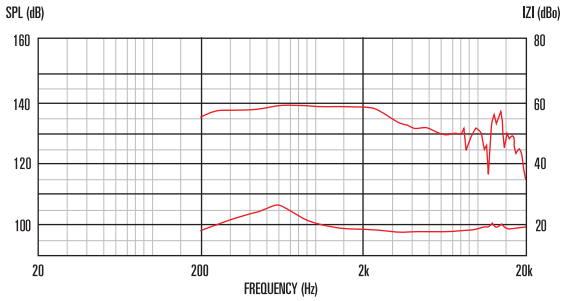
Packed Dimensions & Weight

Single pack size W x D x H . . . . . 214mm x 196mm x 82mm
. . . . . /8.4in x 7.7in x 3.2in
Single pack weight 5.1kg/11.2lb

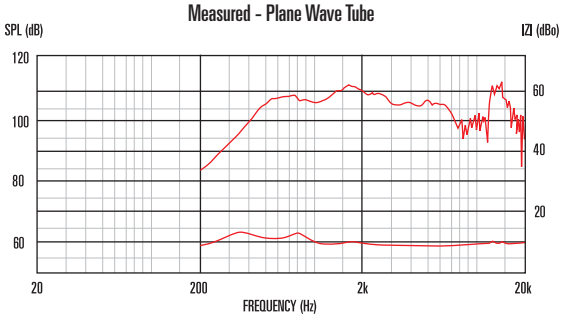
Features

- **2" exit, neodymium magnet, 3" voice coil compression driver provides 75Wrms (AES standard) power handling and 107dB sensitivity**
- **Patented phase plug design method suppresses cavity resonances at higher frequencies**
- **Titanium diaphragm, deep drawn to increase stiffness and reduce distortion**
- **Lower compression ratio reduces air non-linearity and allows for higher maximum SPL**
- **Rolled polyimide surround improves stiffness control, further lowering distortion**
- **Curved coherent wavefront, optimised for horn loading**

Frequency Response and Impedance Curves



Measured - Plane Wave Tube



Measured - Exponential Horn 90° x 40° radiation pattern

1. Tested for two hours on plane wave tube using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance.
2. Measured on axis at 1W, 1m, using typical horn, in 2π anechoic environment.

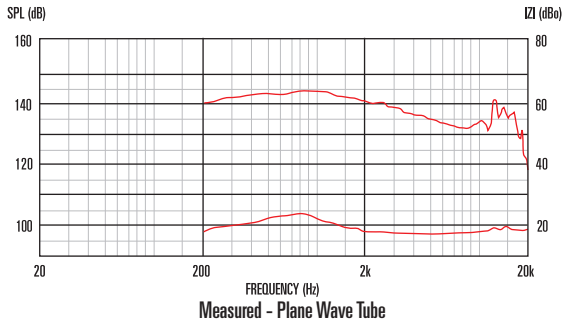
CDX14-3060

Ferrite magnet compression driver

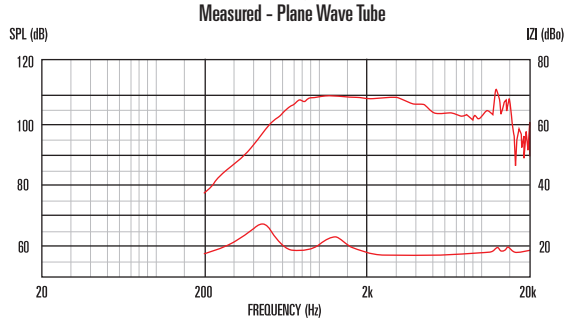
Features

- **1.4" exit, ferrite magnet, 3" voice coil compression driver provides 75Wrms (AES standard) power handling and 106.5dB sensitivity**
- **Patented phase plug design method suppresses cavity resonances at higher frequencies**
- **Titanium diaphragm, deep drawn to increase stiffness and reduce distortion**
- **Lower compression ratio reduces air non-linearity and allows for higher maximum SPL**
- **Rolled polyimide surround improves stiffness control, further lowering distortion**
- **Curved coherent wavefront, optimised for horn loading**

Frequency Response and Impedance Curves



Measured - Plane Wave Tube



Measured - Exponential Horn 90° x 40° radiation pattern

Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air. Measured on axis at 1W, 1m in 2π anechoic environment.

General Specifications

Power rating[1]	75Wrms
Nominal impedance	8Ω
Frequency range	500-18,000Hz
Sensitivity[2]	106.5dB
Recommended min. crossover (12dB/oct)	1000Hz
Voice coil diameter	75mm/3in
Voice coil material	Edgewound copper clad aluminium
Magnet type	Ferrite
Diaphragm material	Titanium
Surround material	Polyimide

Mounting Information

Width	180mm/7.0in
Depth	71mm/2.8in
Weight	4.8kg/10.6lb
Fitting	Flange (4 x M6 holes on a 102mm/4in PCD)
Throat exit	35.6mm/1.4in

Packed Dimensions & Weight

Single pack size W x D x H	214mm x 196mm x 82mm /8.4in x 7.7in x 3.2in
Single pack weight	5.1kg/11.2lb

CELESTION

CDX14-3030

Ferrite magnet compression driver

General Specifications

Power rating[1] 75Wrms
Nominal impedance 8Ω
Frequency range 500-18,000
Sensitivity[2] 106.5dB
Recommended min. crossover (12dB/oct). 1000Hz
Voice coil diameter 75mm/3in
Voice coil material . . . . . Edgewound copper clad aluminium
Magnet type. . . . . Ferrite
Diaphragm and surround material . . . . . Titanium

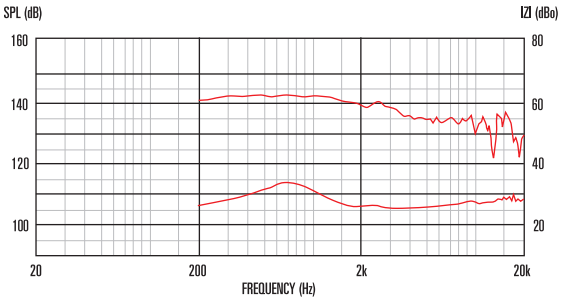
Mounting Information

Overall width 180mm/7in
Overall depth 68mm/2.7in
Fitting. . . . . Flange (4 x M6 holes on a 102mm/4in PCD)
Throat exit 35.6mm/1.4in
Weight 4.88kg/10.7lb

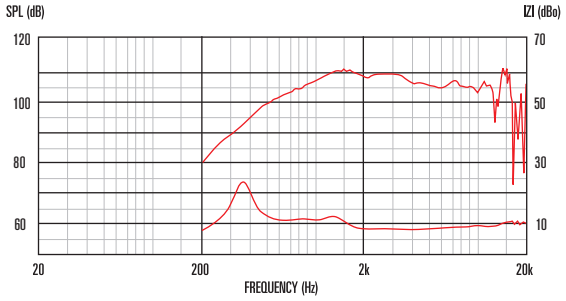
Features

- **1.4" exit, ferrite magnet, 3" voice coil compression driver provides 75Wrms (AES standard) power handling and 106.5dB sensitivity**
- **Next generation Sound Castle™ soft clamping assembly reduces diaphragm stress for decreased distortion and even greater reliability of performance**
- **One piece titanium diaphragm and surround**
- **Finite Element Analysis (FEA) used to optimise both magnet assembly and acoustic design**

Frequency Response and Impedance Curves



Measured - Plane Wave Tube



Measured - Exponential Horn 80° x 60° radiation pattern

1. Tested for two hours on plane wave tube using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance.
2. Measured on axis at 1W, 1m, using typical horn, in 2π anechoic environment.

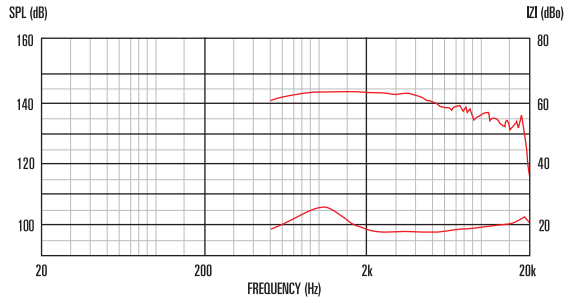
CDX1-1747

Ferrite magnet compression driver

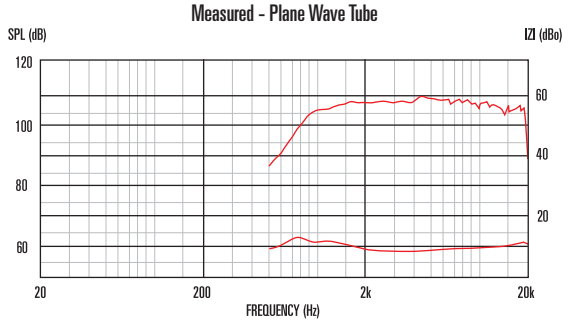
Features

- 1" exit, ferrite magnet compression driver with 1.75" edgewound copper clad aluminium voice coil
- 60Wrms power handling (AES standard) and 110dB sensitivity
- Next generation Sound Castle™ soft clamping assembly reduces diaphragm stress for decreased distortion and even greater reliability of performance
- One piece polyimide diaphragm and surround
- Finite Element Analysis (FEA) used to optimise both magnet assembly and acoustic design

Frequency Response and Impedance Curves



Measured - Plane Wave Tube



Measured - Exponential Horn 90° x 40° radiation pattern

1. Tested for two hours on plane wave tube using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance.
2. Measured on axis at 1W, 1m, using typical horn, in 2π anechoic environment.

General Specifications

Power rating[1]	60Wrms
Nominal impedance	8Ω
Frequency range	1000-20,000Hz
Sensitivity[2]	110dB
Recommended min. crossover (12dB/oct)	2000Hz
Voice coil diameter	44mm/1.75in
Voice coil material	Edgewound copper clad aluminium
Magnet type	Ferrite
Diaphragm and surround material	Polyimide

Mounting Information

Width	120mm/4.72in
Depth	53mm/2.08in
Weight	2.3kg/5.1lb
Fitting	Flange (2/3 M6 holes on 76/57.2, 3.0/2.224in PCD)
Throat exit	25.4mm/1.0in

Packed Dimensions & Weight

Single pack size W x D x H	140mm x 170mm x 70mm /5.5in x 6.7in x 2.8in
Single pack weight	3kg/6.6lb

CDX1-1745

Ferrite magnet compression driver

General Specifications

Power rating[1] 40Wrms
Nominal impedance 8Ω
Frequency range 1200-20,000Hz
Sensitivity[2] 110dB
Recommended min. crossover (12dB/oct) 2200Hz
Voice coil diameter 44mm/1.75in
Voice coil material . . . . . Edgewound copper clad aluminium
Magnet type . . . . . Ferrite
Diaphragm and surround material . . . . . PETP film

Mounting Information

Width 120mm/4.7in
Depth 56mm/2.2in
Weight 2.3kg/5.1lb
Fitting . Flange (2/3 M6 holes on 76/57mm, 3.0/2.24in PCD)
Throat exit 25.4mm/1in

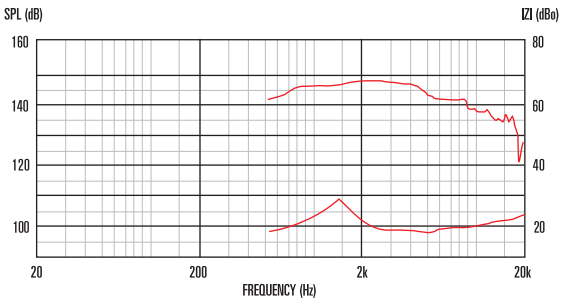
Packed Dimensions & Weight

Single pack size W x D x H . . . . . 140mm x 170mm x 70mm
. . . . . /5.5in x 6.7in x 2.8in
Single pack weight 3kg/6.6lb
Multi pack (6) size W x D x H . . . 430mm x 370mm x 90mm
. . . . . /16.9in x 14.6in x 3.5in
Multi pack (6) weight 14kg/31lb

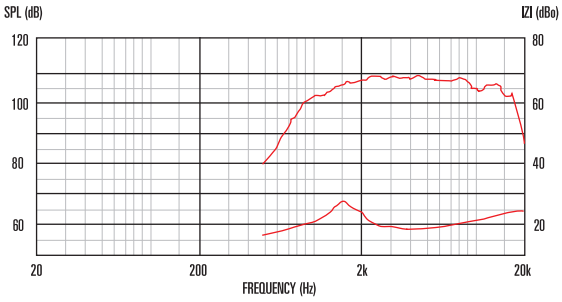
Features

- **1" exit, ferrite magnet compression driver with 1.75" edgewound copper clad aluminium voice coil**
- **40Wrms power handling (AES standard) and 110dB sensitivity**
- **Sound Castle™ clamping ensures even pressure on diaphragm assembly for reduced distortion**
- **One piece PETP diaphragm and surround**
- **Finite Element Analysis (FEA) used to optimise both magnet assembly and acoustic design**

Frequency Response and Impedance Curves



Measured - Plane Wave Tube



Measured - Exponential Horn 90° x 40° radiation pattern

1. Tested for two hours on plane wave tube using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance.
2. Measured on axis at 1W, 1m, using typical horn, in 2π anechoic environment.

Also available in 16Ω, data available on request

CELESTION

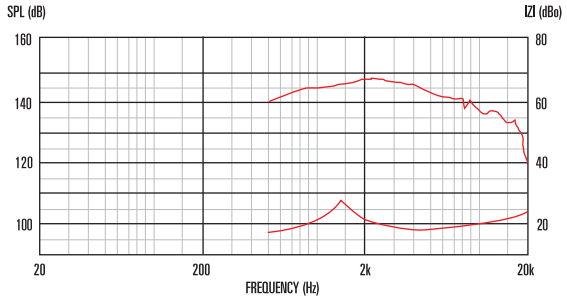
CDX1-1746

Ferrite magnet compression driver

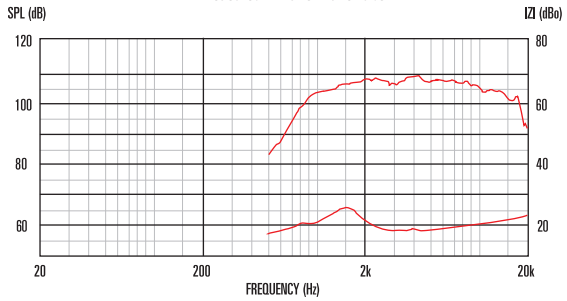
Features

- **1" exit, ferrite magnet compression driver with 1.75" edgewound copper clad aluminium voice coil**
- **40Wrms power handling (AES standard) and 110dB sensitivity**
- **Sound Castle™ clamping ensures even pressure on diaphragm assembly for reduced distortion**
- **One piece PETP diaphragm and surround**
- **Finite Element Analysis (FEA) used to optimise both magnet assembly and acoustic design**

Frequency Response and Impedance Curves



Measured - Plane Wave Tube



Measured - Exponential Horn 90° x 40° radiation pattern

1. Tested for two hours on plane wave tube using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance.
2. Measured on axis at 1W, 1m, using typical horn, in 2π anechoic environment.

General Specifications

Power rating[1]	40Wrms
Nominal impedance	8Ω
Frequency range	1200-20,000Hz
Sensitivity[2]	110dB
Recommended min. crossover (12dB/oct)	2200Hz
Voice coil diameter	44mm/1.75in
Voice coil material	Edgewound copper clad aluminium
Magnet type	Ferrite
Diaphragm and surround material	PETP film

Mounting Information

Width	120mm/4.7in
Depth	56mm/2.2in
Weight	2.3kg/5.1lb
Fitting	Screw (35mm/1.38in dia)
Throat exit	25.4mm/1in

Packed Dimensions & Weight

Single pack size W x D x H	140mm x 170mm x 70mm /5.5in x 6.7in x 2.8in
Single pack weight	3kg/6.6lb
Multi pack (6) size W x D x H	430mm x 370mm x 90mm /16.9in x 14.6in x 3.5in
Multi pack (6) weight	14kg/31lb

CDX1-1440

Ferrite magnet compression driver

General Specifications

Power rating[1] 25Wrms
Nominal impedance 8Ω
Frequency range 1500Hz-20,000Hz
Sensitivity[2] 106dB
Recommended min. crossover (12dB/oct) 2200Hz
Voice coil diameter 35mm/1.4in
Voice coil material . . . . . Copper clad aluminium
Magnet type . . . . . Ferrite
Diaphragm and surround material . . . . . Titanium

Mounting Information

Width 90mm/3.54in
Depth 46.5mm/1.83in
Weight 1kg/2.2lb
Fitting . . . . . Flange (4 x M6 holes on 76mm/3in PCD)
Throat exit 25mm/1in

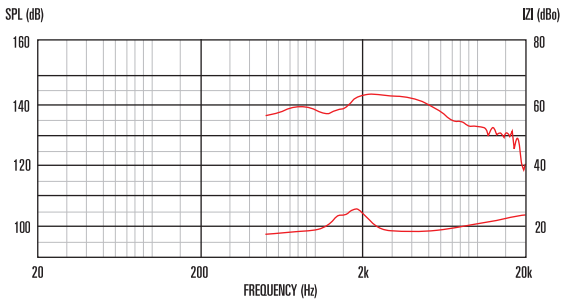
Packed Dimensions & Weight

Multi pack (16) size W x D x H . . 495mm x 495mm x 90mm
. . . . . /19.5in x 19.5in x 3.5in
Multi pack (16) weight 17kg/37.4lb

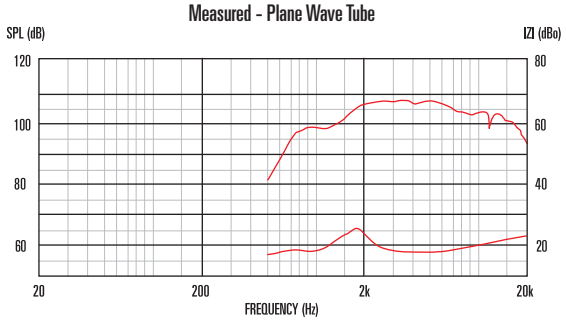
Features

- **1.0" exit, lightweight and compact ferrite magnet compression driver with 1.4" copper clad aluminium voice coil**
- **25Wrms (AES standard) power handling and 106dB sensitivity**
- **One piece titanium diaphragm and surround**
- **Finite Element Analysis (FEA) techniques used to optimise both magnetic and acoustic design**
- **Suitable for 2-way and 3-way systems**

Frequency Response and Impedance Curves



Measured - Plane Wave Tube



Measured - Exponential Horn 90° x 40° radiation pattern

1. Tested for two hours on plane wave tube using continuous band-limited pink noise as per AES standard. Power calculated on minimum impedance.
2. Measured on axis at 1W/1m, using typical horn, in 2π anechoic environment.

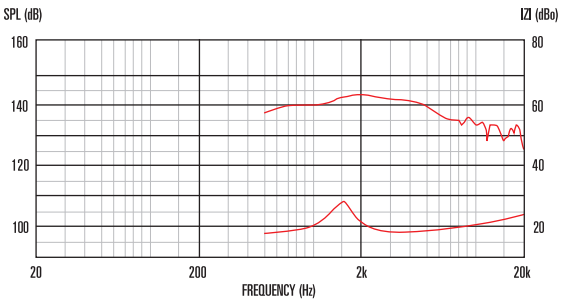
CDX1-1445

Ferrite magnet compression driver

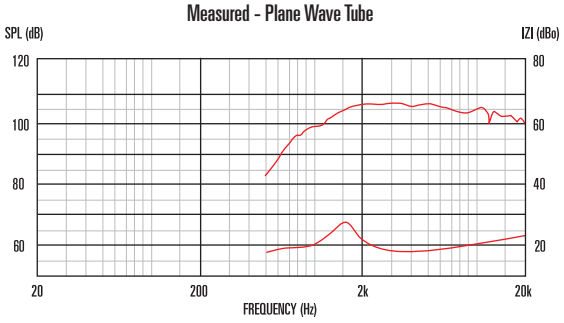
Features

- **1" exit lightweight and compact ferrite magnet compression driver with 1.4" copper clad aluminium voice coil**
- **20Wrms power handling (AES standard) and 106dB sensitivity**
- **One piece PETP diaphragm and surround**
- **Finite Element Analysis (FEA) used to optimise both magnet and acoustic design**
- **Suitable for 2-way and 3-way systems**

Frequency Response and Impedance Curves



Measured - Plane Wave Tube



Measured - Exponential Horn 90° x 40° radiation pattern

1. Tested for two hours on plane wave tube using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance.
2. Measured on axis at 1W, 1m, using typical horn, in 2π anechoic environment.

Also available in 16Ω, data available on request

General Specifications

Power rating[1]	20Wrms
Nominal impedance	8Ω
Sensitivity[2]	106dB
Frequency range	1500-20,000Hz
Recommended min. crossover (12dB/oct)	2200Hz
Voice coil diameter	35mm/1.4in
Voice coil material	Copper clad aluminium
Magnet type	Ferrite
Diaphragm and surround material	PETP film

Mounting Information

Width	90mm/3.54in
Depth	46.5mm/1.83in
Weight	1kg/2.2lb
Fitting	Flange (4 x M6 holes on 76mm/3in PCD)
Throat exit	25mm/1in

Packed Dimensions & Weight

Single pack size W x D x H	110mm x 98mm x 81mm /4.3in x 3.9in x 3.2in
Single pack weight	1.5kg/3.3lb
Multi pack (16) size W x D x H	495mm x 495mm x 90mm /19.5in x 19.5in x 3.5in
Multi pack (16) weight	17kg/37.4lb

CDX1-1446

Ferrite magnet compression driver

General Specifications

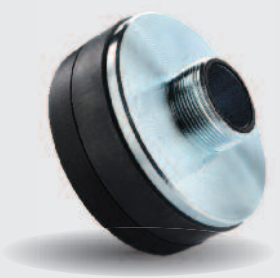
Power rating[1] 20Wrms
Nominal impedance 8Ω
Frequency range 1500-20,000Hz
Sensitivity[2] 106dB
Recommended min. crossover (12dB/oct) 2200Hz
Voice coil diameter 35mm/1.4in
Voice coil material . . . . . Round Copper Coated Aluminium
Magnet type . . . . . Ferrite
Diaphragm and surround material . . . . . PETP film

Mounting Information

Width 90mm/3.54in
Depth 69mm/2.71in
Weight 1.1kg/3.1lb
Fitting . . . . . Screw (35mm/1.38in diameter)
Throat exit 25.4mm/1.0in

Packed Dimensions & Weight

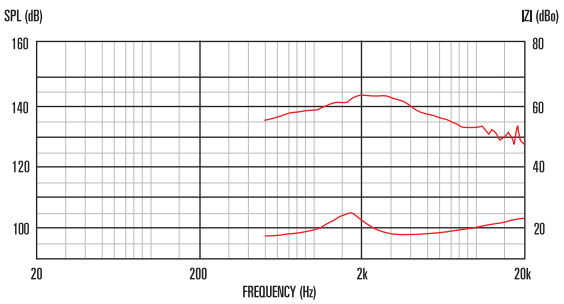
Single pack size W x D x H . . . . . 110mm x 98mm x 81mm
. . . . . /4.3in x 3.9in x 3.2in
Single pack weight 1.5kg/3.3lb
Multi pack (16) size W x D x H . . 480mm x 480mm x 80mm
. . . . . /18.9in x 18.9in x 3.15in
Multi pack (16) weight 19kg/42lb



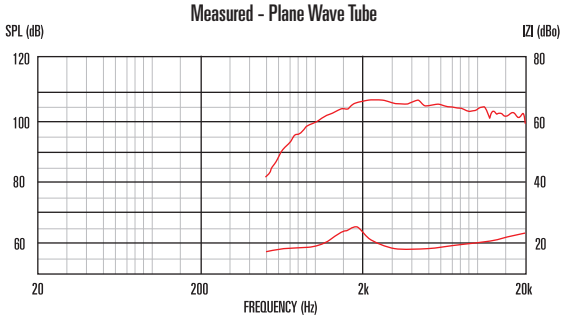
Features

- **1" exit lightweight and compact ferrite magnet compression driver with 1.4" copper clad aluminium voice coil**
- **20Wrms power handling (AES standard) and 106dB sensitivity**
- **35mm/1.38in screw attachment**
- **One piece PETP diaphragm and surround**
- **Finite Element Analysis (FEA) techniques used to optimise both magnetic and acoustic design**
- **Suitable for 2-way and 3-way systems**

Frequency Response and Impedance Curves



Measured - Plane Wave Tube



Measured - Exponential Horn 90° x 40° radiation pattern

1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.

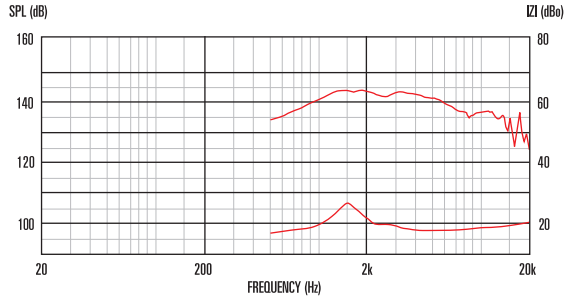
CDX1-1010/1020

Ferrite magnet compression driver

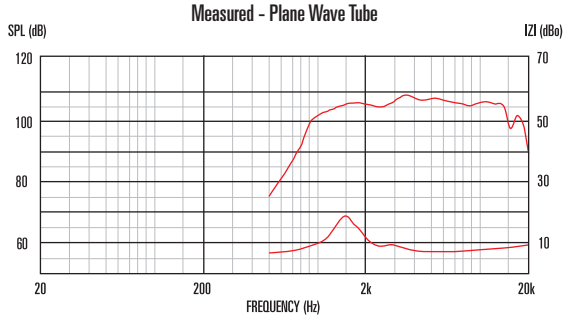
Features

- Very lightweight, low-profile ferrite magnet compression driver
- 15Wrms (AES standard) power handling and 107dB sensitivity, 1500-20,000Hz frequency range
- Finite Element Analysis (FEA) techniques used to optimise both magnetic and acoustic design
- Ideal for entry-level two-way and three-way sound reinforcement cabinets
- CDX1-1020 supplied with partial phase plug assembly (for applications where outer phase plug and horn form single moulding as part of front baffle)

Frequency Response and Impedance Curves



Measured - Plane Wave Tube



Measured - Exponential Horn 90° x 40° radiation pattern

1. Tested for two hours on plane wave tube using continuous band-limited pink noise as per AES standard. Power calculated on minimum impedance.
2. Measured on axis at 1W/1m, using typical horn, in 2π anechoic environment.

General Specifications

Power rating[1]	15Wrms
Nominal impedance	8Ω
Frequency range	1500-20,000Hz
Sensitivity[2]	107dB
Recommended min. crossover (12dB/oct)	2200Hz
Voice coil diameter	25mm/1.0in
Voice coil material	Copper clad aluminium
Magnet type	Ferrite
Diaphragm and surround material	PETP film

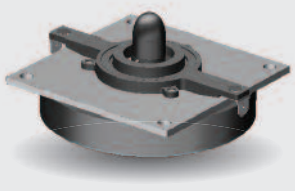
Mounting Information

Width	90mm/3.54in
Depth CDX1-1010	52.8mm/2.08in
Depth CDX1-1020	51.7mm/2.04in
Weight CDX1-1010	0.83kg/1.8lb
Weight CDX1-1020	0.6kg/1.3lb
Fitting CDX1-1010	Screw (35mm/1.38in diameter)
Fitting CDX1-1020	Flange (4x5.5mm holes at 72mm/2.8in)
Throat exit	25mm/1.0in

Packed Dimensions & Weight

Multi pack (16) size W x D x H	480mm x 480mm x 75mm /18.9in x 18.9in x 2.95in
Multi pack (16) weight	15kg/33lb

CDX1-1010 fitting



CDX1-1020 fitting

LF Cast Chassis Neo

Neodymium magnet cast aluminium chassis drivers

Range Overview

With a weight-optimised, neodymium magnet motor assembly and cast aluminium chassis, the Celestion NTR range of bass and mid-bass drivers extends from compact 6.5" models to a very high power 21" subwoofer, and is targeted at medium and large scale sound reinforcement systems and tour sound applications.

Alongside a particularly high power to weight ratio, the NTR's compact chassis designs are well suited to close mounting in arrays. The range also incorporates larger format speakers for bass and sub-bass applications.

Like all Celestion professional loudspeakers, NTR drivers are designed with extensive use of advanced FEA modelling techniques to achieve a number of important performance advantages.

LF Neo Range

	Nominal Diameter	Power Rating*	Impedance	Sensitivity	Frequency Range	Voice Coil Diameter	Unit Weight
NTR21-5010JD	530mm/21in	1600Wrms	8Ω	98dB	30-3000Hz	125mm/5in	12.8kg/28.2lb
NTR15-3018E	381mm/15in	400Wrms	8Ω	98dB	30-3000Hz	75mm/3in	4.0kg/8.8lb
NTR12-3018D	305mm/12in	350Wrms	8Ω	98dB	50-4000Hz	75mm/3in	2.6kg/5.7lb
NTR10-2520E	254mm/10in	250Wrms	8Ω	96dB	50-3000Hz	64mm/2.5in	2.2kg/4.89lb
NTR10-2520D	254mm/10in	250Wrms	8Ω	96dB	55-3500Hz	64mm/2.5in	2.2kg/4.89lb
NTR08-2011D	203mm/8in	200Wrms	8/16Ω	92dB	70-6000Hz	50mm/2in	1.52kg/3.34lb
NTR08-2009D	203mm/8in	200Wrms	8/16Ω	94.5dB	70-5000Hz	50mm/2in	2.8kg/6.16lb
NTR06-1705D	165mm/6.5in	150Wrms	8/16Ω	90dB	70-7000Hz	45mm/1.75in	0.95kg/2.09lb
NTR06-1705B	165mm/6.5in	150Wrms	8Ω	95dB	150-7000Hz	45mm/1.75in	0.85kg/1.87lb

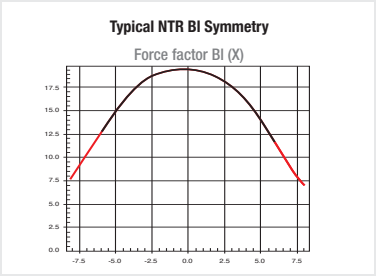
*AES Standard

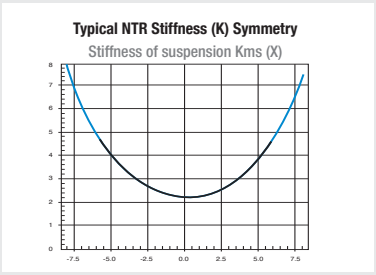
Key Technologies

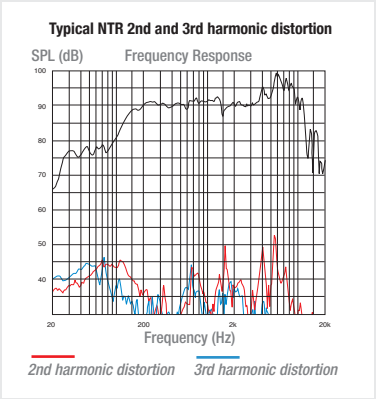
With particular focus on linear excursion via Finite Element Analysis (FEA) optimised suspension geometry and magnet topology, NTR provides application-specific control delivering greater low frequency output, significantly reduced distortion and increased longevity.

In addition to BI and stiffness (K) symmetry, NTR also achieves low thermal compression and distortion through intelligent heat management. This is achieved by smart chassis design combined with vented magnet assemblies to dissipate heat quickly. Features also include:

- **High power to weight ratio**
- **High temperature, 'Inside/Outside' voice coils for further thermal control**
- **Smaller format units feature compact chassis designs for close coupling**
- **Up to 21" diameter speakers available for very high power sub-bass performance**
- **Rigid cast aluminium chassis for maximum mechanical integrity**
- **Double suspensions deliver extra excursion control**

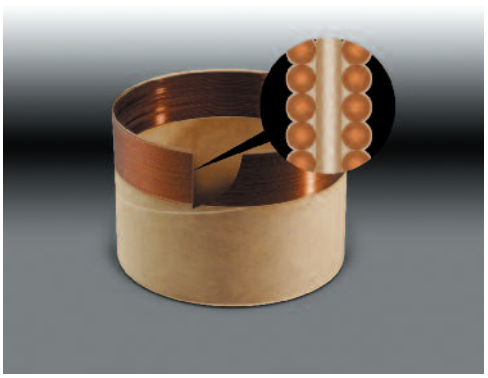






Advanced heat dispersion system

Smart chassis and magnet assembly design increases cooling efficiency



Voice coil wound 'Inside/Outside' for more effective cooling

CELESTION

NTR21-5010JD

Neodymium magnet cast aluminium chassis driver

General Specifications

Nominal diameter	530mm/21in
Power rating[1]	1600Wrms
Nominal impedance	8Ω
Sensitivity[2]	98dB
Frequency range	30-3000Hz
Voice coil diameter	125mm/5in
Chassis type	Cast aluminium
Magnet type	Neodymium
Coil material	Round copper
Former material	Glass fibre
Cone material	Carbon fibre loaded paper
Surround material	Cloth-sealed
Suspension	Double
Xmax[3]	9mm/0.35in
Gap depth	12mm/0.47in
Voice coil winding width	30mm/1.18in

Small Signal Parameters[4]

D	0.46m/18.11in
Fs	30.2Hz
Mms	318.85g/11.26oz
Mmd	280.52g/9.9oz
Qms	5.231
Qes	0.309
Qts	0.291
Re	5.36Ω
Vas	341.43lt/12.05ft^3
Bl	32.93Tm
Cms	0.087mm/N
Rms	11.55kg/s
Le (at 1kHz)	2.063mH

Mounting Information

Overall diameter	550mm/21.65in
Overall depth	254mm/10in
Cut-out diameter	492mm/19.37in
Mounting slot dimensions	12.5mm x 8.5mm/0.49in x 0.33in
Number of mounting slots	8
Mounting slot PCD range	520-528mm/20.5-20.8in
Unit weight	12.8kg/28.2lb

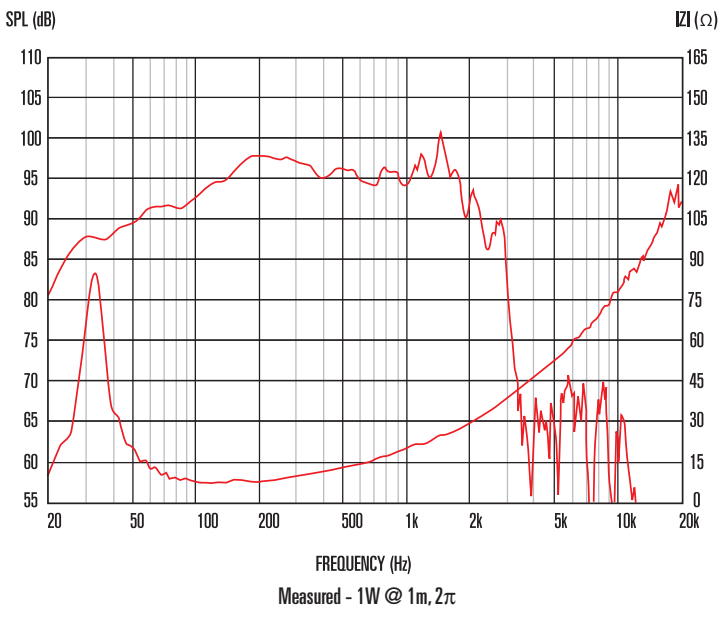
Packed Dimensions & Weight

Single pack size W x D x H	575mm x 575mm x 280mm /22.6in x 22.6in x11.0in
Single pack weight	13.2kg/29lb

Features

- **21" neodymium subwoofer offers 1600Wrms (AES standard) power handling and 98dB sensitivity**
- **5" high temperature Inside/Outside voice coil efficiently dissipates heat, preventing sensitivity loss through thermal compression**
- **Double suspension and a "multi-roll" surround provide exceptional linearity at extremes of cone excursion**
- **Rigid lightweight carbon fibre loaded cone delivers improved performance and faster response**
- **Intelligent heat management in both chassis and magnet assembly design further minimizes distortion**

Frequency Response and Impedance Curves



Measured - 1W @ 1m, 2π

1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.
3. Xmax derived from: (voice coil winding width-gap depth)/2.
4. Small signal parameters measured after unit subjected to pre-conditioning signal.

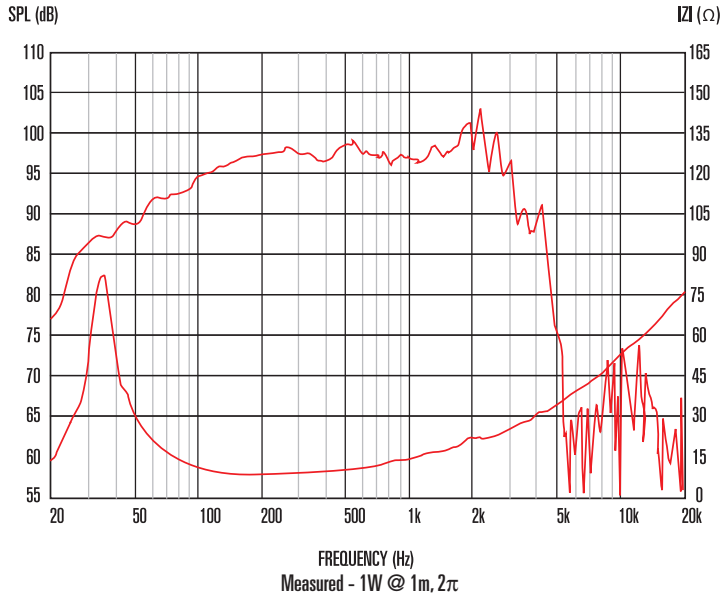
NTR15-3018E

Neodymium magnet cast aluminium chassis driver

Features

- **15" neodymium woofer offers 450Wrms (AES standard) power handling and 98dB sensitivity**
- **3" edgewound voice coil for higher efficiency and excellent distortion control**
- **"M-Roll" surround with Flexirol™ technology providing progressive excursion control, yielding a smooth response even at extremes of frequency range**
- **Extremely lightweight design combined with a highly efficient magnet assembly results in exceptional power-to-weight ratio**
- **Intelligent heat management in both chassis and magnet assembly design further minimizes distortion**

Frequency Response and Impedance Curves



1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.
3. Xmax derived from: (voice coil winding width-gap depth)/2.
4. Small signal parameters measured after unit subjected to pre-conditioning signal.

General Specifications

Nominal diameter	381mm/15in
Power rating[1]	450Wrms
Nominal impedance	8Ω
Sensitivity[2]	98dB
Frequency range	30-3000Hz
Voice coil diameter	75mm/3in
Chassis type	Cast aluminium
Magnet type	Neodymium
Coil material	Flat copper
Former material	Glass fibre
Cone material	Glass loaded paper with weather-resistant coating
Surround material	Cloth-sealed
Suspension	Single
Xmax[3]	5mm/0.20in
Gap depth	10mm/0.39in
Voice coil winding width	20mm/0.79in

Small Signal Parameters[4]

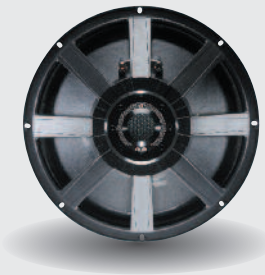
D	0.33m/12.9in
Fs	34.6Hz
Mms	97.24g/3.43oz
Mmd	83.09g/2.93oz
Qms	3.856
Qes	0.262
Qts	0.246
Re	5.58Ω
Vas	225.71lt/7.97ft^3
Bl	21.2Tm
Cms	0.218mm/N
Rms	5.477kg/s
Le (at 1kHz)	1.18mH

Mounting Information

Overall diameter	386mm/15.2in
Overall depth	162mm/6.38in
Cut-out diameter	351mm/13.8in
Mounting slot dimensions	10mm x 7mm/0.4in x 0.27in
Number of mounting slots	8
Mounting slot PCD range	367-373mm/14.4-14.7in
Unit weight	4.0kg/8.8lb

Packed Dimensions & Weight

Single pack size W x D x H	435mm x 435mm x 200mm /17.1in x 17.1in x 7.9in
Single pack weight	5.0kg/11lb
Multi pack (36) size W x D x H	1200mm x 1000mm x 980mm /47.2in x 39.4in x 38.6in
Multi pack (36) weight	166kg/365lb



CELESTION

NTR12-3018D

Neodymium magnet cast aluminium chassis driver

General Specifications

Nominal diameter	305mm/12in
Power rating[1]	350Wrms
Nominal impedance	8Ω
Sensitivity[2]	98dB
Frequency range	50-4000Hz
Voice coil diameter	75mm/3in
Chassis type	Cast aluminium
Magnet type	Neodymium
Coil material	Round copper
Former material	Glass fibre
Cone material	Kevlar loaded paper
Surround material	Cloth sealed
Suspension	Single
Xmax[3]	4mm/0.16in
Gap depth	8mm/0.32in
Voice coil winding width	16mm/0.63in

Small Signal Parameters[4]

D	0.26m/10.24in
Fs	58.7Hz
Mms	57.21g/2.02oz
Mmd	50.28g/1.78oz
Qms	2.514
Qes	0.326
Qts	0.288
Re	5.69Ω
Vas	51.21lt/1.808ft^3
Bl	19.54Tm
Cms	0.128mm/N
Rms	8.397kg/s
Le (at 1kHz)	0.78mH

Mounting Information

Overall diameter	318mm/12.5in
Overall depth	137mm/5.39in
Cut-out diameter	286mm/11.26in
Mounting slot dimensions	9.5mm x 6.5mm/0.37in x 0.26in
Number of mounting slots	8
Mounting PCD range	298-304mm/11.7-12.0in
Unit weight	2.6kg/5.7lb

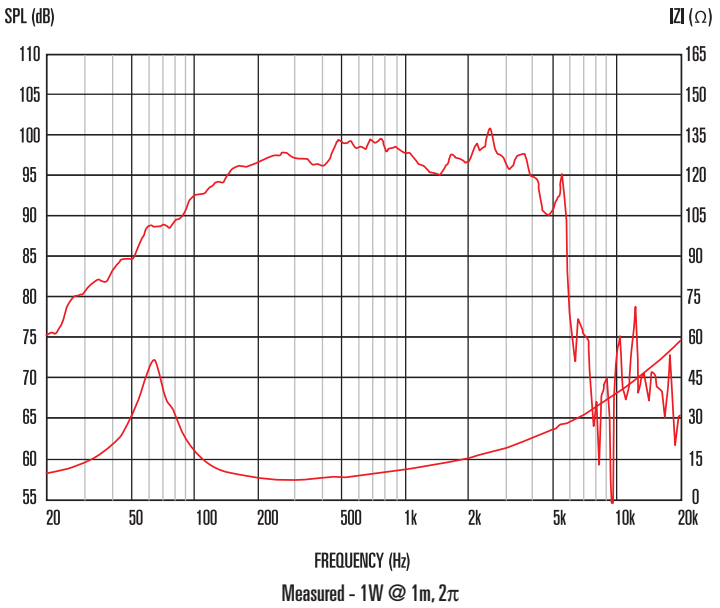
Packed Dimensions & Weight

Single pack size W x D x H	350mm x 350mm x 185mm /13.8in x 13.8in x 7.3in
Single pack weight	3kg/6.6lb
Multi pack (60) size	1080mm x 980mm x 880mm /42.5in x 38.6in x 34.6in
Multi pack (60) weight	178kg/392lb

Features

- **12" neodymium woofer offers 350Wrms (AES standard) power handling and 98dB sensitivity**
- **3" high temperature Inside/Outside voice coil efficiently dissipates heat, preventing sensitivity loss through thermal compression**
- **"M-roll" surround provides progressive excursion control, yielding a smooth response even at extremes of frequency range**
- **Extremely lightweight design combined with a highly efficient magnet assembly results in exceptional power-to-weight ratio**
- **Intelligent heat management in both chassis and magnet assembly design further minimises distortion**

Frequency Response and Impedance Curves



Measured - 1W @ 1m, 2π

1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.
3. Xmax derived from: (voice coil winding width-gap depth)/2.
4. Small signal parameters measured after unit subjected to pre-conditioning signal.

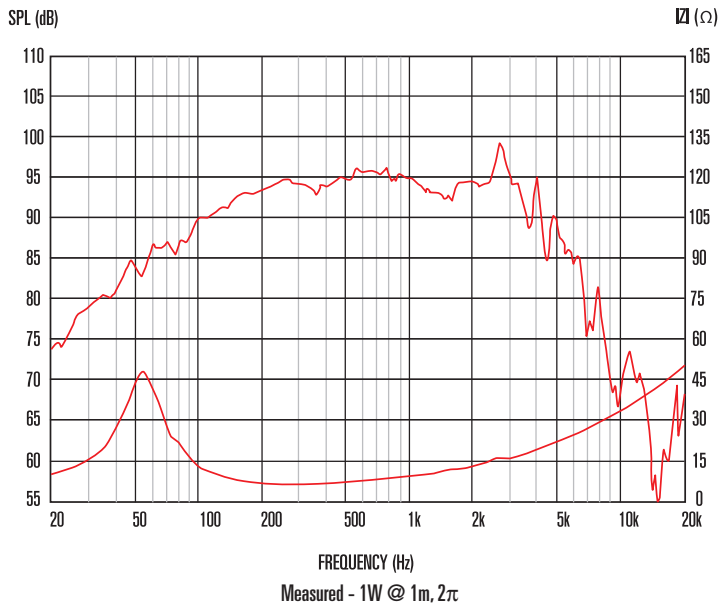
NTR10-2520E

Neodymium magnet cast aluminium chassis driver

Features

- **10" neodymium mid/bass unit offers 250Wrms (AES standard) power handling and 96dB sensitivity**
- **2.5" high temperature Inside/Outside voice coil efficiently dissipates heat, preventing sensitivity loss through thermal compression**
- **"M-Roll" surround provides progressive excursion control, yielding a smooth response even at extremes of frequency range**
- **Extremely lightweight design combined with a highly efficient magnet assembly results in exceptional power-to-weight ratio**
- **Intelligent heat management in both chassis and magnet assembly design further minimises distortion**

Frequency Response and Impedance Curves



Measured - 1W @ 1m, 2π

1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.
3. Xmax derived from: (voice coil winding width-gap depth)/2.
4. Small signal parameters measured after unit subjected to pre-conditioning signal.

General Specifications

Nominal diameter	254mm/10in
Power rating[1]	250Wrms
Nominal impedance	8Ω
Sensitivity[2]	96dB
Frequency range	50-3000Hz
Voice coil diameter	64mm/2.5in
Chassis type	Cast aluminium
Magnet type	Neodymium
Coil material	Round copper
Former material	Glass fibre
Cone material	Kevlar loaded paper
Surround material	Cloth-sealed
Suspension	Single
Xmax[3]	5mm/0.20in
Gap depth	8mm/0.32in
Voice coil winding width	17.5mm/0.69in

Small Signal Parameters[4]

D	0.21m/8.27in
Fs	52.4Hz
Mms	46.43g/1.64oz
Mmd	42.79g/1.51oz
Qms	3.008
Qes	0.334
Qts	0.301
Re	5.63Ω
Vas	33.78lt/1.192ft^3
Bl	16.05Tm
Cms	0.199mm/N
Rms	5.078kg/s
Le (at 1kHz)	0.71mH

Mounting Information

Overall diameter	260mm/10.24in
Overall depth	113mm/4.45in
Cut-out diameter	234mm/9.21in
Mounting slot dimensions	7.5mm x 6.5mm/0.3in x 0.26in
Number of mounting slots	4
Mounting slot PCD range	244-247mm/9.6-9.7in
Unit weight	2.2kg/4.89lb

Packed Dimensions & Weight

Single pack size W x D x H	305mm x 305mm x 150mm /12.0in x 12.0in x 5.9in
Single pack weight	2.5kg/5.5lb
Multipack (96) size W x D x H	1500mm x 1000mm x 980mm /59.1in x 39.4in x 38.8in
Multipack (96) weight	235kg/518lb

CELESTION

NTR10-2520D

Neodymium magnet cast aluminium chassis driver

General Specifications

Nominal diameter	254mm/10in
Power rating[1]	250Wrms
Nominal impedance	8Ω
Sensitivity[2]	96dB
Frequency range	55-3500Hz
Voice coil diameter	64mm/2.5in
Chassis type	Cast aluminium
Magnet type	Neodymium
Coil material	Copper clad aluminium
Former material	Glass fibre
Cone material	Kevlar loaded paper
Surround material	Cloth sealed
Suspension	Single
Xmax[3]	4mm/0.16in
Gap Depth	8mm/0.32in
Voice coil winding width	16mm/0.63in

Small Signal Parameters[4]

D	0.21m/8.27in
Fs	65.0Hz
Mms	37.46g/1.32oz
Mmd	33.82g/1.19oz
Qms	2.568
Qes	0.362
Qts	0.317
Re	5.88Ω
Vas	36.8lt/1.3ft^3
Bl	14.94Tm
Cms	0.217mm/N
Rms	5.12kg/s
Le (at 1kHz)	0.56mH

Mounting Information

Overall diameter	260mm/10.24in
Overall depth	113mm/4.45in
Cut-out diameter	234mm/9.21in
Mounting slot dimensions	7.5mm x 6.5mm/0.3in x 0.26in
Number of mounting slots	4
Mounting PCD range	244-247mm/9.6-9.7in
Unit weight	2.2kg/4.89lb

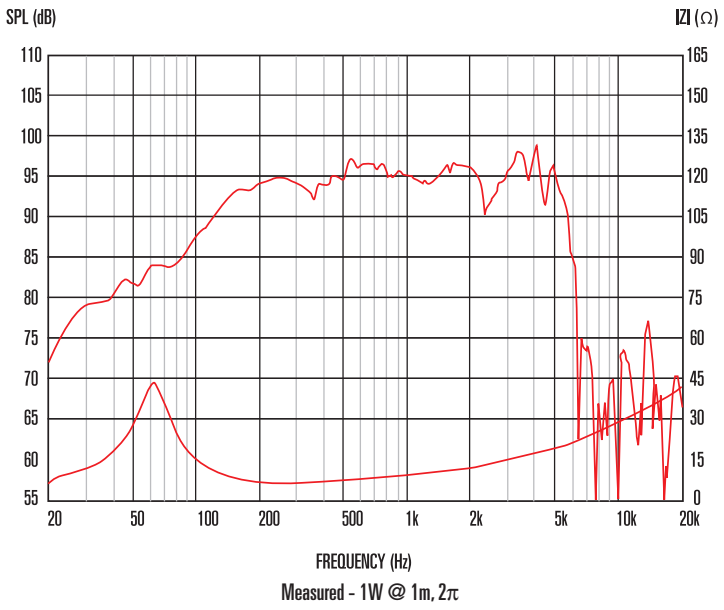
Packed Dimensions & Weight

Single pack size W x D x H	305mm x 305mm x 150mm /12.0in x 12.0in x 5.9in
Single pack weight	2.5kg/5.5lb
Multi pack (96) size W x D x H	1080mm x 880mm x 840mm /42.5in x 34.6in x 33.1in
Multi pack (96) weight	235kg/518lb

Features

- **10" neodymium mid/bass unit offers 250Wrms (AES standard) power handling and 96dB sensitivity**
- **2.5" high temperature Inside/Outside voice coil efficiently dissipates heat, preventing sensitivity loss through thermal compression**
- **"M-roll" surround provides progressive excursion control, yielding a smooth response even at extremes of frequency range**
- **Extremely lightweight design combined with a highly efficient magnet assembly results in exceptional power-to-weight ratio**
- **Intelligent heat management in both chassis and magnet assembly design further minimises distortion**

Frequency Response and Impedance Curves



Measured - 1W @ 1m, 2π

1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.
3. Xmax derived from: (voice coil winding width-gap depth)/2.
4. Small signal parameters measured after unit subjected to pre-conditioning signal.

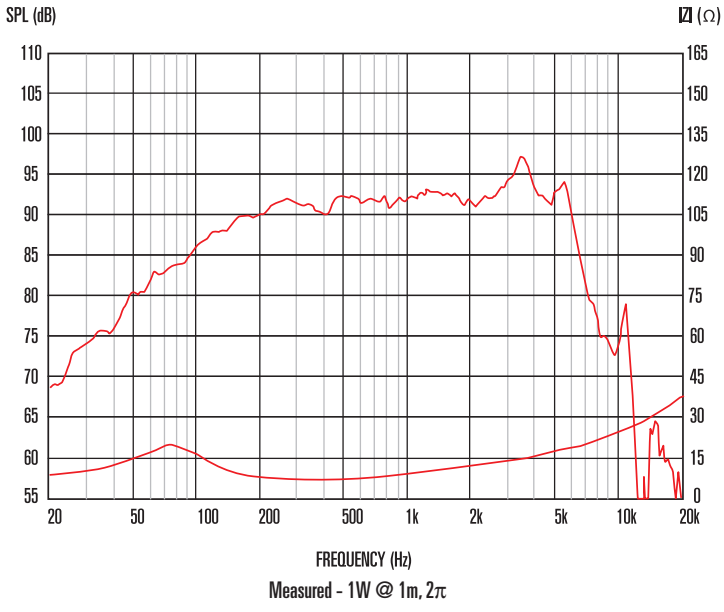
NTR08-2011D

Neodymium magnet cast aluminium chassis driver

Features

- **8" neodymium magnet driver providing 200Wrms (AES standard) power handling and 92dB sensitivity**
- **2" high temperature copper voice coil**
- **Suitable for line array applications, utilizing a space-efficient octagonal chassis profile**
- **Optimized flux distribution in magnet assembly provides low harmonic distortion**
- **"M-Roll" surround provides progressive excursion control, generating a smooth frequency response**
- **Intelligent heat management in both chassis and magnet assembly design offers reduced thermal compression**

Frequency Response and Impedance Curves



Measured - 1W @ 1m, 2π

1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.
3. Xmax derived from: (voice coil winding width-gap depth)/2.
4. Small signal parameters measured after unit subjected to pre-conditioning signal.

Also available in 16Ω, data available on request

General Specifications

Nominal diameter	203mm/8in
Power rating[1]	200Wrms
Nominal impedance	8Ω
Sensitivity[2]	92dB
Frequency range	70-6000Hz
Voice coil diameter	50mm/2in
Chassis type	Cast aluminium
Magnet type	Neodymium
Coil material	Round copper
Former material	Polyimide
Cone material	Kevlar loaded paper with weather-resistant coating
Surround material	Cloth-sealed
Suspension	Single
Xmax[3]	4mm/0.16in
Gap depth	8mm/0.32in
Voice coil winding width	16mm/0.63in

Small Signal Parameters[4]

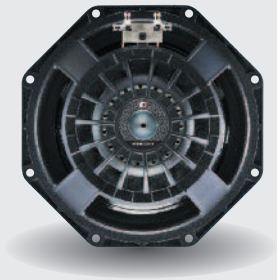
D	0.17m/6.69in
Fs	80.3Hz
Mms	25.33g/0.89oz
Mmd	23.39g/0.826oz
Qms	1.33
Qes	0.59
Qts	0.41
Re	5.85Ω
Vas	11.3lt/0.399ft^3
Bl	11.22Tm
Cms	0.16mm/N
Rms	9.6kg/s
Le (at 1kHz)	0.59mH

Mounting Information

Overall diameter	225mm/8.8in
Overall depth	100mm/4.16in
Cut-out diameter	187mm/7.4in
Mounting slot dimensions	ø6.5mm/0.26in
Number of mounting slots	8
Mounting slot PCD/width across flats	210/8.3
Unit weight	1.52kg/3.34lb

Packed Dimensions & Weight

Single pack size W x D x H	235mm x 235mm x 140mm /9.2in x 9.2in x 5.5in
Single pack weight	1.75kg/3.85lb
Multipack (8) size W x D x H	450mm x 380mm x 260mm /17.7in x 15.0in x 10.2in
Multipack (8) weight	16kg/35.2lb



CELESTION

NTR08-2009D

Neodymium magnet cast aluminium chassis driver

General Specifications

Nominal diameter	203mm/8in
Power rating[1]	200Wrms
Nominal impedance	8Ω
Sensitivity[2]	94.5dB
Frequency range	70-5000Hz
Voice coil diameter	50mm/2in
Chassis type	Cast aluminium
Magnet type	Neodymium
Coil material	Flat copper
Former material	Glass fibre
Cone material	Kevlar loaded paper with weather-resistant coating
Surround material	Cloth-sealed
Suspension	Single
Xmax[3]	4mm/0.16in
Gap depth	10mm/0.39in
Voice coil winding width	18mm/0.67in

Small Signal Parameters[4]

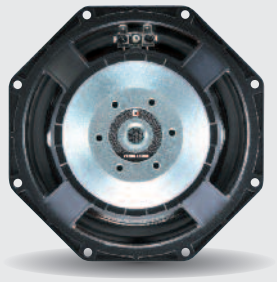
D	0.17m/6.69in
Fs	64.3Hz
Mms	32.21g/1.14oz
Mmd	30.27g/1.07oz
Qms	2.063
Qes	0.219
Qts	0.198
Re	5.83Ω
Vas	13.87lt/0.49ft^3
Bl	18.56Tm
Cms	0.19mm/N
Rms	6.3kg/s
Le (at 1kHz)	0.51mH

Mounting Information

Overall diameter	225mm/8.8in
Overall depth	100mm/4.16in
Cut-out diameter	187mm/7.4in
Mounting slot dimensions	ø6.5mm/0.26in
Number of mounting slots	8
Mounting slot PCD/width across flats	210/8.3
Unit weight	2.8kg/6.16lb

Packed Dimensions & Weight

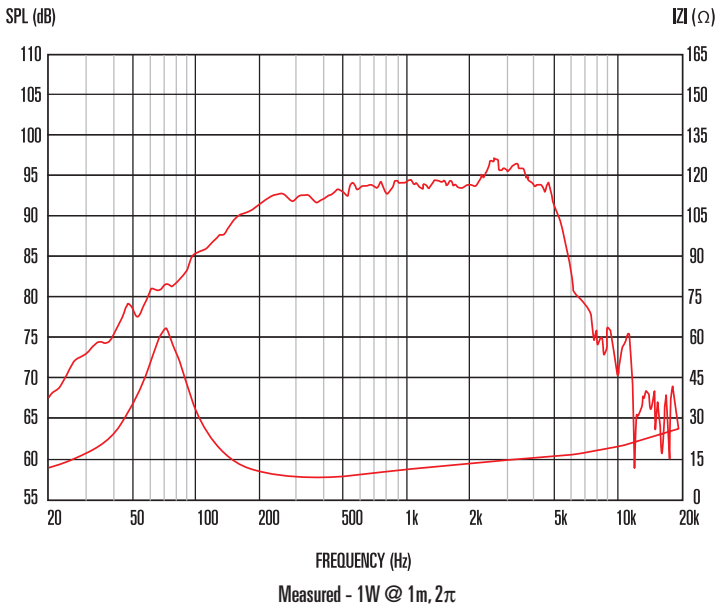
Multipack (8) size W x D x H	450mm x 380mm x 260mm /17.7in x 15.0in x 10.2in
Multipack (8) weight	24kg/52.8lb



Features

- **8" neodymium magnet driver providing 200Wrms (AES standard) power handling and 94.5dB sensitivity**
- **2" edgewound copper voice coil**
- **Suitable for line array applications, utilizing a space-efficient octagonal chassis profile**
- **Copper sleeved pole reduces inductive rise for improved HF performance**
- **"M-roll" surround provides progressive excursion control, generating a smooth frequency response**
- **Intelligent heat management in both chassis and magnet assembly design offers reduced thermal compression**

Frequency Response and Impedance Curves



Measured - 1W @ 1m, 2π

1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.
3. Xmax derived from: (voice coil winding width-gap depth)/2.
4. Small signal parameters measured after unit subjected to pre-conditioning signal.

Also available in 16Ω, data available on request

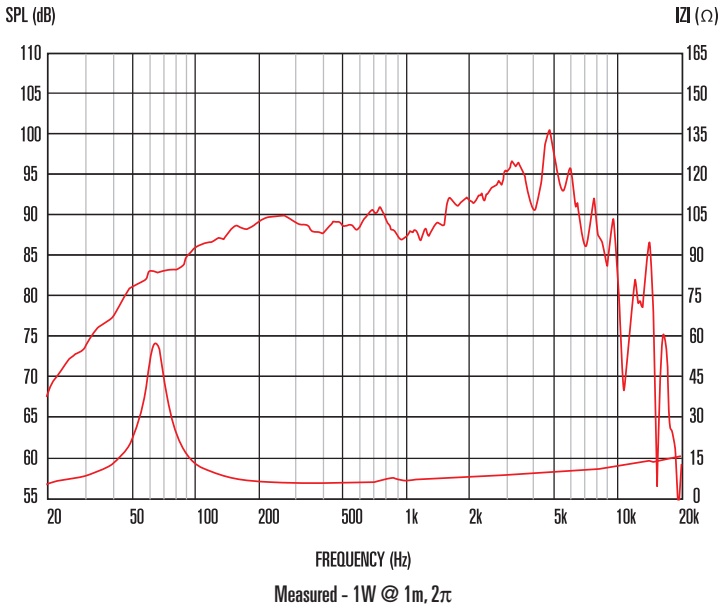
NTR06-1705D

Neodymium magnet cast aluminium chassis driver

Features

- **6.5" neodymium magnet woofer providing 150Wrms (AES standard) power handling and 90dB sensitivity**
- **1.75" high temperature copper clad aluminium voice coil**
- **Optimized flux distribution in magnet assembly provides low harmonic distortion**
- **Half-roll elastomer surround provides greater excursion and improved modal distribution**
- **Intelligent heat management in both chassis and magnet assembly design offers reduced thermal compression**
- **Copper sleeved pole reduces inductive rise for improved HF performance**
- **Space efficient chassis profile**

Frequency Response and Impedance Curves



Measured - 1W @ 1m, 2π

1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.
3. Xmax derived from: (voice coil winding width-gap depth)/2.
4. Small signal parameters measured after unit subjected to pre-conditioning signal.

Also available in 16Ω, data available on request

General Specifications

Nominal diameter	165mm/6.5in
Power rating[1]	150Wrms
Nominal impedance	8Ω
Sensitivity[2]	90dB
Frequency range	70-7000Hz
Voice coil diameter	45mm/1.75in
Chassis type	Cast aluminium
Magnet type	Neodymium
Coil material	Copper clad aluminium
Former material	Polyimide
Cone material	Kevlar loaded paper
Surround material	Elastomer
Suspension	Single
Xmax[3]	4.5mm/0.18in
Gap depth	6mm/0.24in
Voice coil winding width	15mm/0.63in

Small Signal Parameters[4]

D	0.13m/5.12in
Fs	59.8Hz
Mms	17.52g/0.618oz
Mmd	16.66g/0.588oz
Qms	8.240
Qes	0.446
Qts	0.423
Re	5.22Ω
Vas	10.07lt/0.38ft^3
Bl	8.79Tm
Cms	0.404mm/N
Rms	0.799kg/s
Le (at 1kHz)	0.17mH

Mounting Information

Overall diameter	Max 189mm/7.44in
	Min 162mm/6.38in
Overall depth	87mm/3.43in
Cut-out diameter	150mm/5.9in
Mounting slot dimensions	6.5mm x 5.5mm/0.26in x 0.22in
Number of mounting slots	4
Mounting slot PCD range	173.5mm/6.83in
Unit weight	0.95kg/2.09lb

Packed Dimensions & Weight

Single pack size W x D x H	190mm x 190mm x 110mm
	/7.5in x 7.5in x 4.3in
Single pack weight	1.1kg/2.4lb
Multi pack (120) size W x D x H	1070mm x 850mm x 860mm
	/42.1in x 33.5in x 33.9in
Multi pack (120) weight	140kg/308lb

CELESTION

NTR06-1705B

Neodymium magnet cast aluminium chassis driver

General Specifications

Nominal diameter	165mm/6.5in
Power rating[1]	150Wrms
Nominal impedance	8Ω
Sensitivity[2]	95dB
Frequency range	150-7000Hz
Voice coil diameter	45mm/1.75in
Chassis type	Cast aluminium
Magnet type	Neodymium
Coil material	Copper clad aluminium
Former material	Polyimide
Cone material	Kevlar loaded paper
Surround material	Cloth-sealed
Suspension	Single
Xmax[3]	2.5mm/0.098in
Gap depth	6mm/0.24in
Voice coil winding width	11mm/0.43in

Small Signal Parameters[4]

D	0.13m/5.12in
Fs	109.6Hz
Mms	12.934g/0.457oz
Mmd	12.069g/0.422oz
Qms	2.632
Qes	0.527
Qts	0.439
Re	5.95Ω
Vas	4.06lt/0.14ft^3
Bl	10.03Tm
Cms	0.163mm/N
Rms	3.385kg/s
Le (at 1kHz)	0.24mH

Mounting Information

Overall diameter	Max 189mm/7.44in
	Min 162mm/6.38in
Overall depth	71mm/2.79in
Cut-out diameter	150mm/5.9in
Mounting slot dimensions	6.5mm x 5.5mm/0.26in x 0.22in
Number of mounting slots	4
Mounting slot PCD range	173.5mm/6.83in
Unit weight	0.85kg/1.87lb

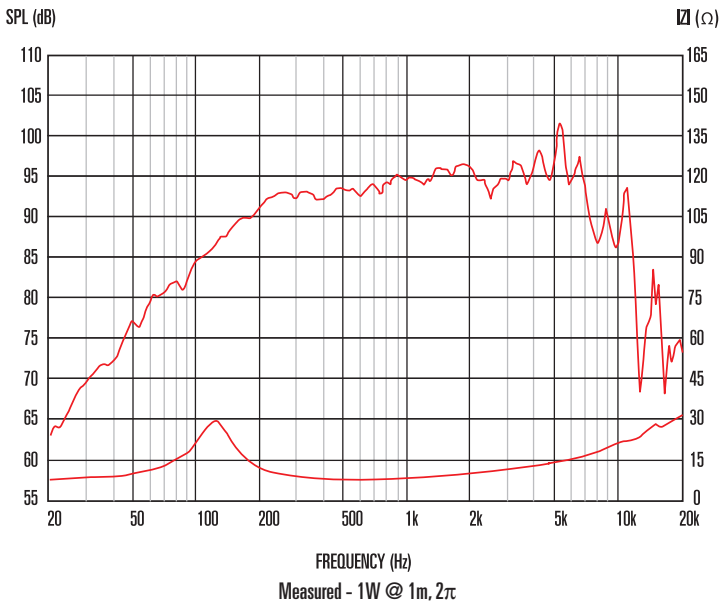
Packed Dimensions & Weight

Single pack size W x D x H	190mm x 190mm x 110mm
	/7.5in x 7.5in x 4.3in
Single pack weight	1.0kg/2.2lb
Multipack (140) size W x D x H	1070mm x 850mm x 860mm
	/42.1in x 33.5in x 33.9in
Multipack (140) weight	140kg/308lb

Features

- **6.5" neodymium magnet mid-range driver providing 150Wrms (AES standard) power handling and 95dB sensitivity**
- **1.75" high temperature copper clad aluminium voice coil**
- **Suitable for line array applications, utilising a space efficient chassis profile**
- **FEA optimised flux distribution in the magnet assembly provides low harmonic distortion**
- **"M-Roll" surround provides progressive excursion control, generating a smooth frequency response**
- **Intelligent heat management in both chassis and magnet assembly design offers reduced thermal distortion**

Frequency Response and Impedance Curves



Measured - 1W @ 1m, 2π

1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.
3. Xmax derived from: (voice coil winding width-gap depth)/2.
4. Small signal parameters measured after unit subjected to pre-conditioning signal.

LF Cast Chassis Ferrite

Ferrite magnet cast aluminium chassis drivers

Range Overview

With a range extending from a lightweight, space-efficient 6" mid-range unit to heavy duty 18" sub-bass drivers, Celestion's Cast Aluminium LF Ferrite loudspeakers are purpose designed specifically for applications such as reflex, scoop, band pass and horn-loaded subwoofers, as well as for multi-way systems.

Already a favourite with system builders who require uncompromising LF performance, Celestion FTR drivers are characterised by high power handling, low distortion and linear excursion.

In 2012 the Cast Aluminium, Ferrite range was expanded to include the new CF Series. Building on many of the innovations first developed for FTR, CF speakers offer even greater levels of efficiency and power handling. The class-leading CF18VJD incorporates a 5" voice coil to deliver a colossal 1600Wrms (AES Standard) power handling.

LF Ferrite Range

	Nominal Diameter	Power Rating*	Impedance	Sensitivity	Frequency Range	Voice Coil Diameter	Unit Weight
CF18VJD	457mm/18in	1600Wrms	8Ω	97dB	25-1500Hz	125mm/5in	23kg/850.6lb
CF1840JD	457mm/18in	1000Wrms	8Ω	96dB	30-2500Hz	100mm/4in	11.6kg/25.5lb
CF1830E	457mm/18in	700Wrms	8Ω	94dB	30-2500Hz	75mm/3in	8.12kg/17.9lb
CF1025C	254mm/10in	300Wrms	8Ω	99dB	60-5000Hz	64mm/2.5in	4.9kg/10.8lb
CF0617M	165mm/6.5in	200Wrms	8Ω	96dB	300-7000Hz	45mm/1.75in	1.9kg/4.2lb
FTR18-4080HDX	457mm/18in	1000Wrms	8Ω	95dB	30-2500Hz	100mm/4in	9.8kg/21.6lb
FTR18-4080FD	457mm/18in	1000Wrms	8Ω	97dB	30-2500Hz	100mm/4in	9.8kg/21.6lb
FTR18-4080F	457mm/18in	600Wrms	8Ω	97dB	30-3000Hz	100mm/4in	9.7kg/21.4lb
FTR15-4080HDX	381mm/15in	1000Wrms	8Ω	96dB	40-2500Hz	100mm/4in	9.7kg/21.3lb
FTR15-4080HD	381mm/15in	1000Wrms	8Ω	95dB	35-2500Hz	100mm/4in	9.5kg/20.9lb
FTR15-4080FD	381mm/15in	1000Wrms	8Ω	97dB	35-2500Hz	100mm/4in	9.5kg/20.9lb
FTR15-4080F	381mm/15in	600Wrms	8Ω	97dB	35-3000Hz	100mm/4in	9.4kg/20.7lb
FTR15-3070E	381mm/15in	400Wrms	4/8Ω	97dB	40-4000Hz	75mm/3in	6.4kg/14.1lb
FTR15-3070C	381mm/15in	400Wrms	8Ω	99dB	40-4000Hz	75mm/3in	6.3kg/13.8lb
FTR12-4080HDX	305mm/12in	1000Wrms	8Ω	93dB	47-3000Hz	100mm/4in	9.6kg/21.1lb
FTR12-3070C	305mm/12in	350Wrms	8Ω	96dB	40-4000Hz	75mm/3in	6.3kg/13.9lb
FTR08-2011D	200mm/8in	200Wrms	8Ω	93dB	70-6000Hz	50mm/2in	3.65kg/8.0lb

*AES Standard

Key Technologies

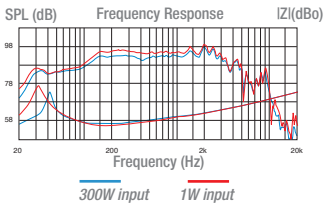
The addition of the flagship CF Series of LF speakers brings with it further innovations designed to deliver greater enhancements in performance. Balanced Airflow Venting (BAV) builds on Celestion's principles of smart chassis design for enhanced cooling. Strategically sized and positioned airflow channels are located in the magnet structure to produce a balanced airflow around the voice coil, rapidly taking heat away to mitigate thermal compression. This enables CF drivers to deliver impressive levels of power handling, without needing overly-massive magnet assemblies.

Demodulation rings substantially reduce both harmonic and intermodulation distortion associated with coil displacement. On the CF Series, the demod rings not only reduce flux modulation that occurs when the voice coil moves but also act to make the variation of system inductances more linear as input current varies.

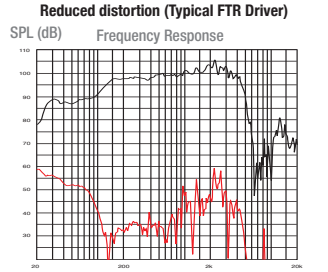
Celestion's ferrite magnet, cast chassis drivers combine optimised linear excursion with advanced heat management to achieve low distortion and a reliable, consistent performance. Innovations like Inside/Outside voice coils, which are wound on both sides of a rigid glass-fibre former deliver more rapid cooling.

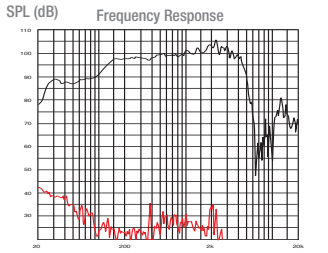
The lightweight, robust, cast aluminium chassis are designed to minimise reflections back to the cone, significantly reducing acoustic distortion, and an FEA optimised magnet topology ensures even flux distribution around the air gap. Double suspensions deliver extra excursion control.

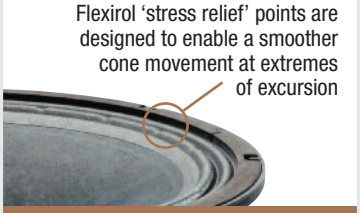
Reduced thermal compression (Typical FTR Driver)



Reduced distortion (Typical FTR Driver)

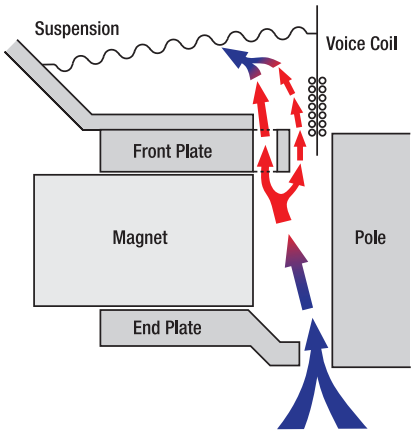


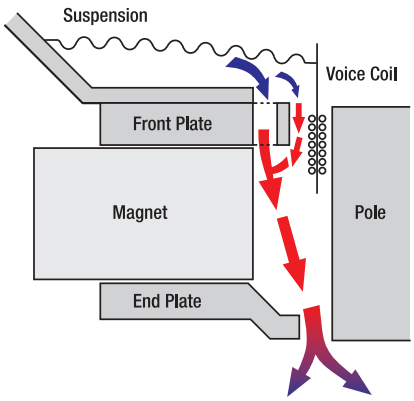




Flexirol™ Surround

Balanced Airflow Venting (BAV)





CF18VJD

Ferrite magnet cast aluminium chassis driver

General Specifications

Nominal diameter	457mm/18in
Power rating[1]	1600Wrms
Nominal impedance	8Ω
Sensitivity[2]	97dB
Frequency range	25Hz-1500Hz
Voice coil diameter	125mm/5in
Chassis type	Cast aluminium
Magnet type	Ferrite
Coil material	Round copper
Former material	Glass fibre
Cone material	Carbon and Kevlar loaded paper
Surround material	Cloth sealed
Suspension	Double
Xmax[3]	9mm/0.35in
Gap depth	12mm/0.47in
Voice coil winding width	30mm/1.18in

Small Signal Parameters[4]

D	0.38m/14.96in
Fs	34.3Hz
Mms	259.72g/9.16oz
Mmd	238.11g/8.39oz
Qms	5.152
Qes	0.360
Qts	0.336
Re	5.98Ω
Vas	150.58lt/5.32ft^3
Bl	30.52Tm
Cms	0.083mm/N
Rms	10.88kg/s
Le (at 1kHz)	1.48mH

Mounting Information

Diameter	462mm/18.19in
Overall depth	233mm/9.17in
Cut-out diameter	416mm/16.38in
Mounting slot dimensions	11mm x 7mm/0.43in x 0.28in
Number of mounting slots	8
Mounting PCD range	441-432mm/17.36-17.0in
Unit weight	23kg/50.6lb

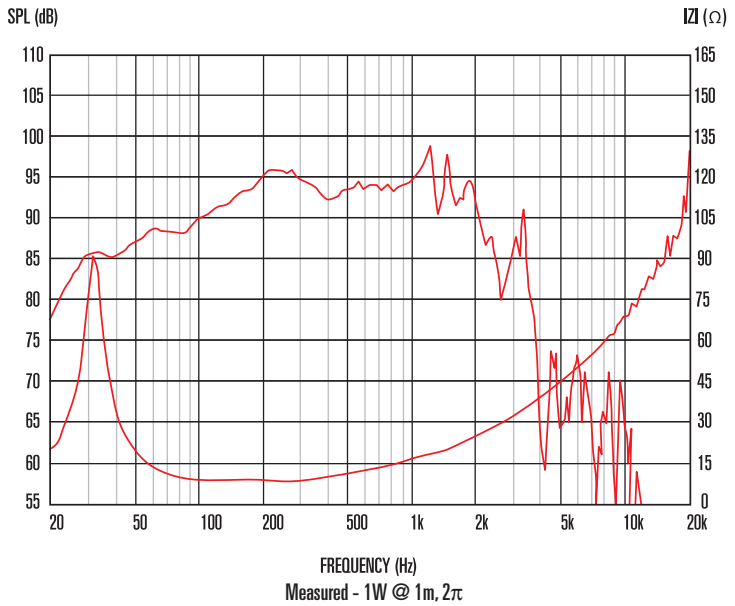
Packed Dimensions & Weight

Single pack size W x D x H	500mm x 500mm x 255mm /19.7in x 19.7in x 11in
Single pack weight	24kg/52.8lb

Features

- **18" ferrite magnet, cast aluminium chassis LF driver delivering 1600Wrms (AES Standard) power handling and 97dB sensitivity**
- **5" high temperature, dual layer, Inside/Outside voice coil for higher efficiency, preventing sensitivity loss through thermal compression**
- **FEA optimized magnet assembly and suspension deliver highly symmetrical cone movement, leading to exceptionally low harmonic distortion**
- **Vented front plate increases airflow to provide enhanced cooling**
- **Twin demodulation rings reduce flux modulation, minimizing electromagnetic distortion**
- **Double suspension and "multi-roll" surround provide exceptional linearity at extremes of cone excursion**

Frequency Response and Impedance Curves



1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.
3. Xmax derived from: (voice coil winding width-gap depth)/2.
4. Small signal parameters measured after unit subjected to pre-conditioning signal.

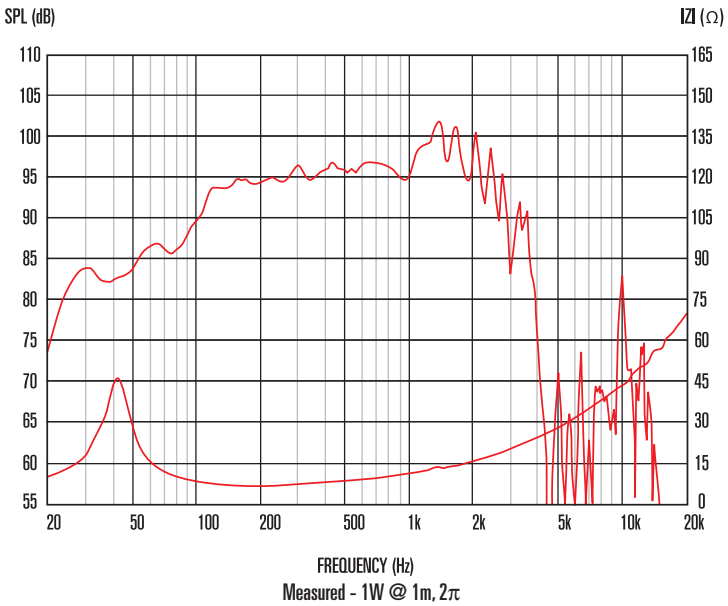
CF1840JD

Ferrite magnet cast aluminium chassis driver

Features

- 18" ferrite magnet, cast aluminium chassis LF driver delivering 1000Wrms (AES Standard) power handling and 98dB sensitivity
- 4" high temperature, dual layer, Inside/Outside voice coil for higher efficiency, preventing sensitivity loss through thermal compression
- FEA optimized magnet assembly and suspension deliver highly symmetrical cone movement, leading to exceptionally low harmonic distortion
- Vented magnet assembly increases airflow to provide enhanced cooling
- Twin demodulation rings reduce flux modulation, minimizing electromagnetic distortion
- Double suspension and "multi-roll" surround provide exceptional linearity at extremes of cone excursion

Frequency Response and Impedance Curves



1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.
3. Xmax derived from: (voice coil winding width-gap depth)/2.

General Specifications

Nominal diameter	457mm/18in
Power rating[1]	1000Wrms
Nominal impedance	8Ω
Sensitivity[2]	98dB
Frequency range	30-2500Hz
Voice coil diameter	100mm/4in
Chassis type	Cast aluminium
Magnet type	Ferrite
Magnet weight	3.18kg/112oz
Coil material	Round copper
Former material	Glass fibre
Cone material	Kevlar loaded paper
Surround material	Cloth-sealed
Suspension	Double
Xmax[3]	10mm/0.39in
Gap depth	10mm/0.39in
Voice coil winding width	30mm/1.18in

Small Signal Parameters

D	0.21m
Fs	44.2Hz
Mms	215.15g/7.59oz
Mmd	185.145g/6.54oz
Qms	4.21
Qes	0.496
Qts	0.444
Re	5.29Ω
Vas	113.924
Bl	24.758Tm
Cms	0.063mm/N
Rms	13.653kg/s
Le (at 1kHz)	0.96mH

Mounting Information

Diameter	460mm/18.11in
Overall depth	220.35mm/8.68in
Cut-out diameter	412.6mm/16.24in
Mounting slot dimensions	11mm x 7mm/0.43-0.28in
Number of mounting slots	8
Mounting PCD range	441-432mm/17.36-17.01in
Unit weight	11.6kg/25.5lb

CELESTION

CF1830E

Ferrite magnet cast aluminium chassis driver

General Specifications

Nominal diameter	457mm/18in
Power rating[1]	700Wrms
Nominal impedance	8Ω
Sensitivity[2]	94dB
Frequency range	30-2500Hz
Voice coil diameter	75mm/3in
Chassis type	Cast Aluminium
Magnet type	Ferrite
Magnet weight	1.84kg/64oz
Coil material	Round Copper
Former material	Glass Fibre
Cone material	Glass-Reinforced Paper
Surround material	Cloth-sealed
Suspension	Single
Xmax[3]	5mm/0.2in
Gap depth	8mm/0.31in
Voice coil winding width	18mm/0.71in

Small Signal Parameters

D	0.38m/14.96in
Fs	40.5Hz
Mms	167.47g/5.91oz
Mmd	145.86g/5.15oz
Qms	4.367
Qes	0.371
Qts	0.343
Re	5.27Ω
Vas	167.92lt/5.93ft³
Bl	24.6Tm
Cms	0.092mm/N
Rms	9.33kg/s
Le (at 1kHz)	3.24mH

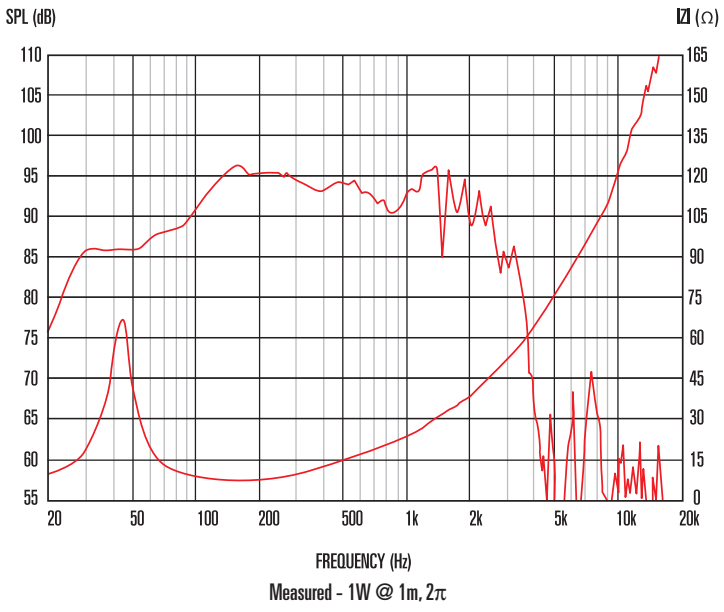
Mounting Information

Diameter	460mm/18.11in
Overall depth	211.3mm/8.31in
Cut-out diameter	414mm/16.29in
Mounting slot dimensions	11mmx7mm/0.43x0.28in
Number of mounting slots	8
Mounting slot PCD	441-432mm/17.36-17.0in
Unit weight	8.12kg/17.9lb

Features

- **18" ferrite magnet, cast aluminium chassis LF driver delivering 700Wrms (AES Standard) power handling and 94dB sensitivity**
- **3" high temperature, multi-layer voice coil for greater motor force**
- **FEA optimized magnet assembly and suspension deliver highly symmetrical cone movement, leading to exceptionally low harmonic distortion**
- **Balanced Airflow Venting (BAV) on the front-plate increases airflow to provide enhanced cooling**
- **Dual Magnet Motor (DMM) incorporates a secondary magnet used to increase overall motor force (Bl) without the need for any additional increase in magnet size**
- **"Multi-roll" surround provides exceptional linearity at extremes of cone excursion**

Frequency Response and Impedance Curves



Measured - 1W @ 1m, 2π

1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.
3. Xmax derived from: (voice coil winding width-gap depth)/2.

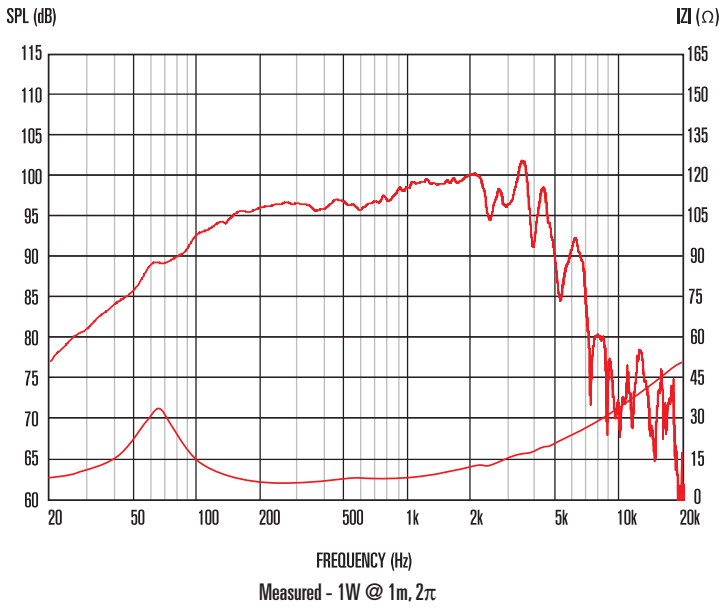
CF1025C

Ferrite magnet cast aluminium chassis driver

Features

- 10" Mid/bass driver delivering 99dB sensitivity and 300Wrms (AES standard) power handling
- FEA optimised magnet assembly and suspension delivers highly symmetrical cone movement leading to exceptionally low harmonic distortion
- Balanced Airflow Venting (BAV) increases airflow to provide enhanced cooling
- Twin demodulation rings reduce flux modulation, minimizing electromagnetic distortion
- "M-roll" surround provides progressive excursion control, yielding a smooth response even at extremes of frequency range

Frequency Response and Impedance Curves



Measured - 1W @ 1m, 2π

1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.
3. Xmax derived from: (voice coil winding width-gap depth)/2.

General Specifications

Nominal diameter	254mm/10in
Power rating[1]	300Wrms
Nominal impedance	8Ω
Sensitivity[2]	99dB
Frequency range	60-5000Hz
Voice coil diameter	64mm/2.5in
Chassis type	Cast Aluminium
Magnet type	Ferrite
Magnet weight	1.7kg/60oz
Coil material	Edgewound copper clad aluminium
Cone material	Kevlar loaded paper
Surround material	Cloth-sealed
Suspension	Single
Xmax[3]	2.5mm/0.1in
Gap depth	8mm/0.31in
Voice coil winding width	12.5mm/0.49in

Small Signal Parameters

D	0.21m/8.27in
Fs	57.5Hz
Mms	36.16g/1.28oz
Mmd	32.51g/1.15oz
Qms	3.906
Qes	0.310
Qts	0.287
Re	5.54Ω
Vas	35.69lt/1.286ft^3
Bl	15.32Tm
Cms	0.21mm/N
Rms	3.358kg/s
Le	0.635mH

Mounting Information

Diameter	265mm/10.43in
Overall depth	119mm/4.69in
Cut-out diameter	230.8mm/9.1in
Mounting slot dimensions	8x6.5mm/0.3x0.25in
Number of mounting slots	8
Mounting slot PCD	244.5-247mm/9.63-9.73in
Unit weight	4.9kg/10.8lb

PRELIMINARY INFORMATION

CELESTION

CF0617M

Ferrite magnet cast aluminium chassis driver

General Specifications

Size	165mm/6.5in
Power rating[1]	200Wrms
Nominal impedance	8Ω
Sensitivity[2]	96dB
Frequency range	300-7000Hz
Voice coil diameter	45mm/1.75in
Chassis type	Cast Aluminium
Magnet type	Ferrite
Magnet weight	0.6kg/220oz
Coil material	Edgewound copper clad aluminium
Cone material	Kevlar loaded paper
Surround material	Temperature resistant foam
Suspension	Single
Xmax[3]	1.2mm/0.05in
Gap depth	6mm/0.24in
Voice coil winding width	8.4mm/0.33in

Small Signal Parameters

D	0.14m/5.5in
Fs	135.8Hz
Mms	11.65g/0.411oz
Mmd	10.57g/0.373oz
Qms	7.49
Qes	0.6
Qts	0.555
Re	4.98Ω
Vas	3.95lt/0.14ft^3
Bl	9.08Tm
Cms	0.118mm/N
Rms	1.327kg/s

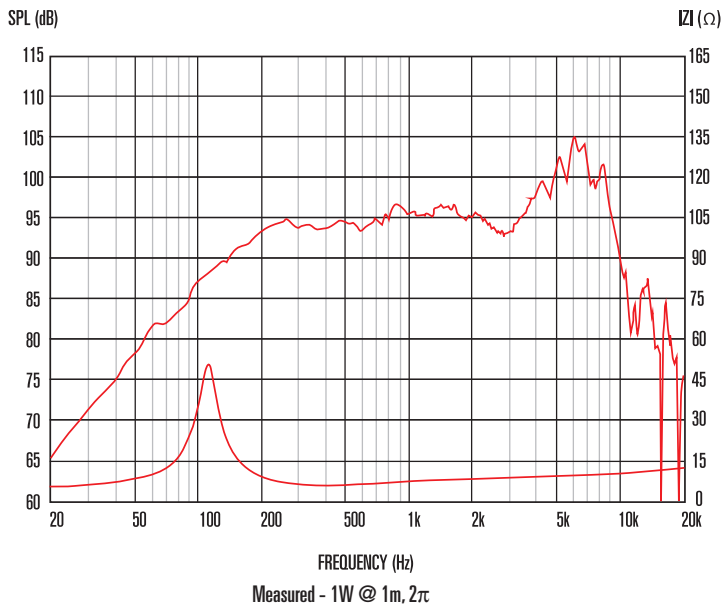
Mounting Information

Overall diameter	Max 189mm/7.44in
	Min 162mm/6.38in
Overall depth	78.5mm/3.1in
Cut-out diameter	150mm/5.9in
Mounting slot dimensions	7.5mm x 5.5mm/0.3in x 0.22in
Number of mounting slots	4
Mounting slot PCD range	173-175mm/6.81-6.89in
Unit weight	1.9kg/4.2lb

Features

- **6.5" dedicated mid-range driver delivering 96dB sensitivity and 200Wrms (AES standard) power handling**
- **FEA optimised magnet assembly and suspension delivers highly symmetrical cone movement leading to exceptionally low harmonic distortion**
- **Copper sleeved pole reduces inductive rise for improved HF performance**
- **Intelligent heat management in both chassis and magnet assembly design offers reduced thermal compression**
- **Space efficient chassis profile**

Frequency Response and Impedance Curves



Measured - 1W @ 1m, 2π

1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.
3. Xmax derived from: (voice coil winding width-gap depth)/2.

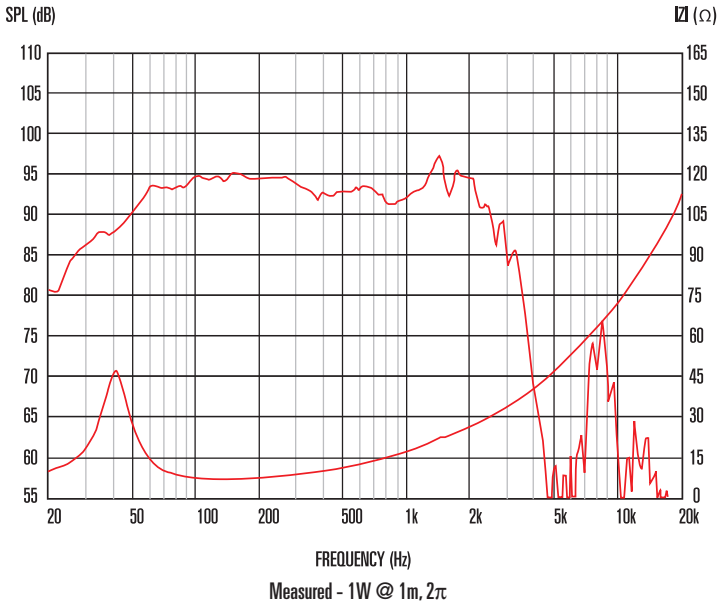
FTR18-4080HDX

Ferrite magnet cast aluminium chassis driver

Features

- 18" ferrite subwoofer provides 1000Wrms (AES standard) power handling and a frequency response of 30Hz-2500Hz
- 4" high temperature Inside/Outside voice coil efficiently dissipates heat, preventing sensitivity loss through thermal compression
- Double suspension and a "multi-roll" surround provide exceptional linearity at extremes of cone excursion
- Intelligent heat management in both chassis and magnet assembly design further minimizes distortion
- Less than 10kg – very low weight for this product class

Frequency Response and Impedance Curves



Measured - 1W @ 1m, 2π

1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.
3. Xmax derived from: (voice coil winding width-gap depth)/2.
4. Small signal parameters measured after unit subjected to pre-conditioning signal.

General Specifications

Nominal diameter	457mm/18in
Power rating[1]	1000Wrms
Nominal impedance	8Ω
Sensitivity[2]	95dB
Frequency range	30-2500Hz
Voice coil diameter	100mm/4in
Chassis type	Cast aluminium
Magnet type	Ferrite
Magnet weight	3.1kg/110oz
Coil material	Round copper
Former material	Glass Fibre
Cone material	Glass loaded paper with weather resistant impregnation
Surround material	Cloth-sealed
Suspension	Double
Xmax[3]	8mm/0.33in
Gap depth	9.5mm/0.37in
Voice coil winding width	25mm/0.99in

Small Signal Parameters[4]

D	0.38m/14.96in
Fs	35.5Hz
Mms	199.02g/7.025oz
Mmd	177.41g/6.26oz
Qms	5.74
Qes	0.46
Qts	0.42
Re	5.01Ω
Vas	184.24lt/6.5ft^3
Bl	22.11Tm
Cms	0.10mm/N
Rms	7.72kg/s
Le (at 1kHz)	1.81mH

Mounting Information

Overall diameter	452mm/17.8in
Overall depth	205mm/8.07in
Cut-out diameter	416mm/16.38in
Mounting slot dimensions	10mm x 7mm/0.4in x 0.27in
Number of mounting slots	8
Mounting slot PCD range	429-440mm/16.89-17.32in
Unit weight	9.8kg/21.6lb

Packed Dimensions & Weight

Single pack size W x D x H	500mm x 500mm x 240mm /19.7in x 19.7in x 9.4in
Single pack weight	11.6kg/25.6lb
Multipack (24) size W x D x H	1210mm x 1050mm x 980mm /47.6in x 41.3in x 35.4in
Multipack (24) weight	278kg/608lb

CELESTION

FTR18-4080FD

Ferrite magnet cast aluminium chassis driver

General Specifications

Nominal diameter	457mm/18in
Power rating[1]	1000Wrms
Nominal impedance	8Ω
Sensitivity[2]	97dB
Frequency range	30-2500Hz
Voice coil diameter	100mm/4in
Chassis type	Cast Aluminium
Magnet type	Ferrite
Magnet weight	3.1kg/110oz
Coil material	Round copper
Former material	Glass fibre
Cone material	Glass loaded paper with weather resistant impregnation
Surround material	Cloth-sealed
Suspension	Double
Xmax[3]	6mm/0.24in
Gap depth	10mm/0.39in
Voice coil winding width	22mm/0.87in

Small Signal Parameters

D	0.38m/14.96in
Fs	26Hz
Mms	172.42g/6.08oz
Mmd	150.81g/5.32oz
Qms	4.33
Qes	0.29
Qts	0.27
Re	5.39Ω
Vas	395.56lt/13.96ft^3
Bl	22.88Tm
Cms	0.22mm/N
Rms	6.506kg/s
Le (at 1kHz)	1.41mH

Mounting Information

Overall diameter	452mm/17.8in
Overall depth	205mm/8.07in
Cut-out diameter	416mm/16.38in
Mounting slot dimensions	10mm x 7mm/0.39in x 0.27in
Number of mounting slots	8
Mounting PCD range	429-440mm/16.89-17.32in
Unit weight	9.8kg/21.6lb

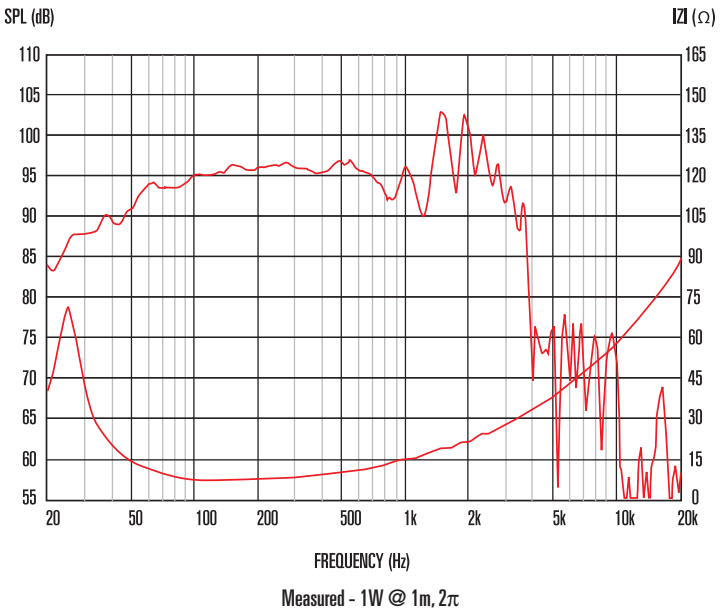
Packed Dimensions & Weight

Single pack size W x D x H	500mm x 500mm x 240mm /19.7in x 19.7in x 9.4in
Single pack weight	11.6kg/25.6lb
Multi pack (24) size W x D x H	1500mm x 1000mm x 980mm /59.1in x 39.4in x 38.6in
Multi pack (24) weight	278kg/608lb

Features

- **18" ferrite woofer provides 1000Wrms power handling (AES Standard) and 97dB sensitivity**
- **4" high temperature Inside/Outside voice coil efficiently dissipates heat, preventing sensitivity loss through thermal compression**
- **Flexirol™ surround for greater excursion control**
- **Double suspension for exceptional linearity at the highest excursions**
- **Low frequency response, down to 30Hz**
- **Smart chassis design minimises acoustic distortion**
- **Specially treated, weather-resistant cone**

Frequency Response and Impedance Curves



Measured - 1W @ 1m, 2π

1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.
3. Xmax derived from: (voice coil winding width-gap depth)/2.

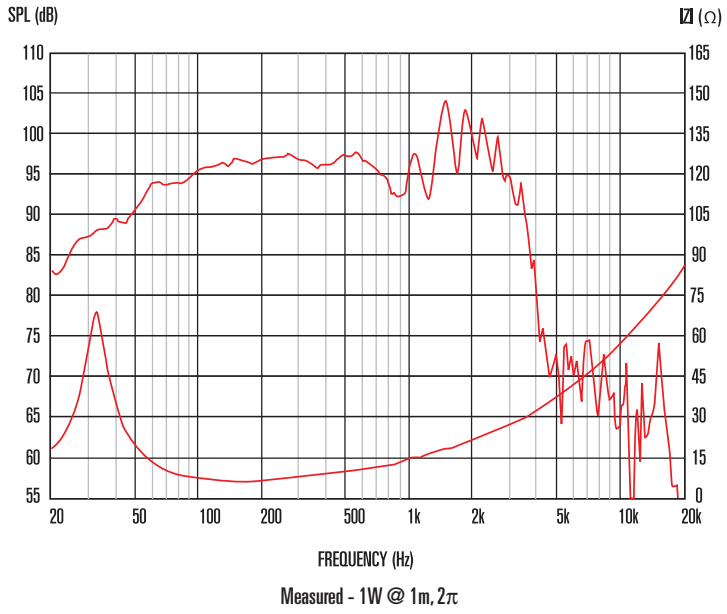
FTR18-4080F

Ferrite magnet cast aluminium chassis driver

Features

- 18" ferrite woofer provides 600Wrms power handling (AES Standard) and 97dB sensitivity
- 4" high temperature Inside/Outside voice coil efficiently dissipates heat, preventing sensitivity loss through thermal compression
- Flexirol™ surround for greater excursion control
- Low frequency response, down to 30Hz
- Smart chassis design minimises acoustic distortion
- Specially treated weather-resistant cone

Frequency Response and Impedance Curves



Measured - 1W @ 1m, 2π

1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.
3. Xmax derived from: (voice coil winding width-gap depth)/2.

General Specifications

Nominal diameter	457mm/18in
Power rating[1]	600Wrms
Nominal impedance	8Ω
Sensitivity[2]	97dB
Frequency range	30-3000Hz
Voice coil diameter	100mm/4in
Chassis type	Cast Aluminium
Magnet type	Ferrite
Magnet weight	3.1kg/110oz
Coil material	Round copper
Former material	Glass fibre
Cone material	Glass loaded paper with weather resistant impregnation
Surround material	Cloth-sealed
Suspension	Single
Xmax[3]	6mm/0.24in
Gap depth	10mm/0.39in
Voice coil winding width	22mm/0.87in

Small Signal Parameters

D	0.38m/14.96in
Fs	32.7Hz
Mms	158.22g/5.58oz
Mmd	136.61g/4.82oz
Qms	5.24
Qes	0.32
Qts	0.30
Re	5.31Ω
Vas	271.99lt/9.6ft^3
Bl	23.31Tm
Cms	0.15mm/N
Rms	6.21kg/s
Le (at 1kHz)	1.46mH

Mounting Information

Overall diameter	452mm/17.8in
Overall depth	205mm/8.07in
Cut-out diameter	416mm/16.38in
Mounting slot dimensions	10mm x 7mm/0.39in x 0.27in
Number of mounting slots	8
Mounting PCD range	429-440mm/16.89-17.32in
Unit weight	9.7kg/21.4lb

Packed Dimensions & Weight

Single pack size W x D x H	500mm x 500mm x 240mm /19.7in x 19.7in x 9.4in
Single pack weight	11.5kg/25.4lb
Multi pack (24) size W x D x H	1500mm x 1000mm x 980mm /59.1in x 39.4in x 38.6in
Multi pack (24) weight	278kg/608lb

CELESTION

FTR15-4080HDX

Ferrite magnet cast aluminium chassis driver

General Specifications

Nominal diameter	381mm/15in
Power rating[1]	1000Wrms
Nominal impedance	8Ω
Sensitivity[2]	96dB
Frequency range	40-2500Hz
Voice coil diameter	100mm/4in
Chassis type	Cast aluminium
Magnet type	Ferrite
Magnet weight	3.1kg/110oz
Coil material	Round copper
Former material	Glass fibre
Cone material	Glass loaded paper with weather resistant impregnation
Surround material	Cloth-sealed
Suspension	Double
Xmax[3]	8mm/0.33in
Gap depth	9.5mm/0.37in
Voice coil winding width	25mm/0.99in

Small Signal Parameters[4]

D	0.33m/12.99in
Fs	40.5Hz
Mms	153.53g/5.42oz
Mmd	139.38g/4.92oz
Qms	3.98
Qes	0.36
Qts	0.33
Re	5.10Ω
Vas	104.27lt/3.68ft^3
Bl	23.53Tm
Cms	0.10mm/N
Rms	9.81kg/s
Le (at 1kHz)	1.8mH

Mounting Information

Overall diameter	387mm/15.24in
Overall depth	180mm/7.1in
Cut-out diameter	351mm/13.82in
Mounting slot dimensions	10mm x 7mm/0.39in x 0.27in
Number of mounting slots	8
Mounting slot PCD range	365-375mm/14.37-14.76in
Unit weight	9.7kg/21.3lb

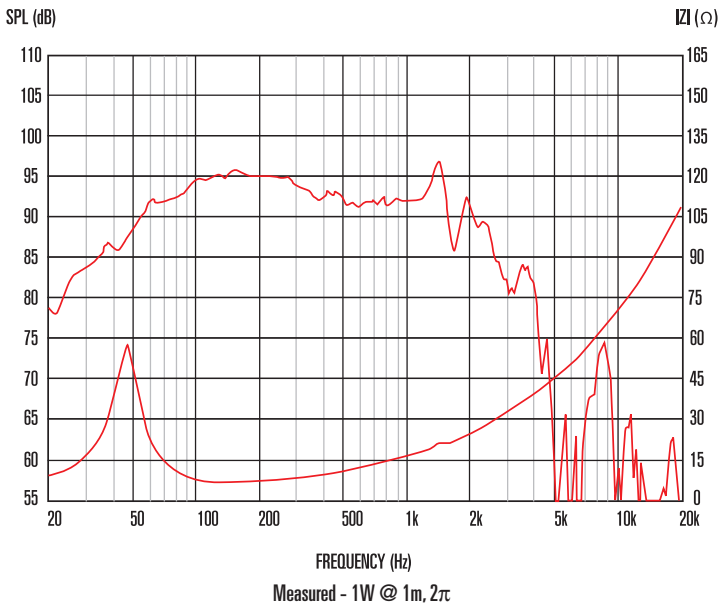
Packed Dimensions & Weight

Single pack size W x D x H	435mm x 435mm x 200mm /17.1in x 17.1in x 7.9in
Single pack weight	11.5kg/25.4lb
Multipack (36) size W x D x H	1210mm x 1050mm x 980mm /47.6in x 41.3in x 35.4in
Multipack (36) weight	390kg/860lb

Features

- **15" ferrite woofer provides 1000Wrms (AES standard) power handling and a frequency response of 40Hz-2500Hz**
- **4" high temperature Inside/Outside voice coil efficiently dissipates heat, preventing sensitivity loss through thermal compression**
- **Double suspension and a "multi-roll" surround provide exceptional linearity at extremes of cone excursion**
- **Intelligent heat management in both chassis and magnet assembly design further minimizes distortion**
- **Less than 10kg – very low weight for this product class**

Frequency Response and Impedance Curves



1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.
3. Xmax derived from: (voice coil winding width-gap depth)/2.
4. Small signal parameters measured after unit subjected to pre-conditioning signal.

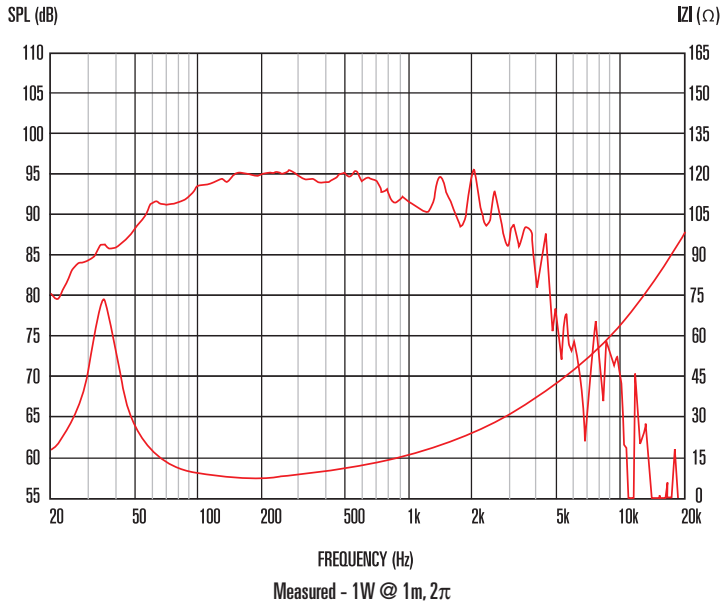
FTR15-4080HD

Ferrite magnet cast aluminium chassis driver

Features

- **15" ferrite woofer provides 1000Wrms power handling (AES Standard) and 95dB sensitivity**
- **4" high temperature Inside/Outside voice coil efficiently dissipates heat, preventing sensitivity loss through thermal compression**
- **Flexirol™ technology for greater excursion control**
- **Double suspension for exceptional linearity at the highest excursions**
- **Optimised for very long throw applications**
- **Smart chassis design minimises acoustic distortion**

Frequency Response and Impedance Curves



1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.
3. Xmax derived from: (voice coil winding width-gap depth)/2.

General Specifications

Nominal diameter	381mm/15in
Power rating[1]	1000Wrms
Nominal impedance	8Ω
Sensitivity[2]	95dB
Frequency range	35-2500Hz
Voice coil diameter	100mm/4in
Chassis type	Cast Aluminium
Magnet type	Ferrite
Magnet weight	3.1kg/110oz
Coil material	Round copper
Former material	Glass fibre
Cone material	Glass loaded paper with weather resistant impregnation
Surround material	Cloth-sealed
Suspension	Double
Xmax[3]	8mm/0.33in
Gap depth	9.5mm/0.37in
Voice coil winding width	25mm/0.98in

Small Signal Parameters

D	0.33m/12.99in
Fs	37.1Hz
Mms	130.4g/4.6oz
Mmd	116.25g/4.10oz
Qms	4.67
Qes	0.33
Qts	0.31
Re	5.89Ω
Vas	146.29lt/5.16ft^3
Bl	23.15Tm
Cms	0.14mm/N
Rms	6.51kg/s
Le (at 1kHz)	1.59mH

Mounting Information

Overall diameter	387mm/15.24in
Overall depth	173mm/6.81in
Cut-out diameter	351mm/13.82in
Mounting slot dimensions	10mm x 7mm/0.39in x 0.27in
Number of mounting slots	8
Mounting PCD range	365-375mm/14.37-14.76in
Unit weight	9.5kg/20.9lb

Packed Dimensions & Weight

Single pack size W x D x H	435mm x 435mm x 200mm /17.1in x 17.1in x 7.9in
Single pack weight	10.8kg/23.8lb
Multi pack (36) size W x D x H	1200mm x 1000mm x 980mm /47.2in x 39.4in x 38.6in
Multi pack (36) weight	390kg/860lb

CELESTION

FTR15-4080FD

Ferrite magnet cast aluminium chassis driver

General Specifications

Nominal diameter	381mm/15in
Power rating[1]	1000Wrms
Nominal impedance	8Ω
Sensitivity[2]	97dB
Frequency range	35-2500Hz
Voice coil diameter	100mm/4in
Chassis type	Cast Aluminium
Magnet type	Ferrite
Magnet weight	3.1kg/110oz
Coil material	Round copper
Former material	Glass fibre
Cone material	Glass loaded paper with weather resistant impregnation
Surround material	Cloth-sealed
Suspension	Double
Xmax[3]	6mm/0.24in
Gap depth	10mm/0.39in
Voice coil winding width	22mm/0.87in

Small Signal Parameters

D	0.33m/12.99in
Fs	34.3Hz
Mms	126.39g/4.46oz
Mmd	112.24g/3.96oz
Qms	3.27
Qes	0.27
Qts	0.25
Re	5.37Ω
Vas	140.0lt/4.94ft^3
Bl	22.89Tm
Cms	0.17mm/N
Rms	8.162kg/s
Le (at 1kHz)	1.38mH

Mounting Information

Overall diameter	387mm/15.24in
Overall depth	170mm/6.69in
Cut-out diameter	351mm/13.82in
Mounting slot dimensions	10mm x 7mm/0.39in x 0.27in
Number of mounting slots	8
Mounting PCD range	365-375mm/14.37-14.76in
Unit weight	9.5kg/20.9lb

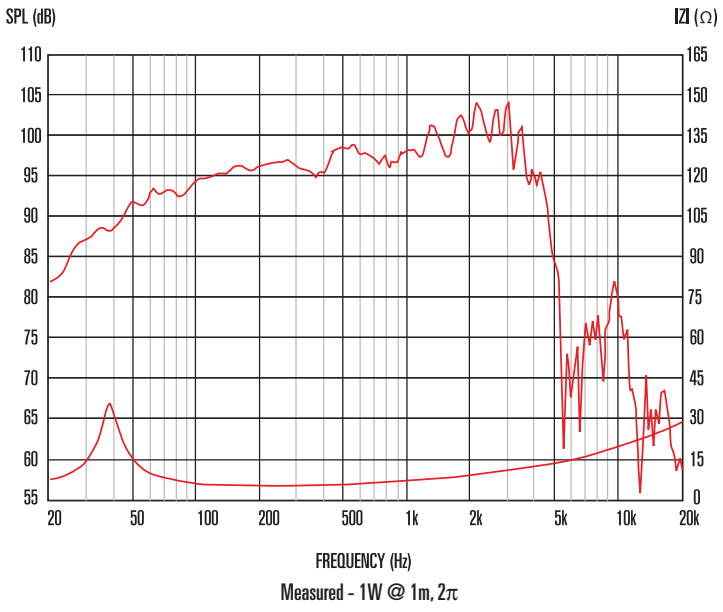
Packed Dimensions & Weight

Single pack size W x D x H	435mm x 435mm x 200mm /17.1in x 17.1in x 7.9in
Single pack weight	10.8kg/23.8lb
Multi pack (36) size W x D x H	1200mm x 1000mm x 980mm /47.2in x 39.4in x 38.6in
Multi pack (36) weight	390kg/860lb

Features

- **15" ferrite woofer provides 1000Wrms power handling (AES Standard) and 97dB sensitivity**
- **4" high temperature Inside/Outside voice coil efficiently dissipates heat, preventing sensitivity loss through thermal compression**
- **Flexirol™ surround for greater excursion control**
- **Double suspension for exceptional linearity at the highest excursions**
- **Low frequency response, down to 35Hz**
- **Smart chassis design minimises acoustic distortion**

Frequency Response and Impedance Curves



Measured - 1W @ 1m, 2π

1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.
3. Xmax derived from: (voice coil winding width-gap depth)/2.

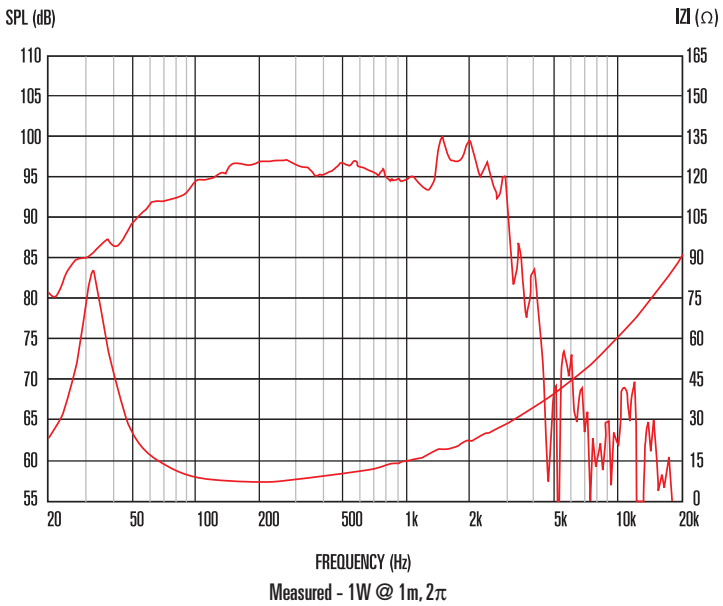
FTR15-4080F

Ferrite magnet cast aluminium chassis driver

Features

- 15" ferrite woofer provides 600Wrms power handling (AES Standard) and 97dB sensitivity
- 4" high temperature Inside/Outside voice coil efficiently dissipates heat, preventing sensitivity loss through thermal compression
- Flexirol™ surround for greater excursion control
- Low frequency response, down to 35Hz
- Smart chassis design minimises acoustic distortion
- Specially treated weather-resistant cone

Frequency Response and Impedance Curves



1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.
3. Xmax derived from: (voice coil winding width-gap depth)/2.

General Specifications

Nominal diameter	381mm/15in
Power rating[1]	600Wrms
Nominal impedance	8Ω
Sensitivity[2]	97dB
Frequency range	35-3000Hz
Voice coil diameter	100mm/4in
Chassis type	Cast Aluminium
Magnet type	Ferrite
Magnet weight	3.1kg/110oz
Coil material	Round copper
Former material	Glass fibre
Cone material	Glass loaded paper with weather resistant impregnation
Surround material	Cloth-sealed
Suspension	Single
Xmax[3]	6mm/0.24in
Gap depth	10mm/0.39in
Voice coil winding width	22mm/0.87in

Small Signal Parameters

D	0.33m/12.99in
Fs	35Hz
Mms	117.83g/4.16oz
Mmd	103.68g/3.66oz
Qms	3.68
Qes	0.26
Qts	0.24
Re	5.62Ω
Vas	182.8lt/6.45ft^3
Bl	23.69Tm
Cms	0.18mm/N
Rms	7.019kg/s
Le (at 1kHz)	1.48mH

Mounting Information

Overall diameter	387mm/15.24in
Overall depth	170mm/6.69in
Cut-out diameter	351mm/13.82in
Mounting slot dimensions	10mm x 7mm/0.39in x 0.27in
Number of mounting slots	8
Mounting PCD range	365-375mm/14.37-14.76in
Unit weight	9.4kg/20.7lb

Packed Dimensions & Weight

Single pack size W x D x H	435mm x 435mm x 200mm /17.1in x 17.1in x 7.9in
Single pack weight	10.7kg/23.6lb
Multi pack (36) size W x D x H	1200mm x 1000mm x 980mm /47.2in x 39.4in x 38.6in
Multi pack (36) weight	390kg/860lb

CELESTION

FTR15-3070E

Ferrite magnet cast aluminium chassis driver

General Specifications

Nominal diameter	381mm/15in
Power rating[1]	400Wrms
Nominal impedance	8Ω
Sensitivity[2]	97dB
Frequency range	40-4000Hz
Voice coil diameter	75mm/3in
Chassis type	Cast aluminium
Magnet type	Ferrite
Magnet weight	2.3kg/81oz
Coil material	Round copper
Former material	Glass fibre
Cone material	Glass loaded paper with weather-resistant impregnation
Surround material	Cloth-sealed
Suspension	Single
Xmax[3]	5.5mm/0.22in
Gap depth	9mm/0.35in
Voice coil winding width	20mm/0.79in

Small Signal Parameters[4]

D	0.33m/8.38in
Fs	45.3Hz
Mms	88.69g/3.13oz
Mmd	74.54g/2.63oz
Qms	3.07
Qes	0.46
Qts	0.40
Re	5.36Ω
Vas	143.85lt/5.08ft^3
Bl	17.24Tm
Cms	0.14mm/N
Rms	8.22kg/s
Le (at 1kHz)	1.3mH

Mounting Information

Overall diameter	387mm/15.24in
Overall depth	161mm/6.34in
Cut-out diameter	351mm/13.82in
Mounting slot dimensions	10mm x 7mm/0.39in x 0.27in
Number of mounting slots	8
Mounting slot PCD range	365-375mm/14.37-14.76in
Unit weight	6.4kg/14.1lb

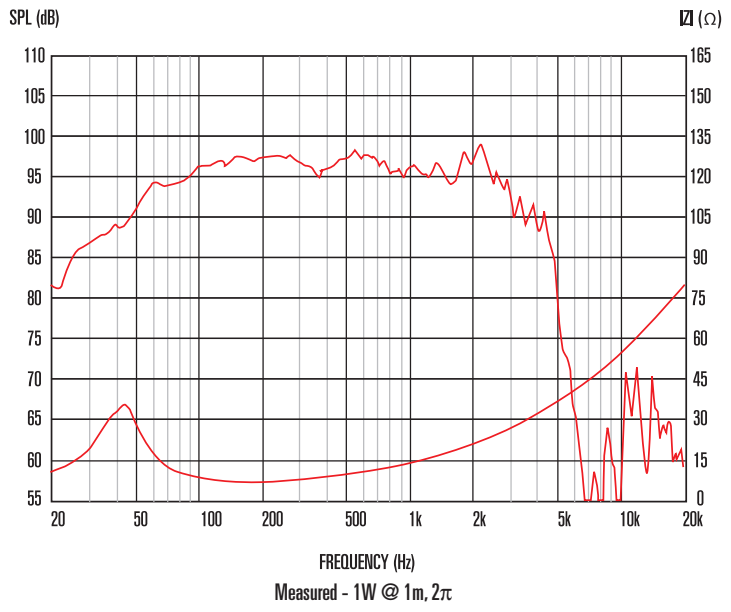
Packed Dimensions & Weight

Single pack size W x D x H	435mm x 435mm x 200mm/17.1in x 17.1in x 7.9in
Single pack weight	7.7kg/17.0lb
Multipack (36) size W x D x H	1210mm x 1050mm x 980mm/47.6in x 41.3in x 35.4in
Multipack (36) weight	278kg/613lb

Features

- **15" ferrite woofer provides 400Wrms power handling (AES Standard) and 97dB sensitivity**
- **3" high temperature Inside/Outside voice coil efficiently dissipates heat, preventing sensitivity loss through thermal compression**
- **Flexirol™ surround for greater excursion control**
- **Low frequency response, down to 40Hz**
- **Smart chassis design minimises acoustic distortion**
- **Specially treated weather-resistant cone**

Frequency Response and Impedance Curves



Measured - 1W @ 1m, 2π

1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.
3. Xmax derived from: (voice coil winding width-gap depth)/2.
4. Small signal parameters measured after unit subjected to pre-conditioning signal.

Also available in 4Ω, data available on request

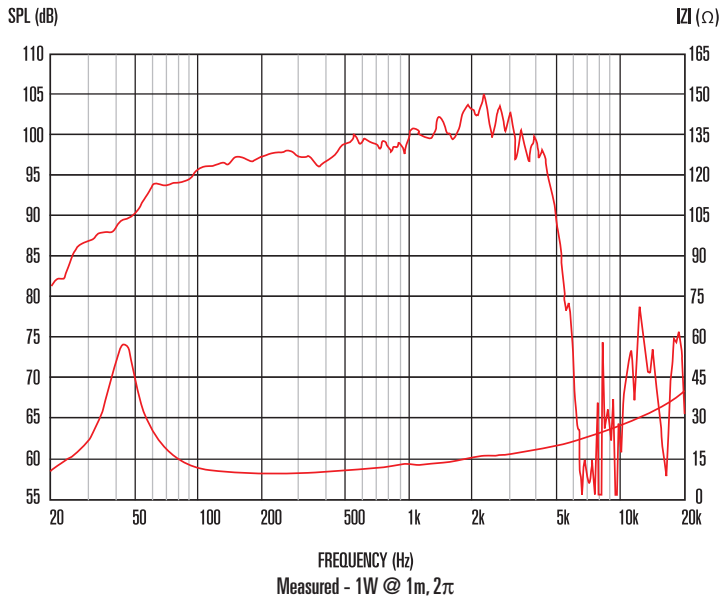
FTR15-3070C

Ferrite magnet cast aluminium chassis driver

Features

- **15" ferrite woofer provides 400Wrms power handling (AES Standard) and 99dB sensitivity**
- **3" high temperature Inside/Outside voice coil efficiently dissipates heat, preventing sensitivity loss through thermal compression**
- **Flexirol™ surround for greater excursion control**
- **Saturated gap technology for lower harmonic distortion**
- **Low frequency response, down to 40Hz**
- **Smart chassis design minimises acoustic distortion**

Frequency Response and Impedance Curves



1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.
3. Xmax derived from: (voice coil winding width-gap depth)/2.

General Specifications

Nominal diameter (mm/in)	381mm/15in
Power rating[1]	400Wrms
Nominal impedance	8Ω
Sensitivity[2]	99dB
Frequency range	40-4000Hz
Voice coil diameter	75mm/3in
Chassis type	Cast Aluminium
Magnet type	Ferrite
Magnet weight	2.3kg/81oz
Coil material	Round copper
Former material	Glass fibre
Cone material	Glass loaded paper with weather-resistant impregnation
Surround material	Cloth-sealed
Suspension	Single
Xmax[3]	3mm/0.12in
Gap depth	10mm/0.39in
Voice coil winding width	16mm/0.63in

Small Signal Parameters

D	0.33m/12.99in
Fs	40Hz
Mms	84.15g/2.97oz
Mmd	70.00g/2.47oz
Qms	7.10
Qes	0.38
Qts	0.36
Re	6.50Ω
Vas	208.0lt/7.34ft^3
Bl	18.70Tm
Cms	0.20mm/N
Rms	2.86kg/s
Le (at 1kHz)	0.59mH

Mounting Information

Overall diameter	387mm/15.24in
Overall depth	158mm/6.22in
Cut-out diameter	351mm/13.82in
Mounting slot dimensions	10mm x 7mm/0.39in x 0.27in
Number of mounting slots	8
Mounting PCD range	365-375mm/14.37-14.76in
Unit weight	6.3kg/13.8lb

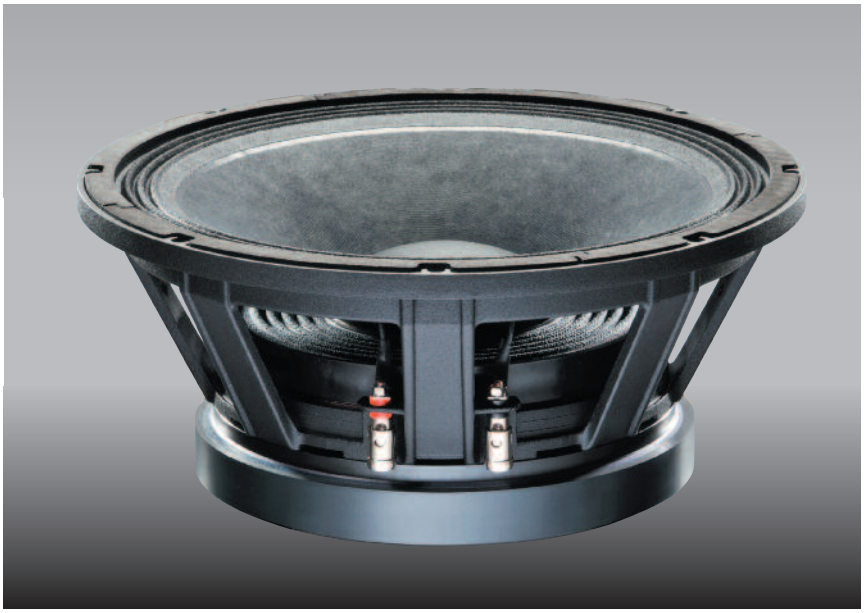
Packed Dimensions & Weight

Single pack size W x D x H	435mm x 435mm x 200mm /17.1in x 17.1in x 7.9in
Single pack weight	7.7kg/17.0lb
Multi pack (36) size W x D x H	1200mm x 1000mm x 980mm /47.2in x 39.4in x 38.6in
Multi pack (36) weight	278kg/613lb

CELESTION

FTR12-4080HDX

Ferrite magnet cast aluminium chassis driver



General Specifications

Nominal diameter	305mm/12in
Power rating[1]	1000Wrms
Nominal impedance	8Ω
Sensitivity[2]	93dB
Frequency range	47-3000Hz
Voice coil diameter	100mm/4in
Chassis type	Cast aluminium
Magnet type	Ferrite
Magnet weight	3.1kg/110oz
Coil material	Round copper
Former material	Glass fibre
Cone material	Glass loaded paper with weather-resistant impregnation
Surround material	Cloth-sealed
Suspension	Double
Xmax[3]	8mm/0.32in
Gap depth	9.5mm/0.37in
Voice coil winding width	25mm/0.98in

Small Signal Parameters[4]

D	0.26m/10.24in
Fs	61.2Hz
Mms	108.68g/3.84oz
Mmd	101.76g/3.59oz
Qms	2.228
Qes	0.446
Qts	0.372
Re	6.05Ω
Vas	24.79lt/0.875ft^3
Bl	23.81Tm
Cms	0.062mm/N
Rms	18.768kg/s
Le (at 1kHz)	1.92mH

Mounting Information

Overall diameter	313mm/12.3in
Overall depth	158mm/6.2in
Cut-out diameter	282mm/11.1in
Mounting slot dimensions	10mm x 7mm/0.39in x 0.27in
Number of mounting slots	8
Mounting slot PCD range	291-301mm/11.7-11.9in
Unit weight	9.6kg/21.1lb

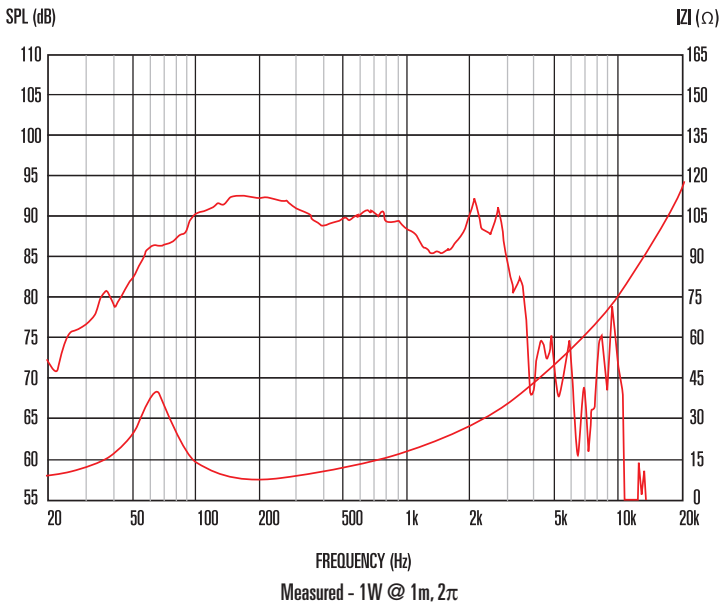
Packed Dimensions & Weight

Single pack size W x D x H	350mm x 350mm x 180mm /13.8in x 13.8in x 7.1in
Single pack weight (kg/lb)	11.4kg/25.1lb
Multipack (36) size W x D x H	1210mm x 1050mm x 980mm /47.6in x 41.3in x 35.4in
Multipack (36) weight	380kg/836lb

Features

- **12" ferrite subwoofer provides 1000Wrms (AES standard) power handling and a frequency response of 47Hz-3kHz**
- **4" high temperature Inside/Outside voice coil efficiently dissipates heat, preventing sensitivity loss through thermal compression**
- **Double suspension and a "multi-roll" surround provide exceptional linearity at extremes of cone excursion**
- **Intelligent heat management in both chassis and magnet assembly design further minimizes distortion**

Frequency Response and Impedance Curves



Measured - 1W @ 1m, 2π

1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.
3. Xmax derived from: (voice coil winding width-gap depth)/2.
4. Small signal parameters measured after unit subjected to pre-conditioning signal.

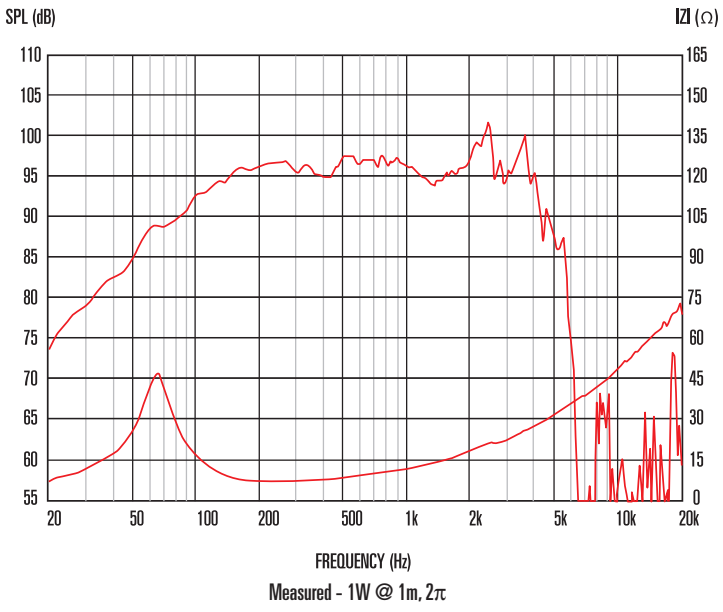
FTR12-3070C

Ferrite magnet cast aluminium chassis driver

Features

- 12" ferrite mid/bass driver provides 350Wrms (AES standard) power handling and 96dB sensitivity
- 3" high temperature Inside/Outside voice coil efficiently dissipates heat, preventing sensitivity loss due to thermal compression
- Low frequency response, down to 40Hz
- Intelligent heat management in both chassis and magnet assembly design further minimizes distortion
- Specially treated weather-resistant cone

Frequency Response and Impedance Curves



Measured - 1W @ 1m, 2π

1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.
3. Xmax derived from: (voice coil winding width-gap depth)/2.
4. Small signal parameters measured after unit subjected to pre-conditioning signal.

General Specifications

Nominal diameter	305mm/12in
Power rating[1]	350Wrms
Nominal impedance	8Ω
Sensitivity[2]	96dB
Frequency range	40-4000Hz
Voice coil diameter	75mm/3in
Chassis type	Cast aluminium
Magnet type	Ferrite
Magnet Weight	2.3kg/81oz
Coil material	Round copper
Former material	Glass fibre
Cone material	Glass loaded paper with weather-resistant impregnation
Surround material	Cloth-sealed
Suspension	Single
Xmax[3]	4mm/0.16in
Gap depth	8mm/0.32in
Voice coil winding width	16mm/0.63in

Small Signal Parameters[4]

D	0.26m/10.24in
Fs	66.1Hz
Mms	58.51g/2.07oz
Mmd	51.59g/1.82oz
Qms	2.90
Qes	0.375
Qts	0.332
Re	5.44Ω
Vas	39.57lt/1.40ft^3
Bl	18.78Tm
Cms	0.099mm/N
Rms	8.374kg/s
Le (at 1kHz)	1.25mH

Mounting Information

Overall diameter	318mm/12.5in
Overall depth	102mm/4.02in
Cut-out diameter	286mm/11.26in
Mounting slot dimensions	7.5mm x 6.5mm/0.3in x 0.26in
Number of mounting slots	8
Mounting slot PCD range	298-304mm/11.7-12.0in
Unit weight	6.3kg/13.9lb

Packed Dimensions and Weight

Single pack size W x D x H	350mm x 350mm x 180mm/13.8in x 13.8in x 7.1in
Single pack weight	8.1kg/17.8lb
Multipack (60) size W x D x H	1210mm x 1050mm x 980mm/47.6in x 41.3in x 35.4in
Multipack (60) weight	400kg/880lb

CELESTION

FTR08-2011D

Ferrite magnet cast aluminium chassis driver

General Specifications

Nominal diameter	200mm/8in
Power rating[1]	200Wrms
Nominal impedance	8Ω
Sensitivity[2]	93dB
Frequency range	70-6000Hz
Voice coil diameter	50mm/2in
Chassis type	Cast Aluminium
Magnet type	Ferrite
Coil material	Round copper
Former material	Polyimide
Cone material	Kevlar loaded paper
Surround material	Cloth-sealed
Suspension	Single
Xmax[3]	3.5mm/0.137in
Gap depth	8mm/0.31in
Voice coil winding width	15mm/0.59in

Small Signal Parameters

D	0.17m/6.69in
Fs	88.4Hz
Mms	26.94g/0.95oz
Mmd	25.01g/0.88oz
Qms	2.594
Qes	0.572
Qts	0.469
Re	5.74Ω
Vas	8.77lt/0.30ft^3
Bl	12.26Tm
Cms	0.12mm/N
Rms	5.769kg/s
Le (at 1kHz)	0.39mH

Mounting Information

Diameter	225mm/8.8in
Overall depth	102mm/4.0in
Cut-out diameter	187mm/7.4in
Mounting slot dimensions	Ø6.5mm/0.26in
Number of mounting slots	8
Mounting PCD range	210mm/8.3in
Unit weight	3.65kg/8.0lb

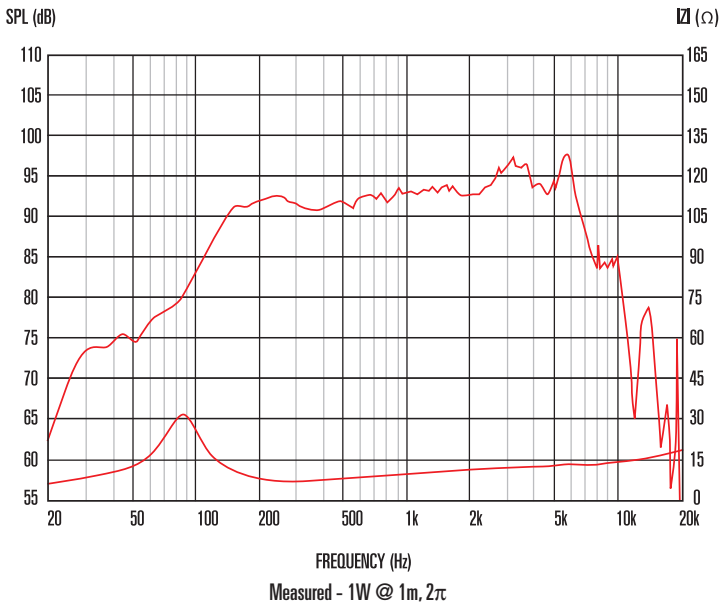
Packed Dimensions and Weight

Single pack size W x D x H	226mm x 226mm x 130mm /8.9in x 8.9in x 5.1in
Single pack weight	3.8kg/8.4lb
Multipack (8) size W x D x H	470mm x 450mm x 270mm /18.5in x 17.7in x 10.6in
Multipack (8) weight	31kg/68.3lb

Features

- **8" ferrite magnet driver providing 200Wrms (AES standard) power handling and 93dB sensitivity**
- **2" high temperature copper voice coil**
- **Suitable for line array applications, utilizing a space-efficient octagonal chassis profile**
- **Optimized flux distribution in magnet assembly provides low harmonic distortion**
- **"M-Roll" surround provides progressive excursion control, generating a smooth frequency response**
- **Intelligent heat management in both chassis and magnet assembly design offers reduced thermal compression**

Frequency Response and Impedance Curves



1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.
3. Xmax derived from: (voice coil winding width-gap depth)/2.

CELESTION

LF Pressed Chassis Ferrite

Ferrite magnet pressed steel chassis drivers

Range Overview

Developed at Celestion's state-of-the-art loudspeaker R&D facility in the UK, this range of pressed steel chassis drivers offer system builders the optimum combination of performance, reliability and cost. This extensive range of pressed steel chassis, ferrite magnet loudspeakers is available in a range of sizes from 4" to 15" diameter.

Our uncompromising approach to all aspects of design, development, production and testing means these speakers are the first-choice driver for increasing numbers of globally-recognised PA brands.

The extensive nature of the range means that there will be a speaker that is suitable for many different cabinet types and applications including two-way and three-way cabinets, fold-back monitors and bass bins, all of which are ideal for use in small to medium-sized venues.

TF Steel Ferrite Range

	Nominal Diameter	Power Rating*	Nominal Impedance	Sensitivity	Frequency Range	Voice Coil Diameter	Unit Weight
TF1530e	381mm/15in	400Wrms	8Ω	98dB	40-3000Hz	75mm/3in	6.5kg/14.3lb
TF1530	381mm/15in	400Wrms	4/8Ω	99dB	40-3000Hz	75mm/3in	6.1kg/13.4lb
TF1530SL	381mm/15in	350Wrms	4/8Ω	98dB	40-3000Hz	75mm/3in	5.0kg/11lb
TF1525e	381mm/15in	300Wrms	4/8Ω	97dB	45-3500Hz	64mm/2.5in	5.2kg/11.5lb
TF1525	381mm/15in	250Wrms	8Ω	98dB	40-3000Hz	64mm/2.5in	5.2kg/11.5lb
TF1520	381mm/15in	150Wrms	8Ω	96dB	45-4000Hz	50mm/2in	5.0kg/11.0lb
TF1230	305mm/12in	350Wrms	8Ω	94dB	45-3000Hz	75mm/3in	4.3kg/9.5lb
TF1230SL	305mm/12in	350Wrms	4/8Ω	97dB	50-4000Hz	75mm/3in	4.3kg/9.5lb
TF1225e	305mm/12in	300Wrms	8Ω	96dB	50-3000Hz	64mm/2.5in	4.4kg/9.7lb
TF1225	305mm/12in	250Wrms	4/8Ω	97dB	50-4000Hz	64mm/2.5in	4.1kg/9.0lb
TF1220	305mm/12in	150Wrms	8Ω	97dB	60-4000Hz	50mm/2in	5.0kg/11lb
TF1218	305mm/12in	100Wrms	8Ω	97dB	60-4500Hz	45mm/1.75in	2.7kg/6.0lb
TF1215	305mm/12in	100Wrms	8Ω	95dB	60-5000Hz	38mm/1.5in	2.4kg/5.3lb
TF1020	254mm/10in	150Wrms	4/8Ω	97dB	60-3000Hz	50mm/2in	3.7kg/8.2lb
TF1018	254mm/10in	100Wrms	8Ω	96dB	70-6000Hz	45mm/1.75in	2.4kg/5.3lb
TF1015	254mm/10in	70Wrms	8Ω	95dB	80-6000Hz	38mm/1.5in	1.7kg/3.7lb
TF0818	203mm/8in	100Wrms	4/8/16Ω	94dB	70-6000Hz	45mm/1.75in	2.3kg/5.1lb
TF0818MR	203mm/8in	100Wrms	8Ω	99dB	800-5000Hz	45mm/1.75in	1.9kg/4.2lb
TF0615	152mm/6in	100Wrms	8Ω	95dB	85-6000Hz	38mm/1.5in	1.4kg/3.1lb
TF0615MR	152mm/6in	50Wrms	8Ω	97dB	500-5000Hz	38mm/1.5in	1.4kg/3.1lb
TF0510	127mm/5in	30Wrms	8Ω	91dB	130-8000Hz	25mm/1in	1.0kg/2.2lb
TF0510MR	127mm/5in	30Wrms	8Ω	91dB	400-4000Hz	25mm/1in	1.2kg/2.6lb
TF0410MR	100mm/4in	30Wrms	8Ω	90dB	400-4000Hz	25mm/1in	1.2kg/2.6lb
K12H-200TC	305mm/12in	200Wrms	8Ω	98dB	50-10,000Hz	50mm/2in	3.9kg/8.6lb
K12H-100TC	305mm/12in	100Wrms	8Ω	97dB	50-10,000Hz	44mm/1.75in	3.8kg/8.4lb

*AES Standard

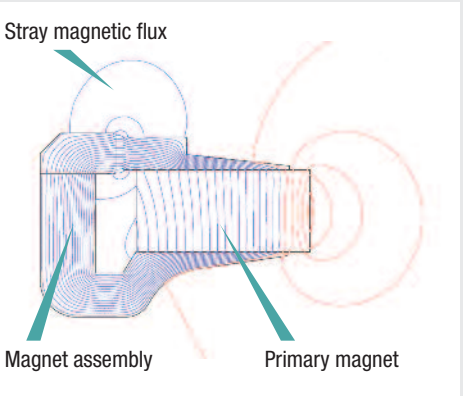
Key Technologies

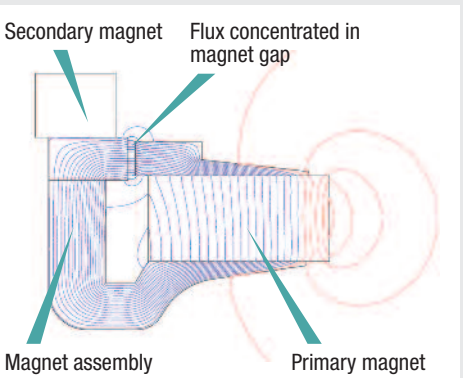
To achieve high levels of performance and reliability at such competitive price points, Celestion pressed steel chassis drivers are packed with innovative design features. Products such as the TF1530SL employ Celestion's Dual Magnet Motor design, incorporating a secondary magnet within the magnet assembly. This makes the motor more efficient by minimising stray flux: the secondary magnet reflects this flux back into the magnet gap. The effect is to increase total motor force (Bl) without needing to increase overall magnet size and weight.

Sophisticated Finite Element Analysis (FEA) further increases the efficiency of magnet designs through enhanced flux control and the elimination of superfluous magnet mass.

Efficient heat management is inherent in the design of every driver, with performance and reliability further enhanced through the use of Kevlar-impregnated cones, high temperature voice coils wound on polyimide formers and rigid chassis designs for maximum energy transfer.

Dual magnet motor design

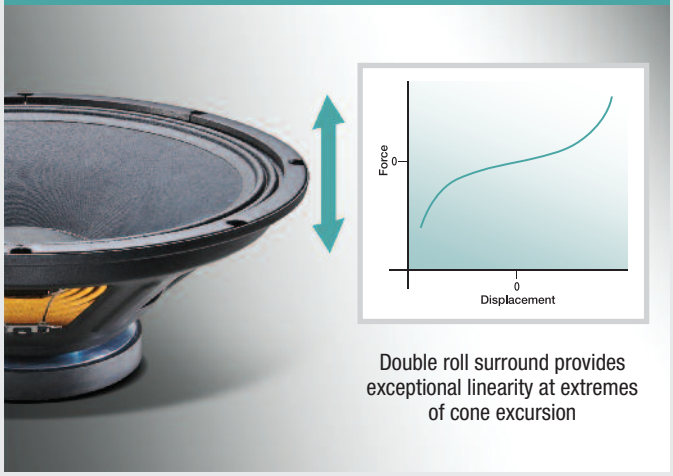




Dynamic heat dispersion

Rear venting improves cooling efficiency

Double roll surround



Double roll surround provides exceptional linearity at extremes of cone excursion

CELESTION

TF1530e

Ferrite magnet pressed steel chassis driver

General Specifications

Nominal diameter	381mm/15in
Power rating[1]	400Wrms
Nominal impedance	8Ω
Sensitivity[2]	98dB
Frequency range	40-3000Hz
Voice coil diameter	75mm/3in
Chassis type	Pressed Steel
Magnet type	Ferrite
Coil material	Flattened Copper coated Aluminium
Former material	Glass fibre
Cone material	Kevlar loaded paper
Surround material	Cloth-sealed
Suspension	Single
Xmax[3]	4.7mm/0.19in
Gap depth	8mm/0.31in
Voice coil winding width	17.3mm/0.68in

Small Signal Parameters[4]

D	0.33m/12.99in
Fs	40.9Hz
Mms	86.24g/3.04oz
Mmd	72.090g
Qms	4.073
Qes	0.376
Qts	0.344
Re	5.09Ω
Vas	181.72lt/6.41ft^3
Bl	17.318Tm
Cms	0.176mm/N
Rms	5.433kg/s
Le (at 1kHz)	0.827mH

Mounting Information

Diameter	385mm/15.16mm
Overall depth	161mm/6.34in
Cut-out diameter	352mm/13.86in
Mounting slot dimensions	9.2x6.2mm/0.36x0.24in
Number of mounting slots	8
Mounting PCD range	369mm/14.57in
Unit weight	5.65kg/14.46lb

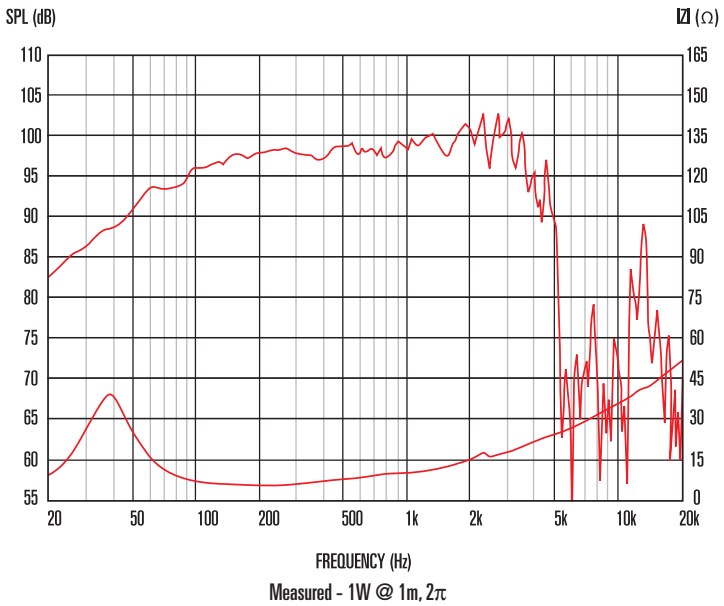
Packed Dimensions & Weight

Multi pack (45) size W x D x H	1200mm x 1000mm x 980mm /47.2in x 39.4in x 38.6in
Multi pack (45) weight	300kg/660lb

Features

- **15" driver provides extended low frequency range**
- **3" edgewound voice coil enables 98dB efficiency and 400Wrms (AES standard) power handling**
- **Vented magnet assembly for enhanced cooling**
- **Kevlar-loaded cone with sealed surround and damping for reduced distortion**
- **Special consideration is paid to materials and construction to deliver maximum reliability**
- **Suitable for use in 2-way and 3-way systems**

Frequency Response and Impedance Curves



Measured - 1W @ 1m, 2π

1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.
3. Xmax derived from: (voice coil winding width-gap depth)/2.
4. Small signal parameters measured after unit subjected to pre-conditioning signal.

CELESTION

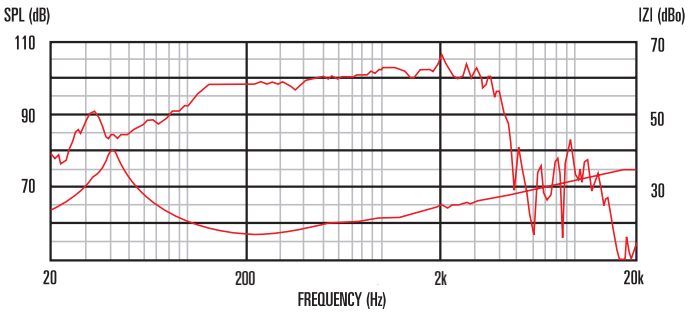
TF1530

Ferrite magnet pressed steel chassis driver

Features

- 15" bass and mid-range driver with efficient magnet assembly that enables 99dB sensitivity and 400Wrms (AES standard) power handling
- 3" high temperature copper voice coil wound on polyimide for increased reliability
- Double roll surround for greater excursion control
- Special consideration is paid to materials and construction to deliver maximum reliability
- Superb price/performance ratio

Frequency Response and Impedance Curves



Measured - 1W @ 1m, 2π

1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.
3. Xmax derived from: (voice coil winding width-gap depth)/2.

Also available in 4Ω, data available on request

General Specifications

Nominal diameter	381mm/15in
Power rating[1]	400Wrms
Nominal impedance	8Ω
Sensitivity[2]	99dB
Frequency range	40-3000Hz
Voice coil diameter	75mm/3in
Chassis type	Pressed steel
Magnet type	Ferrite
Magnet weight	2.44kg/86oz
Coil material	Round copper
Former material	Polyimide
Cone material	Kevlar loaded paper
Surround material	Cloth-sealed
Suspension	Single
Xmax[3]	2mm/0.08in
Gap depth	8mm/0.31in
Voice coil winding width	12mm/0.47in

Small Signal Parameters

D	0.33m/12.99in
Fs	45Hz
Mms	91.85g/3.24oz
Mmd	77.70g/2.74oz
Qms	4.20
Qes	0.42
Qts	0.38
Re	5.70Ω
Vas	141.2lt/4.99ft^3
Bl	18.70Tm
Cms	0.14mm/N
Rms	6.13kg/s
Le (at 1kHz)	1.08mH

Mounting Information

Overall diameter	385mm/15.16in
Overall depth	163mm/6.42in
Cut-out diameter	352mm/13.86in
Mounting slot dimensions	9.2mm x 6.2mm/0.36in x 0.24in
Number of mounting slots	8
Mounting PCD range	369mm/14.56in
Unit weight	6.1kg/13.4lb

Packed Dimensions & Weight

Single pack size W x D x H	410mm x 410mm x 180mm /16.1in x 16.1in x 7.1in
Single pack weight	8kg/17.6lb
Multi pack (45) size W x D x H	1200mm x 1000mm x 980mm /47.2in x 39.4in x 38.6in
Multi pack (45) weight	300kg/660lb

PRELIMINARY INFORMATION

CELESTION

TF1530SL

Ferrite magnet pressed steel chassis driver

General Specifications

Nominal diameter	381mm/15in
Power rating[1]	350Wrms
Nominal impedance	8Ω
Sensitivity[2]	98dB
Frequency range	40-3000Hz
Voice coil diameter	75mm/3in
Chassis type	Pressed Steel
Magnet type	Ferrite
Coil material	Round copper
Former material	Polyimide
Cone material	Kevlar loaded paper
Surround material	Cloth-sealed
Suspension	Single
Xmax[3]	4mm/0.16in
Gap depth	8mm/0.31in
Voice coil winding width	16mm/0.63in

Small Signal Parameters

D	0.33m/12.99in
Fs	40.7Hz
Mms	89.78g/3.17oz
Mmd	75.62g/2.67oz
Qms	3.302
Qes	0.427
Qts	0.378
Re	5.04Ω
Vas	176.08lt/6.22ft^3
Bl	16.45Tm
Cms	0.17mm/N
Rms	6.958kg/s
Le (at 1kHz)	0.93mH

Mounting Information

Diameter	385mm/15.16in
Overall depth	161mm/6.34in
Cut-out diameter	352mm/13.86in
Mounting slot dimensions	9.2x6.2mm/0.36x0.24in
Number of mounting slots	8
Mounting PCD range	369mm/14.57in
Unit weight	5kg/11lb

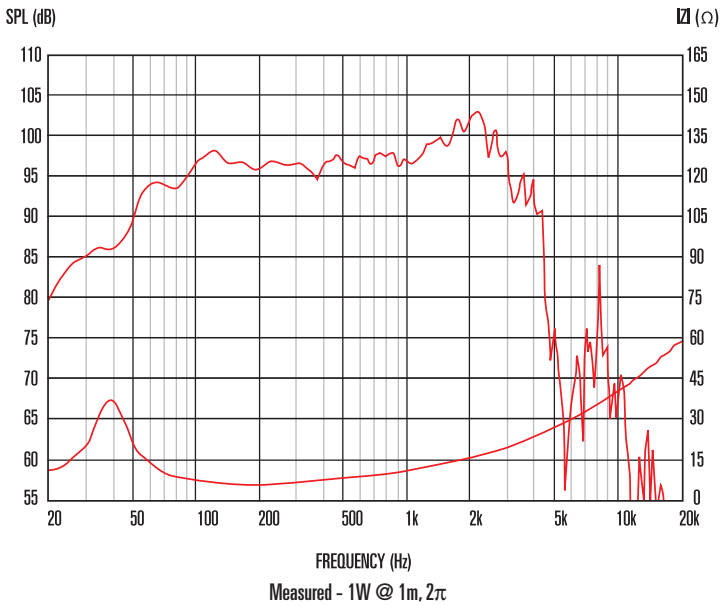
Packed Dimensions & Weight

Multi pack (45) size W x D x H	1200mm x 1000mm x 980mm /47.2in x 39.4in x 38.6in
Multi pack (45) weight	265kg/580lb

Features

- 15" Bass and mid-range driver providing 98dB sensitivity and 350Wrms (AES standard) power handling
- 3" high temperature copper voice coil wound on polyimide for increased reliability
- Finite Element analysis techniques used to optimise magnet assembly, resulting in lower mass than typical ferrite units
- Reduced inductive rise, leading to greater mid-range sensitivity; beneficial for many 15" driver applications
- Kevlar-loaded cone with sealed surround and damping for reduced distortion.
- Double roll surround provides exceptional linearity at extremes of cone excursion
- For use in 2-way or compact 3-way systems

Frequency Response and Impedance Curves



Measured - 1W @ 1m, 2π

1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.
3. Xmax derived from: (voice coil winding width-gap depth)/2.

Also available in 4Ω, data available on request

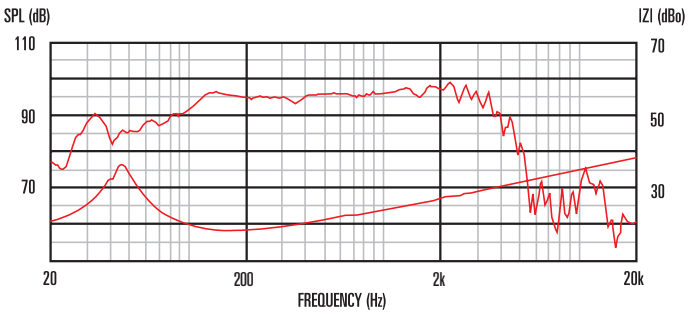
TF1525e

Ferrite magnet pressed steel chassis driver

Features

- 15" driver provides extended low frequency range
- 2.5" edgewound voice coil enables 97dB efficiency and 300Wrms (AES standard) power handling
- Vented magnet assembly for enhanced cooling
- Kevlar-loaded cone with sealed surround and damping for reduced distortion
- Ideal for use in 2-way and 3-way systems

Frequency Response and Impedance Curves



Measured - 1W @ 1m, 2π

1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.
3. Xmax derived from: (voice coil winding width-gap depth)/2.

Also available in 4Ω, data available on request

General Specifications

Nominal diameter	381mm/15in
Power rating[1]	300Wrms
Nominal impedance	8Ω
Sensitivity[2]	97dB
Frequency range	45-3500Hz
Voice coil diameter	64mm/2.5in
Chassis type	Pressed steel
Magnet type	Ferrite
Magnet weight	1.4kg/50oz
Coil material	Edgewound copper
Former material	Glass fibre
Cone material	Kevlar loaded paper
Surround material	Cloth-sealed
Suspension	Single
Xmax[3]	3.5mm/0.14in
Gap depth	8mm/0.31in
Voice coil winding width	14.5mm/0.57in

Small Signal Parameters

D	0.33m/12.99in
Fs	49.8Hz
Mms	82.41g/2.91oz
Mmd	68.26g/2.41oz
Qms	7.12
Qes	0.53
Qts	0.50
Re	6.48Ω
Vas	128.19lt/4.53ft^3
Bl	17.69Tm
Cms	0.12mm/N
Rms	3.62kg/s
Le (at 1kHz)	1.32mH

Mounting Information

Overall diameter	385mm/15.16in
Overall depth	163mm/6.42in
Cut-out diameter	352mm/13.86in
Mounting slot dimensions	9.2mm x 6.2mm/0.36in x 0.24in
Number of mounting slots	8
Mounting PCD range	369mm/14.56in
Unit weight	4.8kg/10.6lb

Packed Dimensions & Weight

Single pack size W x D x H	410mm x 410mm x 180mm /16.1in x 16.1in x 7.1in
Single pack weight	5.5kg/12.1lb
Multi pack (45) size W x D x H	1200mm x 1000mm x 980mm /47.2in x 39.4in x 38.6in
Multi pack (45) weight	248kg/547lb

CELESTION

TF1525

Ferrite magnet pressed steel chassis driver

General Specifications

Nominal diameter	381mm/15in
Power rating[1]	250Wrms
Nominal impedance	8Ω
Sensitivity[2]	98dB
Frequency range	40-3000Hz
Voice coil diameter	64mm/2.5in
Chassis type	Pressed steel
Magnet type	Ferrite
Magnet weight	1.2kg/42oz
Coil material	Round copper
Former material	Polyimide
Cone material	Kevlar loaded paper
Surround material	Cloth-sealed
Suspension	Single
Xmax[3]	2.5mm/0.1in
Gap depth	8mm/0.31in
Voice coil winding width	13mm/0.51in

Small Signal Parameters

D	0.33m/12.99in
Fs	47Hz
Mms	78.2g/2.76oz
Mmd	64.1g/2.26oz
Qms	5.9
Qes	0.66
Qts	0.59
Re	5.21Ω
Vas	152.5lt/5.38ft^3
Bl	13.5Tm
Cms	0.149mm/N
Rms	3.94kg/s
Le (at 1kHz)	0.82mH

Mounting Information

Overall diameter	385mm/15.16in
Overall depth	153mm/6.02in
Cut-out diameter	351mm/13.82in
Mounting slot dimensions	9.2mm x 6.2mm/0.36in x 0.24in
Number of mounting slots	8
Mounting PCD range	369mm/14.56in
Unit weight	5.2kg/11.5lb

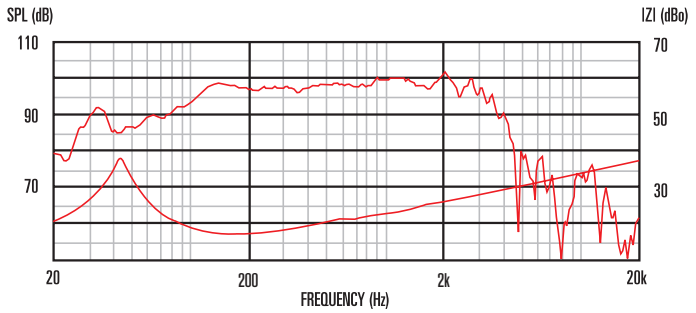
Packed Dimensions & Weight

Single pack size W x D x H	410mm x 410mm x 180mm /16.1in x 16.1in x 7.1in
Single pack weight	5kg/11.0lb
Multi pack (45) size W x D x H	1200mm x 1000mm x 980mm /47.2in x 39.4in x 38.6in
Multi pack (45) weight	225kg/496lb

Features

- **15" bass and mid-range driver providing 98dB sensitivity and 250Wrms (AES standard) power handling**
- **2.5" high temperature copper voice coil wound on polyimide for increased reliability**
- **Kevlar-loaded cone with sealed surround and damping for reduced distortion**
- **Rigid chassis design for maximum energy transfer**
- **Vented magnet assembly for enhanced cooling**
- **Ideal for 2-way and 3-way systems**

Frequency Response and Impedance Curves



Measured - 1W @ 1m, 2π

1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.
3. Xmax derived from: (voice coil winding width-gap depth)/2.

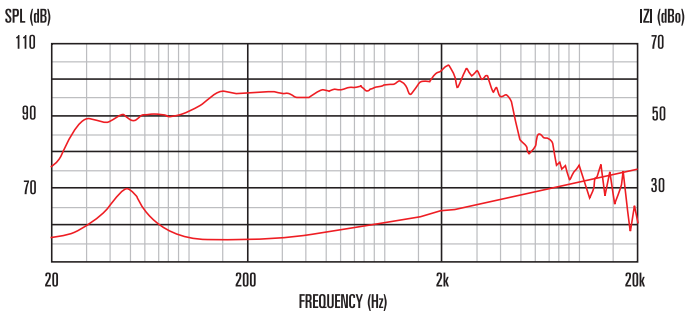
TF1520

Ferrite magnet pressed steel chassis driver

Features

- **Versatile 15" bass and mid-range driver providing 96dB sensitivity and 150Wrms (AES standard) power handling**
- **2" high temperature copper voice coil wound on polyimide for increased reliability**
- **Kevlar-loaded cone with sealed surround and damping for reduced distortion**
- **Rigid chassis design for maximum energy transfer**
- **Ideal for 2-way and 3-way systems**

Frequency Response and Impedance Curves



Measured - 1W @ 1m, 2π

1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.
3. Xmax derived from: (voice coil winding width-gap depth)/2.

Also available in 4Ω, data available on request

General Specifications

Nominal diameter	381mm/15in
Power rating[1]	150Wrms
Nominal impedance	8Ω
Sensitivity[2]	96dB
Frequency range	45-4000Hz
Voice coil diameter	50mm/2in
Chassis type	Pressed steel
Magnet type	Ferrite
Magnet weight	1kg/35oz
Coil material	Round copper
Former material	Polyimide
Cone material	Kevlar loaded paper
Surround material	Cloth-sealed
Suspension	Single
Xmax[3]	3mm/0.12in
Gap depth	8mm/0.24in
Voice coil winding width	14.5mm/0.57in

Small Signal Parameters

D	0.33m/12.99in
Fs	51.7Hz
Mms	62.33g/2.2oz
Mmd	48.18g/1.7oz
Qms	6.69
Qes	0.85
Qts	0.75
Re	5.95Ω
Vas	157.69lt/5.57ft^3
Bl	11.93Tm
Cms	0.15mm/N
Rms	3.03kg/s
Le (at 1kHz)	1.41mH

Mounting Information

Overall diameter	385mm/15.16in
Overall depth	158mm/6.22in
Cut-out diameter	352mm/13.86in
Mounting slot dimensions	9.4mm x 6.3mm/0.37in x 0.25in
Number of mounting slots	8
Mounting PCD range	370mm/14.57in
Unit weight	5.0kg/11.0lb

Packed Dimensions & Weight

Single pack size W x D x H	410mm x 410mm x 180mm /16.1in x 16.1in x 7.1in
Single pack weight	5.5kg/12.1
Multi pack (4) size W x D x H	750mm x 340mm x 440mm /29.5in x 13.4in x 17.3in
Multi pack (4) weight	22kg/48lb

CELESTION

TF1230

Ferrite magnet pressed steel chassis driver

General Specifications:

Nominal diameter	305mm/12in
Power rating[1]	350Wrms
Nominal impedance	8Ω
Sensitivity[2]	94dB
Frequency range	45-3000Hz
Voice coil diameter	75mm/3in
Chassis type	Pressed steel
Magnet type	Ferrite
Magnet weight	1.4kg/48oz
Coil material	Round copper
Former material	Polyimide
Cone material	Kevlar loaded paper
Surround material	Cloth-sealed
Suspension	Single
Xmax[3]	5mm/0.19in
Gap depth	8mm/0.24in
Voice coil winding width	17.5mm/0.69in

Small Signal Parameters

D	0.26m/0.24in
Fs	56.9Hz
Mms	58.59g/2.07oz
Mmd	51.68g/1.82oz
Qms	2.411
Qes	0.615
Qts	0.490
Re	5.18Ω
Vas	53.3lt/1.88ft^3
Bl	13.29Tm
Cms	0.133mm/N
Rms	8.69kg/s
Le (at 1kHz)	1.20mH

Mounting Information

Overall diameter	309mm/12.17in
Overall depth	140mm/5.5in
Cut-out diameter	283mm/11.14in
Mounting slot dimensions	Ø 7.9/0.31
Number of mounting slots	4
Mounting PCD range	297mm/11.69in
Unit weight	4.3kg/9.46lb

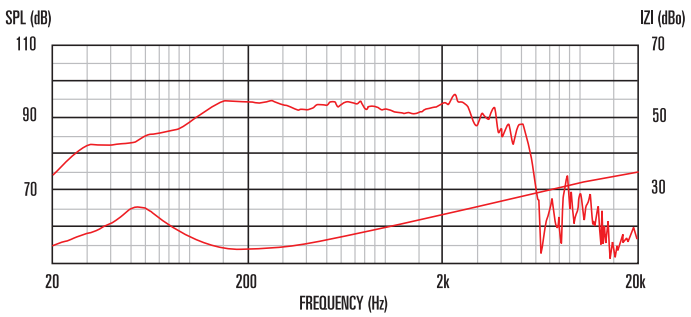
Packed Dimensions & Weight

Multi pack (60) size W x D x H	1080mm x 980mm x 880mm /42.5in x 38.6in x 34.6in
Multi pack (60) weight	190kg/419lb

Features

- **12" Bass driver providing 94dB sensitivity and 350Wrms (AES standard) power handling**
- **3" high temperature copper voice coil wound on polyimide for increased reliability**
- **Kevlar-loaded cone with sealed surround and damping for reduced distortion.**
- **Double roll surround for greater excursion control**
- **Vented magnet assembly for enhanced cooling**
- **For use in 2-way or compact 3-way systems**

Frequency Response and Impedance Curves



Measured - 1W @ 1m, 2π

1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.
3. Xmax derived from: (voice coil winding width-gap depth)/2.

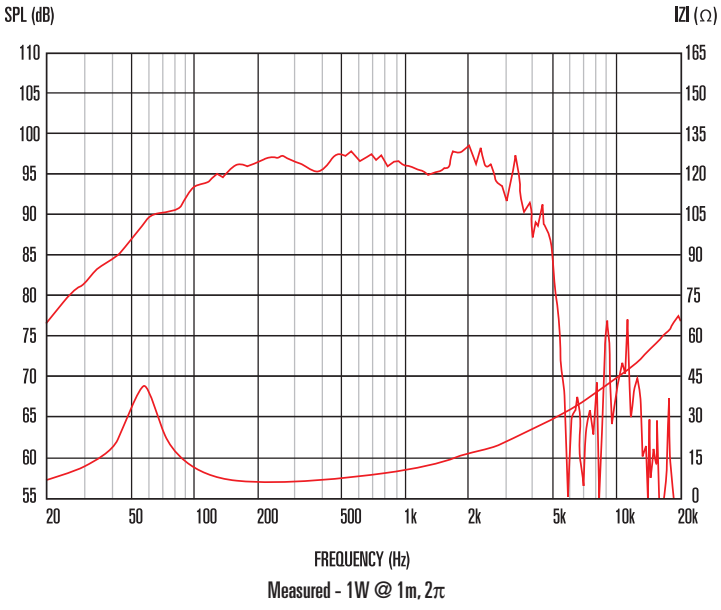
TF1230SL

Ferrite magnet pressed steel chassis driver

Features

- 12" Bass and mid-range driver providing 97dB sensitivity and 350Wrms (AES standard) power handling
- 3" high temperature copper voice coil wound on polyimide for increased reliability
- Finite Element analysis techniques used to optimise magnet assembly, resulting in lower mass than typical ferrite units
- Reduced inductive rise, leading to greater mid-range sensitivity; beneficial for many 12" driver applications
- Kevlar-loaded cone with sealed surround and damping for reduced distortion
- Double roll surround provides exceptional linearity at extremes of cone excursion

Frequency Response and Impedance Curves



Measured - 1W @ 1m, 2π

1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.
3. Xmax derived from: (voice coil winding width-gap depth)/2.
4. Small signal parameters measured after unit subjected to pre-conditioning signal.

Also available in 4Ω, data available on request

General Specifications

Nominal diameter	305mm/12in
Power rating[1]	350Wrms
Nominal impedance	8Ω
Sensitivity[2]	97dB
Frequency range	50-4000Hz
Voice coil diameter	75mm/3in
Chassis type	Pressed Steel
Magnet type	Ferrite
Magnet weight	1.7kg/60oz
Coil material	Round copper
Former material	Polyimide
Cone material	Kevlar loaded paper
Surround material	Cloth-sealed
Suspension	Single
Xmax[3]	4mm/0.16in
Gap depth	8mm/0.31in
Voice coil winding width	16mm/0.63in

Small Signal Parameters[4]

D	0.26m/10.24in
Fs	59.5Hz
Mms	59.29g/2.09oz
Mmd	52.37g/1.84oz
Qms	3.319
Qes	0.444
Qts	0.392
Re	5.11Ω
Vas	48.18lt/1.7ft^3
Bl	15.97Tm
Cms	0.12mm/N
Rms	6.67kg/s
Le (at 1kHz)	0.91mH

Mounting Information

Diameter	309mm/12.17in
Overall depth	137mm/5.43in
Cut-out diameter	283mm/11.14in
Mounting slot dimensions	Ø7.9mm/0.31in
Number of mounting slots	4
Mounting slot PCD	297mm/11.69in
Unit weight	4.3kg/9.5lb

Packed Dimensions & Weight

Multi pack (60) size W x D x H	1080mm x 980mm x 880mm /42.5in x 38.6in x 34.6in
Multi pack (60) weight	190kg/419lb

CELESTION

TF1225e

Ferrite magnet pressed steel chassis driver

General Specifications

Nominal diameter	305mm/12in
Power rating[1]	300Wrms
Nominal impedance	8Ω
Sensitivity[2]	96dB
Frequency range	50-3000Hz
Voice coil diameter	64mm/2.5in
Chassis type	Pressed steel
Magnet type	Ferrite
Magnet weight	1.4kg/50oz
Coil material	Edgewound copper
Former material	Polyimide
Cone material	Kevlar loaded paper
Surround material	Cloth-sealed
Suspension	Single
Xmax[3]	3.5mm/0.14in
Gap depth	8mm/0.31in
Voice coil winding width	14.5mm/0.57in

Small Signal Parameters

D	0.26m/10.24in
Fs	61.2Hz
Mms	53.24g/1.88oz
Mmd	46.31g/1.63oz
Qms	4.80
Qes	0.44
Qts	0.40
Re	5.07Ω
Vas	50.6lt/1.79ft^3
Bl	15.41Tm
Cms	0.13mm/N
Rms	4.27kg/s
Le (at 1kHz)	1.1mH

Mounting Information

Overall diameter	309mm/12.17in
Overall depth	139mm/5.47in
Cut-out diameter	283mm/11.14in
Mounting slot dimensions	Ø 7.9mm/0.31in
Number of mounting slots	4
Mounting PCD range	297mm/11.69in
Unit weight	4.4kg/9.7lb

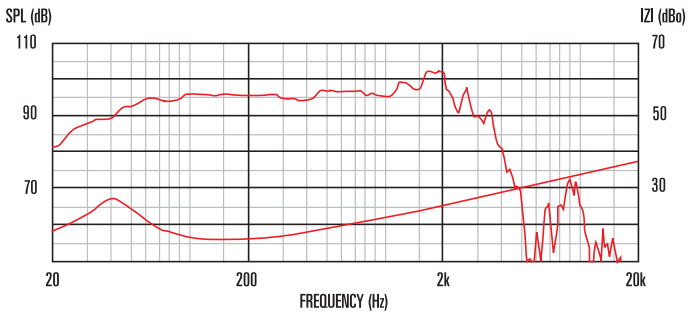
Packed Dimensions & Weight

Single pack size W x D x H	330mm x 330mm x 150mm /13.0in x 13.0in x 5.9in
Single pack weight	5kg/11lb
Multi pack (60) size W x D x H	1080mm x 980mm x 880mm /42.5in x 38.6in x 34.6in
Multi pack (60) weight	290kg/638lb

Features

- **12" Bass driver with extended low frequency response**
- **2.5" edgewound voice coil provides 96dB sensitivity and 300Wrms (AES standard) power handling**
- **Kevlar-loaded cone with sealed surround and damping for reduced distortion**
- **Double roll surround for greater excursion control**
- **Suitable for use in 2-way and compact 3-way systems**

Frequency Response and Impedance Curves



Measured - 1W @ 1m, 2π

1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.
3. Xmax derived from: (voice coil winding width-gap depth)/2.

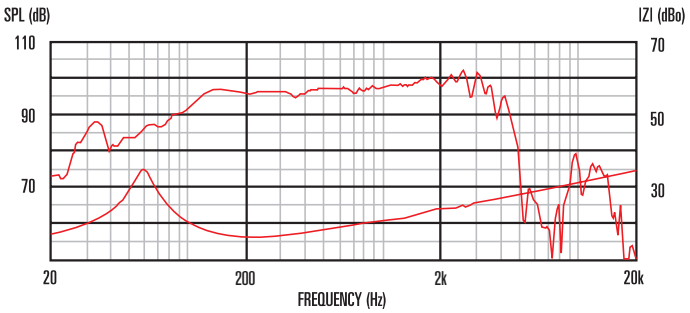
TF1225

Ferrite magnet pressed steel chassis driver

Features

- 12" Bass and mid-range driver providing 97dB sensitivity and 250Wrms (AES standard) power handling
- 2.5" high temperature copper voice coil wound on polyimide for increased reliability
- Optimised ferrite magnet design reduces weight
- Double roll surround for greater excursion control
- For use in 2-way or compact 3-way systems

Frequency Response and Impedance Curves



Measured - 1W @ 1m, 2π

1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.
3. Xmax derived from: (voice coil winding width-gap depth)/2.

Also available in 4Ω, data available on request

General Specifications

Nominal diameter	305mm/12in
Power rating[1]	250Wrms
Nominal impedance	8Ω
Sensitivity[2]	97dB
Frequency range	50-4000Hz
Voice coil diameter	64mm/2.5in
Chassis type	Pressed steel
Magnet type	Ferrite
Magnet weight	1.2kg/42oz
Coil material	Round copper
Former material	Polyimide
Cone material	Kevlar loaded paper
Surround material	Cloth-sealed
Suspension	Single
Xmax[3]	2.5mm/0.1in
Gap depth	8mm/0.31in
Voice coil winding width	13mm/0.51in

Small Signal Parameters

D	0.26m/10.24in
Fs	63Hz
Mms	46.51g/1.64oz
Mmd	39.60g/1.40oz
Qms	6.70
Qes	0.54
Qts	0.50
Re	5.13Ω
Vas	54.5lt/1.92ft^3
Bl	13.20Tm
Cms	0.14mm/N
Rms	2.76kg/s
Le (at 1kHz)	0.84mH

Mounting Information

Overall diameter	309mm/12.17in
Overall depth	130mm/5.12in
Cut-out diameter	283mm/11.14in
Mounting slot dimensions	Ø 7.9/0.31
Number of mounting slots	4
Mounting PCD range	297mm/11.69in
Unit weight	4.1kg/9.0lb

Packed Dimensions & Weight

Single pack size W x D x H	330mm x 330mm x 150mm /13.0in x 13.0in x 5.9in
Single pack weight	5kg/11lb
Multi pack (60) size W x D x H	1080mm x 980mm x 880mm /42.5in x 38.6in x 34.6in
Multi pack (60) weight	290kg/638lb

CELESTION

TF1220

Ferrite magnet pressed steel chassis driver

General Specifications

Nominal diameter	305mm/12in
Power rating[1]	150Wrms
Nominal impedance	8Ω
Sensitivity[2]	97dB
Frequency range	60-4000Hz
Voice coil diameter	50mm/2in
Chassis type	Pressed steel
Magnet type	Ferrite
Magnet weight	1.2kg/42oz
Coil material	Round copper
Former material	Polyimide
Cone material	Kevlar loaded paper
Surround material	Cloth-sealed
Suspension	Single
Xmax[3]	2mm/0.08in
Gap depth	8mm/0.31in
Voice coil winding width	12mm/0.47in

Small Signal Parameters

D	0.26m/10.24in
Fs	55Hz
Mms	38.91g/1.37oz
Mmd	32.0g/1.258oz
Qms	4.30
Qes	0.46
Qts	0.42
Re	5.54Ω
Vas	84.7lt/2.99ft^3
Bl	12.70Tm
Cms	0.21mm/N
Rms	3.16kg/s
Le (at 1kHz)	0.735mH

Mounting Information

Overall diameter	309mm/12.17in
Overall depth	131mm/5.16in
Cut-out diameter	283mm/11.14in
Mounting slot dimensions	Ø 7.9mm/0.31in
Number of mounting slots	4
Mounting PCD range	297mm/11.69in
Unit weight	4kg/8.8lb

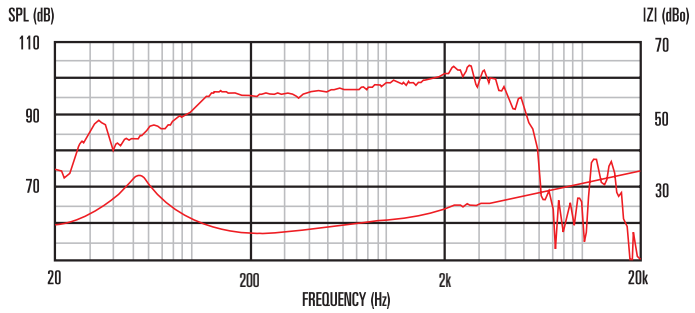
Packed Dimensions & Weight

Single pack size W x D x H	330mm x 330mm x 150mm /13.0in x 13.0in x 5.9in
Single pack weight	5kg/11lb
Multi pack (60) size W x D x H	1080mm x 980mm x 880mm /42.5in x 38.6in x 34.6in
Multi pack (60) weight	265kg/580lb

Features

- **12" Bass/mid driver providing 97dB sensitivity and 150Wrms (AES standard)**
- **2" high temperature copper voice coil wound on polyimide for increased power handling**
- **Rigid chassis design for maximum energy transfer**
- **Kevlar-loaded cone with sealed surround and damping for reduced distortion**
- **Excellent performance at cost-effective price point**
- **Ideal for use in compact 2-way systems**

Frequency Response and Impedance Curves



Measured - 1W @ 1m, 2π

1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.
3. Xmax derived from: (voice coil winding width-gap depth)/2.

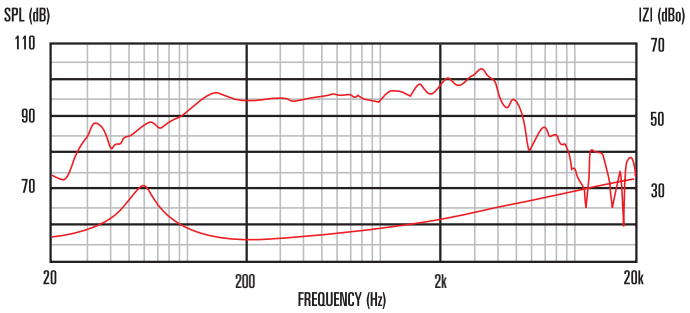
TF1218

Ferrite magnet pressed steel chassis driver

Features

- 12" Bass and mid-range driver offering a superior price/performance ratio
- Provides 97dB sensitivity and 100Wrms (AES standard) power handling
- 1.75" High temperature copper voice coil wound on polyimide for increased reliability
- Kevlar-loaded cone with sealed surround and damping for reduced distortion
- Suitable for use in compact 2-way systems

Frequency Response and Impedance Curves



Measured - 1W @ 1m, 2π

1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.
3. Xmax derived from: (voice coil winding width-gap depth)/2.

General Specifications

Nominal diameter (mm/in)	305mm/12in
Power rating[1]	100Wrms
Nominal impedance	8Ω
Sensitivity[2]	97dB
Frequency range	60-4500Hz
Voice coil diameter	45mm/1.75in
Chassis type	Pressed steel
Magnet type	Ferrite
Magnet weight	0.88kg/31oz
Coil material	Round copper
Former material	Polyimide
Cone material	Kevlar loaded paper
Surround material	Cloth-sealed
Suspension	Single
Xmax[3]	2mm/0.08in
Gap depth	6mm/0.24in
Voice coil winding width	10mm/0.39in

Small Signal Parameters

D	0.26m/10.24in
Fs	62Hz
Mms	39.41g/1.39oz
Mmd	32.50g/1.15oz
Qms	4.90
Qes	0.72
Qts	0.63
Re	5.55Ω
Vas	66.6lt/2.35ft^3
Bl	10.90Tm
Cms	0.17mm/N
Rms	3.14kg/s
Le (at 1kHz)	0.57mH

Mounting Information

Overall diameter	309mm/12.17in
Overall depth	125mm/4.92in
Cut-out diameter	283mm/11.14in
Mounting slot dimensions	Ø 7.9mm/0.31in
Number of mounting slots	4
Mounting PCD range	297mm/11.69in
Unit weight	2.7kg/6.0lb

Packed Dimensions & Weight

Single pack size W x D x H	330mm x 330mm x 150mm /13.0in x 13.0in x 5.9in
Single pack weight	4kg/8.8lb
Multi pack (60) size W x D x H	1080mm x 980mm x 880mm /42.5in x 38.6in x 34.6in
Multi pack (60) weight	185kg/405lb

CELESTION

TF1215

Ferrite magnet pressed steel chassis driver

General Specifications

Nominal diameter	305mm/12in
Power rating[1]	100Wrms
Nominal impedance	8Ω
Sensitivity[2]	95dB
Frequency range	60-5000Hz
Voice coil diameter	38mm/1.5in
Chassis type	Pressed steel
Magnet type	Ferrite
Magnet weight	0.62kg/22oz
Coil material	Round copper
Former material	Polyimide
Cone material	Kevlar loaded paper
Surround material	Cloth-sealed
Suspension	Single
Xmax[3]	2mm/0.08in
Gap depth	6mm/0.24in
Voice coil winding width	10mm/0.39in

Small Signal Parameters

D	0.26m/10.24in
Fs	62.5Hz
Mms	33.91g/1.197oz
Mmd	27.0g/0.95oz
Qms	6.297
Qes	1.311
Qts	1.085
Re	5.85Ω
Vas	69.2lt/2.45ft^3
Bl	8.02Tm
Cms	0.18mm/N
Rms	2.20kg/s
Le (at 1kHz)	0.5mH

Mounting Information

Overall diameter	309mm/12.17in
Overall depth	124mm/4.88in
Cut-out diameter	283mm/11.14in
Mounting slot dimensions	Ø 7.9mm/0.31in
Number of mounting slots	4
Mounting PCD range	297mm/11.69in
Unit weight	2.4kg/5.3lb

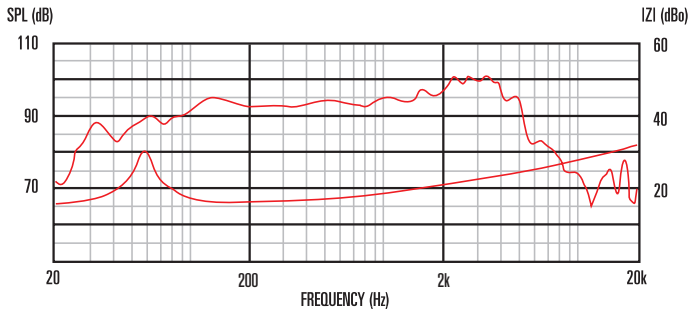
Packed Dimensions & Weight

Single pack size W x D x H	330mm x 330mm x 150mm /13.0in x 13.0in x 5.9in
Single pack weight	3kg/6.6lb
Multi pack (60) size W x D x H	1080mm x 980mm x 880mm /42.5in x 38.6in x 34.6in
Multi pack (60) weight	154kg/339lb

Features

- **12" driver with excellent bass and mid-range performance**
- **Provides 95dB sensitivity and 100Wrms (AES standard) power handling**
- **1.5" High temperature copper voice coil wound on polyimide for increased reliability**
- **Kevlar-loaded cone with sealed surround and damping for reduced distortion**
- **Cost-effective unit, optimised for use in 2-way systems**

Frequency Response and Impedance Curves



Measured - 1W @ 1m, 2π

1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.
3. Xmax derived from: (voice coil winding width-gap depth)/2.

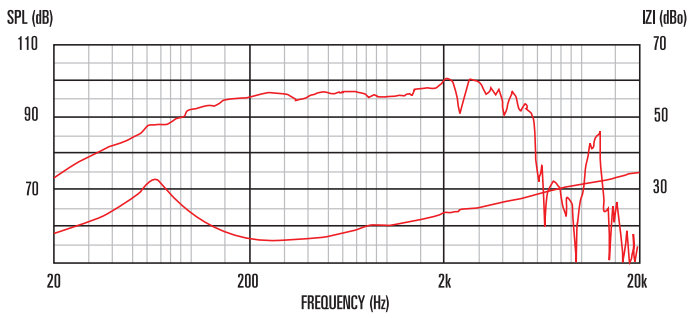
TF1020

Ferrite magnet pressed steel chassis driver

Features

- 10" bass and mid-range driver provides 97dB sensitivity and 150Wrms (AES standard) power handling
- 2" High temperature copper voice coil wound on polyimide for increased reliability
- Ideally suited to compact enclosures and high pass systems
- Rigid chassis design for maximum energy transfer
- Vented magnet assembly for enhanced cooling
- Kevlar-loaded cone with sealed surround and damping for reduced distortion

Frequency Response and Impedance Curves



Measured - 1W @ 1m, 2π

1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.
3. Xmax derived from: (voice coil winding width-gap depth)/2.

Also available in 4Ω, data available on request

General Specifications

Nominal diameter	254mm/10in
Power rating[1]	150Wrms
Nominal impedance	8Ω
Sensitivity[2]	97dB
Frequency range	60-3000Hz
Voice coil diameter	50mm/2in
Chassis type	Pressed steel
Magnet type	Ferrite
Magnet weight	1.2kg/42oz
Coil material	Round copper
Former material	Polyimide
Cone material	Kevlar loaded paper
Surround material	Cloth-sealed
Suspension	Single
Xmax[3]	2mm/0.08in
Gap depth	8mm/0.31in
Voice coil winding width	12mm/0.47in

Small Signal Parameters

D	0.21m/8.27in
Fs	60.9Hz
Mms	30.92g/1.09oz
Mmd	27.27g/0.96oz
Qms	2.853
Qes	0.361
Qts	0.32
Re	5.79Ω
Vas	37.45lt/1.32ft^3
Bl	13.79Tm
Cms	0.221mm/N
Rms	4.15kg/s
Le (at 1kHz)	0.59mH

Mounting Information

Overall diameter	256mm/10.08in
Overall depth	110mm/4.33in
Cut-out diameter	229mm/9.02in
Mounting slot dimensions	8mm x 6mm/0.31in x 0.24in
Number of mounting slots	8
Mounting PCD range	242-246mm/9.53-9.65in
Unit weight	3.7kg/8.2lb

Packed Dimensions & Weight

Single pack size W x D x H	280mm x 280mm x 120mm /11.0in x 11.0in x 4.7in
Single pack weight	4kg/8.8lb
Multi pack (96) size W x D x H	1080mm x 880mm x 840mm /42.5in x 34.6in x 33.1in
Multi pack (96) weight	390kg/860lb

CELESTION

TF1018

Ferrite magnet pressed steel chassis driver

General Specifications

Nominal diameter	254mm/10in
Power rating[1]	100Wrms
Nominal impedance	8Ω
Sensitivity[2]	96dB
Frequency range	70-6000Hz
Voice coil diameter	45mm/1.75in
Chassis type	Pressed steel
Magnet type	Ferrite
Magnet weight	0.88kg/31oz
Coil material	Round copper
Former material	Polyimide
Cone material	Kevlar loaded paper
Surround material	Cloth-sealed
Suspension	Single
Xmax[3]	2mm/0.08in
Gap depth	6mm/0.24in
Voice coil winding width	10mm/0.39in

Small Signal Parameters

D	0.21m/8.27in
Fs	79.8Hz
Mms	28.31g/0.99oz
Mmd	24.67g/0.87oz
Qms	3.381
Qes	0.624
Qts	0.527
Re	5.73Ω
Vas	23.84lt/0.841ft^3
Bl	11.42Tm
Cms	0.14mm/N
Rms	4.199kg/s
Le (at 1kHz)	0.54mH

Mounting Information

Overall diameter	256mm/10.08in
Overall depth	102mm/4.02in
Cut-out diameter	229mm/9.02in
Mounting slot dimensions	8mm x 6mm/0.31in x 0.24in
Number of mounting slots	8
Mounting PCD range	242-246mm/9.53-9.65in
Unit weight	2.4kg/5.3lb

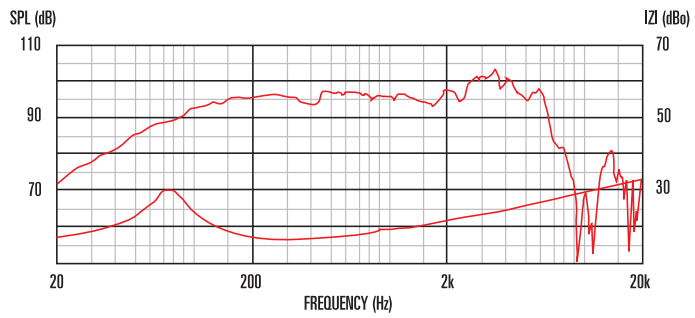
Packed Dimensions & Weight

Single pack size W x D x H	280mm x 280mm x 120mm /11.0in x 11.0in x 4.7in
Single pack weight	3kg/6.6lb
Multi pack (96) size W x D x H	1080mm x 880mm x 840mm /42.5in x 34.6in x 33.1in
Multi pack (96) weight	265kg/585lb

Features

- **10" driver providing 96dB sensitivity and 100Wrms (AES standard) power handling**
- **1.75" high temperature copper voice coil wound on polyimide for increased reliability**
- **Superior bass and mid-range performance**
- **Rigid chassis design for maximum energy transfer**
- **Excellent price/performance ratio**

Frequency Response and Impedance Curves



Measured - 1W @ 1m, 2π

1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.
3. Xmax derived from: (voice coil winding width-gap depth)/2.

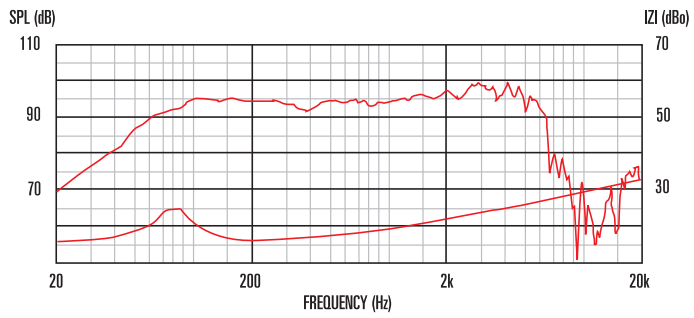
TF1015

Ferrite magnet pressed steel chassis driver

Features

- **10" driver providing 95dB sensitivity and 70Wrms (AES standard) power handling**
- **1.5" high temperature copper voice coil wound on polyimide former for increased reliability**
- **Rigid chassis design for maximum energy transfer**
- **Kevlar-loaded cone with sealed surround and damping for reduced distortion**
- **Excellent bass and mid-range performance**

Frequency Response and Impedance Curves



Measured - 1W @ 1m, 2π

1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.
3. Xmax derived from: (voice coil winding width-gap depth)/2.

Also available in 4Ω, data available on request

General Specifications

Nominal diameter	254mm/10in
Power rating[1]	70Wrms
Nominal impedance	8Ω
Sensitivity[2]	95dB
Frequency range	80-6000Hz
Voice coil diameter	38mm/1.5in
Chassis type	Pressed steel
Magnet type	Ferrite
Magnet weight	0.48kg/17oz
Coil material	Round copper
Former material	Polyimide
Cone material	Kevlar loaded paper
Surround material	Cloth-sealed
Suspension	Single
Xmax[3]	2mm/0.08in
Gap depth	6mm/0.24in
Voice coil winding width	10mm/0.39in

Small Signal Parameters

D	0.21m/8.27in
Fs	85.4Hz
Mms	28.07g/0.99oz
Mmd	24.43g/0.86oz
Qms	3.624
Qes	1.477
Qts	1.049
Re	5.66Ω
Vas	21.02lt/0.742ft^3
Bl	7.6Tm
Cms	0.124mm/N
Rms	4.156kg/s
Le (at 1kHz)	0.59mH

Mounting Information

Overall diameter	256mm/10.08in
Overall depth	100mm/3.94in
Cut-out diameter	229mm/9.02in
Mounting slot dimensions	8mm x 6mm/0.31in x 0.24in
Number of mounting slots	8
Mounting PCD range	242-246mm/9.53-9.65in
Unit weight	1.7kg/3.7lb

Packed Dimensions & Weight

Single pack size W x D x H	280mm x 280mm x 120mm /11.0in x 11.0in x 4.7in
Single pack weight	2kg/4.4lb
Multi pack (96) size W x D x H	1080mm x 880mm x 840mm /42.5in x 34.6in x 33.1in
Multi pack (96) weight	200kg/441lb

CELESTION

TF0818

Ferrite magnet pressed steel chassis driver

General Specifications

Nominal diameter	203mm/8in
Power rating[1]	100Wrms
Nominal impedance	8Ω
Sensitivity[2]	94dB
Frequency range	70-6000Hz
Voice coil diameter	45mm/1.75in
Chassis type	Pressed steel
Magnet type	Ferrite
Magnet weight	0.88kg/31oz
Coil material	Round copper
Former material	Polyimide
Cone material	Kevlar loaded paper
Surround material	Cloth-sealed
Suspension	Single
Xmax[3]	3.5mm/0.14in
Gap depth	6mm/0.24in
Voice coil winding width	13mm/0.51in

Small Signal Parameters

D	0.17m/6.69in
Fs	95Hz
Mms	17.53g/0.62oz
Mmd	15.60g/0.55oz
Qms	3.83
Qes	0.50
Qts	0.44
Re	6.40Ω
Vas	12.6lt/0.44ft^3
Bl	11.36Tm
Cms	0.17mm/N
Rms	2.62kg/s
Le (at 1kHz)	0.75mH

Mounting Information

Overall diameter	208mm/8.19in
Overall depth	99mm/3.54in
Cut-out diameter	183mm/7.20in
Mounting slot dimensions	9.5mm x 5.5mm/0.37in x 0.22in
Number of mounting slots	4
Mounting PCD range	195-199mm/7.68-7.83in
Unit weight	2.3kg/5.1lb

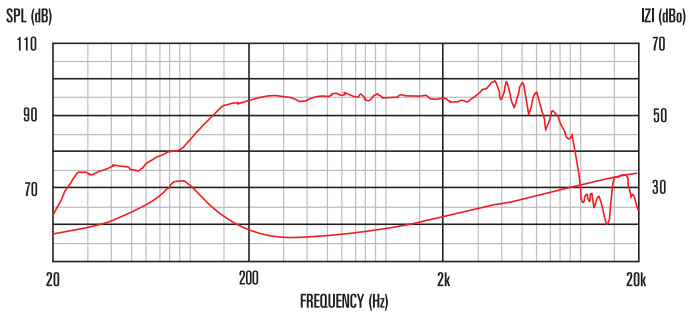
Packed Dimensions & Weight

Single pack size W x D x H	230mm x 230mm x 110mm /9.1in x 9.1in x 4.3in
Single pack weight	3kg/6.6lb
Multi pack (140) size W x D x H	1070mm x 850mm x 860mm /42.1in x 33.5in x 33.9in
Multi pack (140) weight	345kg/760lb

Features

- **8" driver providing 94dB sensitivity and 100Wrms (AES standard) power handling**
- **1.75" high temperature copper voice coil wound on polyimide former for increased reliability**
- **Achieves optimal performance in compact enclosures**
- **Exceptional performance through bass and mid-range**
- **Ideal for 2-way systems**

Frequency Response and Impedance Curves



Measured - 1W @ 1m, 2π

1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.
3. Xmax derived from: (voice coil winding width-gap depth)/2.

Also available in 4Ω and 16Ω, data available on request

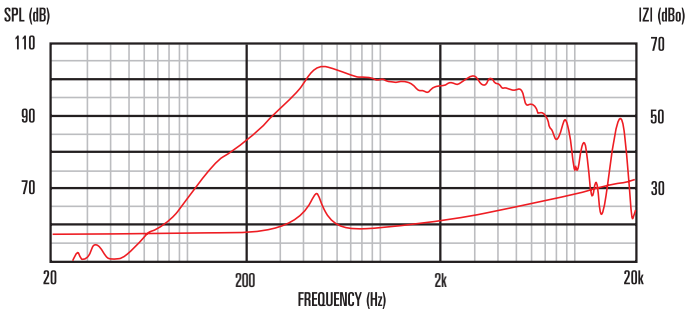
TF0818MR

Ferrite magnet pressed steel chassis driver

Features

- 8" mid-range loudspeaker provides 99dB sensitivity and 100Wrms (AES standard) power handling
- 1.75" high temperature copper voice coil wound on polyimide former for increased reliability
- Designed for use in large 3-way systems
- Closed back chassis simplifies cabinet manufacture, eliminating need for separate mid-range enclosure

Frequency Response and Impedance Curves



Measured - 1W @ 1m, 2π

1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.

General Specifications

Nominal diameter	203mm/8in
Power rating[1]	100Wrms
Nominal impedance	8Ω
Sensitivity[2]	99dB
Frequency range	800-5000Hz
Voice coil diameter	45mm/1.75in
Chassis type	Pressed steel
Magnet type	Ferrite
Magnet weight	0.57kg/20oz
Coil material	Round copper
Former material	Polyimide
Cone material	Kevlar loaded paper
Surround material	Treated paper
Suspension	Single
Xmax	n/a
Gap depth	n/a
Voice coil winding width	n/a

Small Signal Parameters

D	n/a
Fs	450Hz
Mair	n/a
Mmd	n/a
Qms	n/a
Qes	n/a
Qts	n/a
Re	6.70Ω
Vas	n/a
Bl	n/a
Cms	n/a
Rms	n/a
Le (at 1kHz)	0.34mH

Mounting Information

Overall diameter	208mm/8.19in
Overall depth	85mm/3.35in
Cut-out diameter	183mm/7.20in
Mounting slot dimensions	9.5mm x 5.5mm/0.37in x 0.22in
Number of mounting slots	4
Mounting PCD range	195-199mm/7.68-7.83in
Unit weight	1.9kg/4.2lb

Packed Dimensions & Weight

Single pack size W x D x H	230mm x 230mm x 1100mm /9.1in x 9.1in x 4.3in
Single pack weight	3kg/6.6lb
Multi pack (140) size W x D x H	1070mm x 850mm x 860mm /42.1in x 33.5in x 33.9in
Multi pack (140) weight	290kg/640lb

CELESTION

TF0615

Ferrite magnet pressed steel chassis driver

General Specifications

Nominal diameter	152mm/6in
Power rating[1]	100Wrms
Nominal impedance	8Ω
Sensitivity[2]	95dB
Frequency range	85-6000Hz
Voice coil diameter	38mm/1.5in
Chassis type	Pressed steel
Magnet type	Ferrite
Magnet weight	0.8kg/17oz
Coil material	Round copper
Former material	Polyimide
Cone material	Kevlar loaded paper
Surround material	Cloth sealed
Suspension	Single
Xmax[3]	2.5mm/0.1in
Gap depth	6mm/0.24in
Voice coil winding width	6.5mm/0.26in

Small Signal Parameters

D	0.14m/5.51in
Fs	107.2Hz
Mms	11.397g/0.402oz
Mmd	10.316g/0.364oz
Qms	5.83
Qes	0.682
Qts	0.611
Re	7.25Ω
Vas	6.49lt/0.23ft^3
Bl	9.03Tm
Cms	0.193mm/N
Rms	1.317kg/s

Mounting Information

Overall diameter	178mm/7.01in
Overall depth	74mm/2.91in
Cut-out diameter	147mm/5.79in
Mounting slot dimensions	Ø 4.3mm/0.17in
Number of mounting slots	4
Mounting PCD range	168.5mm/6.63in
Unit weight	1.4kg/3.1lb

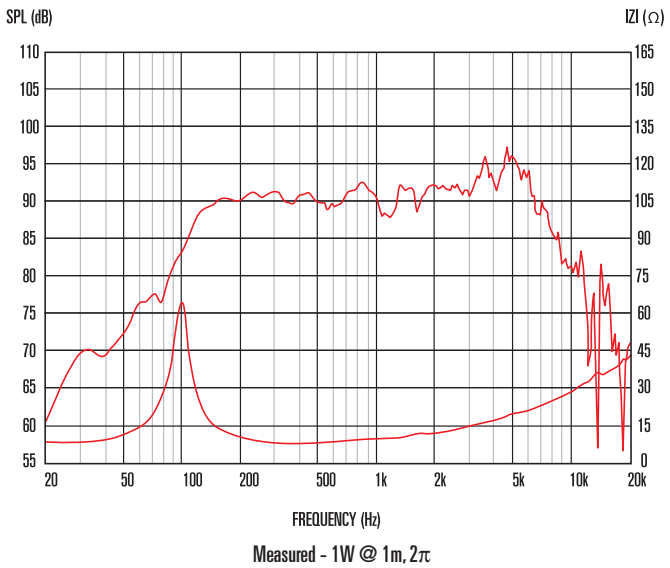
Packed Dimensions & Weight

Single pack size W x D x H	190mm x 200mm x 90mm /7.5in x 7.9in x 3.5in
Single pack weight	2kg/4.4lb

Features

- **6" mid-range driver providing 95dB sensitivity and 100Wrms (AES standard) power handling**
- **1.5" high temperature copper voice coil wound on polyimide former for increased reliability**
- **Rigid chassis design for maximum energy transfer**
- **Vented magnet assembly for enhanced cooling**
- **Achieves optimal performance in compact enclosures**
- **Ideal for 2-way systems**

Frequency Response and Impedance Curves



Measured - 1W @ 1m, 2π

1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.
3. Xmax derived from: (voice coil winding width-gap depth)/2.

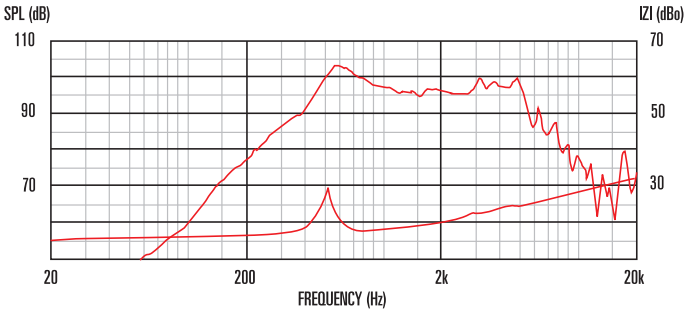
TF0615MR

Ferrite magnet pressed steel chassis driver

Features

- 6" mid-range driver providing 97dB sensitivity and 50Wrms (AES standard) power handling
- 1.5" high temperature copper voice coil wound on polyimide former for increased reliability
- Very compact model suitable for use in 3-way systems
- Optimised to deliver detailed reproduction of mid-range frequencies
- Closed back chassis simplifies cabinet manufacture, eliminating need for separate mid-range enclosure

Frequency Response and Impedance Curves



Measured - 1W @ 1m, 2π

1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.

General Specifications

Nominal diameter	152mm/6in
Power rating[1]	50Wrms
Nominal impedance	8Ω
Sensitivity[2]	97dB
Frequency range	500-5000Hz
Voice coil diameter	38mm/1.5in
Chassis type	Pressed steel
Magnet type	Ferrite
Magnet weight	0.48kg/17oz
Coil material	Round copper
Former material	Polyimide
Cone material	Kevlar loaded paper
Surround material	Treated paper
Suspension	Single
Xmax	n/a
Gap depth	n/a
Voice coil winding width	n/a

Small Signal Parameters

D	n/a
Fs	500Hz
Mms	n/a
Mmd	n/a
Qms	n/a
Qes	n/a
Qts	n/a
Re	5.7Ω
Vas	n/a
Bl	n/a
Cms	n/a
Rms	n/a
Le (at 1kHz)	0.27mH

Mounting Information

Overall diameter	178mm/7.01in
Overall depth	74mm/2.91in
Cut-out diameter	147mm/5.79in
Mounting slot dimensions	Ø 4.3mm/0.17in
Number of mounting slots	4
Mounting PCD range	168.5mm/6.63in
Unit weight	1.4kg/3.1lb

Packed Dimensions & Weight

Single pack size W x D x H	190mm x 200mm x 90mm /7.5in x 7.9in x 3.5in
Single pack weight	2kg/4.4lb
Multi pack (140) size W x D x H	1070mmx 850mm x 860mm /42.1in x 33.5in x 33.9in
Multi pack (140) weight	220kg/485lb

CELESTION

TF0510

Ferrite magnet pressed steel chassis driver

General Specifications

Nominal diameter	127mm/5in
Power rating[1]	30Wrms
Nominal impedance	8Ω
Sensitivity[2]	91dB
Frequency range	130-8000Hz
Voice coil diameter	25mm/1in
Chassis type	Pressed steel
Magnet type	Ferrite
Magnet weight	0.37kg/13oz
Coil material	Round copper
Former material	Polyimide
Cone material	Kevlar loaded paper
Surround material	Cloth-sealed
Suspension	Single
Xmax[3]	1.1mm/0.04in
Gap depth	5mm/0.20in
Voice coil winding width	7.3mm/0.29in

Small Signal Parameters

D	0.10m/3.94in
Fs	106Hz
Mms	5.7g/0.201oz
Mmd	5.3g/0.187oz
Qms	2.40
Qes	0.58
Qts	0.46
Re	6.43Ω
Vas	4.2lt/0.15ft^3
Bl	6.5Tm
Cms	0.40mm/N
Rms	1.60kg/s
Le (at 1kHz)	0.38mH

Mounting Information

Overall diameter	136 x 151mm/5.35 x 5.94in
Overall depth	68mm/2.68in
Cut-out diameter	117mm/4.61in
Mounting slot dimensions	Ø 4.5mm/0.18in
Number of mounting slots	4
Mounting PCD range	140mm/5.51in
Unit weight	1.0kg/2.2lb

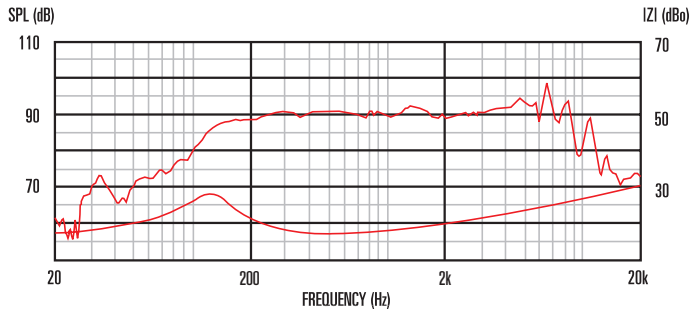
Packed Dimensions & Weight

Single pack size W x D x H	170mm x 180mm x 70mm /6.7in x 7.1in x 2.8in
Single pack weight	1.5kg/3.3lb
Multi pack (12) size W x D x H	320mm x 550mm x 190mm /12.6in x 21.7in x 7.5in
Multi pack (12) weight	13kg/29lb

Features

- **Multi-purpose 5" drive unit delivering clear bass and mid frequencies**
- **Provides 91dB sensitivity and 30Wrms (AES standard) power handling**
- **1" high temperature copper voice coil wound on polyimide former for increased reliability**
- **Impressive extended frequency range**
- **Ideal for use in multiple speaker systems: as LF driver in 2-way systems, as MF driver in 3-way systems**

Frequency Response and Impedance Curves



Measured - 1W @ 1m, 2π

1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.
3. Xmax derived from: (voice coil winding width-gap depth)/2.

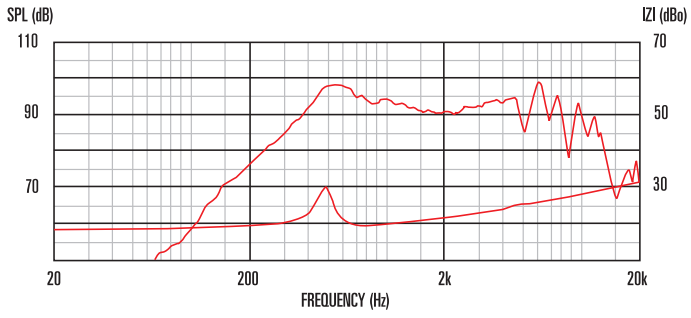
TF0510MR

Ferrite magnet pressed steel chassis driver

Features

- 5" mid-range driver providing 93dB sensitivity and 30Wrms (AES standard) power handling
- 1" high temperature copper voice coil wound on polyimide former for increased reliability
- Very compact model suitable for use in 3-way systems
- Optimised to deliver detailed reproduction of mid-range frequencies
- Closed back chassis simplifies cabinet manufacture, eliminating need for separate mid-range enclosure

Frequency Response and Impedance Curves



Measured - 1W @ 1m, 2π

1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.

General Specifications

Nominal diameter	127mm/5in
Power rating[1]	30Wrms
Nominal impedance	8Ω
Sensitivity[2]	93dB
Frequency range	400-8000Hz
Voice coil diameter	25mm/1in
Chassis type	Pressed steel
Magnet type	Ferrite
Magnet weight	0.37kg/13oz
Coil material	Round copper
Former material	Polyimide
Cone material	Kevlar loaded paper
Surround material	Treated paper
Suspension	Single
Xmax	n/a
Gap depth	n/a
Voice coil winding width	n/a

Small Signal Parameters

D	n/a
Fs	482Hz
Mms	n/a
Mmd	n/a
Qms	n/a
Qes	n/a
Qts	n/a
Re	7.87Ω
Vas	n/a
Bl	n/a
Cms	n/a
Rms	n/a
Le (at 1kHz)	0.2mH

Mounting Information

Overall diameter	136mm x 151mm/5.35in x 5.94in
Overall depth	68mm/2.68in
Cut-out diameter	117mm/4.61in
Mounting slot dimensions	Ø 4.5mm/0.18in
Number of mounting slots	4
Mounting PCD range	140mm/5.5in
Unit weight	1.2kg/2.6lb

Packed Dimensions & Weight

Multi pack (12) size W x D x H	320mm x 550mm x 190mm /12.6in x 21.7in x 7.5in
Multi pack (12) weight	13kg/29lb

TF0410MR

Ferrite magnet pressed steel chassis driver

General Specifications

Nominal diameter	100mm/4in
Power rating[1]	30Wrms
Nominal impedance	8Ω
Sensitivity[2]	90dB
Frequency range	400-10,000Hz
Voice coil diameter	25mm/1in
Chassis type	Pressed steel
Magnet type	Ferrite
Magnet weight	0.48kg/17oz
Coil material	Round copper
Former material	Polyimide
Cone material	Kevlar loaded paper
Surround material	Treated paper
Suspension	Single
Xmax	n/a
Gap depth	n/a
Voice coil winding width	n/a

Small Signal Parameters

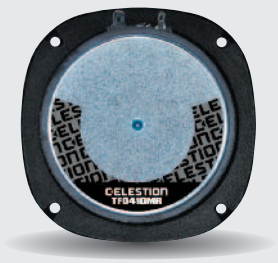
D	n/a
Fs	400Hz
Mms	n/a
Mmd	n/a
Qms	n/a
Qes	n/a
Qts	n/a
Re	5.65Ω
Vas	n/a
Bl	n/a
Cms	n/a
Rms	n/a

Mounting Information

Overall diameter	120mm x 108.5mm/4.7in x 4.3in
Overall depth	60mm/2.4in
Cut-out diameter	95mm/3.7in
Mounting slot dimensions	Ø 4.3mm/0.17in
Number of mounting slots	4
Mounting PCD range	109mm/4.3in
Unit weight	1.2kg/2.6lb

Packed Dimensions & Weight

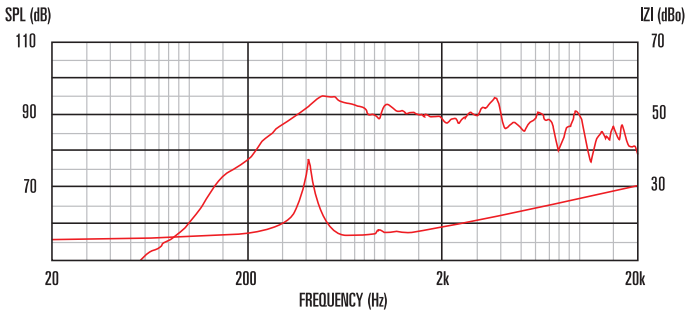
Multi pack (12) size W x D x H	425mm x 280mm x 165mm /16.7in x 11.0in x 6.5in
Multi pack (12) weight	20kg/44lb



Features

- **4" mid-range driver providing 90dB sensitivity and 30Wrms (AES standard) power handling**
- **1" high temperature copper voice coil wound on polyimide former for increased reliability**
- **Very compact model suitable for use in 3-way systems**
- **Optimised to deliver detailed reproduction of mid-range frequencies**
- **Closed back chassis simplifies cabinet manufacture, eliminating need for separate mid-range enclosure**

Frequency Response and Impedance Curves



Measured - 1W @ 1m, 2π

1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.

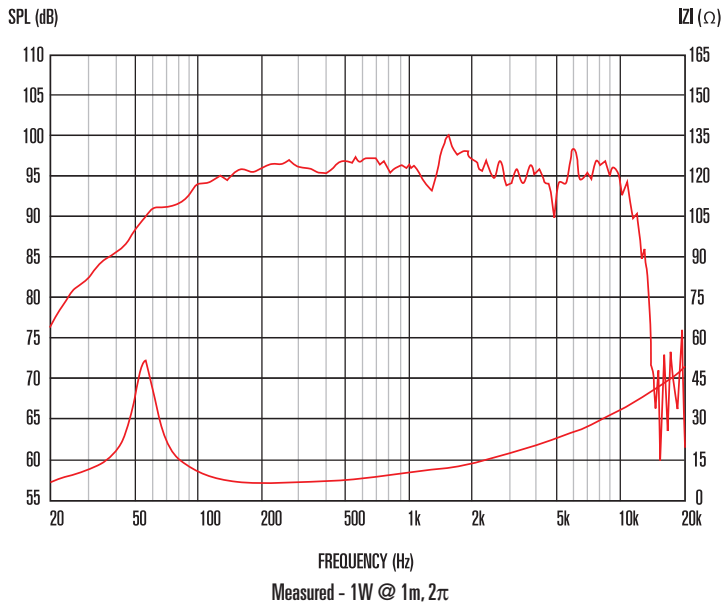
K12H-200TC

Ferrite magnet pressed steel chassis driver

Features

- 12" twin cone drive unit with extended high frequency response
- 2" high temperature copper voice coil for increased reliability and 200Wrms (AES standard) power handling
- Optimised cone neck/voice coil assembly for increased strength, minimising high frequency distortion and improving sound quality
- Secondary cone terminated by pressure formed cloth dust cap for enhanced mid-band clarity
- High efficiency magnet structure design delivers improved sensitivity
- Double roll surround for greater excursion control and smooth frequency response

Frequency Response and Impedance Curves



Measured - 1W @ 1m, 2π

1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.
3. Xmax derived from: (voice coil winding width-gap depth)/2.

General Specifications

Nominal diameter	305mm/12in
Power rating[1]	200Wrms
Nominal impedance	8Ω
Sensitivity[2]	98dB
Frequency range	50-10,000Hz
Voice coil diameter	50mm/2in
Chassis type	Pressed steel
Magnet type	Ferrite
Magnet weight	1.41kg/50oz
Coil material	Round copper
Former material	Polyimide
Cone material	Kevlar loaded paper
Surround material	Cloth-sealed
Suspension	Single
Xmax[3]	2mm/0.08in
Gap depth	8mm/0.31in
Voice coil winding width	12mm/0.47in

Small Signal Parameters

D	0.26m/0.24in
Fs	60.0Hz
Mms	46.514g/1.64oz
Mmd	39.592g/1.39oz
Qms	4.585
Qes	0.583
Qts	0.481
Re	5.61Ω
Vas	60.3lt/2.13ft^3
Bl	13.535 Tm
Cms	0.151mm/N
Rms	3.826 kg/s
Le (at 1kHz)	0.683 mH

Mounting Information

Overall diameter	309mm/12.2in
Overall depth	130.25mm/5.14in
Cut-out diameter	283mm/11.14in
Mounting slot dimensions	Ø 7.9mm/0.31in
Number of mounting slots	4
Mounting PCD range	297mm/11.69in
Unit weight	3.9kg/8.6lb

Packed Dimensions & Weight

Single pack size W x D x H	333mm x 322mm x 145mm /13.1in x 12.7in x 5.7in
Single pack weight	5.0kg/11lb

CELESTION

K12H-100TC

Ferrite magnet pressed steel chassis driver

General Specifications

Nominal diameter	305mm/12in
Power rating[1]	100Wrms
Nominal impedance	8Ω
Sensitivity[2]	97dB
Frequency range	50-10,000Hz
Voice coil diameter	45mm/1.75in
Chassis type	Pressed steel
Magnet type	Ferrite
Magnet weight	1.41kg/50oz
Coil material	Round copper
Former material	Kapton
Cone material	Kevlar loaded paper
Surround material	Cloth-sealed
Suspension	Single
Xmax	1mm/0.04in
Gap depth	8mm/0.31in
Voice coil winding width	10mm/0.39in

Small Signal Parameters

D	0.26m/10.24in
Fs	67.5Hz
Mms	43.669g/1.54oz
Mmd	36.747g/1.30oz
Qms	5.381
Qes	0.581
Qts	0.525
Re	5.43Ω
Vas	50.7lt/1.79ft^3
Bl	13.16Tm
Cms	0.127mm/N
Rms	3.443kg/s
Le (at 1kHz)	0.625mH

Mounting Information

Overall diameter	309mm/12.17in
Overall depth	129.7mm/5.11in
Cut-out diameter	283mm/11.14in
Mounting slot dimensions	Ø7.9mm/0.31in
Number of mounting slots	4
Mounting PCD range	297mm/11.69in
Unit weight	3.8kg/8.4lb

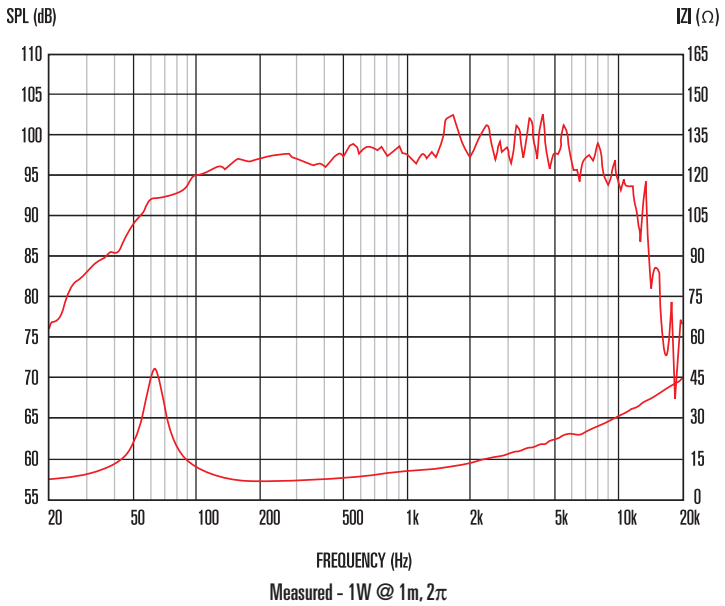
Packed Dimensions & Weight

Single pack size W x D x H	333mm x 322mm x 145mm /13.1in x 12.7in x 5.7in
Single pack weight	4.5kg/10lb

Features

- **12" twin cone drive unit with extended high frequency response**
- **1.75" high temperature copper voice coil for increased reliability and 100Wrms (AES standard) power handling**
- **Optimised cone neck/voice coil assembly for increased strength, minimising high frequency distortion and improving sound quality**
- **Secondary cone terminated by pressure formed cloth dust cap for enhanced mid-band clarity**
- **High efficiency magnet structure design delivers improved sensitivity**
- **Double roll surround for greater excursion control and smooth frequency response**

Frequency Response and Impedance Curves



Measured - 1W @ 1m, 2π

1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.
3. Xmax derived from: (voice coil winding width-gap depth)/2.

Compact Array

Compact array drivers

Range Overview

Recognising the growing popularity of portable and discreet line arrays in sound reinforcement applications, Celestion have introduced the AN Series: three compact and lightweight, neodymium magnet drivers optimised for this application.

AN Series loudspeakers are full-range, professional audio drive units that enable system designers to build into their products some of the principal advantages offered by line array designs: a more even distribution of the acoustic signal and the ability to project sound over greater distances.

The 2", 2.75" and 3" drivers all feature a space-efficient, square chassis profile allowing them to be positioned more closely to each other for improved coupling, and are particularly suited to use in arrays where controlled wavefront (beam steering) is used.

Compact array range

	Nominal Diameter	Power Rating*	Nominal Impedance	Sensitivity	Frequency Range	Voice Coil Diameter	Unit Weight
AN3510	88mm/3.5in	35Wrms	8Ω	87dB	98-18,500Hz	25mm/1.0in	160g/5.65oz
AN2775	70mm/2.75in	20Wrms	8Ω	84dB	160-20,000Hz	20mm/0.75in	100g/3.53oz
AN2075	50mm/2in	20Wrms	8Ω	80dB	160-20,000Hz	20mm/0.75in	97g/3.4oz

*AES Standard

Key Technologies

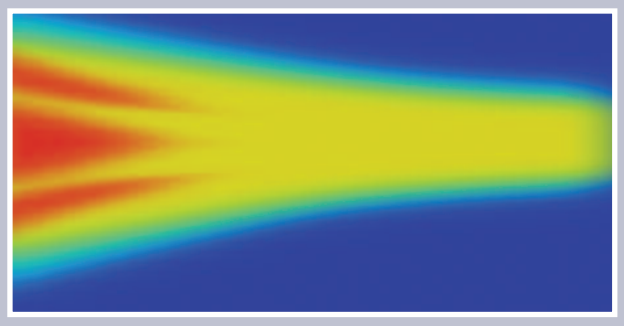
Celestion AN Series compact array drivers are optimised using Finite Element Analysis (FEA) to give a rising HF response. This results in a noticeably wider dispersion characteristic to higher frequencies than conventional loudspeakers of this size.

Chassis are purpose designed for maximum free air movement, while stiff and light aluminium cones remain rigid to higher frequencies, delivering a smoother response in the critical listening band.

Half roll elastomer surrounds enable greater excursion and lower resonance frequency for small diameter cones.They also provide damping of unwanted resonances and sustained centring control at extremes of excursion.

- **Compact and lightweight, full-range Neodymium loudspeakers**
- **Advanced FEA techniques used for acoustic, mechanical and electromagnetic modelling**
- **Ideal for applications such as portable line arrays where actively controlled wavefront (beam steering) is used**
- **Delivers wider dispersion at higher frequencies than many equivalent compact, full-range drivers**
- **Square chassis profile for close coupling**
- **All AN series drivers are weatherproof**

Typical line array vertical dispersion characteristic



Distance

Square chassis profiles allow drivers to be postioned more closely to each other for improved coupling

CELESTION

AN 3510

Compact array driver

General Specifications

Nominal diameter	88mm/3.5in
Power rating[1]	35Wrms
Nominal impedance	8Ω
Sensitivity[2]	87dB
Frequency range	98-18,500Hz
Voice coil diameter	25mm/1.0in
Chassis type	Glass reinforced ABS
Magnet type	Neodymium
Voice coil material	Round Copper
Former material	Polyimide
Cone material	Aluminium
Surround material	Elastomer
Xmax[3]	1.25mm/0.04in
Gap depth	4mm/0.14in
Voice coil winding width	6.5mm/0.23in

Small Signal Parameters

D	70mm/2.76in
Fs	98Hz
Mms	3.37g/0.12oz
Qms	6.59
Qes	0.66
Qts	0.67
Re	5.73Ω
Vas	1.3lt/0.046ft³
Bl	4.5Tm
Cms	0.62mm/N

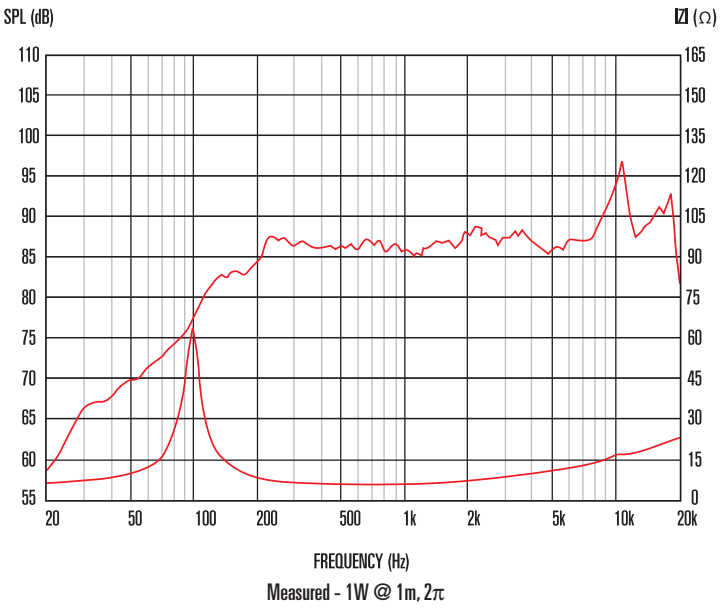
Mounting Information

Overall depth	50mm/2in
Overall size	89.3 x 89.3mm/3.52 x 3.52in
Cut-out diameter	78.8mm/3.1in
Fitting	4 x M4 holes
Mounting PCD range	Ø104mm/4.1in
Unit weight	160g/5.65oz

Features

- **Compact and lightweight, full-range neodymium loudspeakers**
- **Delivers wider dispersion to higher frequencies than many equivalent compact, full-range drivers on the market**
- **Chassis purpose-designed for maximum free air movement, with square mounting frame to facilitate close coupling of multiple units**
- **Stiff and light aluminium cone remains rigid to higher frequencies, delivering a smoother response in the critical listening band**
- **Half roll elastomer surround provides damping for unwanted resonances and sustained centring control at extremes of excursion**
- **Ideal for applications such as portable line arrays where actively controlled wavefront (beam steering) is used**

Frequency Response and Impedance Curves



Measured - 1W @ 1m, 2π

1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.
3. Xmax derived from: (voice coil winding width-gap depth)/2.

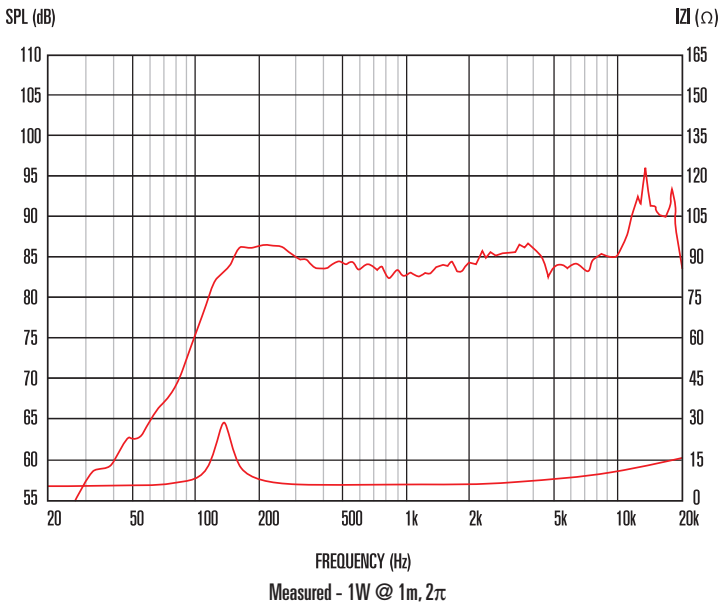
AN 2775

Compact array driver

Features

- **Compact and lightweight, full-range neodymium loudspeakers**
- **Delivers wider dispersion to higher frequencies than many equivalent compact, full-range drivers on the market**
- **Chassis purpose-designed for maximum free air movement, with square mounting frame to facilitate close coupling of multiple units**
- **Stiff and light aluminium cone remains rigid to higher frequencies, delivering a smoother response in the critical listening band**
- **Half roll elastomer surround provides damping for unwanted resonances and sustained centring control at extremes of excursion**
- **Ideal for applications such as portable line arrays where actively controlled wavefront (beam steering) is used**

Frequency Response and Impedance Curves



Measured - 1W @ 1m, 2π

1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.
3. Xmax derived from: (voice coil winding width-gap depth)/2.

General Specifications

Nominal diameter	70mm/2.75in
Power rating[1]	20Wrms
Nominal impedance	8Ω
Sensitivity[2]	84dB
Frequency range	160-20,000Hz
Voice coil diameter	20mm/0.75in
Chassis type	Glass reinforced ABS
Magnet type	Neodymium
Voice coil material	Round Copper
Former material	Polyimide
Cone material	Aluminium
Surround material	Elastomer
Xmax[3]	1.5mm/0.06in
Gap depth	3mm/0.12in
Voice coil winding width	6mm/0.24in

Small Signal Parameters

D	60mm/2.36in
Fs	150Hz
Mms	1.83g/0.06oz
Qms	12.21
Qes	1.67
Qts	1.47
Re	5.20Ω
Vas	0.58lt/0.020ft^3
Bl	2.43Tm
Cms	0.51mm/N

Mounting Information

Overall depth	45mm/1.8in
Overall size	71.3 x 71.3mm/2.8 x 2.8in
Cut-out diameter	66.1mm/2.6in
Fitting	4 x M4 holes
Mounting PCD range	Ø82mm/3.2in
Unit weight	100g/3.53oz

AN 2075

Compact array driver

General Specifications

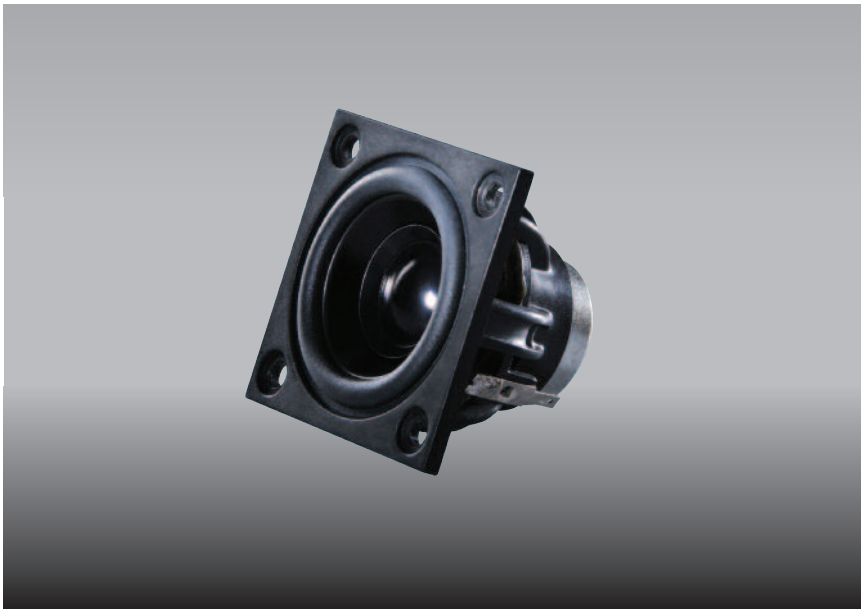
Nominal diameter	50mm/2in
Power rating[1]	20Wrms
Nominal impedance	8Ω
Sensitivity[2]	80dB
Frequency range	160Hz-19kHz
Voice coil diameter	20mm/0.75in
Chassis type	Glass reinforced ABS
Magnet type	Neodymium
Coil material	Round Copper
Former material	Polyimide
Cone material	Aluminium
Surround material	Elastomer
Xmax[3]	1.5mm/0.06in
Gap depth	3mm/0.12in
Voice coil winding width	6mm/0.24in
Voice coil material	Round Copper
Voice coil former material	Polyimide

Small Signal Parameters

D	40mm/1.57in
Fs	160Hz
Mms	1.37g/0.05oz
Qms	10.12
Qes	1.22
Qts	1.09
Re	5.28Ω
Vas	0.12lt/0.004ft^3
Bl	2.60Tm
Cms	0.55mm/N

Mounting Information

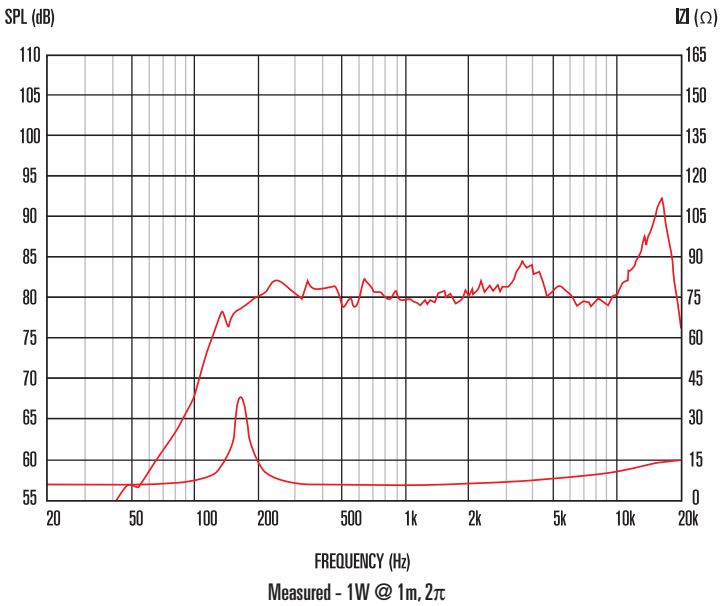
Overall depth	43.5mm/1.7in
Overall size	56.2 x 56.2mm/2.2 x 2.2in
Cut-out diameter	51.1mm/2.0in
Fitting	4 x M4 holes
Mounting PCD range	Ø62mm/2.45in
Unit weight	97g/3.4oz



Features

- **Compact and lightweight, full-range neodymium loudspeakers**
- **Delivers wider dispersion to higher frequencies than many equivalent compact, full-range drivers on the market**
- **Chassis purpose-designed for maximum free air movement, with square mounting frame to facilitate close coupling of multiple units**
- **Stiff and light aluminium cone remains rigid to higher frequencies, delivering a smoother response in the critical listening band**
- **Half roll elastomer surround provides damping for unwanted resonances and sustained centring control at extremes of excursion**
- **Ideal for applications such as portable line arrays where actively controlled wavefront (beam steering) is used**

Frequency Response and Impedance Curves



Measured - 1W @ 1m, 2π

1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.
3. Xmax derived from: (voice coil winding width-gap depth)/2.

Coaxial

Ferrite magnet, coaxial drivers

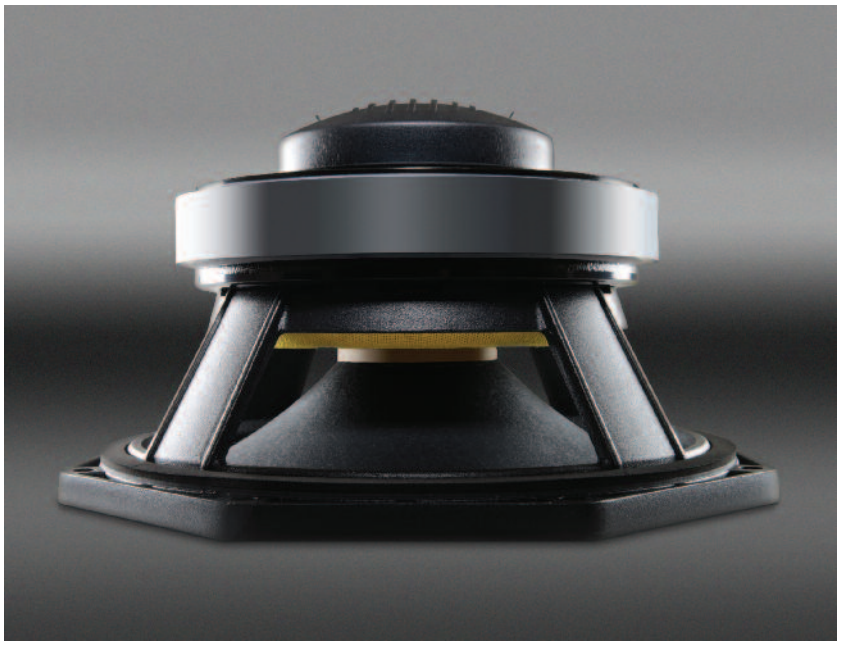
Range Overview

Coaxial loudspeakers offer a full range frequency response in a single self-contained driver. They can provide an effective solution to sound reinforcement applications where size, weight and off-axis response are critical.

Celestion's FTX range of cast aluminium, ferrite magnet coaxial loudspeakers are available in a range of chassis diameters. They utilise a common magnet motor design, where both LF and HF speaker components are powered by one magnet, to deliver unprecedented coherence.

The TF1225CX is a more conventional coaxial loudspeaker that combines a pressed steel TF1225 ferrite LF driver with a modified CDX1-1730 compression driver, mounted to the rear.

In each case, the HF component fires through the centre of the magnet assembly, utilising the LF driver cone as a conical horn.



Coaxial range

	Nominal Diameter	Power Rating	Impedance	Sensitivity	Frequency Range	LF Voice Coil Diameter	Unit Weight
FTX1225	305mm/12in	300Wrms	8Ω	97dB	50-20,000Hz	64mm/2.5in	5.9kg/13.0lb
FTX0820	200mm/8in	200Wrms	8Ω	94dB	70-20,000Hz	50mm/2in	4.1kg/9.0lb
FTX0617	165mm/6.5in	150Wrms	8Ω	92dB	110-20,000Hz	45mm/1.7in	3kg/6.6lb
TF1225CX	305mm/12in	250Wrms	8Ω	97dB	40-18,000Hz	64mm/2.5in	4.6kg/10.1lb

Key Technologies

By concentrically aligning low and high frequency drivers, coaxial loudspeakers act as a single source, often providing improvements in signal alignment when compared to a traditional two-way system. Celestion's FTX coaxial range features fully combined LF and HF components that are powered by a Common Magnet Motor Assembly (same magnet for both elements). This enables the voice coils and hence the acoustic centres of the two drivers to be brought closer together, delivering further improvements in signal coherence and time alignment, for a more natural sounding audio reproduction.

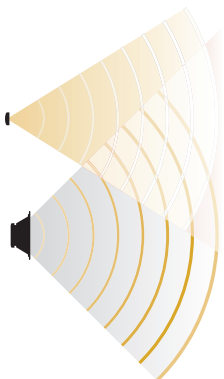
The use of a single magnet assembly also means lighter weight and a more compact profile, compared to more conventional dual motor designs.

Each of the models in the FTX coaxial range features a polyimide film HF diaphragm, enabling these devices to provide greater HF power handling. The next-generation Sound Castle™ soft clamping assembly reduces diaphragm stress for decreased distortion and even greater reliability of performance.

Both HF and LF voice coils are edge wound using lightweight copper or copper clad aluminium. Not only does this increase barrel stiffness, it enables a closer packing density, leading to improved cooling and increased motor strength.

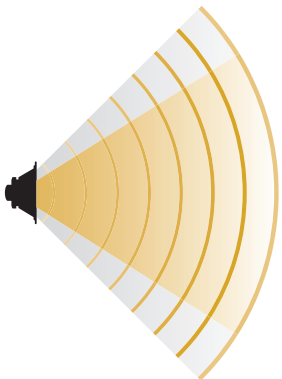
- **HF and LF components combined on the same axis in a single driver for a more coherent signal source**
- **FTX models feature a Common Magnet Motor for a lighter weight, lower profile speaker producing more natural sounding audio**
- **Using LF cone as HF horn for superior off-axis response**
- **Demodulation rings minimise the effects of power compression as well as substantially reducing harmonic and intermodulation distortion associated with voice coil displacement**
- **Voice coils edge wound using lightweight copper clad aluminium for improved cooling and increased motor strength**
- **Polyimide film HF diaphragms (FTX models) deliver greater HF power handling**

Traditional two way system



Signal interference due to different path lengths

Coaxial system



Coherent single source

FTX1225

Coaxial, cast aluminium chassis driver

General Specifications: LF

Size	305mm/12in
Power rating[1]	300Wrms
Nominal impedance	8Ω
Sensitivity[2]	97dB
Frequency range	50-4000Hz
Voice coil diameter	64mm/2.5in
Chassis type	Cast Aluminium
Magnet type	Ferrite
Magnet weight	2.3kg/81oz
Coil material	Edgewound copper clad aluminium
Former material	Glass fibre
Cone material	Kevlar loaded paper
Surround material	Cloth-sealed
Suspension	Single
Xmax[3]	4mm/0.16in
Gap depth	8mm/0.31in
Voice coil winding width	16mm/0.62in

Small Signal Parameters

D	0.26m/10.24in
Fs	47.8Hz
Mms	49.44g/1.95oz
Mmd	42.52g/1.5oz
Qms	5.714
Qes	0.409
Qts	0.382
Re	5.35Ω
Vas	89.55lt/3.16ft³
Bl	13.94Tm
Cms	0.224mm/N
Rms	2.59kg/s
Le (at 1kHz)	0.78mH

General Specifications: HF

Power rating	60Wrms
Nominal impedance	8Ω
Sensitivity	104dB
Frequency range	1000-20,000Hz
Recommended min. crossover (12dB/oct)	2000Hz
Voice coil diameter	45mm/1.75in
Diaphragm and surround material	Polyimide

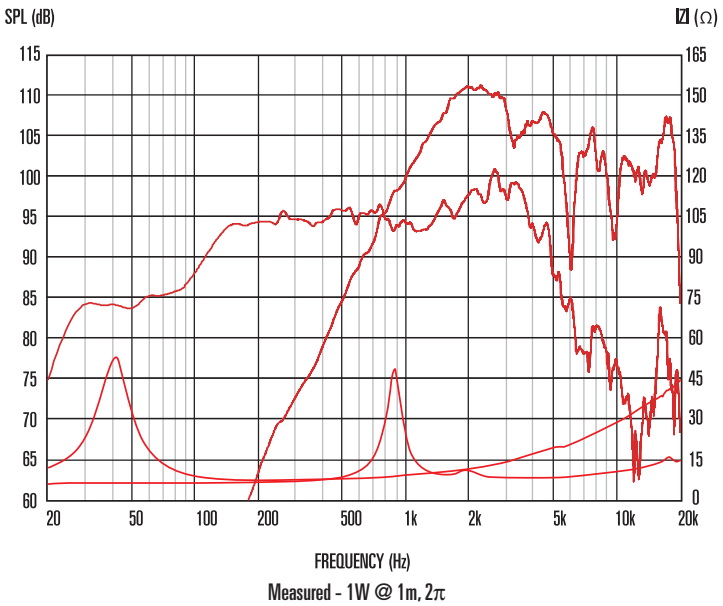
Mounting Information

Overall Diameter	318mm/12.52in
Overall depth	168mm/6.61in
Cut-out diameter	286mm/11.26in
Mounting slot dimensions	7.5x6.5mm/0.29x0.26in
Number of mounting slots	8
Mounting PCD range	298-304mm/11.70-11.97in
Unit weight	5.9kg/13.0lb

Features

- 12" coaxial loudspeaker with 300Wrms (AES standard) power handling and 97dB sensitivity
- Full range frequency response: 50 – 20,000Hz
- FEA (Finite Element Analysis) optimized ferrite magnet assembly acts as common motor for both LF and HF drivers resulting in enhanced coherence
- Robust cast aluminium chassis is designed to minimize unwanted reflections, further reducing acoustic distortion
- Demodulation ring reduces flux modulation, minimizing electromagnetic distortion
- 2.5" edgewound copper clad aluminium voice coil wound on high temperature glass fibre former
- 90° nominal HF coverage

Frequency Response and Impedance Curves



Measured - 1W @ 1m, 2π

1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.
3. Xmax derived from: (voice coil winding width-gap depth)/2.

CELESTION

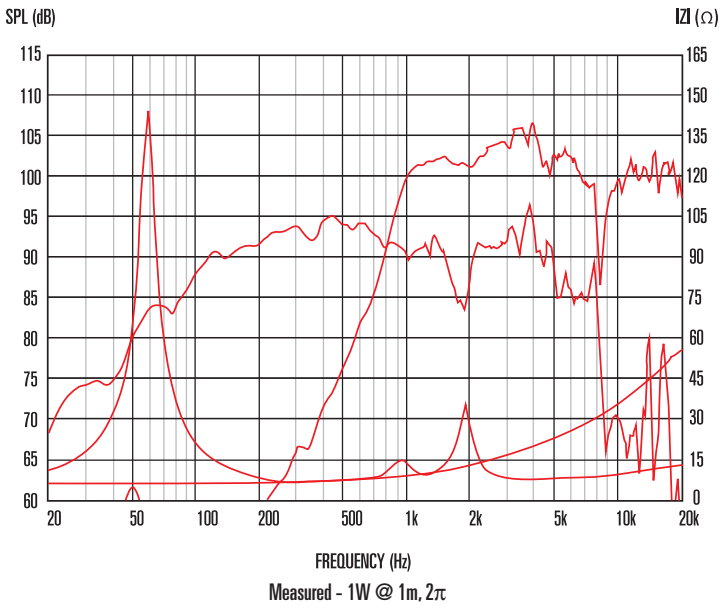
FTX0820

Coaxial, cast aluminium chassis driver

Features

- 8" coaxial loudspeaker providing 200Wrms (AES standard) power handling and 94dB sensitivity
- Full range frequency response: 70 – 20,000Hz
- FEA (Finite Element Analysis) optimized ferrite magnet assembly acts as common motor for both LF and HF drivers resulting in enhanced coherence
- Robust cast aluminium chassis is designed to minimize unwanted reflections, further reducing acoustic distortion
- Demodulation ring reduces flux modulation, minimizing electromagnetic distortion
- 2" edgewound copper voice coil wound on high temperature glass fibre former
- 100° nominal HF coverage

Frequency Response and Impedance Curves



Measured - 1W @ 1m, 2π

1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.
3. Xmax derived from: (voice coil winding width-gap depth)/2.

General Specifications: LF

Size	200mm/8in
Power rating[1]	200Wrms
Nominal impedance	8Ω
Sensitivity[2]	94dB
Frequency range	70-4000Hz
Voice coil diameter	50mm/2in
Chassis type	Cast Aluminium
Magnet type	Ferrite
Magnet weight	1.5kg/54oz
Coil material	Edgewound copper
Former material	Glass fibre
Cone material	Kevlar loaded paper
Surround material	Cloth-sealed
Suspension	Single
Xmax[3]	2mm/0.08in
Gap depth	8mm/0.31in
Voice coil winding width	12mm/0.47in

Small Signal Parameters

D	0.17m/6.69in
Fs	63.9Hz
Mms	21.12g/0.75oz
Mmd	19.19g/0.68oz
Qms	4.709
Qes	0.242
Qts	0.231
Re	5.9Ω
Vas	21.38lt/0.75ft^3
Bl	14.4Tm
Cms	0.238mm/N
Rms	1.802kg/s
Le (at 1kHz)	0.84mH

General Specifications: HF

Power rating	40Wrms
Nominal impedance	8Ω
Sensitivity	103dB
Frequency range	1500-20,000Hz
Recommended min. crossover (12dB/oct)	2200Hz
Voice coil diameter	34mm/1.4in
Diaphragm and surround material	Polyimide

Mounting Information

Overall Diameter	225mm/8.86in
Overall depth	114mm/4.49in
Cut-out diameter	187mm/7.36in
Mounting slot dimensions	ø6.5mm/0.26in
Number of mounting slots	8
Mounting PCD range	210mm/8.27in
Unit weight	4.1kg/9.0lb

PRELIMINARY INFORMATION

CELESTION

FTX0617

Coaxial, cast aluminium chassis driver

General Specifications: LF

Size	165mm/6.5in
Power rating[1]	150Wrms
Nominal impedance	8Ω
Sensitivity[2]	92dB
Frequency range	110-4000Hz
Voice coil diameter	44mm/1.75in
Chassis type	Cast Aluminium
Magnet type	Ferrite
Magnet weight	0.88kg/31oz
Coil material	Edgewound copper clad aluminium
Former material	Glass fibre
Cone material	Kevlar loaded paper
Surround material	Cloth-sealed
Suspension	Single
Xmax[3]	2mm/0.08in
Gap depth	6mm/0.24in
Voice coil winding width	10mm/0.4in

Small Signal Parameters

D	0.14m/5.51in
Fs	105.3Hz
Mms	10.94g/0.39oz
Mmd	9.86g/0.35oz
Qms	3.851
Qes	1.021
Qts	0.807
Re	5.57Ω
Vas	7lt/0.25ft^3
Bl	6.28Tm
Cms	0.209mm/N
Rms	1.88kg/s
Le (at 1kHz)	0.28mH

General Specifications: HF

Power rating	40Wrms
Nominal impedance	8Ω
Sensitivity	103dB
Frequency range	1500-20,000Hz
Recommended min. crossover (12dB/oct)	2200Hz
Voice coil diameter	34mm/1.4in
Diaphragm and surround material	Polyimide

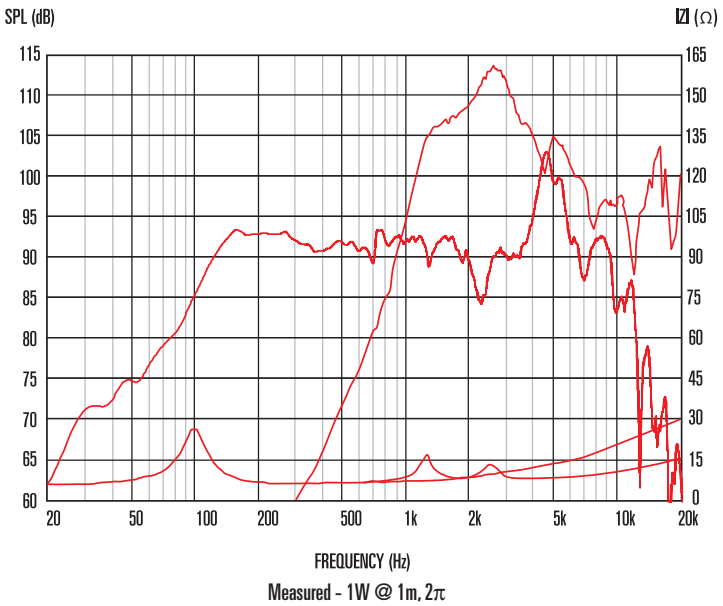
Mounting Information

Overall Diameter	Max: 189mm/7.44in; Min: 162mm/6.38in
Overall depth	93mm/3.66in
Cut-out diameter	150mm/5.9in
Mounting slot dimensions	6.5mmx5.5mm/0.26inx0.22in
Number of mounting slots	4
Mounting PCD range	173.5mm/6.83in
Unit weight	3kg/6.6lb

Features

- **6.5" coaxial loudspeaker providing 150Wrms (AES standard) power handling and 92dB sensitivity**
- **Full range frequency response: 110 – 20,000Hz**
- **FEA (Finite Element Analysis) optimized ferrite magnet assembly acts as common motor for both LF and HF drivers resulting in enhanced coherence**
- **Robust cast aluminium chassis is designed to minimize unwanted reflections, further reducing acoustic distortion**
- **Demodulation ring reduces flux modulation, minimizing electromagnetic distortion**
- **2" edgewound copper clad aluminium voice coil wound on high temperature glass fibre former**
- **100° nominal HF coverage**

Frequency Response and Impedance Curves



1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.
3. Xmax derived from: (voice coil winding width-gap depth)/2.

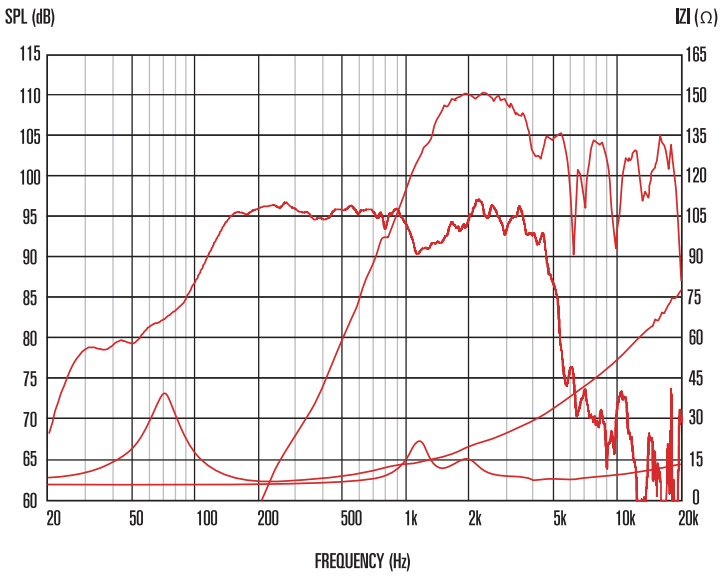
TF1225CX

Coaxial, pressed steel chassis driver

Features

- 12" coaxial loudspeaker with 40-18,000Hz response
- 250Wrms (AES standard) power handling and 97dB sensitivity
- 2.5" high temperature copper voice coil wound on polyimide for increased reliability
- Robust and reliable pressed steel frame ferrite magnet LF driver
- Compact, lightweight neodymium compression driver - 80º nominal coverage

Frequency Response and Impedance Curves



1. Tested for two hours using a continuous, band-limited pink noise signal as per AES standard. Power calculated on minimum impedance. Loudspeaker tested in free air.
2. Measured on axis at 1W, 1m in 2π anechoic environment.
3. Xmax derived from: (voice coil winding width-gap depth)/2.

General Specifications: LF

Nominal diameter	305mm/12in
Power rating[1]	250Wrms
Nominal impedance	8Ω
Sensitivity[2]	97dB
Frequency range	40-4000Hz
Voice coil diameter	64mm/2.5in
Chassis type	Pressed steel
Magnet type	Ferrite
Magnet weight	1.2kg/42oz
Coil material	Round copper
Former material	Polyimide
Cone material	Kevlar loaded paper
Surround material	Cloth-sealed
Suspension	Single
Xmax[3]	2.5mm/0.098in
Gap depth	8mm/0.31in
Voice coil winding width	13mm/0.51in

Small Signal Parameters

D	0.26m/0.24in
Fs	71.4Hz
Mms	49.68g/1.75oz
Mmd	42.76g/1.51oz
Qms	3.824
Qes	0.480
Qts	0.426
Re	5.57Ω
Vas	39.91lt/1.41ft^3
Bl	16.08Tm
Cms	0.10mm/N
Rms	5.83kg/s
Le (at 1kHz)	0.23mH

General Specifications: HF

Power rating	75Wrms
Nominal impedance	8Ω
Sensitivity	110dB
Frequency range	1200-18,000Hz
Recommended min. crossover (12dB/oct)	2200Hz
Voice coil diameter	45mm/1.75in
Magnet type	Neodymium
Diaphragm and surround material	PETP film

Mounting Information

Overall diameter	309mm/12.2in
Overall depth	172mm/6.77in
Cut-out diameter	283mm/11.14in
Mounting slot dimensions	Ø 7.9mm/0.31in
Number of mounting slots	4
Mounting PCD range	297mm/11.69in
Unit weight	4.6kg/10.1lb


CDM-1445

CELESTION

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