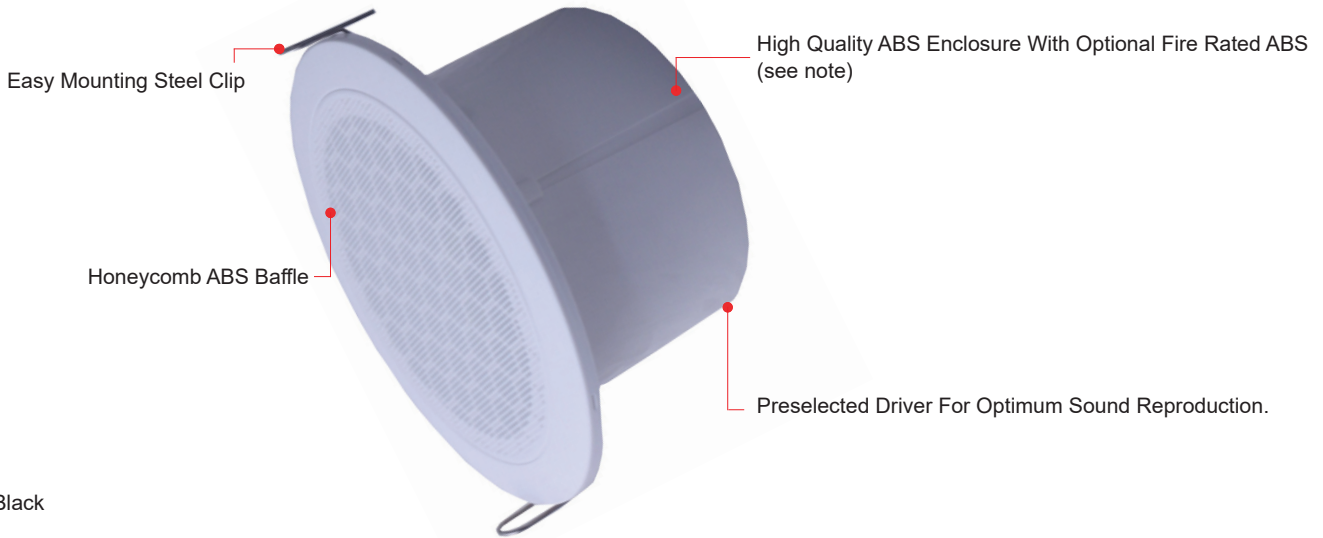


EVAC / PAGING / BGM



Variant:
Colour: Black

Introduction

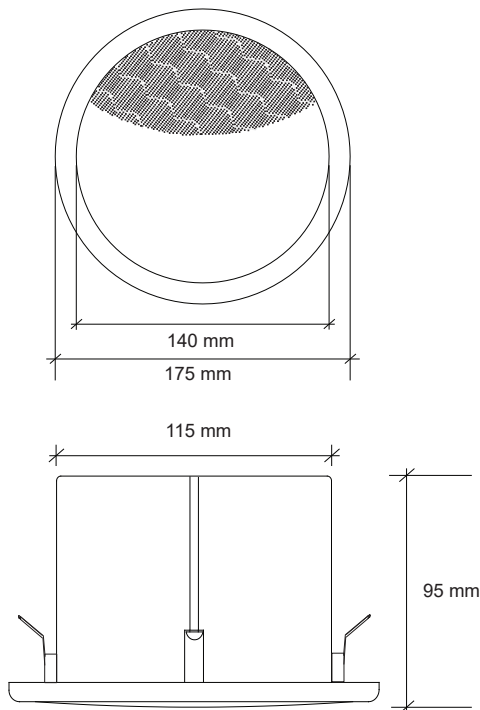
CS515 is a general purpose and cost effective ceiling speaker with nominal power rating of 6W 100V line. It's unique honeycomb ABS baffle with low profile edge is a distinctive feature of CS515 which could enhance the final finishing of the ceiling.

Among the outstanding features are the installation mechanism - spring clips which is flexible to flip but strong in holding.

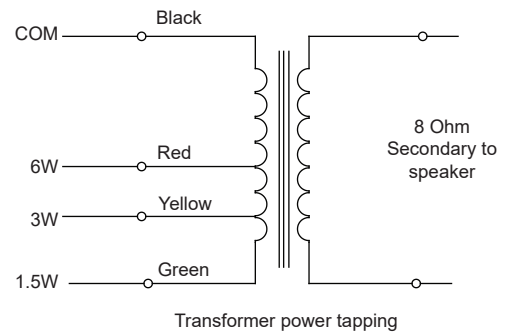
The uniquely designed ABS front grille makes the unit suitable for installation in high humidity areas such as beach sides, hill resorts and pool areas.

It is suitable for Speech and soft background music playback in areas such as :

- Hotel corridors / lobbies / rooms
- Offices
- Shopping centres for general paging and pipe in music



Circuit Diagram



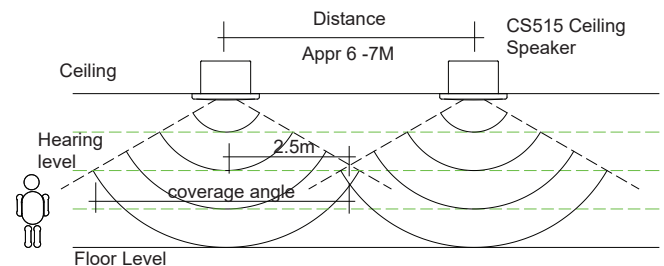
Design Assistance

To obtain a reasonably good sound or speech intelligibility, several environmental factors had to be taken into consideration such as :

- Environmental noise level or background noise
- Ceiling height
- Area's acoustic factor (eg. reverberation time)
- Coverage area

In order to hear properly, the sound source from speaker shall be minimum 6 dB above the background noise.

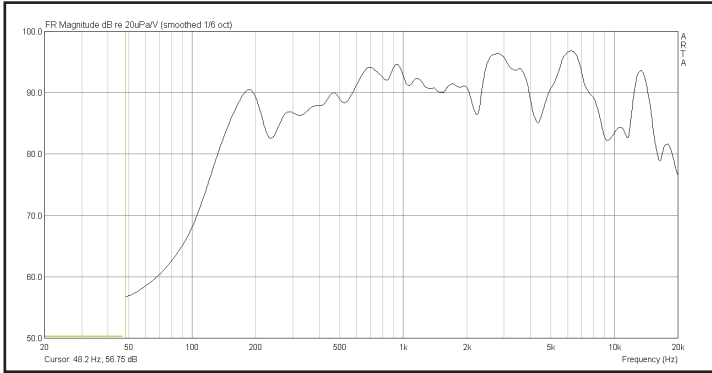
If the background noise is around 70 dB, the person shall be listening to the speaker sound at approximately 76 dB, at around 1.5 to 2m above floor level.



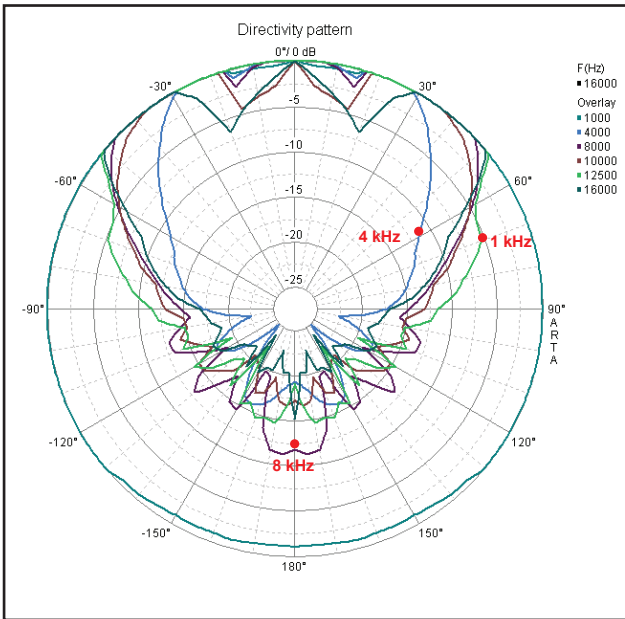
If the power input to CS515 is 3W, the SPL (1KHz) at 2m from speaker shall be approximately 92 dB. With music source, the average SPL shall be 3 dB below ; thereby the hearing shall be around 89 dB, which is rather comfortable level in a shopping mall.

From this, the coverage area can be estimated ; ie. approximately 7m diameter or 38 sq m. Further to this, the distance of speaker can be ascertained by dividing the area of the mall to the area of coverage by each speaker.

Frequency Response Chart



Polar Chart



Technical Specifications

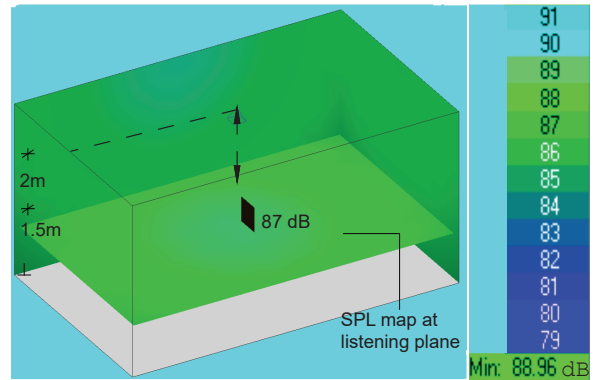
Speaker	
Power rating	6W 100V Line nominal (max 10W)
Diameter	5" (125 mm)
Cone type	Dual Cone
Impedance (Ω)	8
Freq response (-5dB)	150 ~ 17 kHz
SPL @ 1W / m (+/-3dB) ; 1 kHz	92 dB
Harmonic distortion	< 2%
Dispersion angle (+/- 6 dB)	180 deg (1kHz) 90 deg (4 kHz) 120 deg (8 kHz)

Matching Transformer	
Tapping (100V line input)	1.5 / 3 / 6W
Primary impedance (Ω)	6.7K / 3.3K / 1.67K
Secondary impedance (Ω)	8

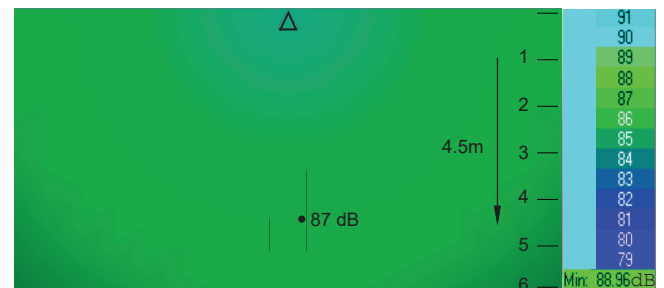
Physical Dimensions	
Grille / enclosure	ABS Plastic
Grille pattern	Honeycomb
Air perforation index	45%
Cutting hole dim	145 mm
Overall size	175 x 95 mm
Weight	620 g
Colour	White

Packing Information	
Carton box dimensions	705 (L) x 400 (W) x 190 (H) mm
Weight	12 kg
Packing quantity	16 Uts

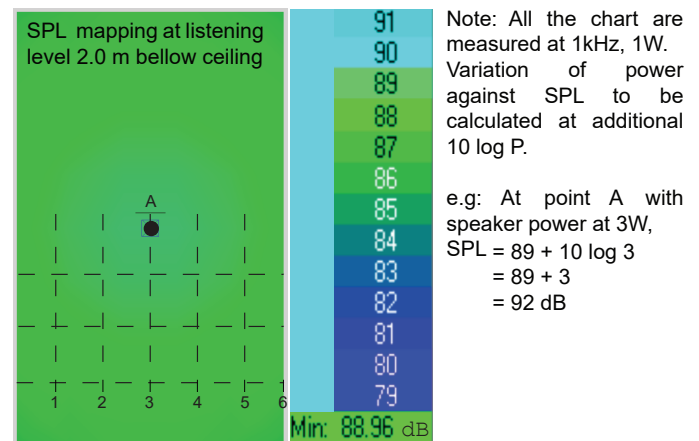
SPL Simulation



ISO View



Side View



Top View

SPL - Distance Chart

TAP	IM	2	3	4	5
1W	92	89	82.5	80	78
1.5W	93.8	87.8	84.3	81.8	79.8
3W	96.8	93.8	87.3	84.8	82.8
6W	99.8	96.8	90.3	87.8	85.8

The above chart shows the co-relation of SPL and distance from speaker based on the characteristics of CS515, at 1 KHz.

The maximum value is based on 6W power input to the speaker at 6W transformer tapping whereas the nominal value is based on 1W power input to the 6W transformer tapping.

Different frequencies may have different dB values at hearing point.

Note:

ABS fire retardant material: TOYOLAC 884 X01

Safety EN55013 EN55020
Standards: EN61000

