

PC-1867FC

Ceiling Mount Fire Dome Speaker



DESCRIPTION

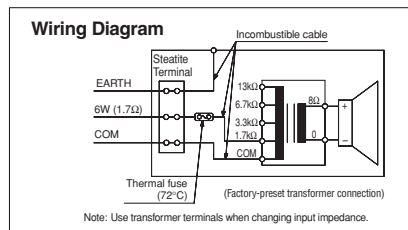
TOA's PC-1867FC Ceiling Mount Speaker features an iron-made dome that prevents the fire from spreading in the ceiling in case of an emergency situation. 12cm (5") cone-type speaker unit ensures high-quality sound. The speaker can be easily installed using the speaker mounting spring and the dome can also be easily mounted in the speaker mounting hole in the ceiling panel. The rated input is 6W for a 100V line and 3W for a 70V line. The PC-1867FC is provided with a steatite terminal block of screw type that permits bridging and branch wiring.

The PC-1867FC is certified to European standard EN 54-24* and complies with the British standard BS 5839 Part 8.

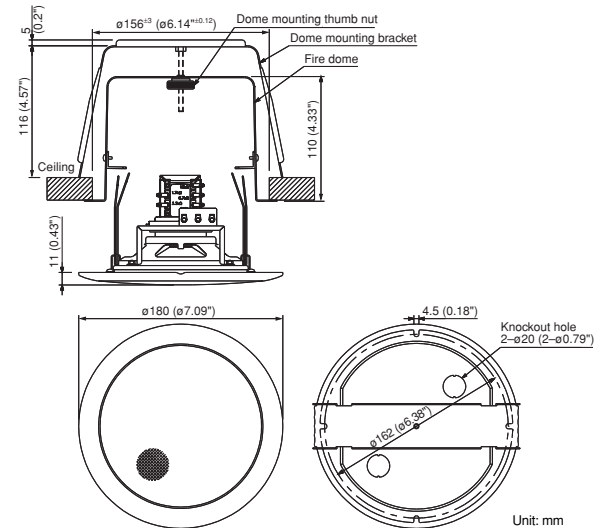
*EN 54-24: Loudspeaker for voice alarm systems for fire detection and fire alarm systems.

FEATURES

- Flush-mount ceiling speaker with iron-made dome
- Fire-resistant front grille is finely meshed, enabling low speaker profile
- Easy installation with spring catches
- Full-range 12 cm (5") speaker
- High sensitivity: 90 dB (1W, 1m)
- Steatite screw terminal block and thermal fuse
- EN 54-24 certified in 2010 (Certificate No.:1438/CPD/0183)
- In compliance with British Standard BS 5839 part 8
- Ideally suited for voice alarm system application



APPEARANCE AND DIMENSIONAL DIAGRAM



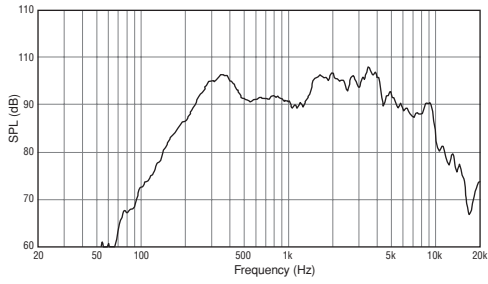
SPECIFICATIONS

Rated Input:	6 W (100 V Line), 3 W (70 V Line)
Rated Impedance:	100 V line: 1.7 k Ω (6 W), 3.3 k Ω (3 W) 6.7 k Ω (1.5 W), 13 k Ω (0.8 W) 70 V line: 1.7 k Ω (3 W), 3.3 k Ω (1.5 W) 6.7 k Ω (0.8 W), 13 k Ω (0.4 W)
Sensitivity:	90dB (1W, 1m) (500Hz – 5kHz, pink noise) 79dB (1W, 4m) (100Hz – 10kHz, pink noise) according to EN 54-24 91dB (1W, 1m) (100Hz – 10kHz, pink noise) converted based on EN 54-24
Maximum Sound Pressure Level:	85dB (6W, 4m) (100Hz – 10kHz, pink noise) according to EN 54-24 97dB (6W, 1m) (100Hz – 10kHz, pink noise) converted based on EN 54-24
Frequency Response:	160Hz – 13kHz (peak -20dB)
Coverage Angle (-6dB):	500Hz: 186°, 1kHz: 178°, 2kHz: 148°, 4kHz: 76°, according to EN 54-24
Environmental Type:	A (indoor applications) according to EN 54-24
Speaker Component:	12 cm (5") cone-type
Dimensions for Fixing Hole:	ø156 ^{±0.12} (mounting hole) × 30 (maximum ceiling thickness) mm (ø6.14 ^{±0.12} × 1.18")
Speaker Mounting Method:	Spring catch
Applicable Cable:	Solid wire: ø1.0 – ø3.0 mm (AWG 18 – 9)
Connction:	Screw connector (steatite terminal) bridging
Finish:	Baffle: Aluminum, off-white (RAL 9010 or equivalent color), paint Grille: Aluminum net, off-white (RAL 9010 or equivalent color), paint Dome mounting bracket: Steel plate, trivalent chromate treatment plating Fire dome: Steel plate, black, painting
Dimensions:	ø180 × 11 (exposed section) + 110 (D) mm (ø7.09" × 0.43" + 4.33")
Weight:	1.4 kg (3.09 lb) (bracket, fire dome included)
Accessory:	Rubber grommet × 2, Paper pattern × 1

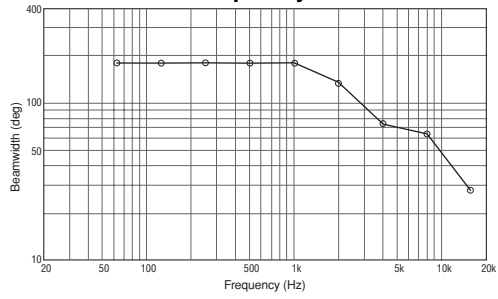


CHARACTERISTIC DIAGRAMS

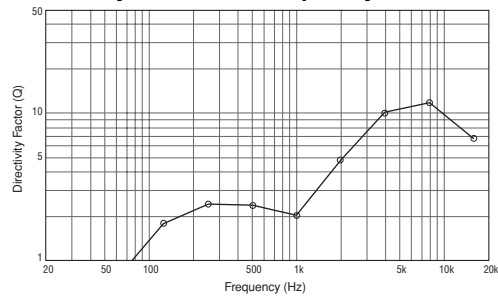
SPL vs. Frequency



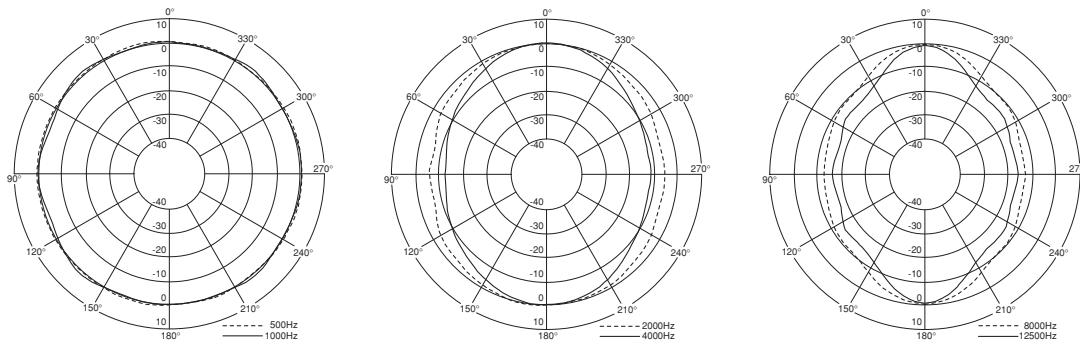
Beamwidth vs. Frequency



Directivity Factor vs. Frequency

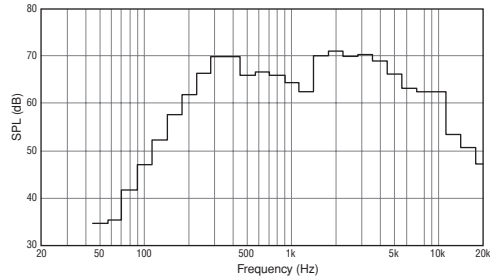


Polar Response

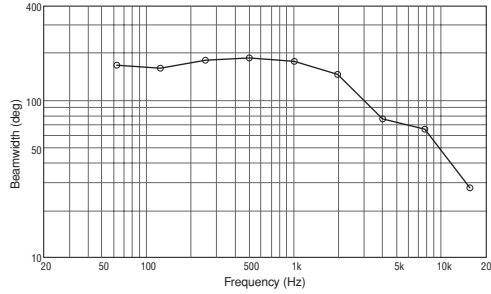


CHARACTERISTIC DIAGRAMS based on the EN 54-24 measurement conditions (Pink noise, 1W, 4m, with EN baffle)

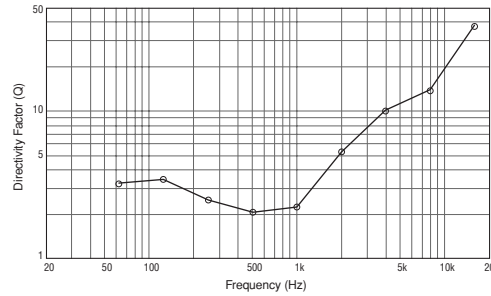
SPL vs. Frequency



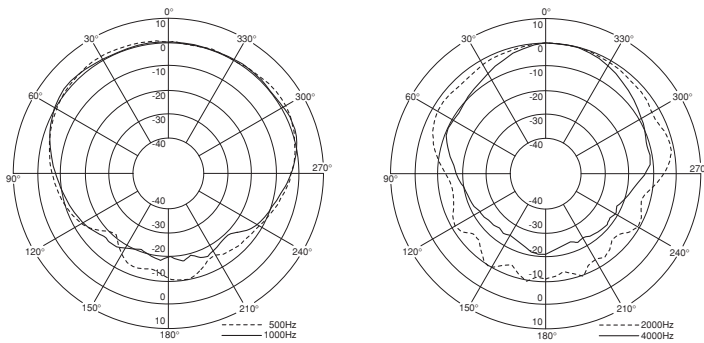
Beamwidth vs. Frequency



Directivity Factor vs. Frequency



Polar Response



ARCHITECTURAL AND ENGINEERING SPECIFICATIONS

The ceiling speaker shall be a 12cm (5") cone-type, featuring a steel plate dome to prevent a fire from spreading in the ceiling during a fire emergency situation. The speaker shall be easily installed using its speaker mounting spring-catch, and the dome shall be easily mounted in the mounting hole of the speaker panel. A steatite terminal block shall allow bridge connection. The speaker shall be EN 54-24 certified and compliant with BS 5839-8. The speaker shall include a transformer having multiple taps (0.8W, 1.5W, 3W, 6W at 100V line and 0.4W, 0.8W, 1.5W, 3W at 70V line) adjustable.

The sensitivity at 1W input measured at a distance of 1m shall be 90 dB (500 Hz to 5k Hz, pink noise). The speaker shall have a frequency response of 160 Hz to 13k Hz (-20dB).

The specifications based on the EN 54-24 measurement conditions are follows:

The sensitivity with 1W input shall be 79 dB at a distance of 4m and 91 dB at a distance of 1m converted based on EN 54-24 (100 Hz to 10k Hz, pink noise).

The maximum sound pressure level with 6W input shall be 85 dB at a distance of 4m and 97 dB at a distance of 1m converted based on EN 54-24 (100 Hz to 10k Hz, pink noise). The environmental type according to EN 54-24 shall be A (indoor application).

The speaker baffle shall be constructed of aluminum. The grille shall be aluminum net. The speaker shall be available in off-white color. The unit shall have dimensions of $\phi 180 \times 11$ (exposed section) $\times 110$ (D) mm ($\phi 7.09'' \times 0.43''$ (exposed section) + 4.33"), and a weight of 1.4 kg (3.09 lb).

The ceiling speaker shall be TOA model PC-1867FC.