



# LBC 3090/01 Ceiling Loudspeaker



The LBC 3090/01 is an economic flush-mounting ceiling loudspeaker for general purpose applications. It is a full range loudspeaker for speech and music reproduction in shops, department stores, schools, offices, sports halls, hotels and restaurants.

## Functions

The LBC 3090/01 has a single-piece, 6 W dual cone loudspeaker. A 100 V matching transformer is mounted behind the front panel assembly. The moulded plastic front panel is mounted onto the loudspeaker's metal frame, and a dust cover protects the rear. The appearance and colour are unobtrusive in any interior.

## Certifications and Approvals

All Bosch loudspeakers are designed to withstand operating at their rated power for 100 hours in accordance with IEC 268-5 Power Handling Capacity (PHC) standards. Bosch has also developed the Simulated Acoustical Feedback Exposure (SAFE) test to demonstrate that they can withstand two times their rated power for short durations. This ensures extra reliability under extreme

- ▶ Suitable for speech and music reproduction
- ▶ Increased sensitivity
- ▶ Flush-mounting in ceiling cavity
- ▶ Easy to install
- ▶ Protective dust cover
- ▶ Optional certified fire dome
- ▶ Simple power setting
- ▶ Matching surface mounting box
- ▶ Comply with international safety regulations

conditions, leading to higher customer satisfaction, longer operating life, and much less chance of failure or performance deterioration.

All plastic parts are manufactured from self-extinguishing high-impact ABS material (according to UL 94V0).

Region	Certification	
Europe	CE	Declaration of Conformity
Safety	acc. to EN 60065	

## Installation/Configuration Notes

### Installation

Installation is both quick and easy, as the unit(s) have two built-in spring-loaded locking clamps that secure them into holes in the ceiling (for suspended ceilings and wall boards from 9 to 25 mm thick). Alternatively, they can be fixed with four screws (using pre-drilled holes) in ceiling or wall panels less than 9 mm thick. A circular template for marking a 182 mm (7.1 in) diameter hole is included with the loudspeaker.

**Terminal Block**

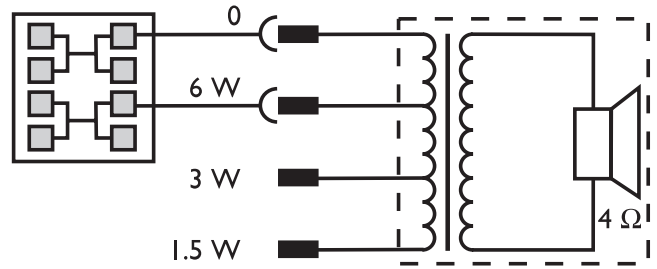
The unit has a two-way terminal block with push connections suitable for loop-through wiring. Three primary taps are provided on the matching transformer to allow selection of nominal full- power, half-power or quarter-power radiation (i.e. in 3 dB steps).

**LBC 3091/01 Surface Mounting Box**

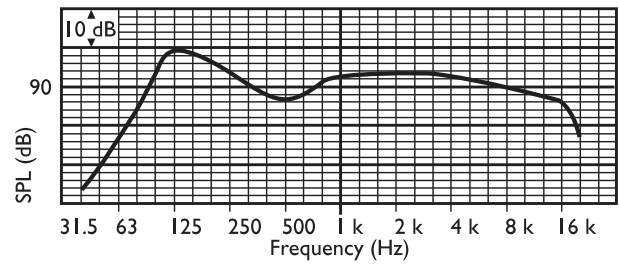
For mounting onto the surface of a wall or ceiling, the color-matched surface mounting box LBC 3091/01 is available.

**LBC 3080/01 Fire Dome**

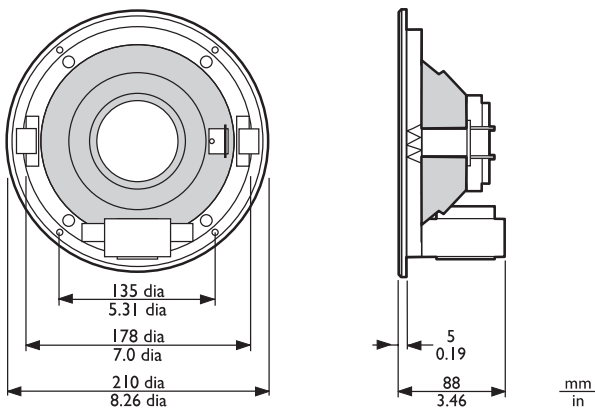
During a fire, the ceiling cavity can allow fire or smoke to spread throughout a building. To inhibit fire entering the cavity via the ceiling loudspeaker, it can be fitted with an LBC 3080/01 steel fire dome. This is mounted on the loudspeaker assembly using four self-tapping screws supplied with the fire dome. The fire-dome has knock-out holes for two grommets (supplied) and two cable glands (PG 13).



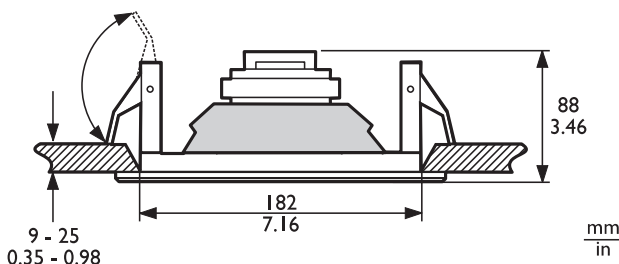
Circuit diagram



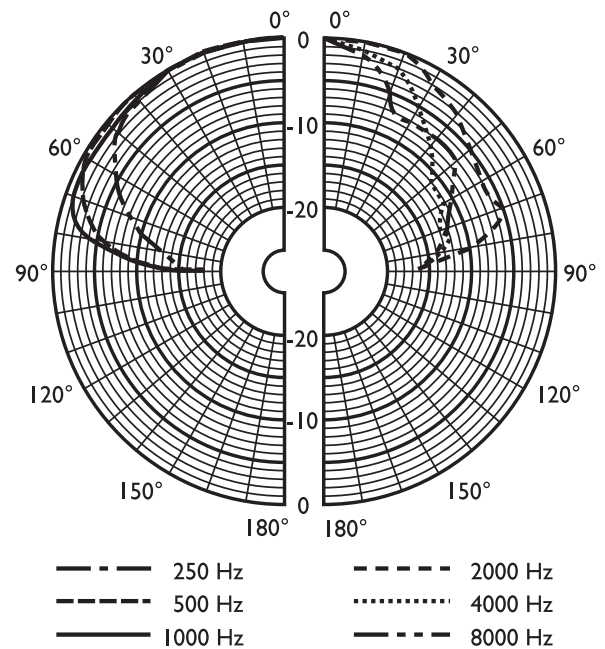
Frequency response



Dimensions in mm (in)



Dimensions in mm (in)

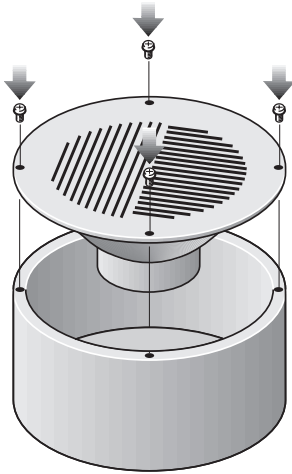


Polar diagram (measured with pink noise)

	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
SPL 1.1	94	91	89	91	93	95	89
SPL max.	102	99	97	99	101	103	97
Q-factor	4.8	5	3	3.4	6.3	18	20
Efficiency	0.66	0.32	0.34	0.46	0.4	0.22	0.05
H. angle	150	140	180	160	140	55	45
V. angle	150	140	180	160	140	55	45

Acoustical performance specified per octave

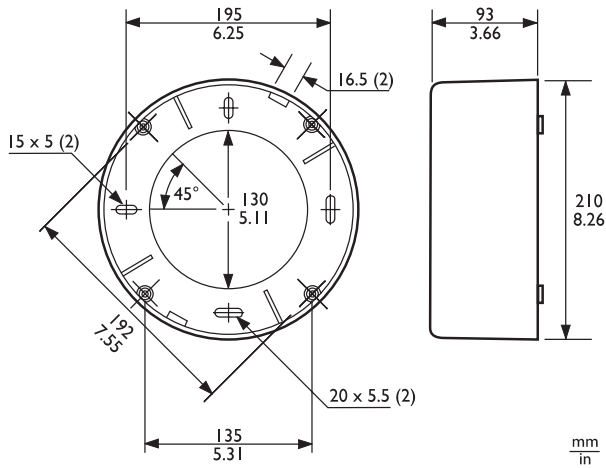
**LBC 3091/01 Surface Mounting Box**



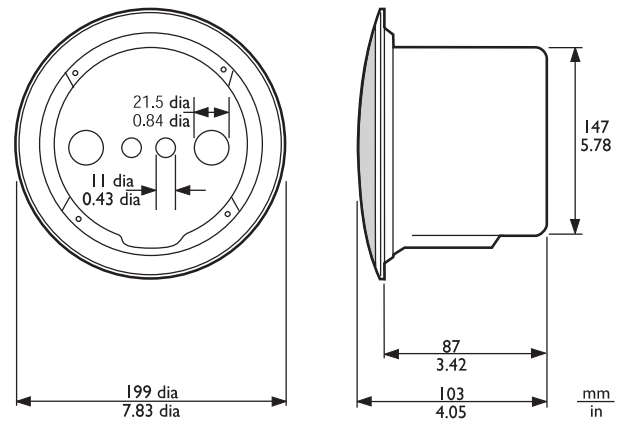
**LBC 3080/01 Fire Dome**



*LBC 3090/01 and LBC 3091/01 assembly*



*Dimensions in mm (in)*



*LBC 3090/01 + LBC 3080/01 fire dome assembly dimensions in mm (in)*

**Parts Included**

Quantity	Component
1	LBC 3090/01 Ceiling Loudspeaker
1	182 mm circular template

**Technical Specifications****Electrical\***

Maximum power	9 W
Rated power	6 / 3 / 1.5 W
Sound pressure level at 6 W / 1 W (1 kHz, 1 m)	99 dB / 91 dB (SPL)
Sound pressure level at 6 W / 1 W (4 kHz, 1 m)	103 dB / 95 dB (SPL)
Effective frequency range (-10 dB)	70 Hz to 18 kHz
Opening angle at 1 kHz/4 kHz (-6 dB)	160° / 55°
Rated voltage	100 V
Rated impedance	1667 ohm
Connector	2-pole push-in terminal block

\* Technical performance data acc. to IEC 60268-5

**Mechanical**

Diameter	210 mm (8.3 in)
Maximum depth	88 mm (3.5 in)
Mounting cut-out	182 + 5 mm (7.2 in)
Speaker diameter	152.4 mm (6 in)
Weight	1.1 kg (2.4 lb)
Color	Off-white (RAL 9010)
Magnet weight	150 g (5.3 oz)

**Environmental**

Operating temperature	-25 °C to +55 °C (-13 °F to +131 °F)
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Relative humidity	<95%

**LBC 3091/01**

Diameter	210 mm (8.3 in)
Maximum depth	93 mm (3.6 in)
Weight	290 g (0.6 lb)
Color	Off white (RAL 9010)

**LBC 3080/01**

Diameter	147 mm (5.8 in)
Maximum depth	87 mm (3.4 in)
Weight	360 g (0.8 lb)
Color	Off white (RAL 9010)
Certified B15	acc. to DIN 4102

**Ordering Information**

**LBC 3090/01 Ceiling Loudspeaker** **LBC3090/01**  
6 W dual cone economic flush-mounting ceiling loudspeaker for general purpose applications.

**Accessories**

**LBC 3091/01 Surface Mounting Box** **LBC 3091/01**  
for securing the ceiling loudspeaker to walls or hard ceilings

**LBC 1256/00 EVAC Connection Adapter** **LBC1256/00**  
3-pole screw connector, 100 pieces

**LBC 3080/01 Fire Dome** **LBC 3080/01**  
metal fire dome for the LBC 3087/41, LBC 3090/01, LBC 3090/31, LHM 0606/00 and LHM 0606/10 ceiling loudspeakers

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