

- 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 •

Philips loudspeakers offer a combination of quality, performance and innovation in public address. They are the result of over half a century's experience in professional audio, and meet virtually all sound reinforcement system requirements.

**Excellent price/performance ratio**

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.

**Dual-cone loudspeaker**

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



**LBC 3090/01, LBC 3091/01**

CEILING LOUDSPEAKER

the rear. The appearance and colour are unobtrusive in any interior.

**Mounting**

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.

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

**Simple power setting**

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).

**Fire dome**

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



**SPECIFICATIONS**

# LBC 3090/01, LBC 3091/01

CEILING LOUDSPEAKER

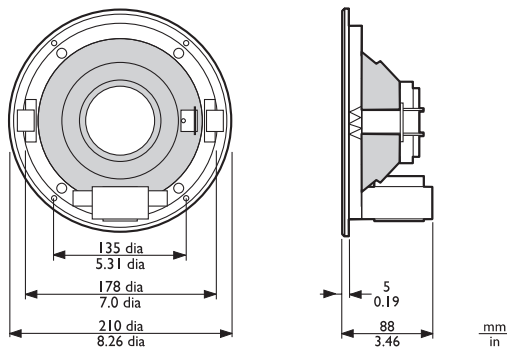
**Quality Assurance**

All Philips loudspeakers are designed to withstand operating at their rated power for 100 hours in accordance with IEC 268-5 Power Handling Capacity (PHC) standards. Philips 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 conditions, leading to higher customer satisfaction, longer operating life, and much less chance of failure or performance deterioration.

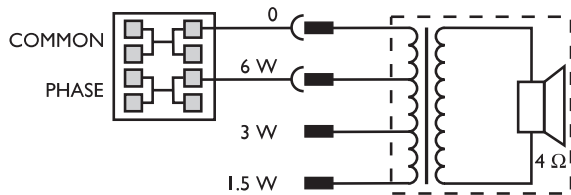
**Safety aspects**

In common with all Philips products, care is taken to meet high safety standards. This loudspeaker complies with the relevant safety and installation regulations of EN 60065. All plastic parts are manufactured from self-extinguishing high-impact ABS material (according to UL 94V0).

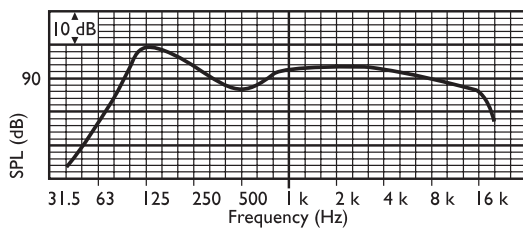
**LBC 3090/01**



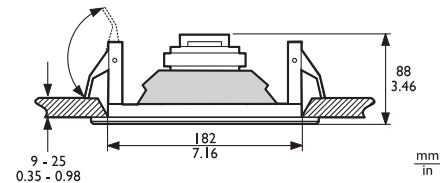
Dimensions (in mm/in)



Circuit diagram



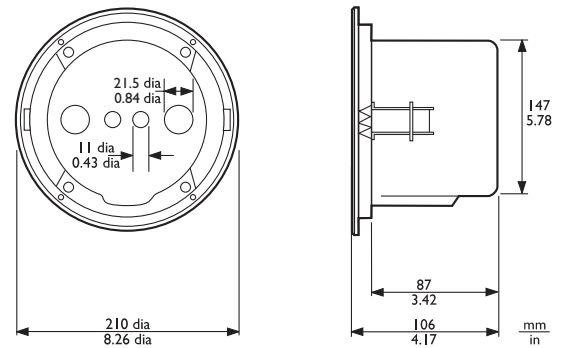
Frequency response



Dimensions (in mm/in)



LBC 3080/01

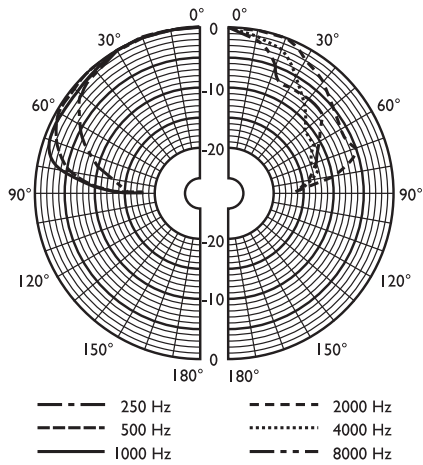


LBC 3090/01 + LBC 3080/01 fire dome assembly dimensions

**SPECIFICATIONS**

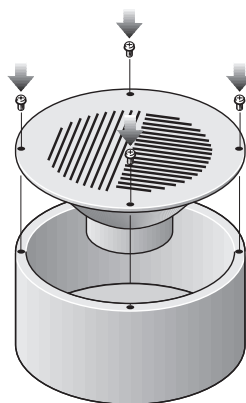
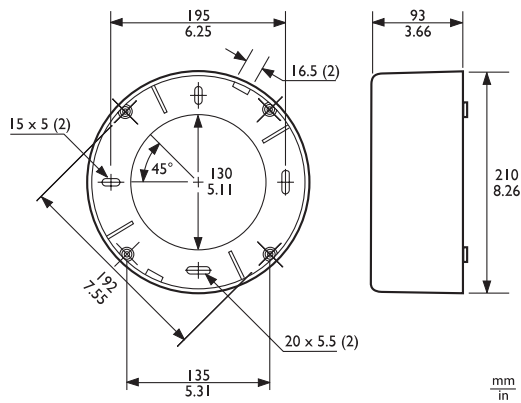
# LBC 3090/01, LBC 3091/01

CEILING LOUDSPEAKER



Octave band (Hz)	125	250	500	1 k	2 k	4 k	8 k
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
Hor. angle	150	140	180	160	140	55	45
Vert. angle	150	140	180	160	140	55	45

*Polar diagram (measured with pink noise)*



LBC 3091/01

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

## SPECIFICATIONS

# LBC 3090/01, LBC 3091/01

CEILING LOUDSPEAKER

### TECHNICAL PERFORMANCE DATA ACC. TO IEC 268-5

	<b>LBC 3090/01</b>
<b>Max. power</b>	9 W
<b>Rated power</b>	6 W (6 - 3 - 1.5 W)
<b>Sound pressure level at rated power</b>	
<b>6 W/1 W (at 1 kHz, 1 m)</b>	99 dB/91 dB (SPL)
<b>Effective frequency range (-10 dB)</b>	70 Hz to 18 kHz
<b>Opening angle (at 1 kHz/4 kHz, -6 dB)</b>	160°/55°
<b>Rated voltage</b>	100 V
<b>Rated impedance</b>	1667 Ω
<b>Speaker size</b>	6"
<b>Magnet weight</b>	5.3 oz
<b>Ambient temperature range</b>	-25 to +55 °C (-13 to 131 °F)
<b>Safety</b>	acc. to EN 60065
<b>Self-extinguishing</b>	acc. to UL94V0
<b>Connection</b>	2-pole push connector
<b>Dimensions (dia x max. depth)</b>	210 x 88 mm (8.3 x 3.5 in)
<b>Mounting cut-out dia.</b>	182 <sup>+5</sup> (7.2 in)
<b>Colour</b>	White (RAL 9010)
<b>Weight</b>	1.1 kg (2.4 lb)
	<b>LBC 3091/01</b>
<b>Dimensions (dia x max. depth)</b>	210 x 93 mm (8.3 x 3.6 in)
<b>Colour</b>	White (RAL 9010)
<b>Weight</b>	290 g (0.6 lb)
	<b>LBC 3080/01</b>
<b>Dimensions (dia x max. depth)</b>	147 x 87 mm (5.8 x 3.4 in)
<b>Certified B15</b>	acc. to DIN 4102
<b>Colour</b>	White (RAL 9010)
<b>Weight</b>	360 g (0.8 lb)

