



Contitec Electronics Ltd.  
Martin-Kollar-Str. 4  
D-81829 München


Tel. +49 89 99 81 86 30  
Fax. +49 89 3219 50 75  
eMail: sales@contitec.com  
web: www.contitec.com

# Component Specification

Product : Horn Speaker  
Part Number : CA-SH5536A-1610EW55  
Drawing No : DRW8067

## Content

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2. Electrical & Acoustical Characteristics
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## 1) General

This product is applied to horn speaker applications for industrial vehical applications e.g. fork-lift construction machines etc.  
Please contact us for customer specific solutions.

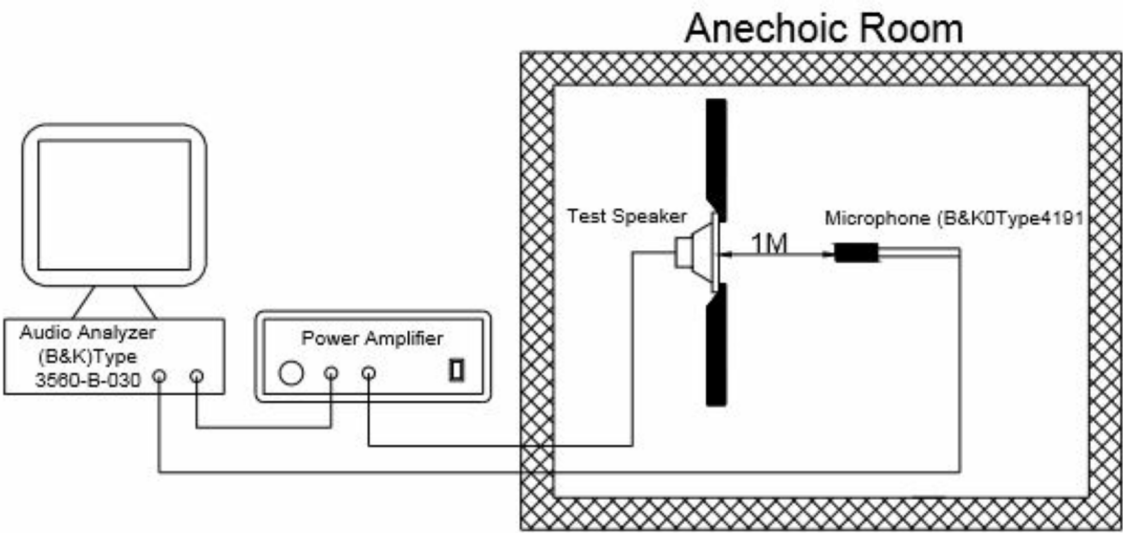
## 2) Electrical & Acoustical Specifications

	Type	Specification
1	Input Power	10 W (max.15 W)
2	Magnet size	24.5x 3.5 mm
3	Frequency Range	F0 ~ 4KHz
4	Resonance Frequency	1800Hz±20%
5	Sound Pressure Level	≥98 dB ± 3 dB at 3W , 1m , 20 % duty rate ≥96 dB ± 3 dB at 2W , 1m , 20 % duty rate (Applying optimized housing: ≥105dB ± 3 dB at 3W , 1m , 3 KHz, 20 % duty rate )
6	Impedance	16 Ω± 20%
7	Operating Temperature Range	-30 +80°C
8	Store Temperature Range	-30 +110°C
9	Weight	92 g
10	Buzz and Rattle	Should not be audible buzzes, rattles when the 4V sine wave signal swept at frequency range.
11	Polarity	When supplied plus D.C. voltage to (+) terminal, the cone diaphragm must move to forward.
12	Case Material/Color	PA66/Black
13	Diameter x Height	56mm x 37,4mm

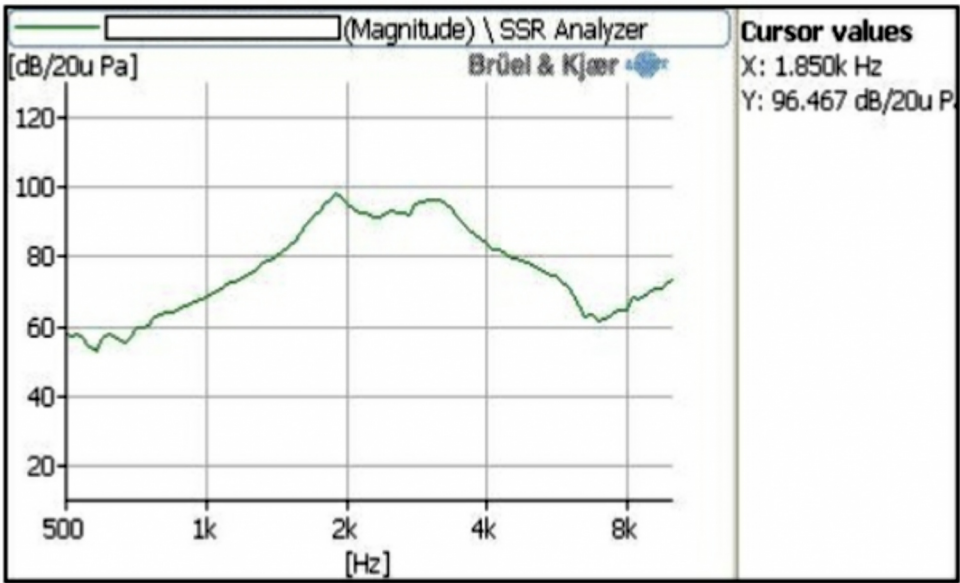
1 . 0	14/03/16	Production release	L. Hua	T. Feng	G. Schubert
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3) Test Circuit




4) Frequency Characteristics



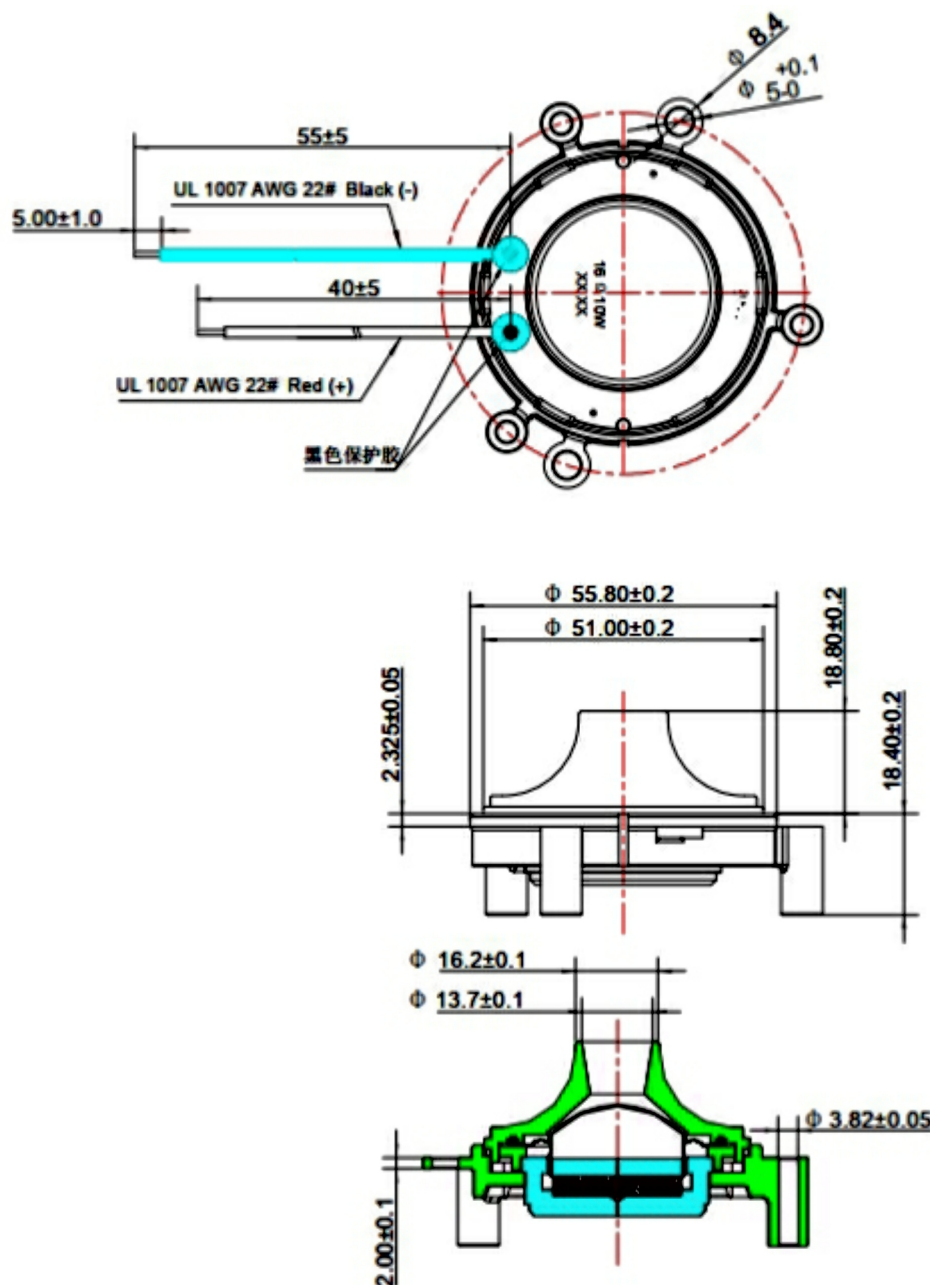
Standard: SPL 96 dB at 1,85 KHz

Optimized housing : SPL 105 dB at 5 KHz


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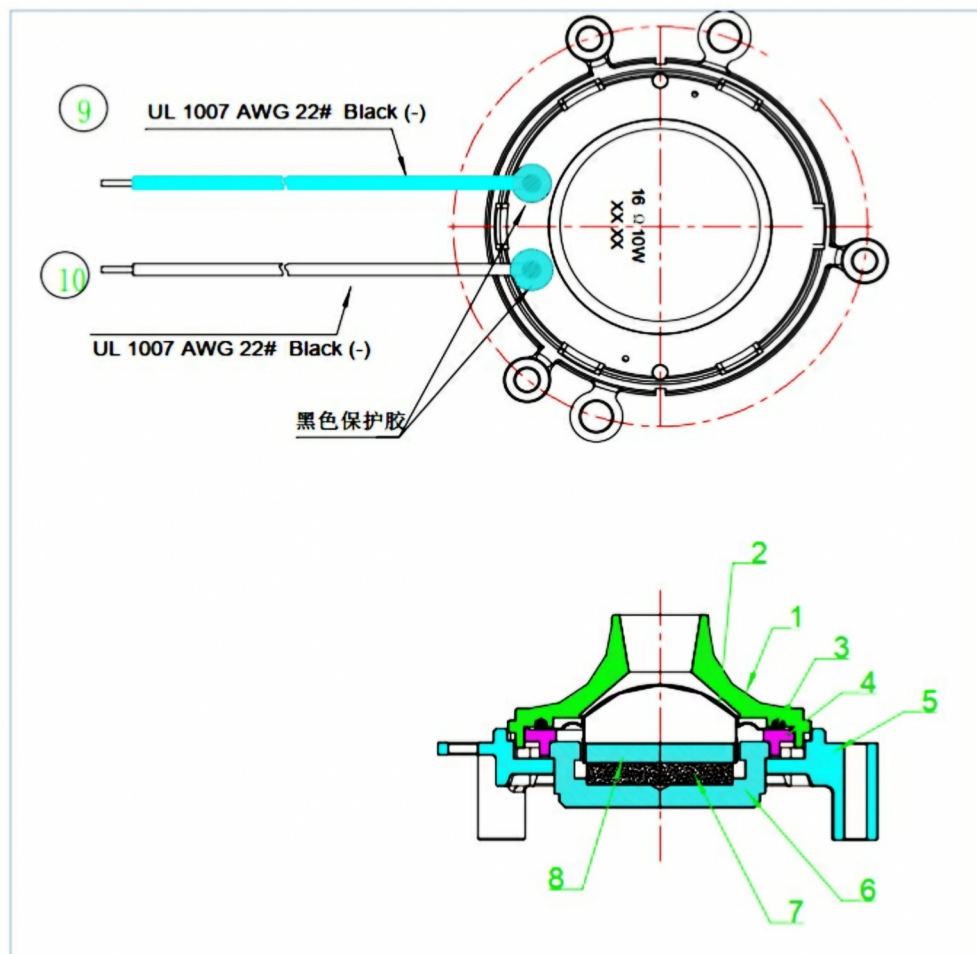
## 5) Dimensions



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## 6) Structure



No	Part Name	Unit	Material
1	UPPER CASE	EA	LCP 6130
2	LOWER CASE	EA	LCP 6130
3	YOKE	EA	Pure-Fe
4	COIL	EA	3DS-FC
5	MAGNET	EA	Sm-Co
6	RESONATOR	EA	PERMALLOY
7	MAGNET PLATE	EA	PERMALLOY
8	TERMINAL	EA	PBS
9	SOLDER	EA	Sn95%Ag5%

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## 7) Reliability Test

No	Items	Specification
1	High Temperature Test	After being placed in a chamber with $+80\pm 3^{\circ}\text{C}$ for 2 hours and then being placed in natural condition for 1 hour, speaker shall be measured.
2	Low Temperature Test	After being placed in a chamber with $-30\pm 3^{\circ}\text{C}$ for 2 hours and then being placed in natural condition for 1 hour, speaker shall be measured.
3	Humidity Test	After being placed in a chamber with 90-95%R.H. at $+40\pm 2^{\circ}\text{C}$ for 2 hours and then being placed in natural condition for 1 hour, speaker shall be measured.
4	Shock Test	Under acceleration of peak $100\text{m/s}^2$ (10g) half sine wave pulse (pulse time is 16ms) condition. run into product 1000 times continuously.
5	Vibration Test	After being applied vibration of amplitude of 1.5mm with 10 to 55Hz band of vibration frequency to each of 3 perpendicular directions for 1 hour, then placed in natural condition for 1 hour, speaker shall be measured.
6	Drop Test	Package product to carton, from 1m height, 6 directions fall to concrete
7	Load test	After being applied loading white noise with input power 10W (12.6 Vrms.) for 48 hours, then placed in natural condition for 1 hour, speaker shall be measured.

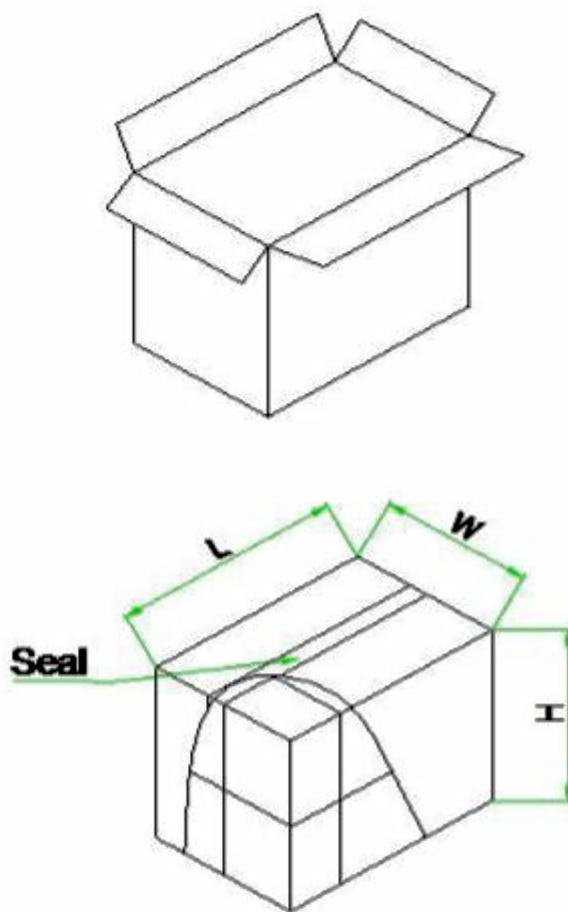
After test (1~7item), the speaker S.P.L. difference shall be within  $\pm 3\text{dB}$ , and the appearance not exist any change to be harmful to normal operation (e.g. cracks, rusts, damages, especially distortion).

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## 8) Packing

Each minimum package unit of products shall be in a carton box and it shall be clearly marked with Part Number, quantity and outgoing inspection number.



QTY: 240 pcs  
L×W×H= 390×360×125 mm

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## 9) Revision

Rev. No	Date	Page	Description	Sign
10	14/03/16	all	Production release	Wang.Xue

1 . 0	14/03/16	Production release	L. Hua	T. Feng	G. Schubert
Revision	Date	Notes	Drawn by	Checked by	Approved by