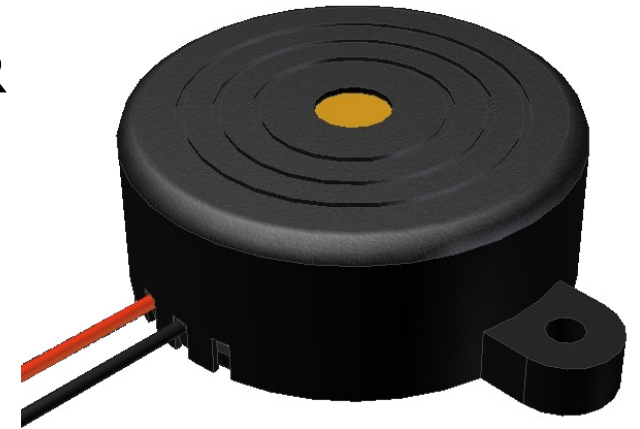




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## AI-4228-TF-LW140-3-R 42mm Indicator

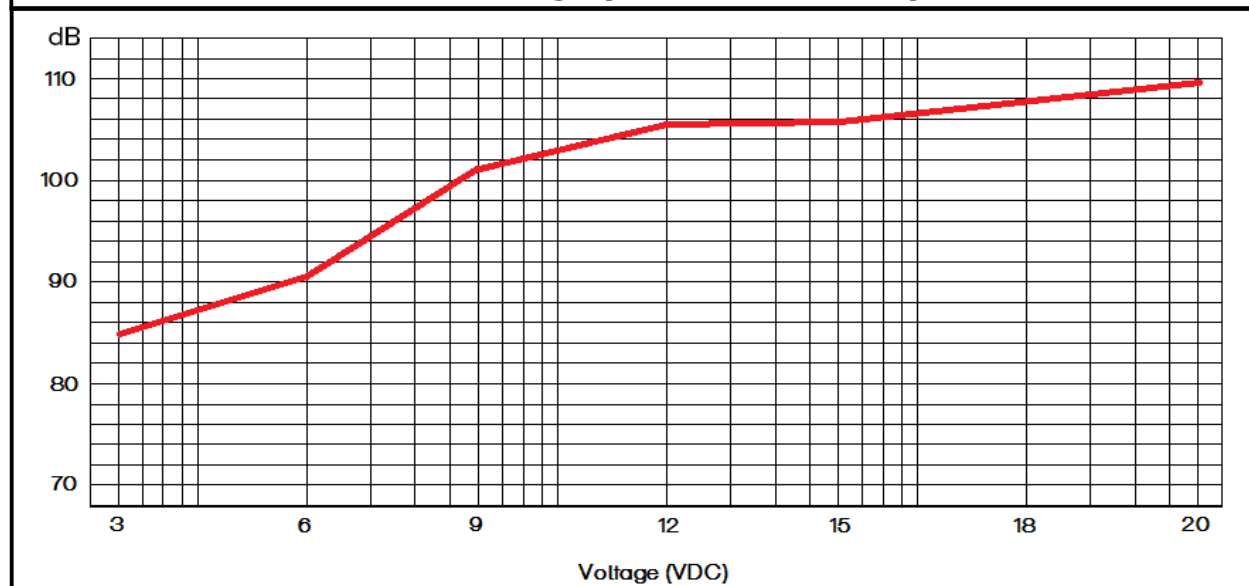


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### Product Overview

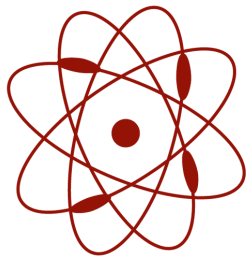
- 42mm diameter, 3-20 VDC self-drive indicator
- High 105 dBA minimum output (12 VDC @ 10 cm) and 2.8 kHz continuous tone
- ABS housing with mounting tabs and 140mm lead wires for quick connection
- Piezo-based solution consumes only 10 mA of current

**SPL vs Voltage (measured @10 cm)**



AI-4228-TF-LW140-3-R





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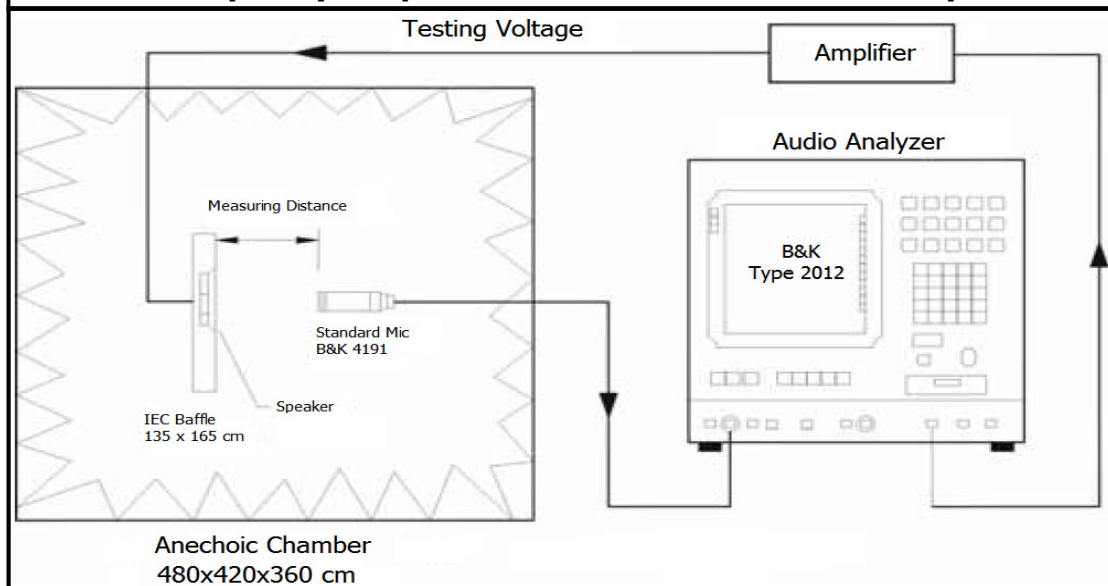
## AI-4228-TF-LW140-3-R 42mm Indicator

### Mechanical and Environment Testing

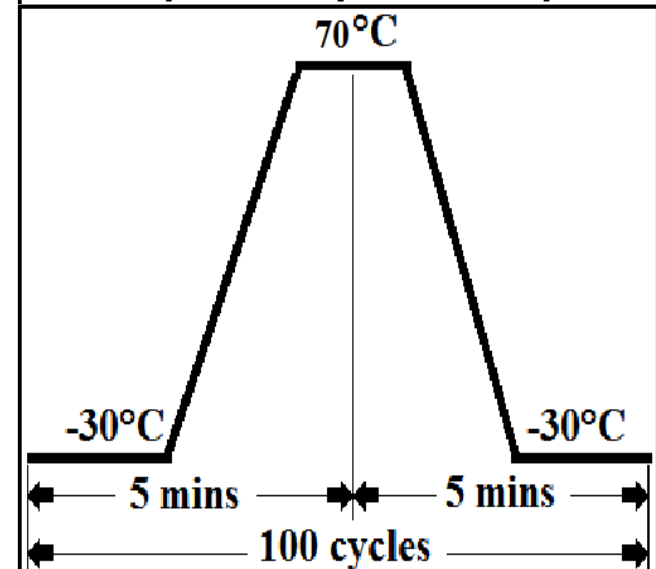
Test Description	Test Condition
High Temperature	70°C ( $\pm 2^\circ\text{C}$ ) with random humidity for 96 hours
Low Temperature	-30°C ( $\pm 2^\circ\text{C}$ ) with random humidity for 96 hours
Humidity	40°C ( $\pm 2^\circ\text{C}$ ) with 90% to 95% relative humidity for 96 hours
Vibration	0.75 mm movement modulated at 10-55 Hz for 3 hours
Drop Test	100 cm free fall onto wood board, 10 cycles
Temperature Cycle Test	-30°C to 70°C, 100 cycles

After tests, part shall rest for 2 hours. Parts are then tested for clean, pure tones.

### Frequency Response and SPL Measurement Setup



### Temperature Cycle Test Graph



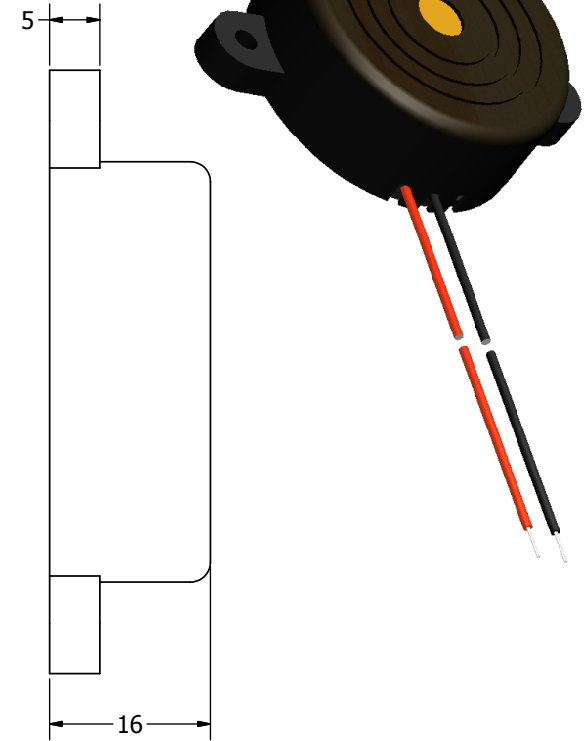
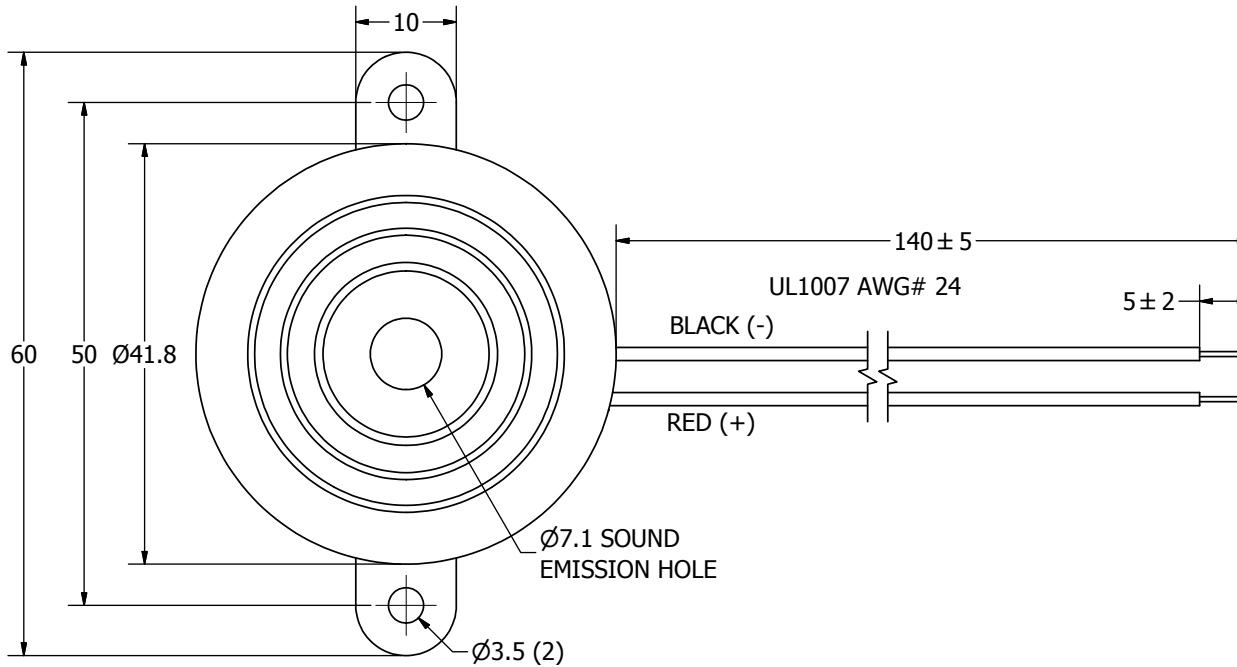
## SPECIFICATIONS

PARAMETERS	VALUES	UNITS
RATED VOLTAGE	12	Vdc
OPERATING VOLTAGE RANGE	3 ~ 20	Vdc
RATED CURRENT (MAX)	10	mA
MINIMUM SPL @ 10 CM	105	dBA
RESONANT FREQUENCY	2,800 ± 500	Hz
TONE OR PULSE RATE	CONTINUOUS	0 pulse /sec
OPERATING TEMPERATURE	-20 ~ +60	°C
STORAGE TEMPERATURE	-30 ~ +70	°C
HOUSING MATERIAL	ABS	-
TERMINAL MATERIAL	LEAD WIRE	-
WEIGHT	12	grams

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## REVISION HISTORY

LTR	DESCRIPTION	DATE	APPROVED
-	RELEASED FROM ENGINEERING	8/16/2004	
A	REVISED PART No. AND DIMENSIONS	8/26/2004	R.W.
B	REMOVED LEAD FREE ADDED RoHS NOTE	8/10/2005	B.R.
C	REVISED WIRE LENGTH FROM 215 TO 140	10/31/2005	B.R.
D	REVISED TO INVENTOR 3-D DRAWING TEMPLATE	3/05/2008	B.R.



### NOTES:

- ALL DIMENSIONS ARE IN MILLIMETERS.
- SPECIFICATIONS SUBJECT TO CHANGE OR WITHDRAWAL WITHOUT NOTICE.
- THIS PART IS RoHS 2002/95/EC COMPLIANT.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS, TOLERANCES ARE ±0.5 AND ANGLES ARE ±3°.	SIZE <b>A3</b>	Designed by	Date	Checked by	Date	Approved by	Date	Drawn Date		
		R.A.C.	8/16/2004			R.W.	8/16/2004	3/3/2008		
AI-4228-TF-LW140-R.idw		 <b>pui audio</b> a projects unlimited company		<b>AI-4228-TF-LW140-R</b>			Indicator		Edition -	Sheet 1 / 1