PUIaudio

Data Sheet	AILF-4228-TF-HT-LW140

Features:

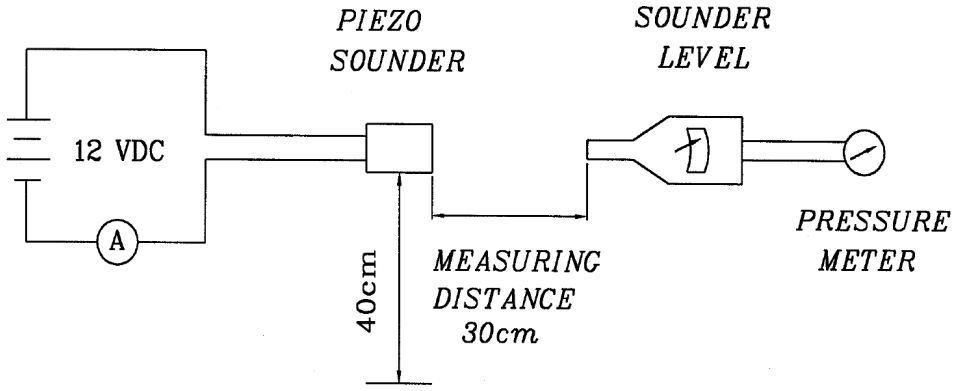
- Lead free 41.8mm Piezo Audio Indicator
- 12VDC rated and 2,800Hz resonant frequency
- Lead Wire for easy assembly

Specifications

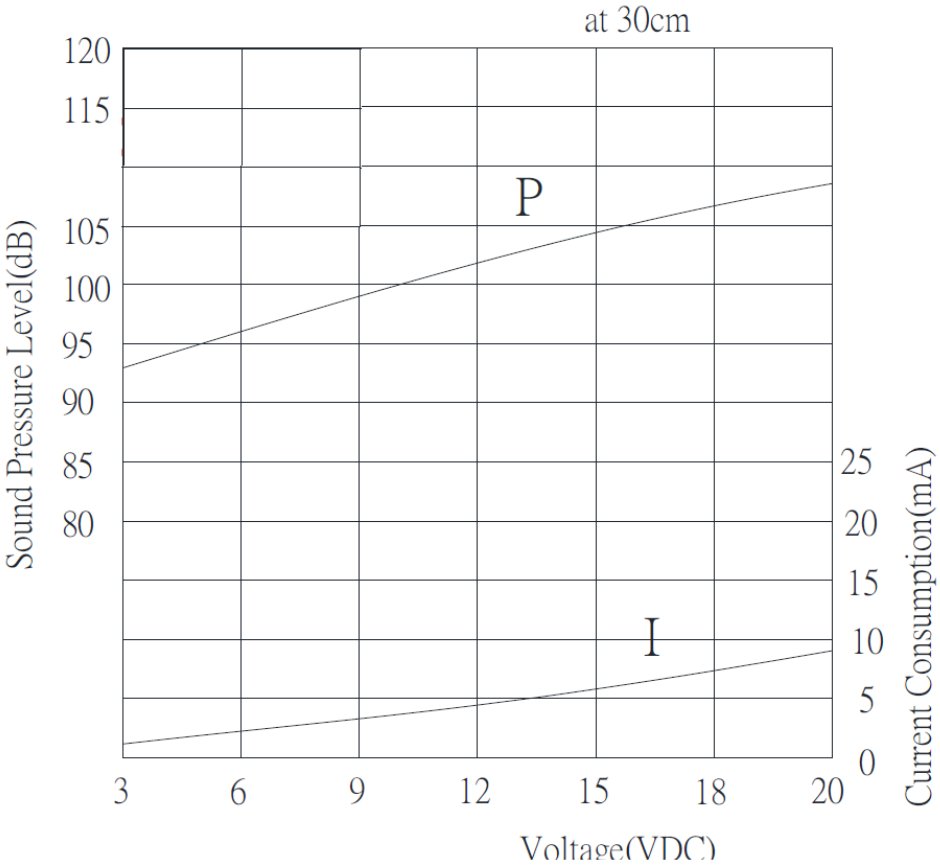
Parameters	Values	Units
Rated Voltage	12	VDC
Operating Voltage Range	3 ~ 20	VDC
Current Draw at Rated Voltage	15 max	mA
Minimum SPL @ 30cm	92	dBA
Resonant Frequency	2,800 ± 500	Hz
Tone or Pulse Rate	Continuous	-
Housing Material	Black ABS UL-94 1/16" HB HIGH HEAT	-
Terminal Material	Lead Wire	-
Weight	14.6	Grams
Acceptable Soldering Methods	Hand Solder, Wave Solder	-
Environmental Compliances	RoHS2.0	Buzzer ceramics meet RoHS 2.0 lead-free requirements
Storage Temperature	-40 ~ +95	°C
Operating Temperature	-30 ~ +85	°C

Measurement Method **(Temperature: 25±3°C; Relative Humidity: 60% ~ 70%)**

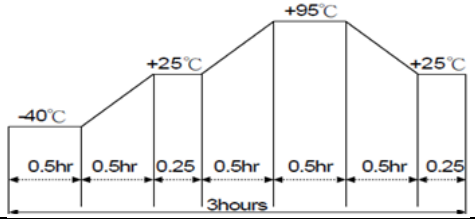
Standard Test Fixture (Distance: 30cm, 12VDC)



Typical SPL/Current vs Input Voltage

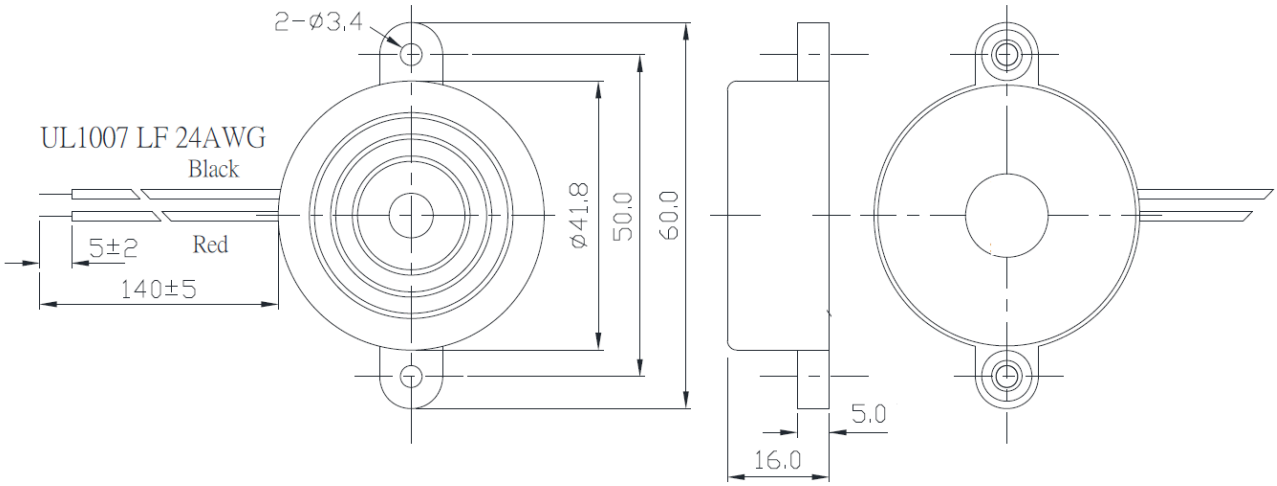


Reliability Testing

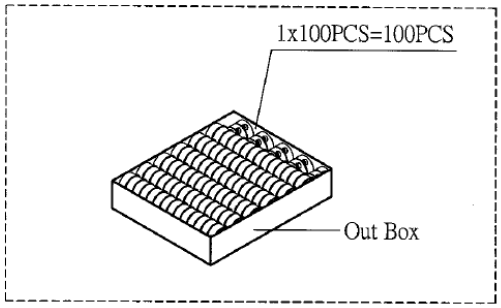
Type of Test	Test Specifications
High Temperature Test	Test chamber for 240 hours at +95°C
Low Temperature Test	Test chamber for 240 hours at -40°C
Humidity Test	Test chamber for 240 hours at +40°C with relative humidity at 90±5%
Temperature Cycle Testing	Run for 5 cycles with each cycle consisting of: 
Vibration Test	1.5mm amplitude vibration with 10~55Hz band of vibration frequency for 2 hours. Repeat test in X, Y, Z directions (total 6 hours).
Solderability Test	Lead terminals immersed in rosin for 5 seconds, then in solder bath of +270±5°C for 3±1 seconds.
Lead Wire Pull Strength	The pull force shall be applied to double lead wire : Horizontal 3.0N(0.306kg) for 30 seconds. Vertical 2.0N(0.204kg) for 30 seconds. No Damage or cut off.
Drop Test	Free drop a unit from the height 75cm to the surface of 40mm thick board, three times. Repeat test in X, Y, Z directions (total 9 times).
Load Test	Apply rated voltage for 48 hours continuously at +70°C. Apply a duty cycle of 1 minute on, 1 minute off 5000 times minimum, at rated voltage and room temperature (+25±2°C).
Continuous Life Test	48 hours continuous operation at +70°C, at rated voltage.
Intermittent Life Test	1 minute on, 1 minutes off, minimum of 5000 times at +25±2°C, at rated voltage.

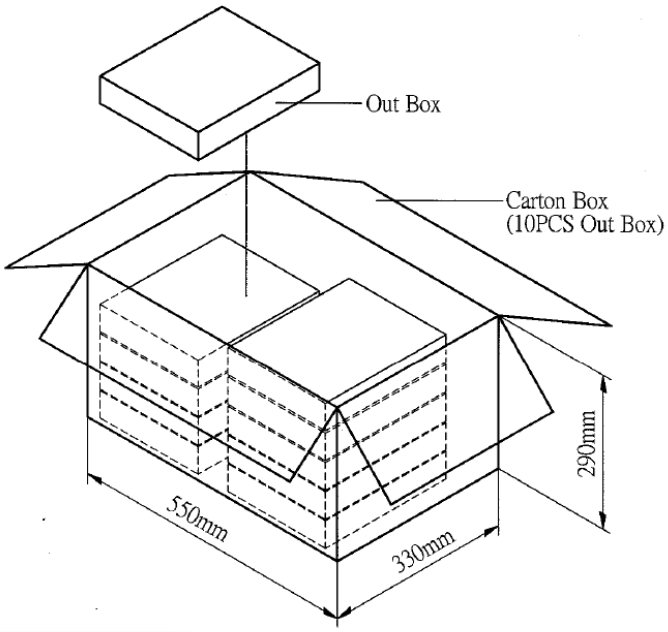
After each test, let rest for 4 hours, then the change in SPL shall be within ±10 dB. The value of resonant frequency/ current consumption should be in±10%

Dimensions



Packaging





Out Box	310mmx248mmx49mm	1x100PCS=100PCS
Carton Box	550mmx330mmx290mm	100PCSx10=1000PCS

Specifications Revisions

Revision	Description	Date	Approved
A	RELEASED FROM ENGINEERING	3/4/2024	NK

Note:

1. Unless otherwise specified:
    A. All dimensions are in millimeters.
    B. Default tolerances are ±0.5mm and angles are ±3°.
2. Specifications subject to change or withdrawal without notice.