

## **Excellent Integrated System Limited**

Stocking Distributor

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[CUI Inc.](#)  
[CPE-400AC](#)

For any questions, you can email us directly:

[sales@integrated-circuit.com](mailto:sales@integrated-circuit.com)

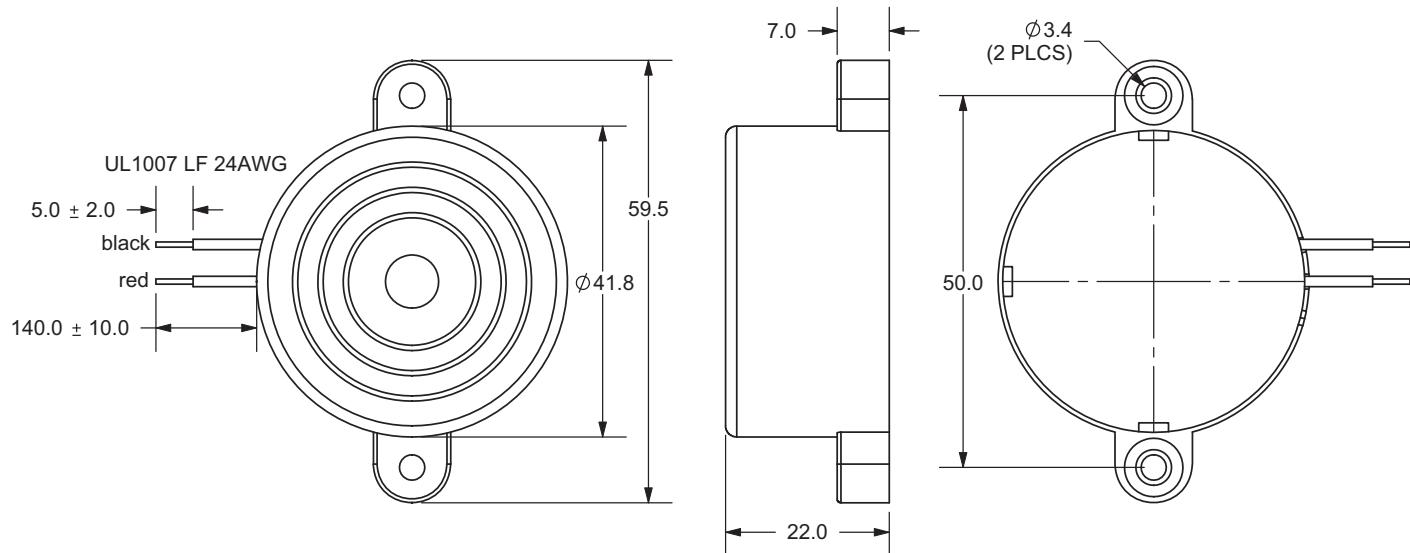
For more information, please visit the [product page](#).page 1 of 5  
date 11/12/2007**PART NUMBER:** CPE-400AC**DESCRIPTION:** piezo audio indicators**SPECIFICATIONS**

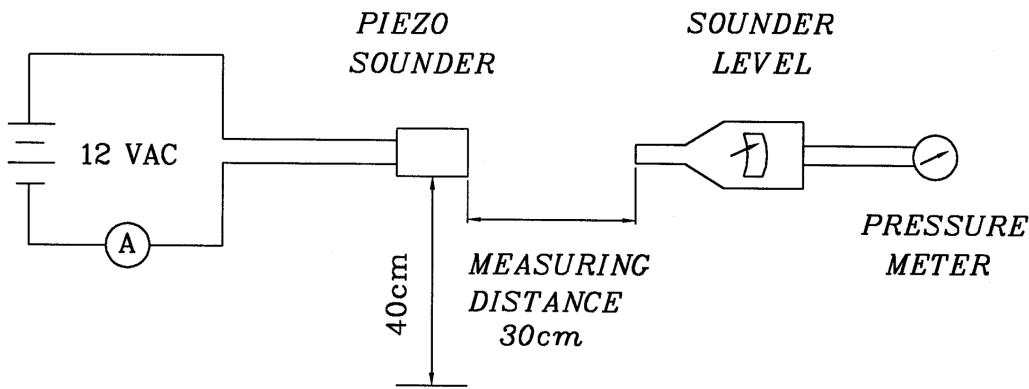
operating frequency	3.1 ± 0.5 KHz	
operating voltage range	3 ~ 30 V AC/V DC	AC/DC non-polar
current consumption	8 mA max.	at 12 V AC
sound pressure level	89 db min.	at 30 cm/12 V AC
rated voltage	12 V AC	
tone	continuous	
operating temperature	-30 ~ +85° C	
storage temperature	-40 ~ +95° C	
dimensions	Ø41.8 x H22.0 mm	
weight	15.7 g max.	
material	ABS UL-94 1/16" high heat (black)	
terminal	wire type	
RoHS	yes	

**APPEARANCE DRAWING**

tolerance: ±0.5

units: mm

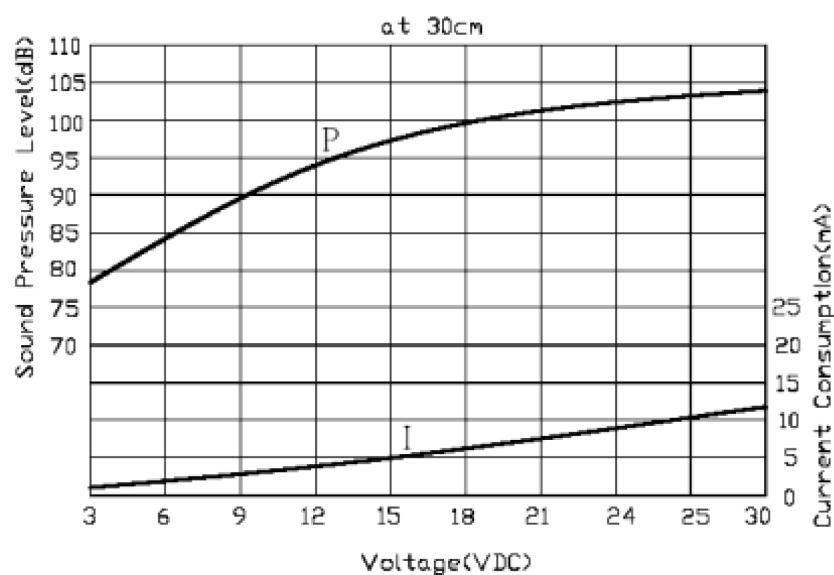


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date 11/12/2007**PART NUMBER:** CPE-400AC**DESCRIPTION:** piezo audio indicators**MEASUREMENT METHOD**

S.P.L. Measuring Circuit

Mic: RION S.P.L. meter UC30 or equivalent

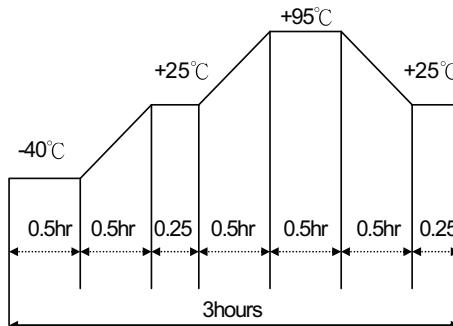
S.G.: Hewlett Packard 33120A function generator or equivalent

**CURRENT CONSUMPTION/SOUND PRESSURE LEVEL**

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date 11/12/2007**PART NUMBER:** CPE-400AC**DESCRIPTION:** piezo audio indicators**MECHANICAL CHARACTERISTICS**

item	test condition	evaluation standard
solderability	Stripped wires are immersed in rosin for 5 seconds and then immersed in solder bath of $270 \pm 5^\circ\text{C}$ for $3 \pm 1$ seconds.	90% min. of the lead terminals will be wet with solder (except the edge of the terminal).
lead wire pull strength	The pull force shall be applied to lead wire: Horizontal 3.0N for 30 seconds Vertical 2.0N for 30 seconds	No damage or cutting off.
vibration	The buzzer shall be measured after applying a vibration amplitude of 1.5 mm with 10 to 55 Hz band of vibration frequency to each of the 3 perpendicular directions for 2 hours.	The value of oscillation frequency/current consumption should be $\pm 10\%$ of the initial measurements. The SPL should be within $\pm 10\text{dB}$ compared with the initial measurement.
drop test	The part will be dropped from a height of 75 cm onto a 40 mm thick wooden board 3 times in 3 axes (X, Y, Z) for a total of 9 drops.	

**ENVIRONMENT TEST**

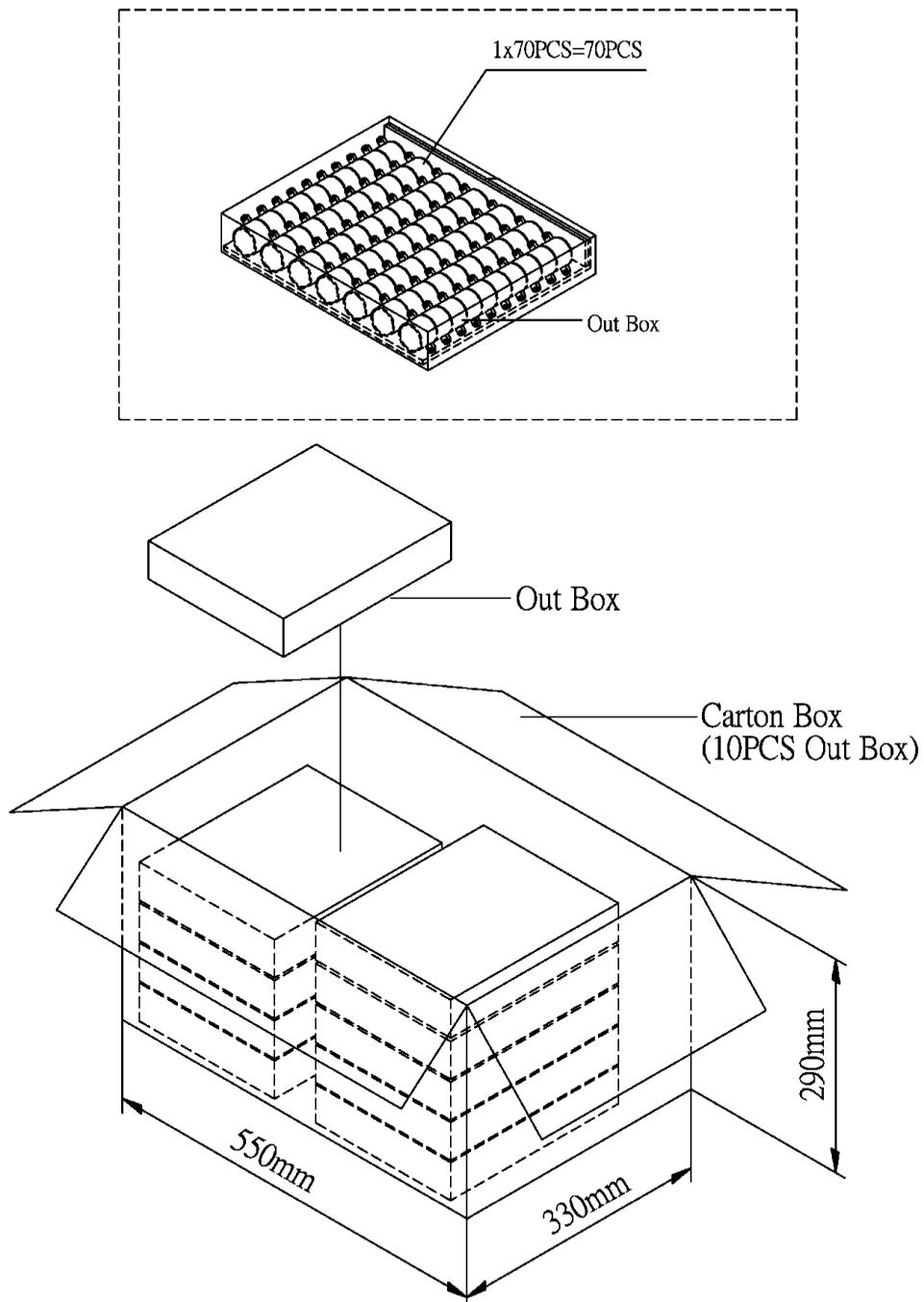
item	test condition	evaluation standard
high temp. test	After being placed in a chamber at $+95^\circ\text{C}$ for 240 hours.	
low temp. test	After being placed in a chamber at $-40^\circ\text{C}$ for 240 hours.	
humidity test	After being placed in a chamber at $+40^\circ\text{C}$ and $90 \pm 5\%$ relative humidity for 240 hours.	
temp. cycle test	The part shall be subjected to 5 cycles. One cycle will consist of:   <p>The graph illustrates a temperature cycle test. It shows a 5-hour cycle consisting of three segments: a ramp up from <math>-40^\circ\text{C}</math> to <math>+25^\circ\text{C}</math> (0.5hr), a dwell at <math>+25^\circ\text{C}</math> (0.25hr), a ramp up to <math>+95^\circ\text{C}</math> (0.5hr), a dwell at <math>+95^\circ\text{C}</math> (0.5hr), a ramp down to <math>+25^\circ\text{C}</math> (0.5hr), a dwell at <math>+25^\circ\text{C}</math> (0.25hr), and a ramp down to <math>-40^\circ\text{C}</math> (0.5hr). The total cycle time is 3 hours.</p>	The buzzer will be measured after being placed at $+25^\circ\text{C}$ for 4 hours. The value of the oscillation frequency/current consumption should be $\pm 10\%$ compared to the initial measurements. The SPL should be within $\pm 10\text{dB}$ compared to the initial measurements.

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date 11/12/2007**PART NUMBER:** CPE-400AC**DESCRIPTION:** piezo audio indicators**RELIABILITY TEST**

item	test condition	evaluation standard
operating (life test)	1. Continuous life test: The part will be subjected to 48 hours of continuous operation at +70°C with rated voltage applied.  2. Intermittent life test: A duty cycle of 1 minute on, 1 minutes off, a minimum of 5,000 times at room temp (+25 ±2°C) with rated voltage applied.	The buzzer will be measured after being placed at +25°C for 4 hours. The value of the oscillation frequency/current consumption should be ±10% compared to the initial measurements. The SPL should be within ±10dB compared to the initial measurements.

**TEST CONDITIONS**

standard test condition	a) tempurature: +5 ~ +35°C	b) humidity: 45 - 85%	c) pressure: 860-1060 mbar
judgement test condition	a) tempurature: +25 ±2°C	b) humidity: 60 - 70%	c) pressure: 860-1060 mbar

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date 11/12/2007**PART NUMBER:** CPE-400AC**DESCRIPTION:** piezo audio indicators**PACKAGING**

Out Box	310mmx248mmx49mm	1x70PCS=70PCS
Carton Box	550mmx330mmx290mm	70PCSx10=700PCS