

## Excellent Integrated System Limited

Stocking Distributor

Click to view price, real time Inventory, Delivery & Lifecycle Information:

[CUI Inc.](#)  
[CPE-351](#)

For any questions, you can email us directly:  
[sales@integrated-circuit.com](mailto:sales@integrated-circuit.com)



**PART NUMBER:** CPE-351

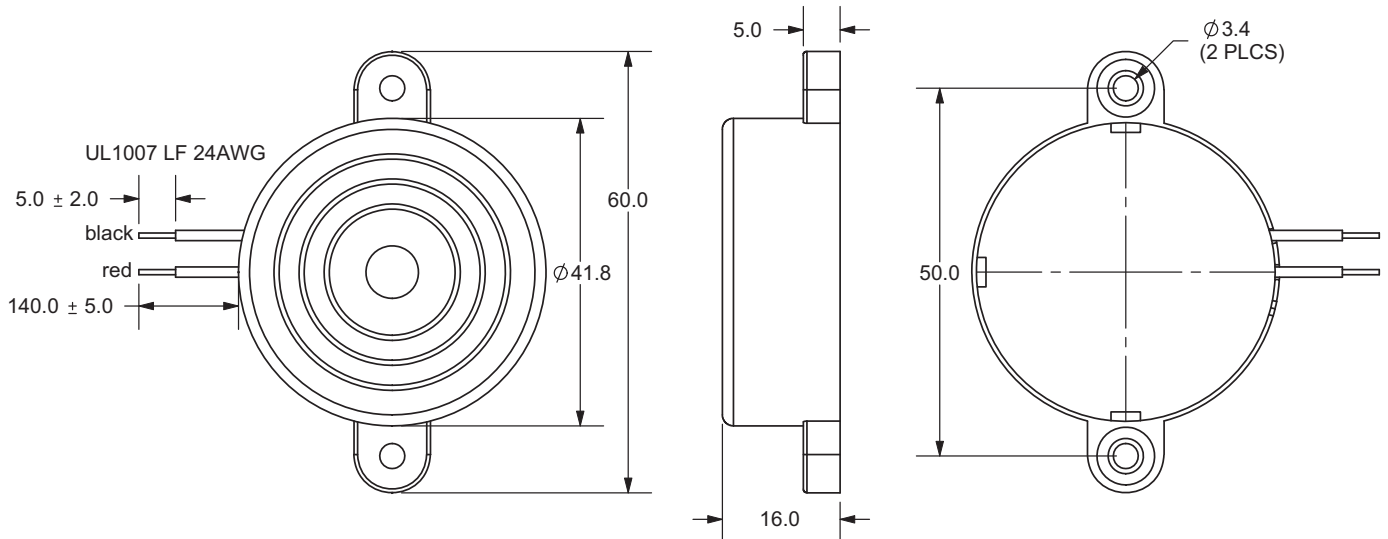
**DESCRIPTION:** piezo audio indicators

**SPECIFICATONS**

|                         |                                   |                  |
|-------------------------|-----------------------------------|------------------|
| operating frequency     | 2.8 ± 0.5 KHz                     |                  |
| operating voltage range | 3 ~ 28 V DC                       |                  |
| current consumption     | 6 mA max.                         | at 12 V DC       |
| sound pressure level    | 81 db min.                        | at 30 cm/12 V DC |
| rated voltage           | 12 V DC                           |                  |
| tone                    | fast pulse (3.5Hz±20%)            |                  |
| operating temperature   | -30 ~ +85° C                      |                  |
| storage temperature     | -40 ~ +95° C                      |                  |
| dimensions              | Ø41.8 x H16.0 mm                  |                  |
| weight                  | 14.6 g max.                       |                  |
| material                | ABS UL-94 1/16" high heat (black) |                  |
| terminal                | wire type                         |                  |
| RoHS                    | yes                               |                  |

**APPEARANCE DRAWING**

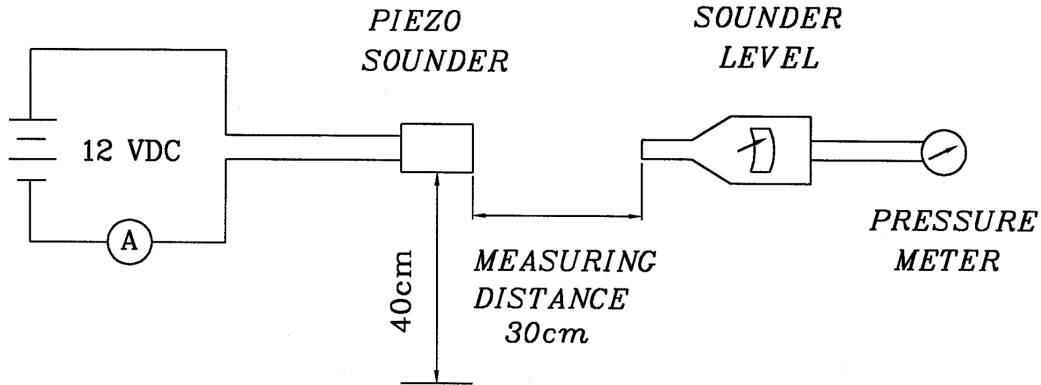
tolerance: ±0.5  
 units: mm



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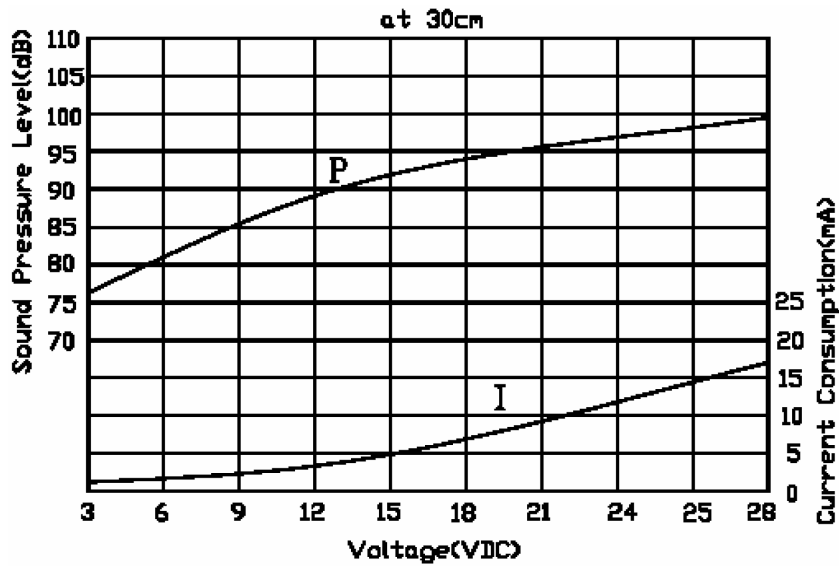
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**MEASUREMENT METHOD**



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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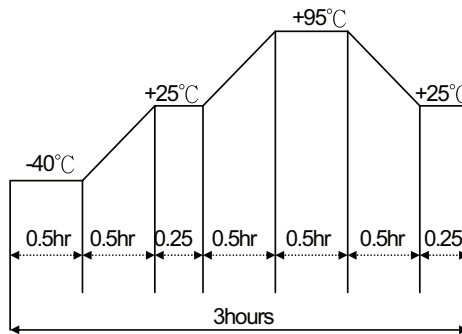
**DESCRIPTION:** piezo audio indicators

**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 ±5°C for 3 ±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:<br>Horizontal 3.0N for 30 seconds<br>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 ±10% of the initial measurements. The SPL should be within ±10dB 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°C for 240 hours.                             | 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. |
| low temp. test   | After being placed in a chamber at -40°C for 240 hours.                             |   |
| humidity test    | After being placed in a chamber at +40°C and 90±5% relative humidity for 240 hours. |   |
| temp. cycle test | The part shall be subjected to 5 cycles. One cycle will consist of:                 |   |



For more information, please visit the [product page](#).



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 date 11/12/2007

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**RELIABILITY TEST**

| item                  | test condition  | evaluation standard   |
|-----------------------|---|---|
| operating (life test) | 1. Continuous life test:<br>The part will be subjected to 48 hours of continuous operation at +70°C with rated voltage applied.<br><br>2. Intermittent life test:<br>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. |

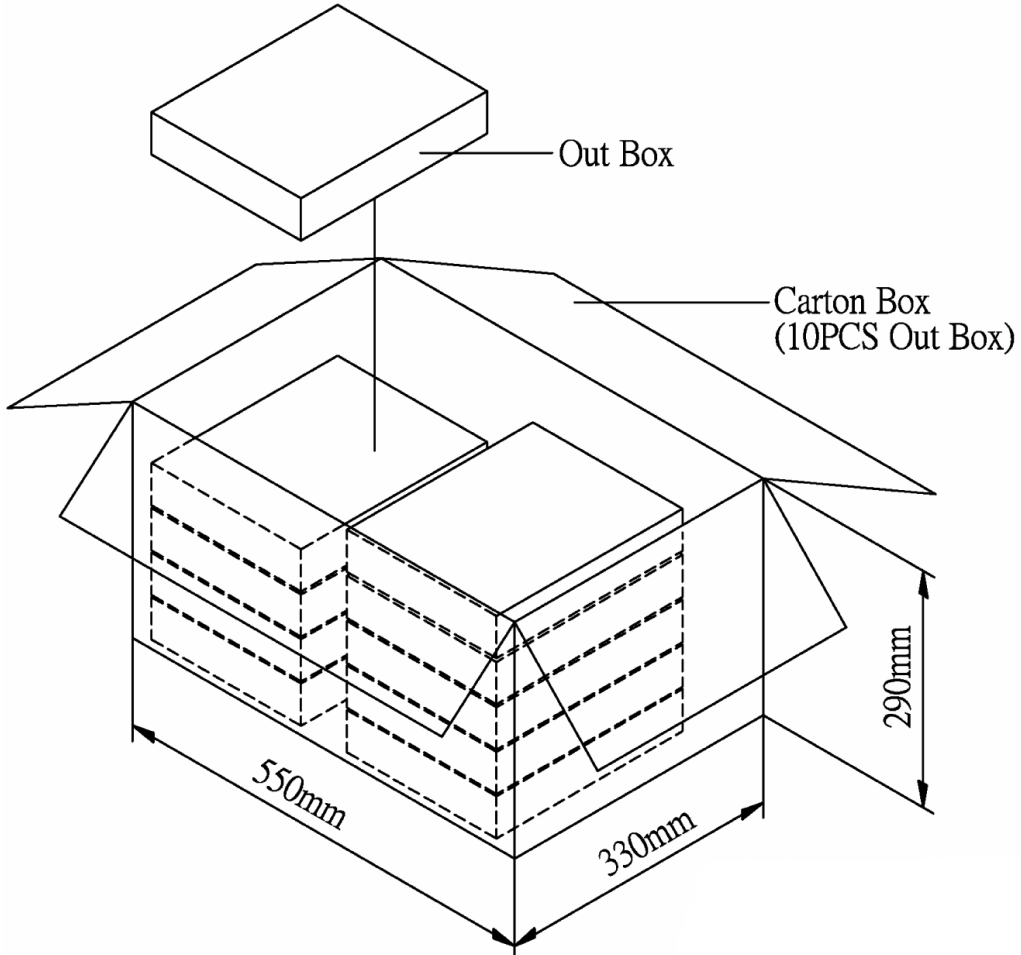
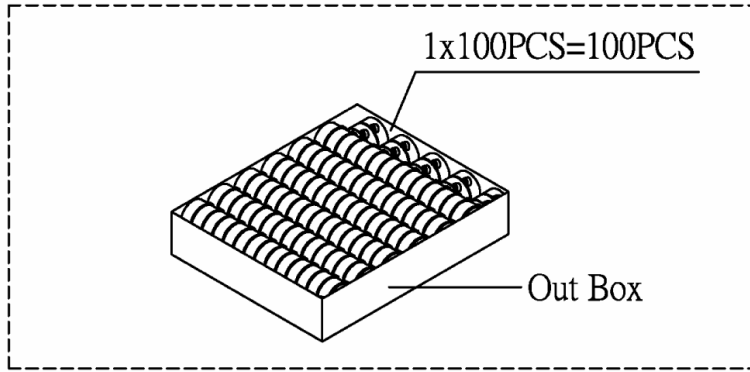
**TEST CONDITIONS**

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

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**PACKAGING**



|            |                   |                    |
|------------|-------------------|--------------------|
| Out Box    | 310mmx248mmx49mm  | 1x100PCS=100PCS    |
| Carton Box | 550mmx330mmx290mm | 100PCSx10=1,000PCS |