



Part No: CEM-1212C

Description: magnetic buzzer

Date: 9/08/2006

Unit: mm

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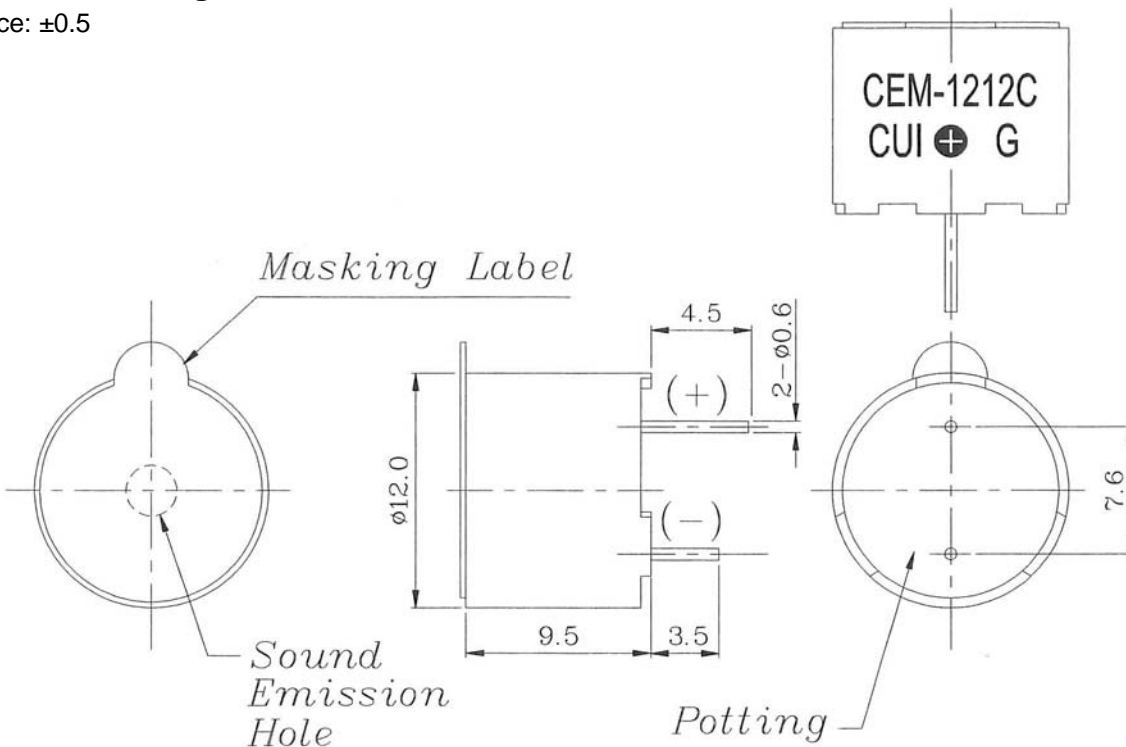


### Specifications

|                       |  |
|-----------------------|--|
| Rated voltage         | 12.0 V dc  |
| Operating voltage     | 8.0 ~ 16.0 V dc                                      |
| Current consumption   | 35 mA max.   |
| Sound pressure level  | 85 db min. (94 db typ.) at 10 cm (A-weight free air) |
| Resonant frequency    | 2300 Hz ± 300  |
| Operating temperature | -20 ~ +60° C   |
| Storage temperature   | -30 ~ +70° C   |
| Dimensions            | ø12 x H9.5 mm  |
| Weight                | 1.6 g  |
| Material              | PPO (Black)  |
| Terminal              | Pin type (Au Plating)                                |
| RoHS                  | yes  |

### Appearance Drawing

Tolerance: ±0.5





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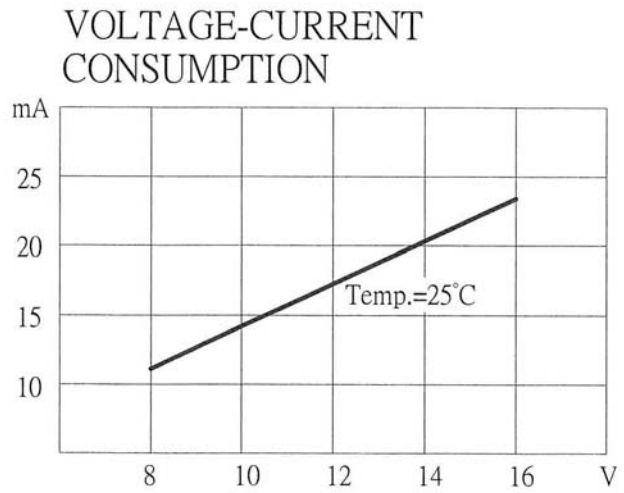
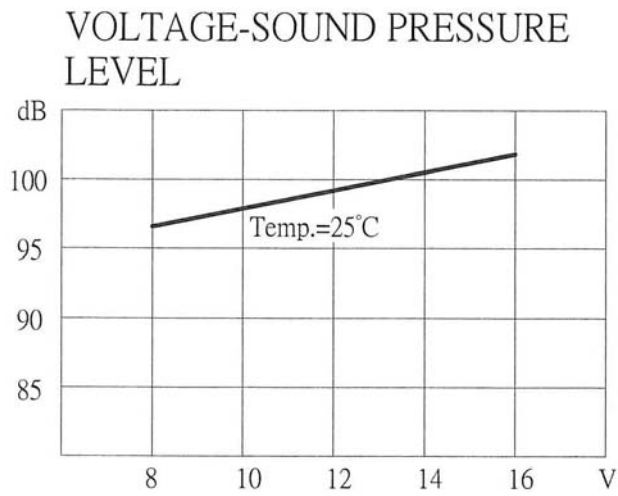
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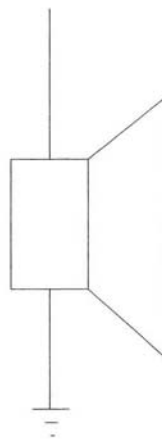
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**Voltage: Sound Pressure Level / Voltage: Current Consumption**



**Measurement Method**

+V DC





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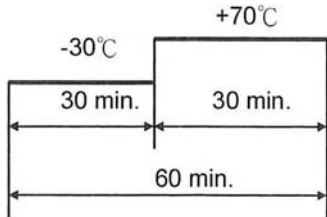
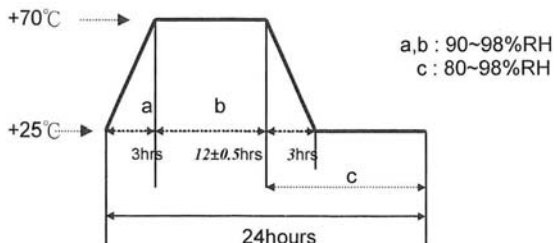
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### Mechanical Characteristics

| Item                         | Test Condition  | Evaluation Standard   |
|------------------------------|---|---|
| Solderability <sup>1</sup>   | Lead terminals 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.)  |
| Soldering Heat Resistance    | Lead terminals are immersed solder bath of 260 ±5°C for 3 ±1 seconds.   | No interference in operation.   |
| Terminal Mechanical Strength | For 10 seconds, the force of 9.8N (1.0kg) is applied to each terminal in axial direction.   | No damage or cutting off.   |
| Vibration                    | The buzzer should be measured after applying a vibration amplitude of 1.5mm with 10 to 55 Hz band of vibration frequency to each of the 3 perpendicular directions for 2 hours. | After the test, the part should meet specifications without any damage in appearance or performance. The SPL should be within ±10 dBA when compared to the initial measurement. |
| Drop Test                    | The part should 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.   |   |

Notes: 1. Not recommended for wave soldering

### Environment Test

| Item                      | Test Condition   | Evaluation Standard   |
|---------------------------|--|---|
| High temp. test           | After being placed in a chamber at +70°C for 96 hours.   | After the test, the part should meet specifications without any damage in appearance or performance. The SPL should be within ±10 dBA when compared to the initial measurement. |
| Low temp. test            | After being placed in a chamber at -30°C for 96 hours.   |   |
| Thermal Shock             | The part should be subjected to 10 cycles. One cycle will consist of:<br>                 |   |
| Temp./Humidity cycle test | The part shall be subjected to 10 cycles. One cycle will be 24 hours and consist of:<br> |   |



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**Reliability Tests**

| <b>Item</b>           | <b>Test Condition</b>   | <b>Evaluation Standard</b>  |
|-----------------------|---|---|
| Operating (Life Test) | 1. Continuous life test:<br>The part will be subjected to 72 hours at 45°C with 12 V dc applied.<br><br>2. Intermittent life test:<br>A duty cycle of 1 minute on, 1 minute off, a minimum of 10,000 times at room temp. (+25±10°C) with 12 V dc applied. | After the test, the part should meet specifications without any damage in appearance or performance. After 4 hours at +25°C, the SPL should be within ±10 dBA when compared to the initial measurement. |

**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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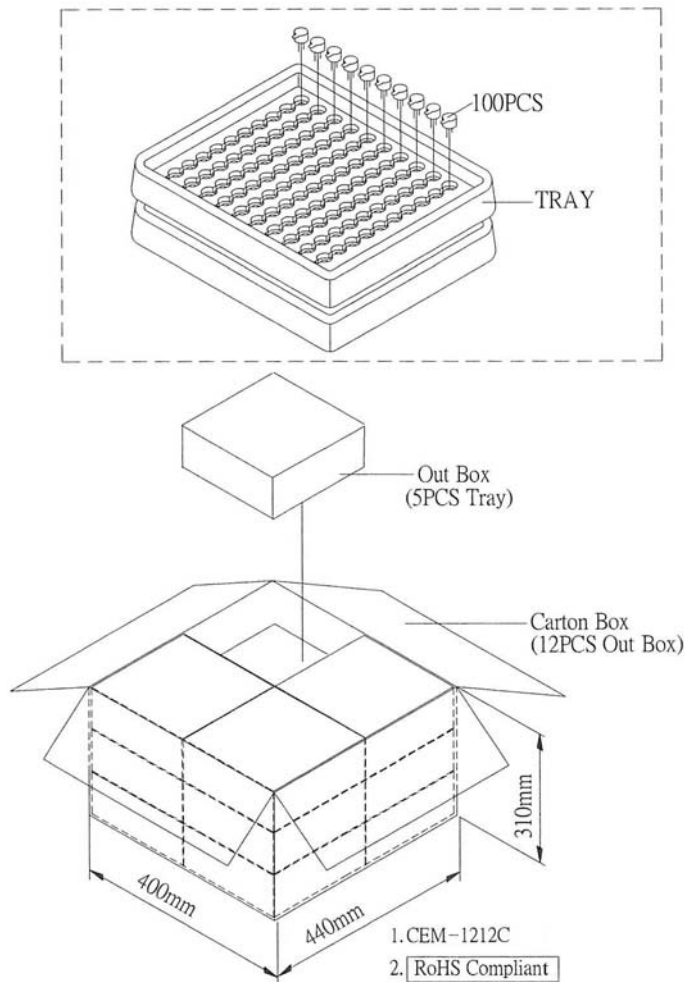
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**Packaging**



|            |                   |                      |
|------------|-------------------|----------------------|
| Tray       | 184mmx184mmx23mm  | 1x100PCS=100PCS      |
| Out Box    | 200mmx190mmx100mm | 5LAYERx100PCS=500PCS |
| Carton Box | 440mmx400mmx310mm | 500PCSx12=6,000PCS   |