


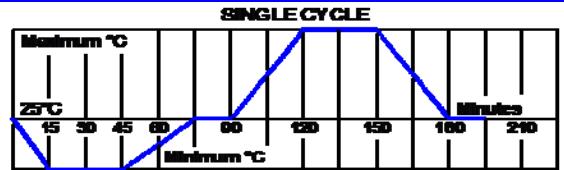


# PRODUCT INFORMATION

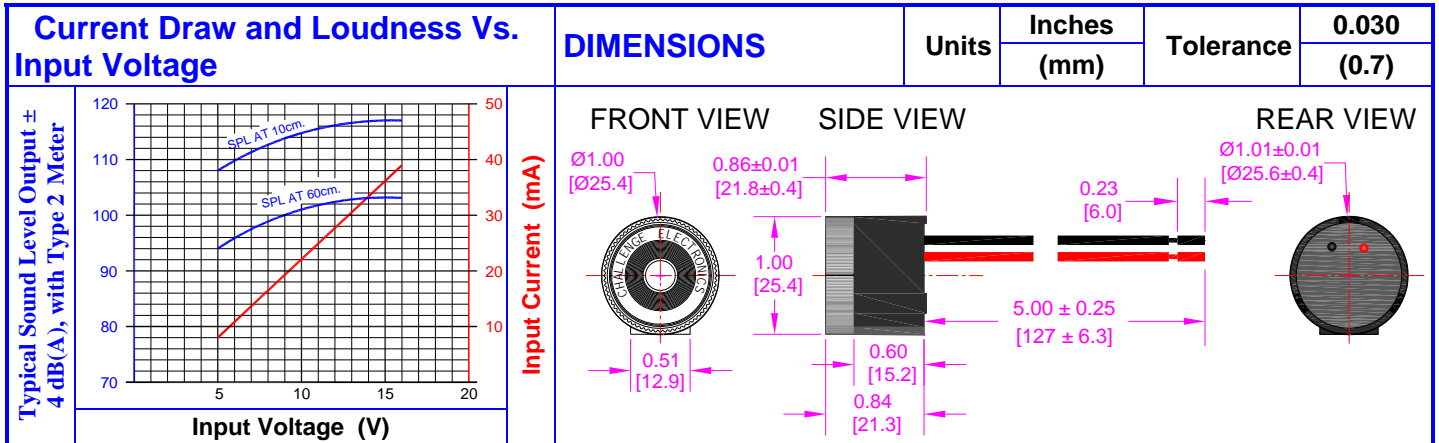
Part #: **CE-C80WIR**

Revision: 9-2015

## Extra Loud Miniature Piezoelectric Alarm

| DESCRIPTION  |  | FEATURES  |                            |  |                        |               |
|--|--|---|----------------------------|--|------------------------|---------------|
| <b>Challenge Electronics CONTINUOUS Tone; EXTRA Loud; 5 to 16 Vdc;</b> with a relatively low sound frequency of <b>2,900 Hz.</b> ; <b>M</b> style <b>Gray</b> case; <b>25.1 mm</b> Diameter, <b>22.2 mm</b> High; Sound Pressure Level of <b>102 dB(A)</b> at 12 Vdc and 61 cm; <b>Wire leads</b> color coded, 18 AWG, <b>5.0"</b> long termination; with <b>I</b> Diaphragm Corrosion and <b>R</b> False-Sounds prevention; <b>RoHS</b> Compliant; <b>Miniature Piezoelectric Alarm</b> |  | <ul style="list-style-type: none"> <li>◆ <b>Reliable Solid State Piezoelectric Technology</b></li> <li>◆ <b>Corrosion resistant Stainless Steel Diaphragm</b></li> <li>◆ <b>Flame Retardant Plastic</b></li> <li>◆ <b>Extended Storage Temperature</b></li> <li>◆ <b>Hermetically Sealed Alarm</b></li> <li>◆ <b>Water Proof, NEMA 3R, 4X, or 12</b></li> <li>◆ <b>RoHS, Lead Free Compliance</b></li> <li>◆ <b>ISO 9001:2008; ISO-TS 16949:2009 Certified</b></li> </ul> |                            |  |                        |               |
| <b>SPECIFICATIONS</b>  |  |    |                            |  |                        |               |
| <b>Operating Mode</b>  | Extra Loud, Continuous Tone  |   | <b>Pulse Rate</b>          |  |                        |               |
| <b>Operating Voltage</b>   | 5 to 16 Vdc  | <b>Nominal Operating Voltage</b>  | 12 Vdc                     | <b>Operating Frequency</b>   | 2,900 ± 250 Hz.        |               |
| <b>Typical Loudness</b>  | <b>At 5 Vdc</b>  | 94 ± 5 dB(A)  | <b>At 12 Vdc</b>           | 102 ± 4 dB(A)  | <b>At 16 Vdc</b>       | 103 ± 3 dB(A) |
|  | SPL is measured at 24 inches (61 cm), 25°C, Sound Level meter # 2240, Type 2, Fast Response, A-Weighted  |   |                            |  |                        |               |
| <b>Typical Operating Current</b>   | 8 mA at 5 Vdc  |   | 30 mA at 12 Vdc            |  | 40 mA at 16 Vdc        |               |
| <b>Operating Temperature</b>   | -30°C to +65°C   |   | <b>Storage Temperature</b> | -40°C to +100°C  |                        |               |
| <b>Surge Voltage</b>   | 20% over maximum Operating Voltage for less than 5 minutes   |   |                            |  |                        |               |
| <b>Polarity Protection</b>   | Protected against Reversed Voltage to the Maximum Operating Voltage  |   |                            |  |                        |               |
| <b>Galvanic Corrosion Prevention</b>   | The diaphragm electrically insulated to prevent dc current flow between the diaphragm and the negative or positive inputs causing Galvanic Corrosion   |   |                            |  |                        |               |
| <b>Falls Alarm</b>   | A 550 Ohms shunt is added in the alarm to prevent falls sound from alarm due to current leakage  |   |                            |  |                        |               |
| <b>Materials</b>   | <b>Alarm Case</b>  | Plastic, "M" style Case, NORYL™, PX9406 or equal, flame retardant UL 94-V0, Gray  |                            |  |                        |               |
|  | <b>Diaphragm</b>   | Stainless Steel 304   | <b>Sound Port</b>          | Single opening Top Side  |                        |               |
|  | <b>Encapsulation</b>   | Silicon Potting covering SMD components topped with 2 parts epoxy potting, Black  |                            |  |                        |               |
|  | <b>Termination</b>   | Two (2) Wires Leads, 18 AWG (16X30), -40°C to 125°C, GXL Automotive, Copper, XPLE insulated, SAE J1128, 5.0" (127 mm) long, Struck 0.235 (6.0 mm). Color coded: Red Positive and Black Negative   |                            |  |                        |               |
| <b>Physical Dimensions</b>   | <b>Diameter (D)</b>  | 1.00" (25.4 mm) Ø   | <b>Height (H)</b>          | <b>Height (H)</b>  | 0.86" (21.8 mm)        |               |
| <b>Approximate Weight</b>  | 13.5 grams   | <b>Removable Washing Label</b>  | No                         | <b>Compliance</b>  | RoHS, Lead Free, REACH |               |
| <b>RELIABILITY</b>   |  |   |                            |  |                        |               |
| <b>Thermal Operating Temperature Test</b>  | 96 hours continuous operation at <b>Rated Power</b> , at <b>Maximum Rated Operating Temperature</b> *  |   |                            |  |                        |               |
|  | 96 hours continuous operation at <b>Rated Power</b> , at <b>Minimum Rated Operating Temperature</b> *  |   |                            |  |                        |               |
| <b>Thermal Storage Temperature Test</b>  | 96 hours storage at <b>Maximum Rated Storage Temperatures</b> *  |   |                            |  |                        |               |
|  | 96 hours storage at <b>Minimum Rated Storage Temperatures</b> *  |   |                            |  |                        |               |
| <b>Thermal Shock Test</b>  | 5 cycles of <b>Minimum and Maximum Operating Temperature</b><br>Each cycle shall be set per diagram below and is 3 hours long *  |   |                            |  |                        |               |
| <b>Humidity Test</b>   | 120 Hours at +60°C±2°C, 90-95% RH *  |   |                            |  |                        |               |
| <b>Salt Spray</b>  | Withstand exposure to salt spray per ASTM B117 for a period of 300 hours *   |   |                            |  |                        |               |
| <b>Water &amp; Dust Exposure</b>   | Withstands water submergence and dust exposure per IP-68 *   |   |                            |  |                        |               |
| <b>Vibration Test</b>  | 2 Hours at 1.5 mm with 10 to 55 Hz. of vibration frequency to each of 3 perpendicular direction *  |   |                            |  |                        |               |
| <b>Drop Test</b>   | Dropped naturally from 1 meter height onto the surface of 10mm wooden board, 2 directions upper and side of the part are applied *   |   |                            |  |                        |               |
| <b>Termination Strength</b>  | Maximum of 15 pounds (6.8 Kg) load pull test   |   |                            |  |                        |               |
| <b>* Reliability Test Performance</b>  | Parts should conform to original performance within ±3dB, after 3 hours of recovery and dry period   |   |                            |  |                        |               |
| <b>Life Test</b>   | <b>Intermittent</b>  | 1,000 hours, of a 1 minute on 4 minutes off cycle at room temperature and <b>maximum Operating Voltage</b>  |                            |  |                        |               |
|  | <b>Continuous</b>  | 250 hours continuous operation at <b>maximum Operating Voltage</b> and maximum Operating Temperatures   |                            |  |                        |               |
| <b>Warranty</b>  | For a period of <b>two (2) years</b> from date of shipping under normal operations conditions<br>This warranty does not apply to products damaged through misuse, abuse, improper installation, alteration, rework, or attempt to repair |   |                            |  |                        |               |

The information contained herein is believed to be correct, but no guarantee or warranty, express or implied, with respect to accuracy, completeness or results is extended and no liability is assumed. Challenge Electronics reserves the right to make changes in any specification, data or material contained herein.



| ALARM MARKING |   |  |
|---------------|---|--|
| On Case side: | <b>Part Number</b><br><b>Sound Type</b><br><b>Operating Voltage Range / Date Code</b><br><b>Made in China</b> | <b>Note:</b><br>Date Code consists of 2 Digits for year number and 2 Digits for week of production, Last Digit for day of the week |

**SUBSTANCE OF VERY HIGH CONCERN (REACH) and RoHS LEAD FREE COMPLIANCE**

This product does NOT contain any of the REACH Substances of Very High Concern (SVHC), and is in compliance with European Union REACH Regulation No.1907/2006 regarding chemical substances which must be registered or disclosed.

|                                  |             |                  |  |             |               |
|----------------------------------|-------------|------------------|--|-------------|---------------|
| Cadmium (Cd) / Cadmium Compounds | ≤ 100 ppm   | In compliance    | Poly Brominated Biphenyls (PBB)        | ≤ 1,000 ppm | In compliance |
| Lead (Pb) / Lead Compounds       | ≤ 1,000 ppm | ≤ 10,000 ppm (*) | Poly Brominated Diphenyl Ethers (PBDE) | ≤ 1,000 ppm | In compliance |
| Mercury (Hg) / Mercury Compounds | ≤ 1,000 ppm | In compliance    | Arsenic (As)                           | ≤ 1,000 ppm | In compliance |
| Hexavalent-Chromium (Cr6+)       | ≤ 1,000 ppm | In compliance    |  |             |               |

(\*) European Union Directive 2011/65/EU (RoHS Directive) of the European Parliament. And of the Council of 8 June 2011 and all subsequent amendments, The ANNEX III of the Directive Applications exempted from the restriction in Article 4(1): 7(c)-I, Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. Piezoelectric devices, or in a glass or ceramic matrix compound Piezoelectric is also known as Lead Zirconate Titanate (PZT) ceramics. Piezoelectric Ceramic disc, (PZT), lead as high covalent compound in the ceramic matrix to achieve good ferroelectric properties in a wide temperature range. The best-known performances can be reached with PZT ceramics, which are a mixture of PbTiO3 and PbZrO3. The lead content, homogeneous material compound is between 58% and 68% by weight depending on the proportion of zirconium (Zr) and titanium (Ti).

| PACKAGING   |                        | Shipping Box MARKING               | TRAY  |  |
|---|------------------------|------------------------------------|-------|--|
| <p>MODEL: CE-C80W<br/>QTY: 500<br/>N.W:<br/>G.W:<br/>SIZE: 39 X 29 X 30<br/>LOT NO: XXXXX</p> | Part Number            | Dimensions                         | L     |  |
|   | Other PN (if required) |                                    | W     |  |
|   | Lot and/or Date Code   |                                    | H     |  |
|   | Quantity               | Individually packed in Plastic Bag |       |  |
| PO Number   | SHIPPING BOX           |                                    |       |  |
| Net Weight  | Dimensions             | L                                  | 35 cm |  |
| Gross Weight  |                        | W                                  | 35 cm |  |
| Box Number of Boxes   |                        | H                                  | 18 cm |  |
| Made in China   |                        |                                    |       |  |
|   | Quantity               | 500                                |       |  |
|   | Approximate Weight     | 9 Kg.                              |       |  |

| Revision | Description   | By        | Date      |
|----------|---|-----------|-----------|
| 6-2013   | Updated Specifications Format   | Ely Zofan | 4/10/2013 |
| 7-2013   | Added parameters at Nominal Voltage   | Ely Zofan | 6/4/2013  |
| 8-2014   | Modified the SPL Specification Format   | Ely Zofan | 3/19/2014 |
| 9-2015   | Added SubstanceE of Very High Concern & RoHS Compliance, and Extended the warranty period | Ely Zofan | 1/13/2015 |
|          |   |           |           |
|          |   |           |           |