

# Piezo Ceramics DC-AC Inverter Specification

[RoHS Compliant]



*Note: Actual product image may be different.*

|              |   |
|--------------|---|
| Model        | FC02-12-03  |
| Part No.     | D008888136  |
| Description  | 2 lamps with wide range dimming control<br>Independent open lamp protection |
| Customer     |   |
| Hardware Rev | 1.0   |
| Document Rev | 1.1   |

| Approved by | Verified by | Prepared by |
|-------------|-------------|-------------|
| Eddie       | Bart        | Queenie     |

ZIPPY inverters are distributed by:

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Your flatpanel partner

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 **US E304655**

## Revision Record

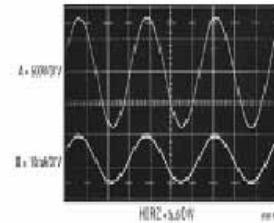
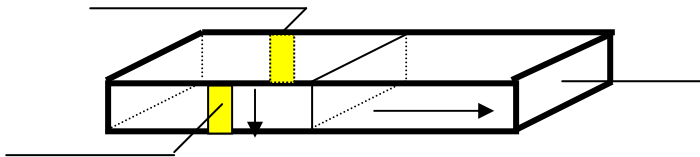
| Request Document No. | Date       | Page | Item | Description                             | Revision |
|----------------------|------------|------|------|---|----------|
| FC12272006           | 12/27/2006 | 5    | 2.2  | Change Document Rev to 1.1              | 1.1      |
|                      |            | 6    | 5.1  | Correction Environmental Characteristic |          |
|                      |            | 7    | 5.2  | Correction Production tests             |          |
|                      |            | 7    | 6.1  | Deletion Typical duty cycle             |          |
|                      |            | 7    | 7.1  | Correction Applicable safety standards  |          |
|                      |            |      |      | Correction Label Set                    |          |
|                      |            |      |      |   |          |
|                      |            |      |      |   |          |
|                      |            |      |      |   |          |

## 1. General:

Piezoelectric ceramics are used to convert electric energy to mechanical energy and vice versa. Piezoelectric transformer can generate a high voltage output by a low voltage input through the utilization of mechanical resonance and magnification phenomenon of the piezoelectric transducer.

### 1.1 Principle:

The piezoelectric transformer has primary and secondary electrodes on the piezoelectric ceramics. The primary side is polarized in the thickness direction and secondary side is polarized in the length direction. When a voltage with the resonance frequency is applied on the primary side, a strong mechanical vibration is generated by “inverse piezoelectric effect” of the ceramics, and a high voltage is output from the secondary side, matching its vibration frequency by “direct piezoelectric effect”.



### 1.2 Advantages & special features:

- No EMI (Piezo ceramics)
  - > 85% High efficiency
  - Inflammability (no liability)
  - Wide range no flicker dimming
  - One size fits all
  - Constant current mode
  - Wide operating temperature -40 to +85
  - Independent open lamp protection
  - Independent short circuit protection
  - Balanced sine wave output, no harmonic current noise
  - Balanced sine wave output, ultra low harmonic current noise
  - Short start up time, extended CCFL lifespan
  - Open lamp and short circuit protection
  - Built-in Arc Protection
  - 100% full load test
  - Compact Size, high reliability
  - Low heat generation
  - UL approval E304655
  - RoHS compliant with Piezo ceramic exemption
- \*Spec subject to models











