

## CCFL INVERTER

(For Dual Tube Applications)

### GENERAL DESCRIPTION

The AC7-12G-2137 is designed to power 2 CCFLs to a nominal current level of 6.0mA per tube, when powered with a nominal input voltage of +12VDC.

Intensity control is accomplished by the user providing a DC variable voltage level at Pin 3 of CON1.

Enable control is accomplished at Pin 4 of CON1.

All outputs are open and short circuit protected.

### MECHANICAL/ENVIRONMENTAL

Weight = 14 grams

Altitude = 10,000 ft max.

Humidity < 85% non-condensing

Size (L x W x H) = 4.35 IN x 0.80 IN x 0.350 IN

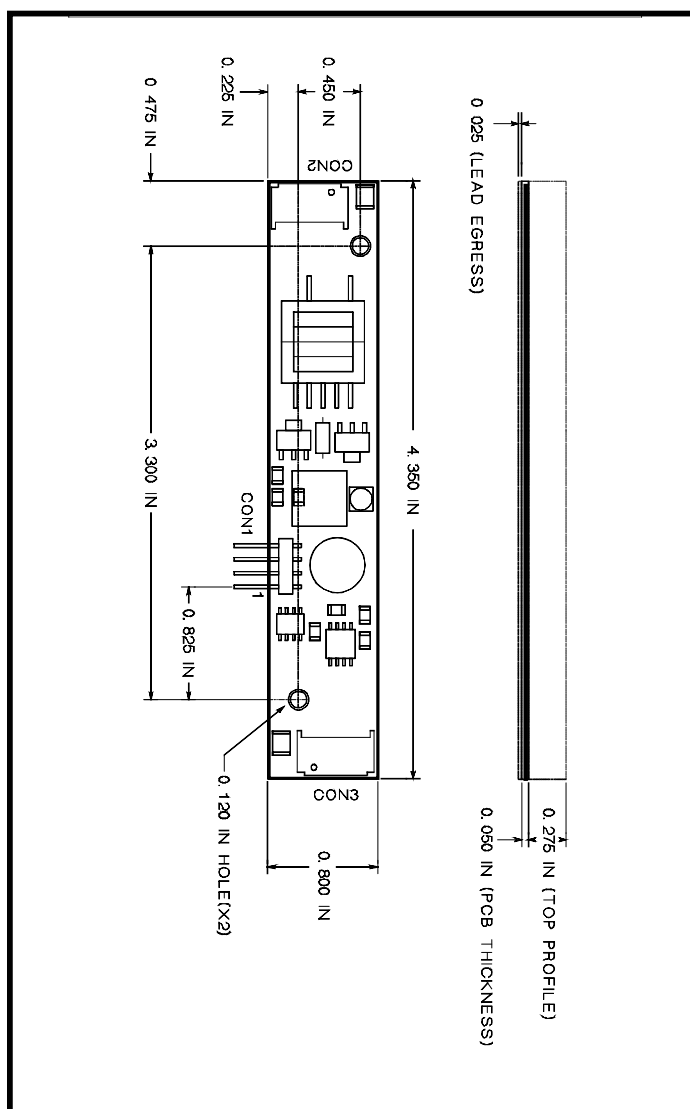
PCB thickness = 0.050 IN

Mounting Holes = 0.120 IN diameter (X2)

Input Power & Control Connector = CON1

CCFL Output Connectors = CON2 and CON3

RoHS Compliant



| INPUT CONNECTOR  |          | OUTPUT CONNECTORS           |           |
|------------------|----------|-----------------------------|-----------|
| CON1             |          | CON2, CON3                  |           |
| MOLEX 22-28-8041 |          | JST SM03(4.0)B-BHS-1-TB(LF) |           |
| PIN#             | FUNCTION | PIN#                        | FUNCTION  |
| 1                | +VIN     | 1                           | CCFL HOT  |
| 2                | GND      | 2                           | NC        |
| 3                | VCNTL    | 3                           | CCFL COLD |
| 4                | ENABLE   |                             |           |

## PRODUCT DATA SHEET

06/22/12

### MAXIMUM RATINGS\*

| Symbol | Parameter                                                 | Value        | Unit |
|--------|-----------------------------------------------------------|--------------|------|
| Vin    | Supply Voltage (Referenced to Ground)                     | -0.7 to 13.2 | Vdc  |
| Vip    | Voltage applied to any Input Pin (Referenced to Ground)   | -0.7 to 5.7  | Vdc  |
| Iop    | Current sourced or sinked from any Output Pin             | +/- 10       | mAdc |
| Pin    | Input Power (DC Input Voltage x DC Input Current)         | 5.9          | W    |
| Top    | Operating Temperature (Still air ambient around Inverter) | 0 to +70     | °C   |
| Tstg   | Storage Temperature                                       | -20 to +105  | °C   |

\*Maximum Ratings are those values beyond which damage to the inverter may occur.

### RECOMMENDED OPERATING CONDITIONS

| Symbol | Parameter                                        | Min  | Max  | Unit |
|--------|--------------------------------------------------|------|------|------|
| Vin    | Supply Voltage (Referenced to Ground)            | 10.8 | 13.2 | Vdc  |
| Lsv    | Cold Cathode Fluorescent Lamp Sustaining Voltage | 262  | 438  | Vrms |
| Vcntl  | Intensity Control                                | 0.1  | 4.92 | Vdc  |

### ELECTRICAL CHARACTERISTICS

Vin = +12.0V, Lsv = 350Vrms, Vcntl = +0.1V, Enable = +5.0V unless otherwise specified

| Symbol | Parameter                        | Test Conditions                 | Min  | Max  | Unit  |
|--------|----------------------------------|---------------------------------|------|------|-------|
| Lstart | Lamp Starting Voltage            | Open Circuit                    | 1000 |      | Vrms  |
| Lout   | Lamp Output Current              |                                 | 5.4  | 6.6  | mArms |
| Lfreq  | Lamp-Current Frequency           |                                 | 45   | 55   | KHz   |
| Pfreq  | PWM Dimming Frequency            | Vcntl (Pin 3) = +2.5V           | 95   | 101  | Hz    |
| Pdc    | PWM Duty Cycle Range             | Vcntl (Pin 3) = +4.92V to +0.1V | 0    | 100  | %     |
| ENoff  | Enable Control, unit OFF (Pin 4) |                                 |      | 0.8  | Vdc   |
| ENon   | Enable Control, unit ON (PIN 4)  |                                 | 3.0  |      | Vdc   |
| Iin    | Input Current Draw               |                                 |      | 0.45 | Adc   |
| Eff    | Electrical Efficiency            |                                 | 87   |      | %     |