

# APPLIED CONCEPTS INC.

397 Route 281 - P.O. BOX 1175  
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Phone: (315) 696-6676 Fax: (315) 696-9923  
www.acipower.com

# AC-1632

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## CCFL INVERTER (For Single Tube Applications)

11/8/06

### GENERAL DESCRIPTION

The AC-1632 is designed to power 1 CCFL from an input voltage of +12V.

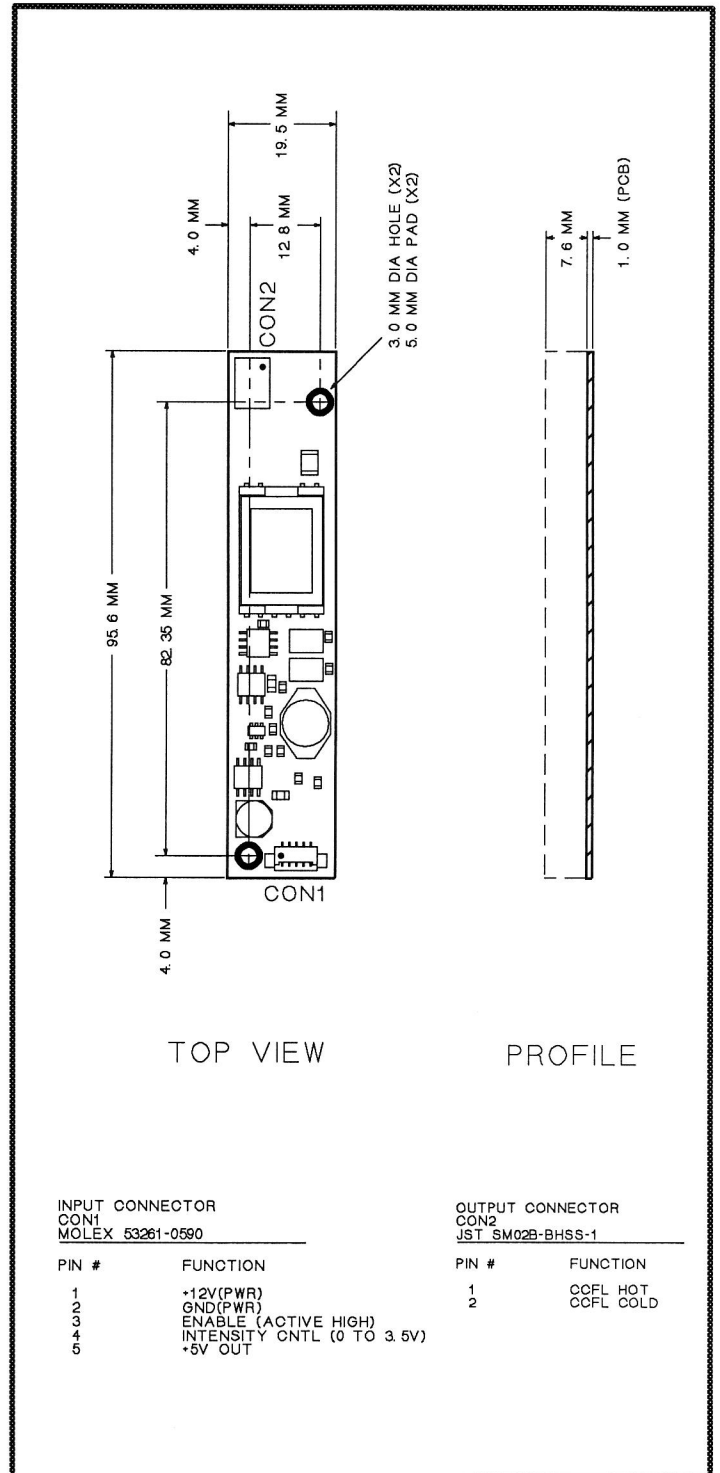
The AC-1632 features dimming control via an analog dc control level presented to pin 4 of CON1.

Enable control is accomplished @ pin 3 of CON1.

The output is open and short circuit protected.

### MECHANICAL / ENVIRONMENTAL

Weight = 14 grams  
Altitude = 10,000 Ft maximum  
Humidity < 85% non-condensing  
Size (L x W x H) = 95.6 mm x 19.5 mm x 8.6 mm  
PCB thickness = 1.0 mm  
Mounting Holes = 3.0 mm diameter (X2)  
Input Power & Control Connector = CON1  
CCFL Output Connector = CON2





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**MAXIMUM RATINGS\***

11/8/06

| Symbol | Parameter   | Value       | Unit |
|--------|---|-------------|------|
| Vin    | Supply Voltage (Referenced to Ground)                     | -0.7 to 14  | 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           | W    |
| Top    | Operating Temperature (Still air ambient around Inverter) | -30 to +85  | DegC |
| Tstg   | Storage Temperature                                       | -30 to +105 | DegC |

\* 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 | 284  | 582  | Vrms |
| Vcntl  | Intensity Control Voltage Range                  | 0    | 3.5  | Vdc  |

**ELECTRICAL CHARACTERISTICS**

Vin = +12V, Vcntl = +3.5V, Enable = +5V unless otherwise specified

| Symbol | Parameter                | Test Conditions             | Min  | Max  | Unit  |
|--------|--------------------------|-----------------------------|------|------|-------|
| Lstart | Lamp Starting Voltage    |                             | 1400 |      | Vrms  |
| Lout1  | Lamp Output Current      | @ Lsv = 485Vrms             | 6.3  | 7.7  | mArms |
| Lout2  | Lamp Output Current      | @ Lsv = 355Vrms             | 6.7  | 8.3  | mArms |
| Lfreq  | Lamp-Current Frequency   |                             | 50.4 | 61.6 | Khz   |
| Pfreq  | PWM Dimming Frequency    | Vcntl (Pin 4) = +1.75V      | 95   | 101  | Hz    |
| Pdc    | PWM Duty Cycle Range     | Vcntl (Pin 4) = 0V to +3.5V | 0    | 100  | %     |
| ENoff  | Enable Control, unit OFF | (Pin 3)                     |      | 0.5  | Vdc   |
| ENon   | Enable Control, unit ON  | (Pin 3)                     | 2.0  |      | Vdc   |
| +5Vout | +5V Reference Out        | (Pin 5) 10K load to ground  | 4.6  | 5.3  | Vdc   |
| Iin1   | Input Current Draw       | @ Lsv = 485Vrms             |      | 0.4  | Adc   |
| Iin2   | Input Current Draw       | @ Lsv = 355Vrms             |      | 0.31 | Adc   |
| Eff    | Electrical Efficiency    |                             | 80   |      | %     |