

**APPLIED
CONCEPTS INC.**

397 Route 281 - P.O. BOX 1175
Tully, New York 13159-1175
Phone: (315) 696-6676 Fax: (315) 696-9923
www.acipower.com

ACQ-R1-1465

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CCFL INVERTER
(For Dual Tube Applications)

3/28/06

GENERAL DESCRIPTION

The ACQ-R1-1465 is designed to power 2 CCFL's at a nominal current level of 6mA/tube and regulated over an input voltage range of +8V to +18V.

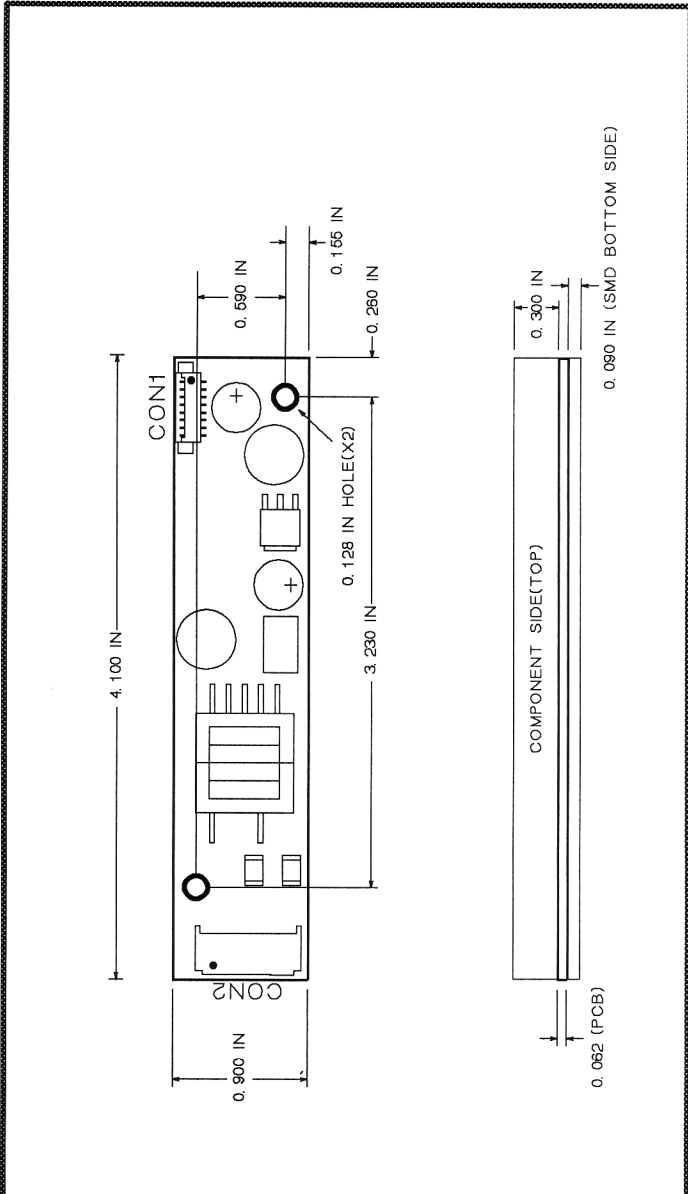
The ACQ-R1-1465 features analog dimming control via a dc control level @ pin 6 of CON1. A dc reference voltage is available @ pin 7 of CON1 for external use.

Enable control is accomplished @ pin 5 of CON1.

All outputs are open and short circuit protected.

MECHANICAL / ENVIRONMENTAL

Weight = 21.5 grams
Altitude = 10,000 Ft maximum
Humidity < 85% non-condensing
Size (L x W x H) = 4.1 IN x 0.9 IN x 0.452 IN
PCB thickness = 0.062 IN
Mounting Holes = 0.128 IN diameter (X2)
Input Power & Control Connector = CON1
CCFL Output Connector = CON2



INPUT CONNECTOR
CON1
MOLEX 53261-0890

OUTPUT CONNECTOR
CON2
JST SM04(4.0)B-BHS-1-TB

| PIN # | FUNCTION |
|-------|-----------------|
| 1 | +8 TO +18V(PWR) |
| 2 | +8 TO +18V(PWR) |
| 3 | GND(PWR) |
| 4 | GND(PWR) |
| 5 | ENABLE |
| 6 | VCNTL |
| 7 | +5V OUT |
| 8 | PWM OUT |

| PIN # | FUNCTION |
|-------|-------------|
| 1 | CCFL 1 |
| 2 | CCFL 2 |
| 3 | NC |
| 4 | CCFL COMMON |



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MAXIMUM RATINGS*

3/28/06

| Symbol | Parameter | Value | Unit |
|--------|---|-------------|------|
| Vin | Supply Voltage (Referenced to Ground) | -0.7 to 20 | Vdc |
| Vip | Voltage applied to any Input Pin (Referenced to Ground) | -0.3 to 5.3 | Vdc |
| Iop | Current sourced or sinked from any Output Pin | +/- 10 | mAdc |
| Pin | Input Power (DC Input Voltage x DC Input Current) | 10 | W |
| Top | Operating Temperature (Still air ambient around Inverter) | 0 to +70 | DegC |
| Tstg | Storage Temperature | -20 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) | 8 | 18 | Vdc |
| Lsv | Cold Cathode Fluorescent Lamp Sustaining Voltage | 450 | 700 | Vrms |
| Vcntl | Intensity Control Voltage | 0 | 5.0 | Vdc |

ELECTRICAL CHARACTERISTICS

Vin = +8V to +18V, Lsv = 575Vrms, Vcntl = +5V, Enable = +5V unless otherwise specified

| Symbol | Parameter | Test Conditions | Min | Max | Unit |
|--------|----------------------------------|--------------------------|------|------|-------|
| Lstart | Lamp Starting Voltage | | 1450 | | Vrms |
| Lout | Lamp Output Current | | 5.4 | 6.6 | mArms |
| Lfreq | Lamp-Current Frequency | | 42 | 52 | Khz |
| Pfreq | PWM Dimming Frequency | Vcntl (Pin 6) = +2.5V | 95 | 101 | Hz |
| Pdc | PWM Duty Cycle Range | Vcntl (Pin 6) = 0 to +5V | 0 | 100 | % |
| ENoff | Enable Control, unit OFF (Pin 5) | | | 0.8 | Vdc |
| ENon | Enable Control, unit ON (Pin 5) | | 2.0 | | Vdc |
| +5Vout | +5V Reference Out (Pin 7) | 10k load to ground | 4.6 | 5.25 | Vdc |
| Iin | Input Current Draw | @ 12V in | | 0.75 | Adc |
| Eff | Electrical Efficiency | | 85 | | % |