

# 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](http://www.acipower.com)

# ACJ-R1-1578

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## CCFL INVERTER (For Dual Tube Applications)

01/04/06

### GENERAL DESCRIPTION

The ACJ-R1-1578 is designed to power 2 CCFL's at a nominal current level of 5.0 mA/tube and is regulated over an input voltage range of +8V to +18V.

Intensity control is accomplish via a DC level @ pin 6 of CON1.

Enable control is accomplished @ pin 5 of CON1.

A dc reference voltage is available @ pin 7 of CON1 for external use.

A PWM output signal is available @ pin 8 of CON1 for external use.

All outputs are open and short circuit protected.

### MECHANICAL / ENVIRONMENTAL

Weight = 21.5 grams

Altitude = 10,000 Ft maximum

Humidity < 85% non-condensing

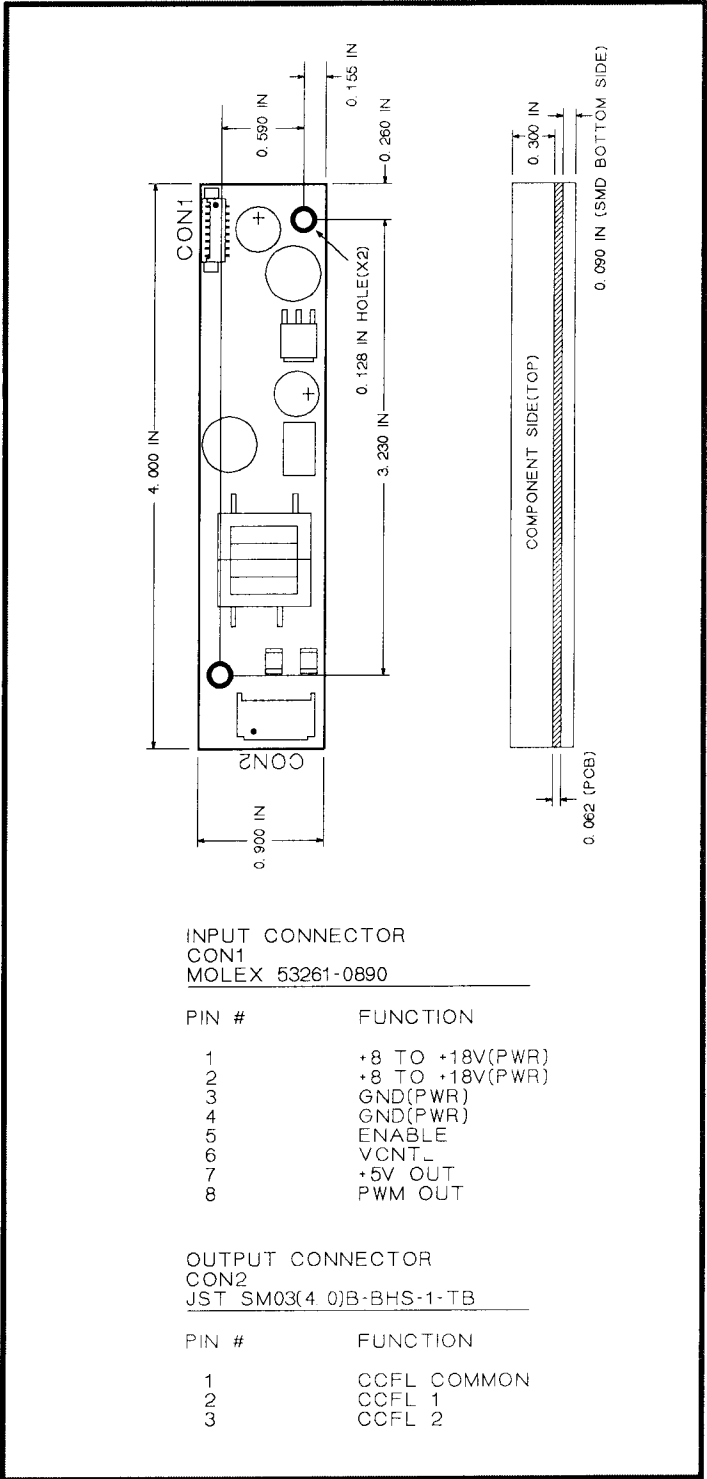
Size (L x W x H) = 4.0 IN x 0.9 IN x 0.452 IN

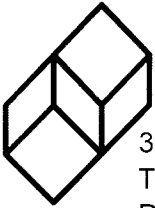
PCB thickness = 0.062 IN

Mounting Holes = 0.128 IN diameter (X2)

Input Power & Control Connector = CON1

CCFL Output Connector = CON2





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## MAXIMUM RATINGS\*

01/04/06

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)	-0.7 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)	7.2	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	300	700	Vrms
Vcntl	Intensity Control Voltage	0	5.0	Vdc

## ELECTRICAL CHARACTERISTICS

Vin = +8 to +18V, Lsv = 500Vrms, Vcntl = +5V, Enable = +5V unless otherwise specified

Symbol	Parameter	Test Conditions	Min	Max	Unit
Lstart	Lamp Starting Voltage		1400		Vrms
Lout	Lamp Output Current	PWM Duty Cycle @ 100%	4.5	5.5	mArms
Lfreq	Lamp-Current Frequency		41	51	Khz
Pfreq	PWM Dimming Frequency	Vcntl (Pin 6) = +2.5V	95	101	Hz
Pdc	PWM Duty Cycle Range	Vcntl (Pin 6) = 0V to +5V	0	100	%
ENoff	Enable Control, unit OFF	Enable (Pin 5)		0.7	Vdc
ENon	Enable Control, unit ON	Enable (Pin 5)	2.0		Vdc
+5Vout	+5V Reference Out	10k load to ground (Pin 7)	4.6	5.3	Vdc
Iin	Input Current Draw	@ 8V		0.810	Adc
Iin	Input Current Draw	@ 12V		0.540	Adc
Iin	Input Current Draw	@ 18V		0.360	Adc
Eff	Electrical Efficiency		85		%