



**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

**AC5-12-1480**

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**CCFL INVERTER**  
(For Multiple Tube Applications)

8/16/04

**GENERAL DESCRIPTION**

The AC5-12-1480 is designed to power 5 CCFL's to a nominal power level of 18 watts.

Intensity control (0-100%) is accomplished by the user providing a variable dc level of 5V(off) to 0V(full-on) at pin 5 of CON1.

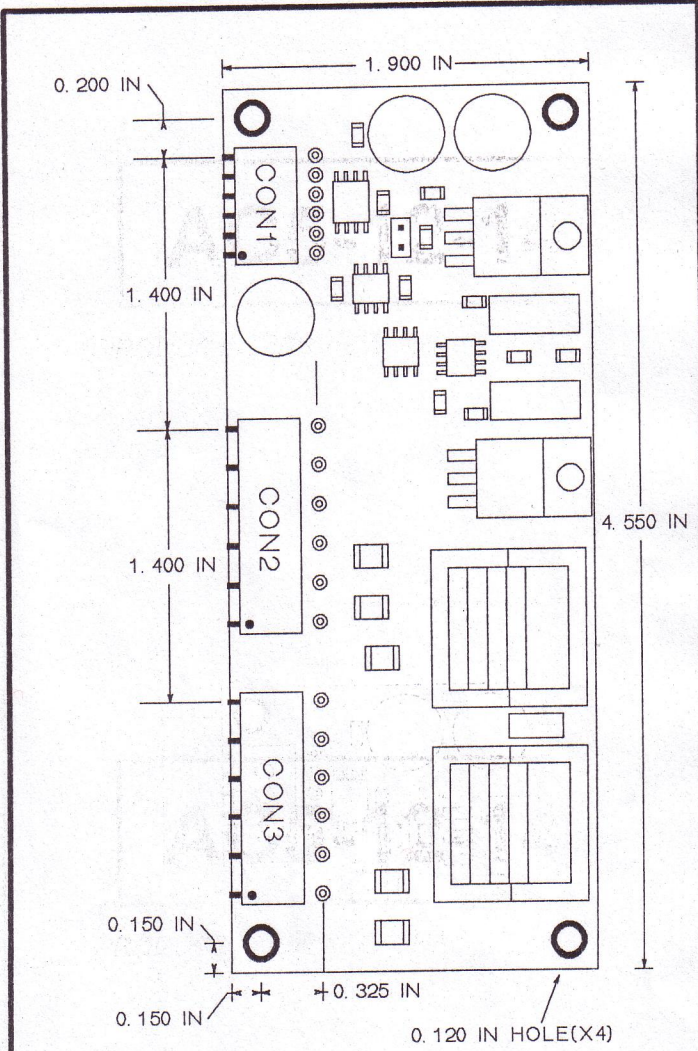
Enable control is accomplished @ pin 3 of CON1 (0V=off, 5V=on). In addition, a +5V reference voltage is available @ pin 4 of CON1 for external use.

All outputs are open and short circuit protected.

UL 1950 Recognized (File# E201813).

**MECHANICAL / ENVIRONMENTAL**

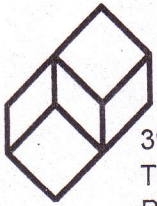
Weight = 60 grams  
Altitude = 10,000 Ft maximum  
Humidity < 85% non-condensing  
Size (L x W x H) = 4.55 IN x 1.90 IN x 0.575 IN  
PCB thickness = 0.062 IN  
Mounting Holes = 0.120 IN diameter (X4)  
Input Power & Control Connector = CON1  
CCFL Output Connectors = CON2, CON3



PROFILE = 0.575 IN

CON1 MOLEX 22-28-1063		CON2(CON3) MOLEX 22-28-1113	
PIN #		PIN #	
1	+12V	1	CCFL 1(3)
2	GND	2	NC
3	ENABLE	3	CCFL 2(4)
4	+5V OUT	4	NC
5	VCNTL	5	CCFL NC(5)
6	PWM OUT	6	NC
		7	NC
		8	NC
		9	NC
		10	NC
		11	CCFL COMMON





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**MAXIMUM RATINGS\***

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)	25	W
Top	Operating Temperature (Still air ambient around Inverter)	0 to +70	DegC
Tstg	Storage Temperature	-40 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 Flourescent Lamp Sustaining Voltage	400	700	Vrms
Vcntl	Intensity Control Voltage	0	5	Vdc

**ELECTRICAL CHARACTERISTICS**

Vin = +12V, Lsv = 550Vrms, Vcntl = 0V, ENon = +5V unless otherwise specified

Symbol	Parameter	Test Conditions	Min	Max	Unit
Lstart	Lamp Starting Voltage		1800		Vrms
Lout	Lamp Output Current		6.75	7.75	mArms
Lfreq	Lamp-Current Frequency		35	41	Khz
Pfreq	PWM Dimming Frequency	Vcntl (Pin 5) = +2.5V	95	101	Hz
Pdc	PWM Duty Cycle Range	Vcntl (Pin 5) = +5V to 0V	0	100	%
ENoff	Enable Control, unit OFF (Pin 3)		0	0.7	Vdc
ENon	Enable Control, unit ON (Pin 3)		3.5	5.0	Vdc
+5Vout	+5V Reference Out (Pin 4)	10k load to ground	4.6	5.3	Vdc
PWMlo	PWM output signal low (Pin 6)	10k load to ground	0	0.5	Vdc
PWMhi	PWM output signal high (Pin 6)	10k load to ground	4.5	5.0	Vdc
Iin	Input Current Draw			2.0	Adc
Eff	Electrical Efficiency		90		%