



**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

AC5-12-1503

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CCFL INVERTER

(For Multiple Tube Applications)

12/13/04

GENERAL DESCRIPTION

The AC5-12-1503 is designed to power 6 CCFL's to a nominal power level of 24 watts.

Intensity control is accomplished by the user providing an active-low (CMOS) signal to the up-button control (pin 4 of CON1) or the down-button control (pin 5 of CON1). The last set power level is retained for next

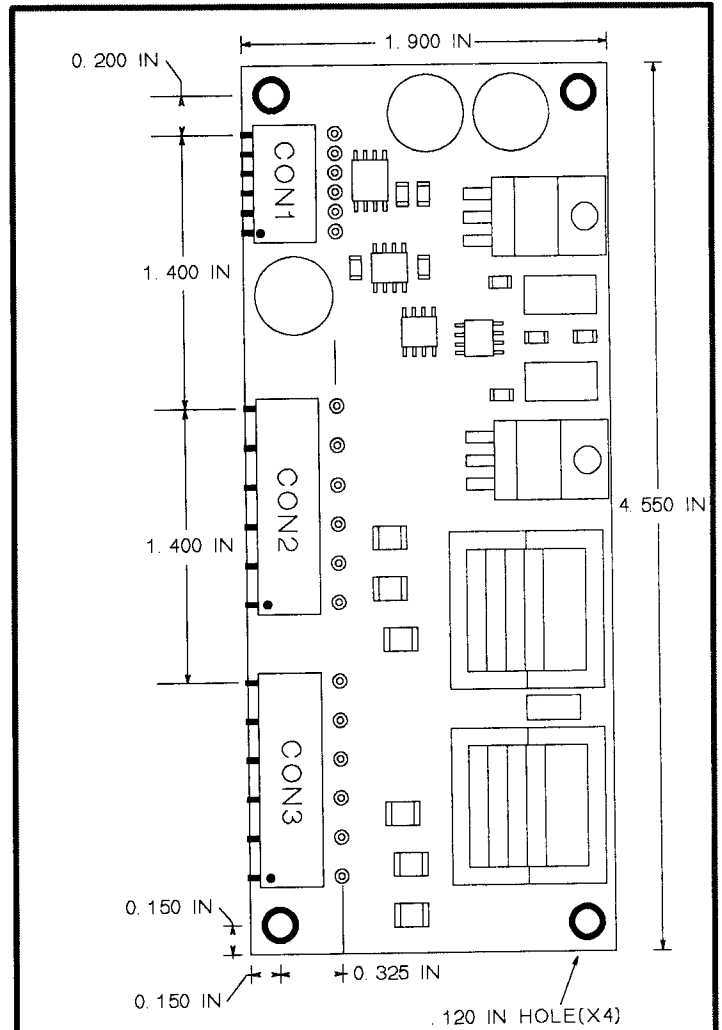
Enable control is accomplished @ pin 3 of CON1 (0V=off, 5V=on).

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

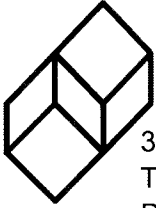


PROFILE = .560 IN

CON1
MOLEX 22-05-3061

CON2(CON3)
MOLEX 22-05-3111

PIN #		PIN #	
1	+12V	1	CCFL 3(6)
2	GND	2	NC
3	ENABLE	3	CCFL 2(5)
4	UP-BUTTON	4	NC
5	DOWN BUTTON	5	CCFL 1(4)
6	PWM OUT	6	NC
		7	NC
		8	NC
		9	NC
		10	NC
		11	CCFL COMMON



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MAXIMUM RATINGS*

12/13/04

Symbol	Parameter	Value	Unit
Vin	Supply Voltage (Referenced to Ground)	-0.7 to 13.5	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)	32.4	W
Top	Operating Temperature (Still air ambient around Inverter)	0 to +70	DegC
Tstg	Storage Temperature	-40 to +150	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	550	750	Vrms
Bstep	Brightness Control	0	255	Steps

ELECTRICAL CHARACTERISTICS

Vin = +12V, Lsv = 650Vrms, Bstep = 255 steps, Enable = +5V unless otherwise specified

Symbol	Parameter	Test Conditions	Min	Max	Unit
Lstart	Lamp Starting Voltage		1800		Vrms
Lout	Lamp Output Current		5.5	6.5	mArms
Lfreq	Lamp-Current Frequency		33	41	Khz
Pfreq	PWM Dimming Frequency	Bstep = 128 steps	95	101	Hz
Pdc	PWM Duty Cycle Range	Bstep = 0 to 255 steps	0	100	%
ENoff	Enable Control, unit OFF (Pin 3)			0.8	Vdc
ENon	Enable Control, unit ON (Pin 3)		2.0		Vdc
UP	Up Button Brightness Control			0.8	Vdc
DOWN	Down Button Brightness Control			0.8	Vdc
PWMlo	PWM output signal low (Pin 6)	10k load to ground	0	0.5	
PWMhi	PWM output signal high (Pin 6)	10k load to ground	4.5	5.0	
Iin	Input Current Draw			2.4	Adc
Eff	Electrical Efficiency		90		%