

**APPLIED
CONCEPTS INC.**

397 Route 281 - P.O. BOX 1175
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AC-1510B

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CCFL INVERTER
(For Multiple Tube Applications)

02/06/09

GENERAL DESCRIPTION

The AC-1510B is designed to power 6 CCFL's to a nominal power level of 31 watts from an input voltage of +12V.

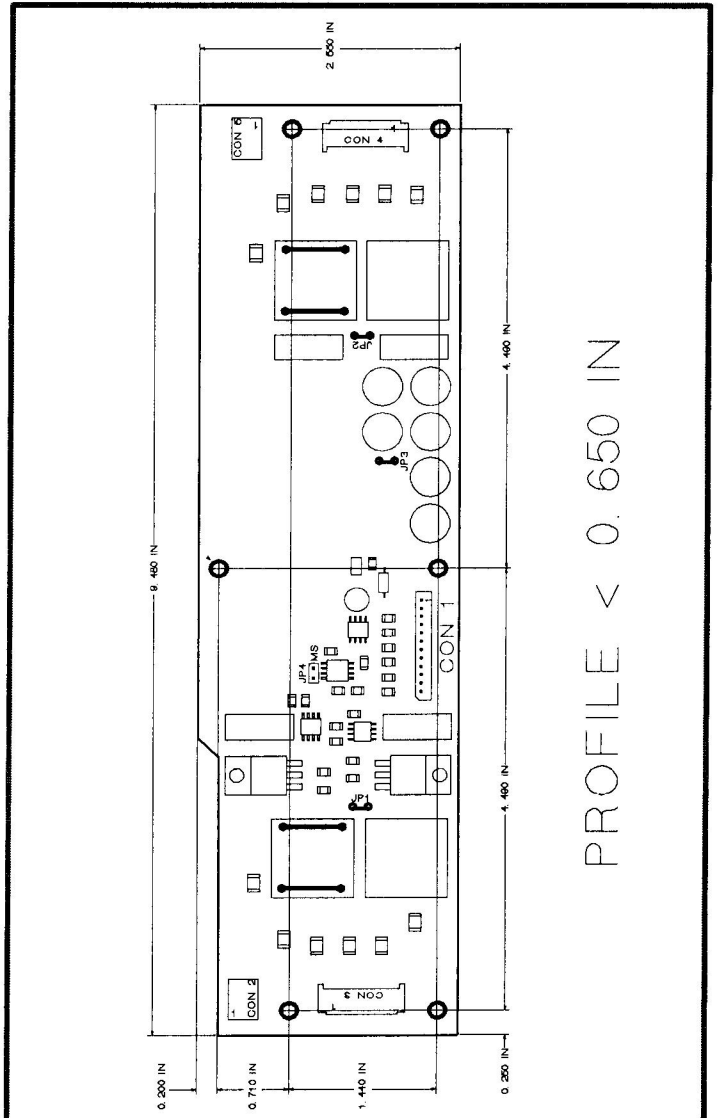
Intensity control is accomplished by the user providing a variable dc level of 0V(100% on) to 3.5V(.4% on) at pin 7 of CON1. A DC reference voltage (+5V) is available @pin 6 of CON1 for external use.

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

All outputs are open and short circuit protected.

MECHANICAL / ENVIRONMENTAL

- Weight = 120 grams
- Altitude = 10,000 Ft maximum
- Humidity < 85% non-condensing
- Size (L x W x H) = 9.48 IN x 2.55 IN x 0.650 IN
- PCB thickness = 0.062 IN
- Mounting Holes = 0.120 IN diameter (X6)
- Input Power & Control Connector = CON1
- CCFL Output Connectors = CON2, CON3, CON4, CON5



PROFILE < 0.650 IN

INPUT CONNECTOR
CON1
MOLEX 22-03-5125

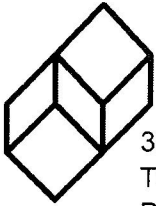
OUTPUT CONNECTOR(S)
CON2, CON5
JST SM02B-BHSS-1-TB

PIN #	FUNCTION
1,2	+VIN
3,4	GND(POWER)
5	ENABLE
6	+5V OUT
7	VCNTL
8	GND(SIGNAL)

PIN #	FUNCTION
1	CCFL HOT
2	CCFL COLD

OUTPUT CONNECTOR(S)
CON3, CON4
JST SM04(9-E2)B-BHS-1-TB

PIN #	FUNCTION
1	CCFL HOT
2	CCFL HOT
3	NC
4	CCFL COLD
5	CCFL COLD



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MAXIMUM RATINGS*

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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)	38	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 Fluorescent Lamp Sustaining Voltage	550	950	Vrms
Vcntl	Intensity Control Voltage	0	3.5	Vdc

ELECTRICAL CHARACTERISTICS

Vin = +12V, Lsv = 760Vrms, Vcntl = +3.5V, Enable = +5V unless otherwise specified

Symbol	Parameter	Test Conditions	Min	Max	Unit
Lstart	Lamp Starting Voltage		1800		Vrms
Lout	Lamp Output Current		5.8	7.2	mArms
Lfreq	Lamp-Current Frequency		40.5	49.5	Khz
Pfreq	PWM Dimming Frequency	Vcntl (Pin 7) = +1.75V	95	101	Hz
Pdc	PWM Duty Cycle Range	Vcntl (Pin 7) = +3.5V to 0V	.4	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	10k load to ground @ (Pin 6)	4.75	5.25	Vdc
Iin	Input Current Draw			3.0	Adc
Eff	Electrical Efficiency		90		%