

**APPLIED
CONCEPTS INC.**

397 Route 281 - P.O. BOX 1175
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www.acipower.com

AC8-V2-1479

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CCFL INVERTER
(For Quad Tube Applications)

03/18/05

GENERAL DESCRIPTION

The AC8-V2-1479 is designed to power 4 CCFL's up to power level of 9.0 watts from a nominal +12V source.

Analog intensity control is accomplished by the user providing a DC level @ pin 6 of CON1.

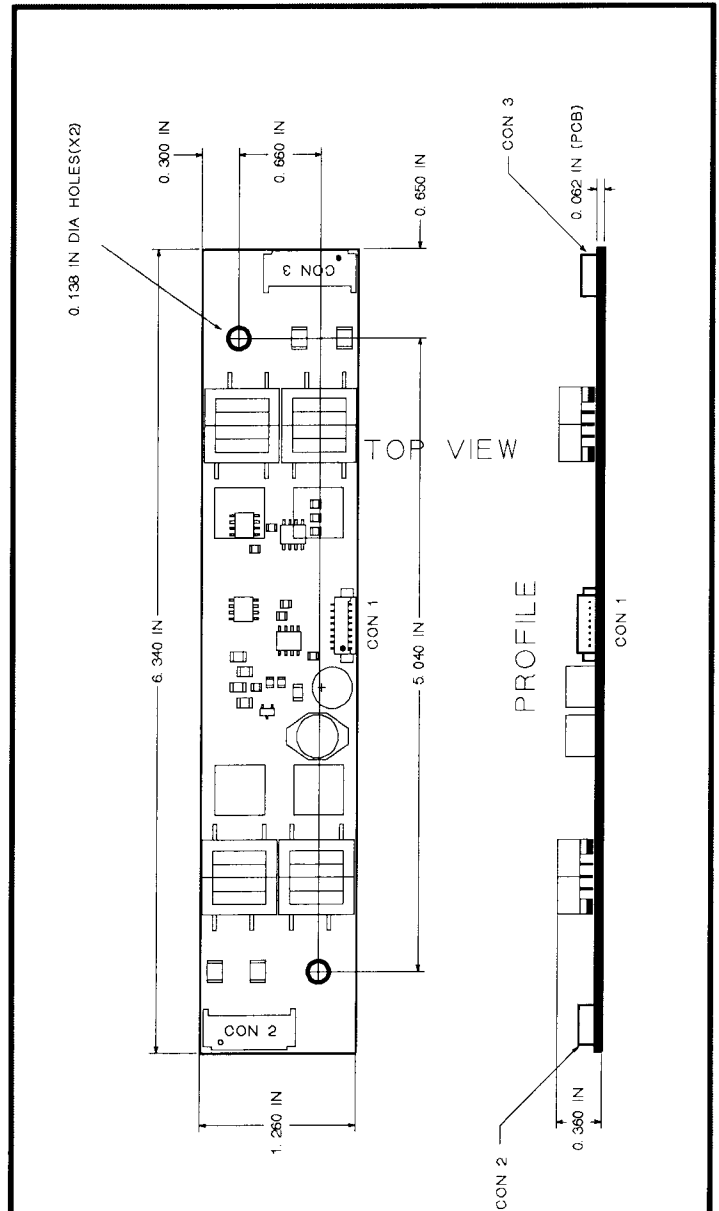
Enable control is accomplished @ pin 5 of CON1. In addition, a +5V reference voltage is available @ pin 7 of CON1 for external use.

If desired, the pwm dimming frequency of the inverter can be synchronized to the LCD frame rate via pin 8 of CON1.

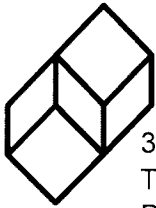
All outputs are open and short circuit protected.

MECHANICAL / ENVIRONMENTAL

Weight = 40 grams
Altitude = 10,000 Ft maximum
Humidity < 85% non-condensing
Size (L x W x H) = 6.34 IN x 1.26 IN x 0.360 IN
PCB thickness = 0.062 IN
Mounting Holes = 0.138 IN diameter (X2)
Input Power & Control Connector = CON1
CCFL Output Connector(s) = CON2, CON3



INPUT CONNECTOR CON1 MOLEX 53261-0890		OUTPUT CONNECTORS CON2, (CON3) JST SM04(4.0)B-BHS-1-TB	
PIN #	FUNCTION	PIN #	FUNCTION
1	+12V(PWR)	1	CCFL 1(3) HOT
2	+12V(PWR)	2	CCFL 2(4) HOT
3	GND(PWR)	3	NC
4	GND(PWR)	4	CCFL 1,2(3,4) COLD
5	ENABLE		
6	VCNTL		
7	+5V REF OUT		
8	VSYNC IN		



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MAXIMUM RATINGS*

03/18/05

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)	13	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)	10.8	13.2	Vdc
Lsv	Cold Cathode Fluorescent Lamp Sustaining Voltage	350	550	Vrms
VSYif	Vertical Synchronization Input Frequency	48	62	Hz
Vcntl	Intensity Control Voltage	0.5	4.5	Vdc

ELECTRICAL CHARACTERISTICS

Vin = +12V, Lsv = 450Vrms, Vcntl = +4.5V, Enable = +5V unless otherwise specified

Symbol	Parameter	Test Conditions	Min	Max	Unit
Lstart	Lamp Starting Voltage		1300		Vrms
Lout	Lamp Output Current		4.5	5.5	mArms
Lfreq	Lamp-Current Frequency		39	47	Khz
Pfreq	PWM Dimming Frequency	Vcntl (Pin 6) = +2.5V Vsync-In (Pin 8) = 0V Vsync-In (Pin 8) = 60Hz	95 119.8	101 120.2	Hz Hz
Pdc	PWM Duty Cycle Range	Vcntl (Pin 6) = 0.5 to +4.5V	0	100	%
ENoff	Enable Control, unit OFF	Enable (Pin 5)		0.8	Vdc
ENon	Enable Control, unit ON	Enable (Pin 5)	3.5		Vdc
VSYlo	Vertical Sync In LO Level	VSync (Pin 8)		0.8	Vdc
VSYhi	Vertical Sync In HI Level	VSync (Pin 8)	3.5		Vdc
+5Vout	+5V Reference Out	10k load to ground (Pin 7)	4.5	5.25	Vdc
Iin	Input Current Draw			0.95	Adc
Eff	Electrical Efficiency		90		%