

APPLIED CONCEPTS INC.

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www.acipower.com

AC8-12-1477

PRODUCT OVERVIEW SHEET - PAGE 1 OF 2

CCFL INVERTER (For Quad Tube Applications)

09/08/04

GENERAL DESCRIPTION

The AC8 series is a low cost high performance inverter solution featuring various output connector formats that are compatible with many of the popular quad-tube flatpanel displays.

This AC8 is designed to power typically 4 CCFL's up to power levels of 20 watts from a nominal +12V source.

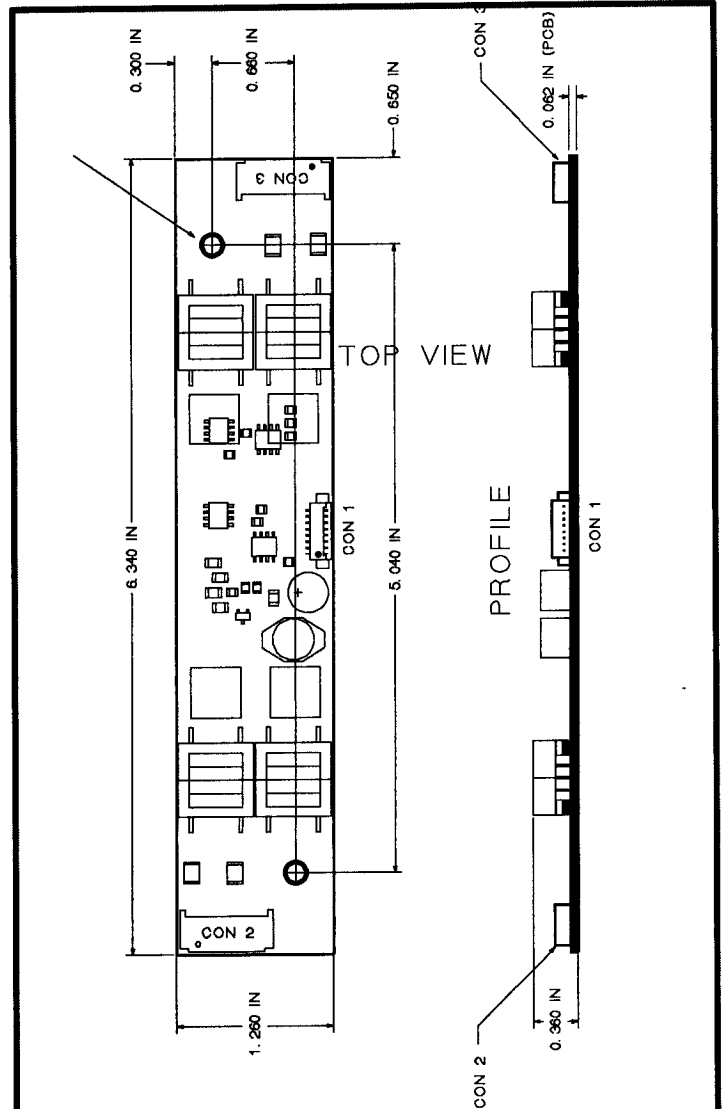
Enable control is accomplished @ pin 5 of CON1. In addition, a +5V reference voltage is available @ pin 7 of CON1 for external use.

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*

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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)	27	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	525	875	Vrms
VSYif	Vertical Synchronization Input Frequency	48	62	Hz
Vcntl	Intensity Control Voltage	0.5	4.5	Vdc

ELECTRICAL CHARACTERISTICS

Vin = +12V, Lsv = 700Vrms, Vcntl = +4.5V, ENon = +4.5V unless otherwise specified

Symbol	Parameter	Test Conditions	Min	Max	Unit
Lstart	Lamp Starting Voltage		1800		Vrms
Lout	Lamp Output Current		6.25	7.75	mArms
Lfreq	Lamp-Current Frequency		43	53	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 (Pin 5)		0	0.7	Vdc
ENon	Enable Control, unit ON (Pin 5)		3.5	5.0	Vdc
VSYhi	Vertical Sync In HI Level (Pin 8)		0	0.7	Vdc
VSYlo	Vertical Sync In LO Level (Pin 8)		3.5	5.0	Vdc
+5Vout	+5V Reference Out (Pin 7)	10k load to ground	4.6	5.3	Vdc
Iin	Input Current Draw			2.0	Adc
Eff	Electrical Efficiency		90		%