



**APPLIED
CONCEPTS INC.**

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AC5-V1-1586

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CCFL INVERTER

(For Multiple Tube Applications)

02/07/06

GENERAL DESCRIPTION

The AC5-V1-1586 is designed to power 8 CCFL's to a nominal power level of 22 Watts from a nominal +12V source.

Intensity control (0-100%) is accomplished by the user providing a variable dc level @ pin 5 of CON1

Enable control is accomplished @ pin 3 of CON1.

A PWM output is available @ pin 6 of CON for external use.

If desired, the pwm dimming frequency of the inverter can be synchronized to the LCD frame rate via pin 4 of CON1.

All outputs are open and short circuit protected.

MECHANICAL / ENVIRONMENTAL

Weight = 50 grams

Altitude = 10,000 Ft maximum

Humidity < 85% non-condensing

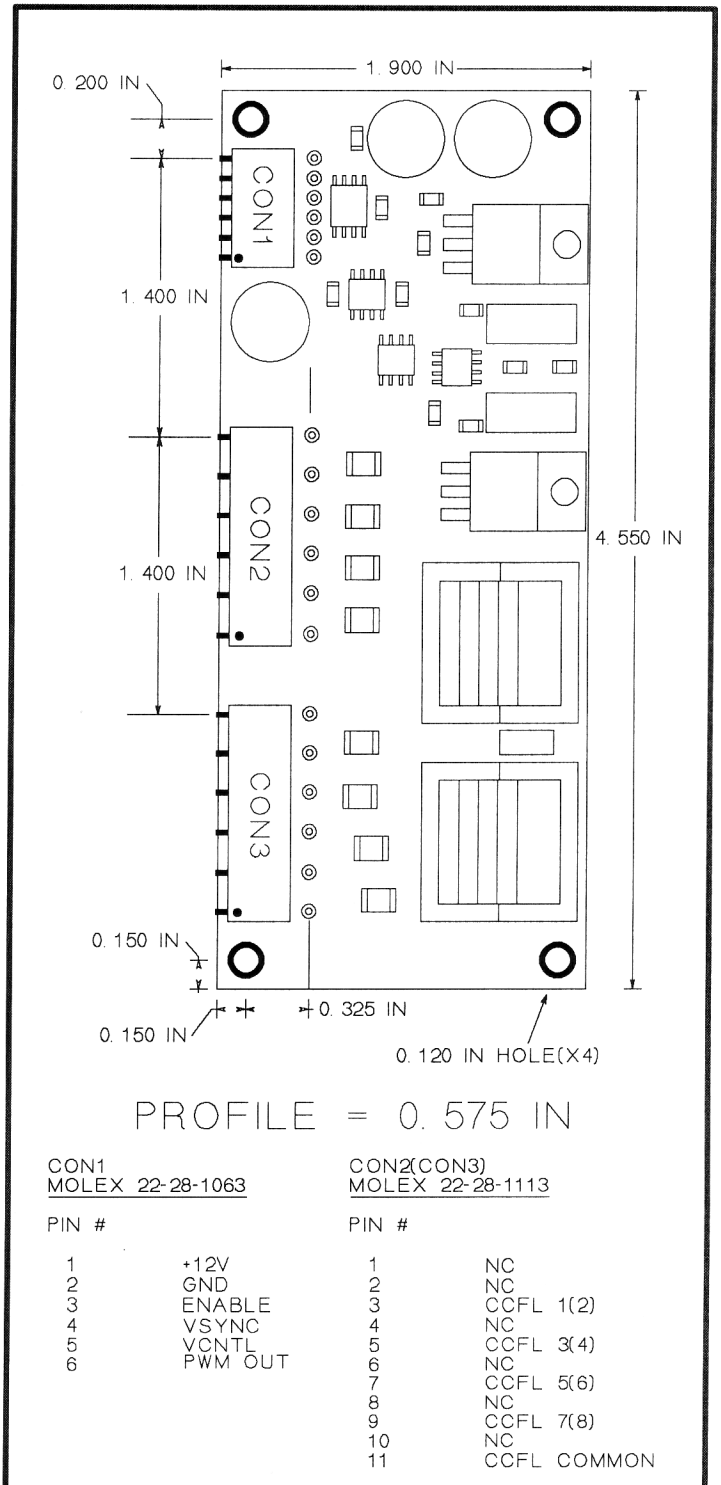
Size (L x W x H) = 4.550 IN x 1.900 IN x 0.575 IN

PCB thickness = 0.062 IN

Mounting Holes = 0.120 IN diameter (X4)

Input Power & Control Connector = CON1

CCFL Output Connector(s) = CON2,CON3





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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)	30	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	300	500	Vrms
VSYif	Vertical Synchronization Input Frequency	48	80	Hz
Vcntl	Intensity Control Voltage	0	5	Vdc

ELECTRICAL CHARACTERISTICS

Vin = +12V, Lsv = 400Vrms, Vcntl = +5V, Enable = +5V unless otherwise specified

Symbol	Parameter	Test Conditions	Min	Max	Unit
Lstart	Lamp Starting Voltage		1200		Vrms
Lout	Lamp Output Current		6.3	7.7	mArms
Lfreq	Lamp-Current Frequency		37.8	46.2	Khz
Pfreq	PWM Dimming Frequency	Vcntl (Pin 5) = +2.5V Vsync-In (Pin 4) = 0V Vsync-In (Pin 4) = 60Hz	95 119.8	101 120.2	Hz Hz
Pdc	PWM Duty Cycle Range	Vcntl (Pin 5) = 0 to +5V	0	100	%
ENoff	Enable Control	Unit OFF (Pin 3)		0.7	Vdc
ENon	Enable Control	Unit ON (Pin 3)	2.0		Vdc
VSYhi	Vertical Sync In HI Level	(Pin 4)	3.5		Vdc
VSYlo	Vertical Sync In LO Level	(Pin 4)		0.7	Vdc
PWMlo	PWM output signal low	10k load to ground (Pin 6)		0.5	Vdc
PWMhi	PWM output signal high	10k load to ground (Pin 6)	4.5		Vdc
Iin	Input Current Draw			2.3	Adc
Eff	Electrical Efficiency		90		%