



**APPLIED
CONCEPTS INC.**

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ACL-V1-1580

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CCFL INVERTER
(For Multiple Tube Applications)

4/25/06

GENERAL DESCRIPTION

The ACL-V1-1580 is designed to power 10 CCFL's to a nominal power level of 36.5 watts from a nominal +12V source.

Intensity control is accomplish via a DC level @ pin 4 of CON1.

Enable control is accomplished @ pin 7 of CON1.

A DC reference voltage is available @ pin 1 of CON1 for external use.

All outputs are open and short circuit protected.

MECHANICAL / ENVIRONMENTAL

Weight = 88 grams

Altitude = 10,000 Ft maximum

Humidity < 85% non-condensing

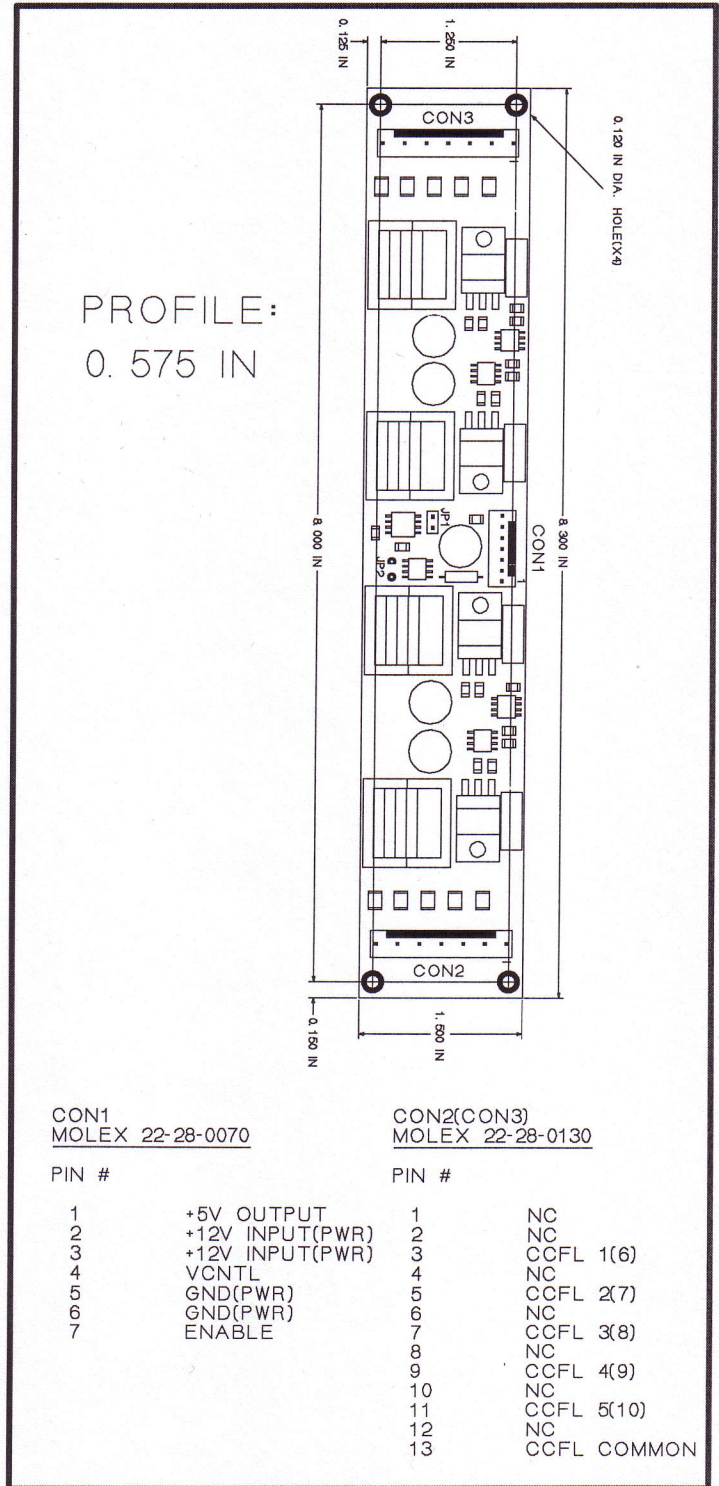
Size (L x W x H) = 8.3 IN x 1.5 IN x 0.575 IN

PCB thickness = 0.062 IN

Mounting Holes = 0.120 IN diameter (X4)

Input Power & Control Connector = CON1

CCFL Output Connectors = CON2, CON3





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MAXIMUM RATINGS*

04/25/06

Symbol	Parameter	Value	Unit
Vin	Supply Voltage (Referenced to Ground)	-0.7 to 13.2	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)	49	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	420	700	Vrms
Vcntl	Intensity Control Voltage	0	5.0	Vdc

ELECTRICAL CHARACTERISTICS

Vin = +12V, Lsv = 560Vrms, Vcntl = +5V, Enable = +5V unless otherwise specified

Symbol	Parameter	Test Conditions	Min	Max	Unit
Lstart	Lamp Starting Voltage		1800		Vrms
Lout	Lamp Output Current		5.9	7.1	mArms
Lfreq	Lamp-Current Frequency		32	39	Khz
Pfreq	PWM Dimming Frequency	Vcntl (Pin 4) = +2.5V	95	101	Hz
Pdc	PWM Duty Cycle Range	Vcntl (Pin 4) = 0V to +5V	0	100	%
ENoff	Enable Control, unit OFF	Enable (Pin 7)		0.7	Vdc
ENon	Enable Control, unit ON	Enable (Pin 7)	2.0		Vdc
+5Vout	+5V Reference Out	10k load to ground (Pin 1)	4.6	5.3	Vdc
Iin	Input Current Draw			3.7	Adc
Eff	Electrical Efficiency		90		%