Applied Concepts
INNOVATION IN POWER CONVERSION TECHNOLOGY

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AC-1825

PRODUCT DATA SHEET

04/15/09

CCFL INVERTER

(For Single Tube Applications)

GENERAL DESCRIPTION

The AC-1825 is designed to power one CCFL to a nominal power level of 4.0 Watts from an input voltage of +12 VDC.

Intensity control is accomplished by the user, via an Intensity Control Resistance (Icr) connected to pins 3 and 4 of CON1.

Enable control is accomplished at pin 2 of CON1.

The output is open and short circuit protected.

MECHANICAL/ENVIRONMENTAL

Weight = 16 grams

Altitude = 10,000 ft max.

Humidity < 85% non-condensing

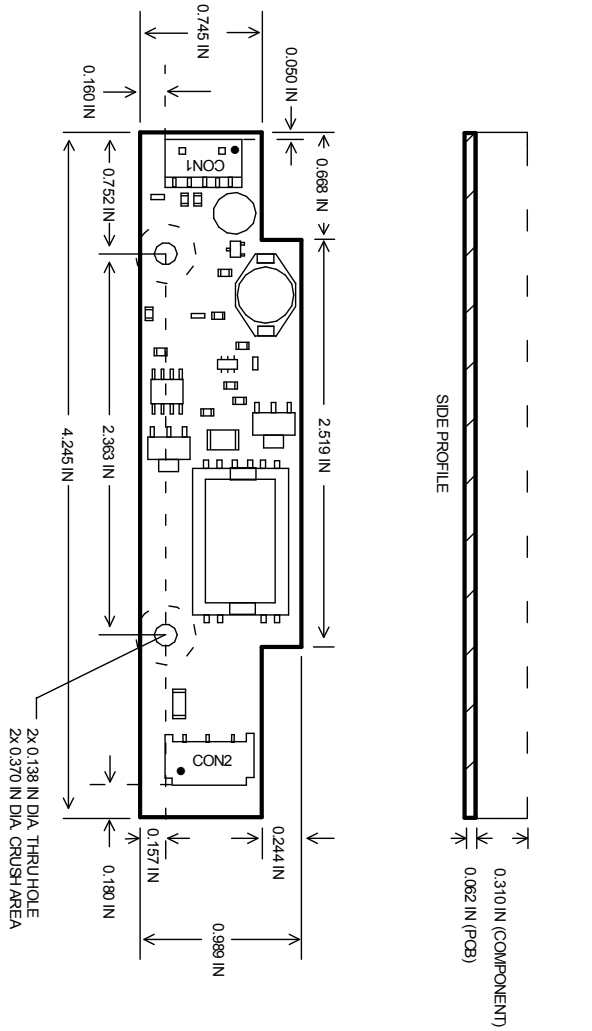
Size (L x W x H) = 4.245 IN x 0.989 IN x 0.372 IN

PCB thickness = 0.062 IN

Mounting Holes = 0.138 IN diameter (X2)

Input Power & Control Connector = CON1

CCFL Output Connector = CON2



INPUT CONNECTOR
CON1
MOLEX 53015-0510

PIN #	FUNCTION
1	+12VDC
2	ENABLE
3	Icr (Intensity Control Resistance)
4	Icr (Intensity Control Resistance)
5	GND

OUTPUT CONNECTOR
CON2
JST SM03(4.0)B-BHS-1-TB(LF)(SN)

PIN #	FUNCTION
1	CCFL HOT
2	NC
3	CCFL COLD

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MAXIMUM RATINGS*

Symbol	Parameter	Value	Unit
Vin	Supply Voltage (Referenced to Ground)	-0.7 to 14.0	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)	6.0	W
Top	Operating Temperature (Still air ambient around Inverter)	-30 to +70	°C
Tstg	Storage Temperature	-30 to +105	°C

*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	446	744	Vrms
Icr	Intensity Control Resistance Range	0	100	Kohms

ELECTRICAL CHARACTERISTICS

Vin = +12.0V, Lsv = 595Vrms, Icr = 0ohm, Enable = +5V unless otherwise specified

Symbol	Parameter	Test Conditions	Min	Max	Unit
Lstart	Lamp Starting Voltage	Open Circuit	1200		Vrms
Lout	Lamp Output Current		6.1	7.5	mArms
Lfreq	Lamp-Current Frequency		46	56	KHz
Pfreq	PWM Dimming Frequency		95	101	Hz
Pdc	PWM Duty Cycle Range	Icr (Pins 3 and 4)= 100K to 0 Ohm	0	100	%
ENoff	Enable Control, unit OFF (Pin 2)			0.8	Vdc
ENon	Enable Control, unit ON (PIN 2)		2.0		Vdc
Iin	Input Current Draw			0.45	Adc
Eff	Electrical Efficiency		85		%

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