

CCFL INVERTER

(For Dual Tube Applications)

GENERAL DESCRIPTION

The AC-1720A is designed to power 2 CCFL tubes to a nominal current level of 5mA per tube, from an input voltage of +12VDC.

Dimming control is accomplished by the user applying a variable DC voltage level or PWM signal at Pin 6 of CON1.

Enable control is accomplished at Pin 5 of CON1.

All outputs are open and short circuit protected.

MECHANICAL/ENVIRONMENTAL

Weight = 19 grams

Altitude = 10,000 ft max.

Humidity < 85% non-condensing

Size (L x W x H) = 4.75 IN x 0.90 IN x 0.362 IN

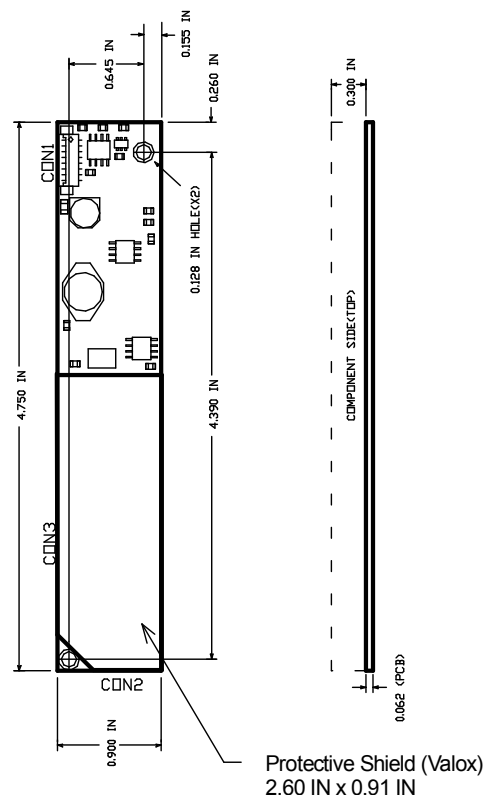
PCB thickness = 0.062 IN

Mounting Holes = 0.128 IN Dia. (x2)

Input Power and Control Connector = CON1

CCFL Output Connectors = CON2 and CON3

Inverter includes Valox Protective Shield



INPUT CONNECTOR
CON1
MOLEX 53261-0890

PIN #	FUNCTION
1	+12V(PWR)
2	+12V(PWR)
3	GND(PWR)
4	GND(PWR)
5	ENABLE
6	VCNTL/PWM-IN
7	GND(SIG)
8	+12V(PWR)

OUTPUT CONNECTOR
CON2, CON3
JST SM03(4.0)B-BHS-1-TB

PIN #	FUNCTION
1	CCFL HOT
2	NC
3	CCFL COLD

MAXIMUM RATINGS*

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)	5.0	W
Top	Operating Temperature (Still air ambient around Inverter)	-40 to +85	°C
Tstg	Storage Temperature	-40 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	250	450	Vrms
Vcntl	Intensity Control Voltage	0.25	3.0	Vdc
PWMcntl	Intensity Control PWM Frequency Range (User Supplied Input)	1	10	KHz

ELECTRICAL CHARACTERISTICS

Vin = +12V, Lsv = 350Vrms, Vcntl = +0V, Enable = +5V, unless otherwise specified.

Symbol	Parameter	Test Conditions	Min	Max	Unit
Lstart	Lamp Starting Voltage	Open Circuit	1000		Vrms
Lout	Lamp Output Current		4.5	5.5	mArms
Lfreq	Lamp-Current Frequency		39.6	48.4	KHz
Pfreq	PWM Dimming Frequency	Vcntl(Pin 6) = +1.625V or PWMcntl (Pin 6) = 50%	95	101	Hz
Pdc	PWM Duty Cycle Range	Vcntl(Pin 6) $\geq$ 3.0V or PWMcntl = 100%		0	%
		Vcntl(Pin 6) $\leq$ 0.25V or PWMcntl = 0%	100		%
PWMlo	PWM LO Level (VIL)	Pin 6		0.25	Vdc
PWMhi	PWM High Level (VIH)	Pin 6	3.0		Vdc
ENoff	Enable Control, unit OFF	Pin 5		0.8	Vdc
ENon	Enable Control, unit ON	Pin 5	2.0		Vdc
Iin	Input Current Draw			0.36	Adc
Eff	Electrical Efficiency		90		%