

## CCFL INVERTER

(For Single Tube Applications)

### GENERAL DESCRIPTION

The AC-1302A is designed to power 1 CCFL tube to a nominal power level of 3 Watts from an input voltage of +12VDC.

Intensity control is accomplished by the user providing a variable DC voltage level at pin 2.

The AC-1302A is custom designed for Palomar Display Products.

Enable control is accomplished at pin 3.

All outputs are open and short circuit protected.

### MECHANICAL/ENVIRONMENTAL

Weight = 15.3 grams

Altitude = 32,800 ft max.

Humidity < 85% non-condensing

Size (L x W x H) = 2.20 IN x 1.15 IN x 0.372 IN

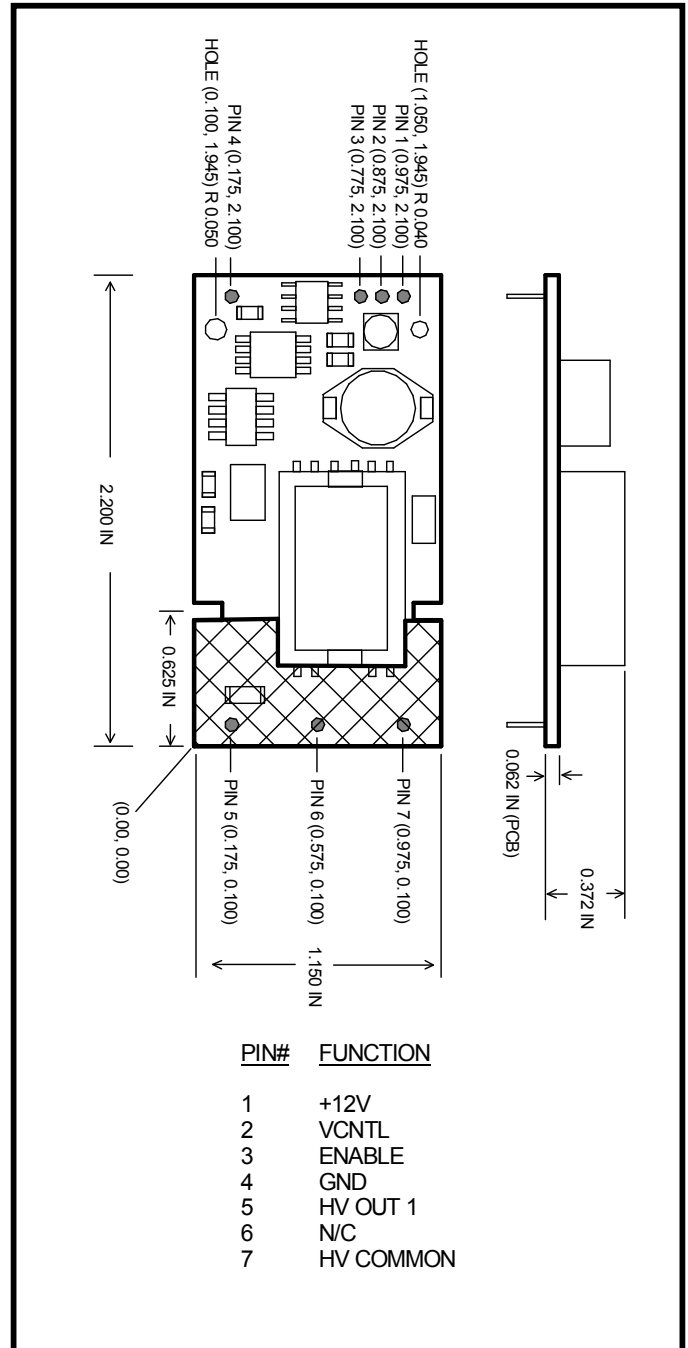
PCB thickness = 0.062 IN

Input Power and Control Pins = Pins 1, 2, 3, and 4

CCFL Output Pins = Pins 5 and 7

High Voltage area coated with 3M DP-190.

Entire Assembly Conformally Coated with Humiseal 1B73.



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**PRODUCT DATA SHEET**

02/04/13

**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)	4.0	W
Top	Operating Temperature (Still air ambient around Inverter)	-20 to +70	°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	400	660	Vrms
Vcntl	Intensity Control	0.31	3.8	Vdc

**ELECTRICAL CHARACTERISTICS**

Vin = +12.0V, Lsv = 530Vrms, Vcntl = +3.8V, Enable = +5.0V unless otherwise specified

Symbol	Parameter	Test Conditions	Min	Nom	Max	Unit
Lstart	Lamp Starting Voltage	Open Circuit	1650			Vrms
Lout	Lamp Output Current		5.0	5.5	6.0	mArms
Lfreq	Lamp-Current Frequency		42	46.5	51	KHz
Pfreq	PWM Dimming Frequency	Vcntl (Pin 2) = +1.9V	95		101	Hz
Pdc	PWM Duty Cycle Range	Vcntl (Pin 2) = +0.31V to +3.8V	0		100	%
ENoff	Enable Control, unit OFF (Pin 3)				0.8	Vdc
ENon	Enable Control, unit ON (Pin 3)		2.0			Vdc
Iin	Input Current Draw			0.32		Adc
Eff	Electrical Efficiency			90		%