

APPLIED CONCEPTS INC.

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AC-1414A

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CCFL INVERTER (For Quad Tube Applications)

09/06/05

GENERAL DESCRIPTION

The AC-1414A is designed to power 4 CCFL's up to power levels of 31 watts from a nominal +12V source.

Enable control is accomplished @ pin 7 of CON1.

Analog intensity is accomplished by the user providing DC level @ pin 8 of CON1.

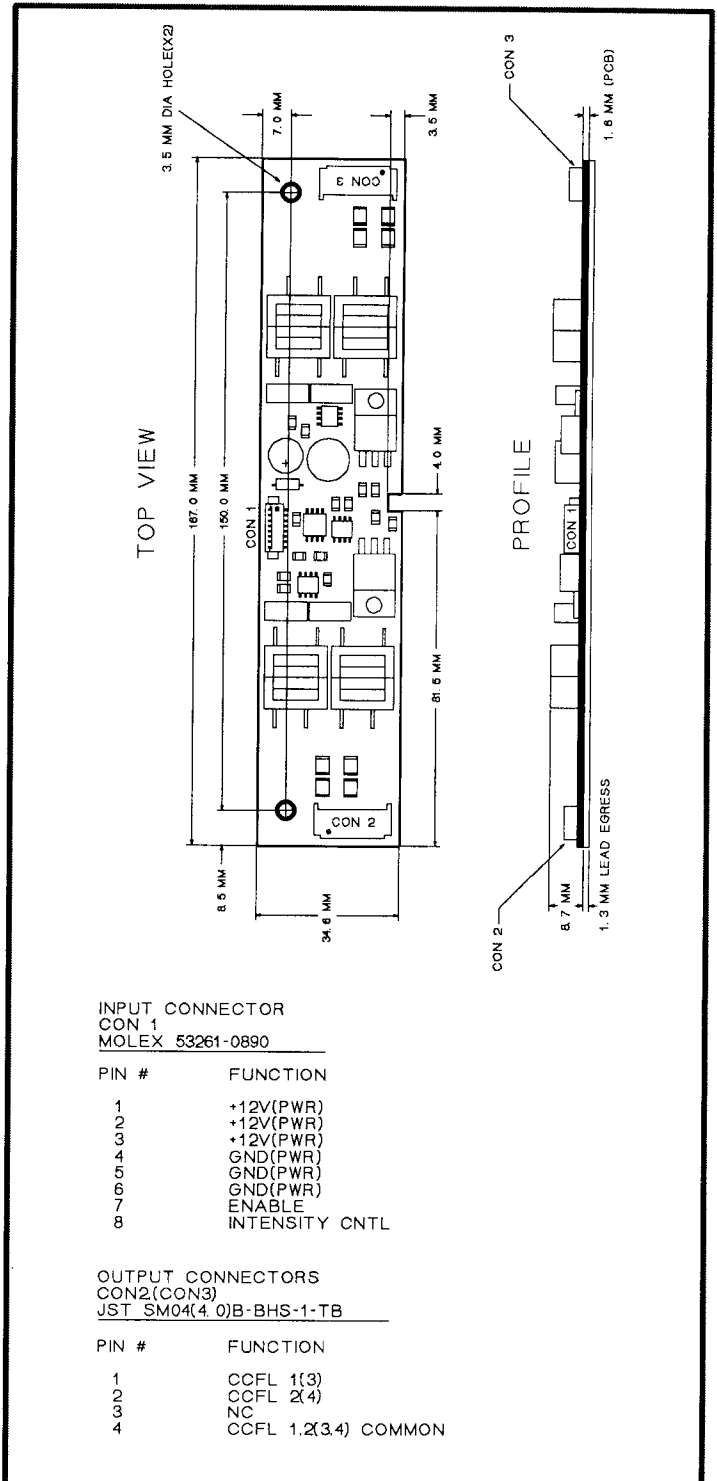
As an option, this unit is Vsync capable.

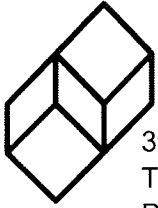
All outputs are open and short circuit protected.

This unit is plug-in compatible with the four CCFLs used in the Fujitsu FLC43XWC6V-02 Flatpanel backlight.

MECHANICAL / ENVIRONMENTAL

- Weight = 40 grams
- Altitude = 10,000 Ft maximum
- Humidity < 90 % non-condensing
- Size (L x W x H) = 167 mm x 34.6 mm x 8.7 mm
- PCB thickness = 1.6 mm
- Mounting Holes = 3.5 mm diameter (X2)
- Input Power & Control Connector = CON1
- CCFL Output Connector(s) = CON2 , CON3





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MAXIMUM RATINGS*

09/06/05

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)	40	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	470	780	Vrms
Vcntl	Intensity Control Voltage	0	4.4	Vdc

ELECTRICAL CHARACTERISTICS

Vin = +12V, Lsv = 625Vrms, Vcntl = +4.4V, ENABLE = +5V unless otherwise specified

Symbol	Parameter	Test Conditions	Min	Max	Unit
Lstart	Lamp Starting Voltage		1650		Vrms
Lout	Lamp Output Current		11.8	13.1	mArms
Lfreq	Lamp-Current Frequency		67	83	Khz
Pfreq	PWM Dimming Frequency	Vcntl (Pin 8) = +2.2V	95	101	Hz
Pdc	PWM Duty Cycle Range	Vcntl (Pin 8) = 0 to 4.4V	0	100	%
ENoff	Enable Control, unit OFF.	Enable (Pin 7)		0.8	Vdc
ENon	Enable Control, unit ON.	Enable (Pin 7)	2.0		Vdc
Iin	Input Current Draw			3.0	Adc
Eff	Electrical Efficiency		90		%