

**APPLIED
CONCEPTS INC.**

397 Route 281 - P.O. BOX 1175
Tully, New York 13159-1175
Phone: (315) 696-6676 Fax: (315) 696-9923
www.acipower.com

AC3-12-1505

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CCFL INVERTER

(For Multiple Tube Applications)

12/20/04

GENERAL DESCRIPTION

The AC3-12-1505 is designed to power 2 CCFL's with 7mA of output current yielding an output power of 3.3W per tube.

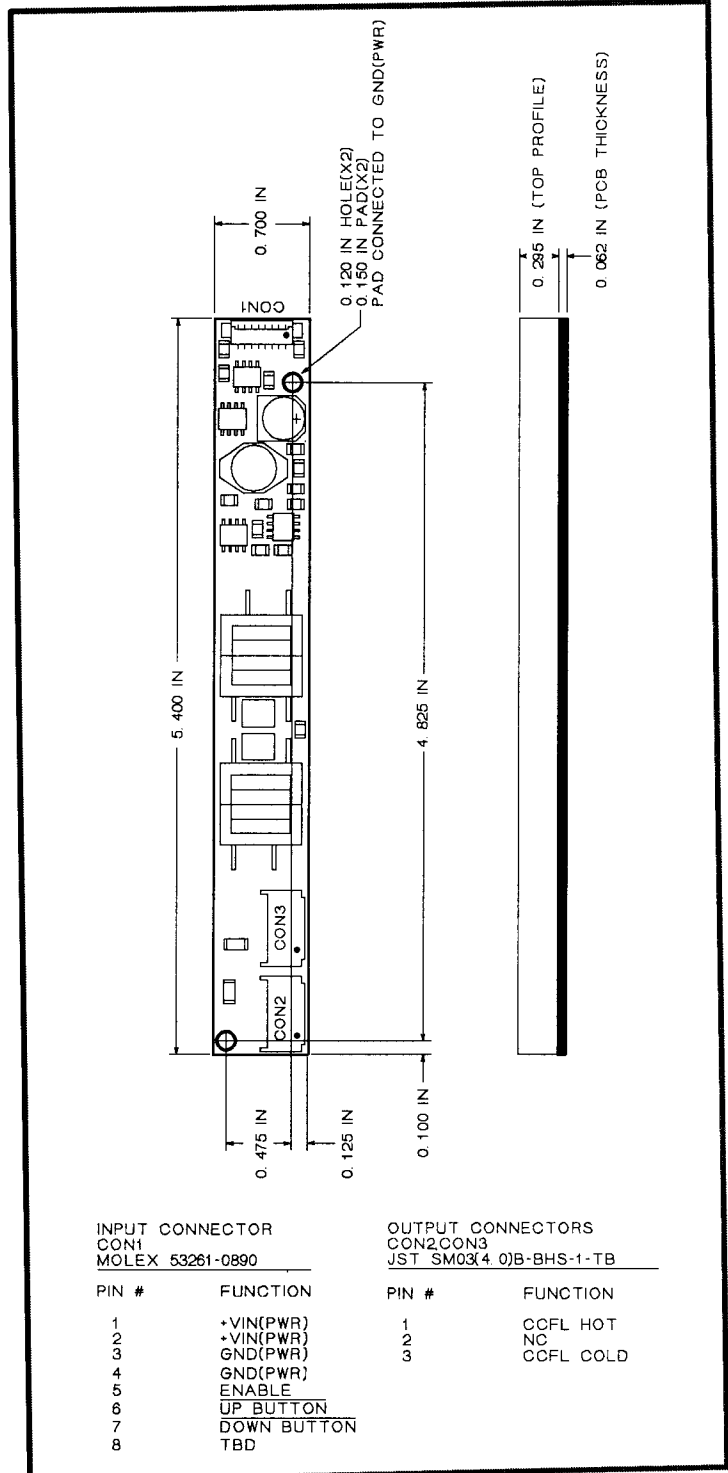
Intensity control is accomplished by the user providing an active-low (CMOS) signal to the up-button control (pin 6 of CON1) or the down-button control (pin 7 of CON1). The last set power level is retained for next

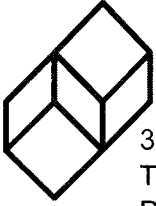
Enable control is accomplished @ pin 5 of CON1 (0V=off, 5V=on).

All outputs are open and short circuit protected.

MECHANICAL / ENVIRONMENTAL

- Weight = 20 grams
- Altitude = 10,000 Ft maximum
- Humidity < 85% non-condensing
- Size (L x W x H) = 5.4 IN x 0.7 IN x 0.360 IN
- PCB thickness = 0.062 IN
- Mounting Holes = 0.120 IN diameter (X2)
- Input Power & Control Connector = CON1
- CCFL Output Connectors = CON2, CON3





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MAXIMUM RATINGS*

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Symbol	Parameter	Value	Unit
Vin	Supply Voltage (Referenced to Ground)	-0.7 to 13.5	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	mAcd
Pin	Input Power (DC Input Voltage x DC Input Current)	9.45	W
Top	Operating Temperature (Still air ambient around Inverter)	0 to +70	DegC
Tstg	Storage Temperature	-40 to +150	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	370	570	Vrms
Bstep	Brightness Control	50	255	Steps

ELECTRICAL CHARACTERISTICS

Vin = +12V, Lsv = 470Vrms, Bstep = 255 steps, Enable = +5V unless otherwise specified

Symbol	Parameter	Test Conditions	Min	Max	Unit
Lstart	Lamp Starting Voltage		1800		Vrms
Lout	Lamp Output Current		6.3	7.7	mA rms
Lfreq	Lamp-Current Frequency		43	53	Khz
Pfreq	PWM Dimming Frequency	Bstep = 128 steps	95	101	Hz
Pdc	PWM Duty Cycle Range	Bstep = 50 to 255 steps	20	100	%
ENoff	Enable Control, unit OFF (Pin 5)			0.7	Vdc
ENon	Enable Control, unit ON (Pin 5)		3.5		Vdc
UP	Up Button Brightness Control			0.8	Vdc
DOWN	Down Button Brightness Control			0.8	Vdc
Iin	Input Current Draw			0.7	Adc
Eff	Electrical Efficiency		90		%