

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

ACQ-12-1655

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CCFL INVERTER (For Dual Tube Applications)

3/27/09

GENERAL DESCRIPTION

The ACQ-12-1655 is designed to power 2 CCFL's to a nominal power level of 4.5 Watts from a +12V source.

The ACQ-12-1655 features analog dimming control via a dc control level @ pin 6 of CON1. A dc reference voltage(+5V) is available @ pin 8 of CON1 for external use.

Enable control is accomplished @ pin 5 of CON1.

A Vsync input is available at pin 7 of CON1.

All outputs are open and short circuit protected.

MECHANICAL / ENVIRONMENTAL

Weight = 21.5 grams

Altitude = 10,000 Ft maximum

Humidity < 85% non-condensing

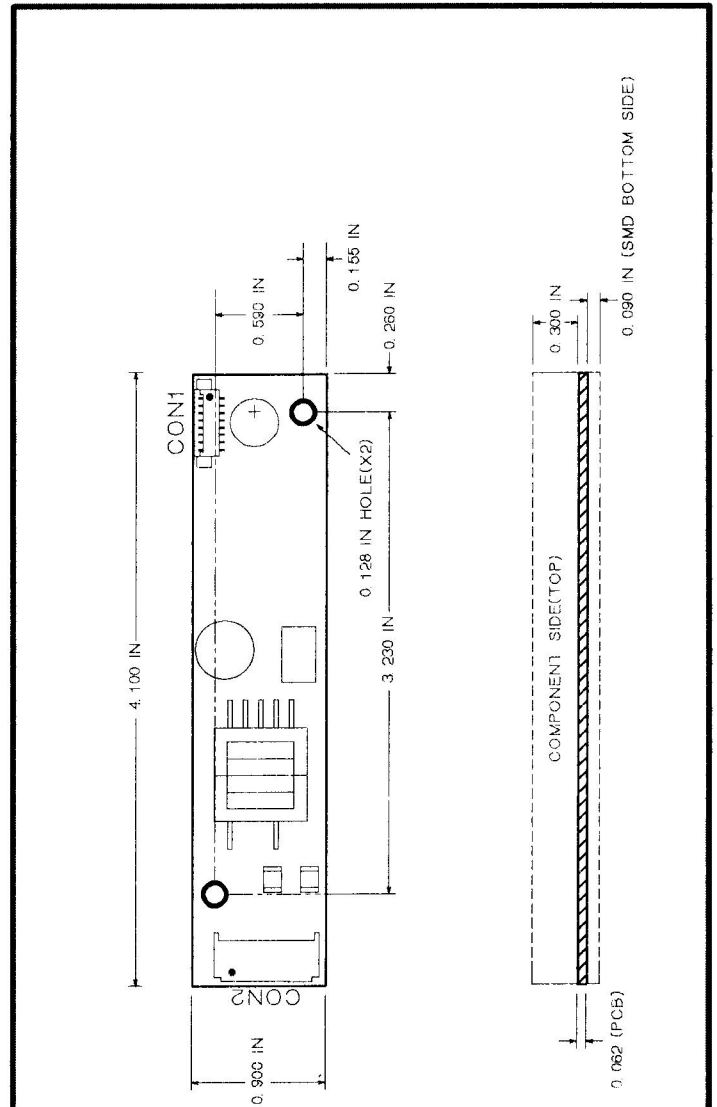
Size (L x W x H) = 4.1 IN x 0.9 IN x 0.452 IN

PCB thickness = 0.062 IN

Mounting Holes = 0.128 IN diameter (X2)

Input Power & Control Connector = CON1

CCFL Output Connector = CON2

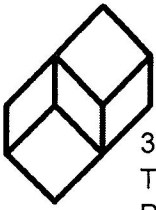


INPUT CONNECTOR
CON1
MOLEX 53261-0890

PIN #	FUNCTION
1	+12V(PWR)
2	+12V(PWR)
3	GND(PWR)
4	GND(PWR)
5	ENABLE
6	VCTRL
7	VSYNC-IN
8	PWM OUT

OUTPUT CONNECTOR
CON2
JST SM04(4 0)B-2MS-1-TB

PIN #	FUNCTION
1	CCFL 1
2	CCFL 2
3	NC
4	CCFL COMMON



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MAXIMUM RATINGS*

3/27/09

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)	6.1	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	250	500	Vrms
Vcntl	Intensity Control Voltage	0.5	4.5	Vdc

ELECTRICAL CHARACTERISTICS

Vin = +12V, Lsv = 370Vrms, Vcntl = +4.5V, ENon = +5V unless otherwise specified

Symbol	Parameter	Test Conditions	Min	Max	Unit
Lstart	Lamp Starting Voltage		1100		Vrms
Lout	Lamp Output Current	PWM Duty Cycle @ 100%	5.4	6.6	mArms
Lfreq	Lamp-Current Frequency		46	57	Khz
Pfreq	PWM Dimming Frequency	Vcntl (Pin 6) = +2.5V	95	101	Hz
Pdc	PWM Duty Cycle Range	Vcntl (Pin 6) = 0.5 to +4.5V	0	100	%
ENoff	Enable Control, unit OFF (Pin 5)			0.5	Vdc
ENon	Enable Control, unit ON (Pin 5)		2.0		Vdc
VSYlo	Vertical Sync In LO Level (Pin 7)			0.8	Vdc
VSYhi	Vertical Sync In HI Level (Pin 7)		4.0		Vdc
+5Vout	+5V Reference Out (Pin 8)	10k load to ground	4.6	5.3	Vdc
Iin	Input Current Draw			0.46	Adc
Eff	Electrical Efficiency		88		%