



**APPLIED  
CONCEPTS INC.**

397 Route 281 - P.O. BOX 1175  
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www.acipower.com

**AC7-12-1643**

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**CCFL INVERTER**

*(For Multiple Tube Applications)*

11/28/06

**GENERAL DESCRIPTION**

The AC7-12-1643 is designed to power typically 2 CCFL's up to power levels of 6 watts from a nominal +12V source.

Intensity control (0-100%) is accomplished by the user providing a variable dc level at pin 3 of CON1.

Enable control is accomplished at pin 4 of CON1.

All outputs are open and short circuit protected.

**MECHANICAL / ENVIRONMENTAL**

Weight = 14.1 grams

Altitude = 10,000 Ft maximum

Humidity < 85% non-condensing

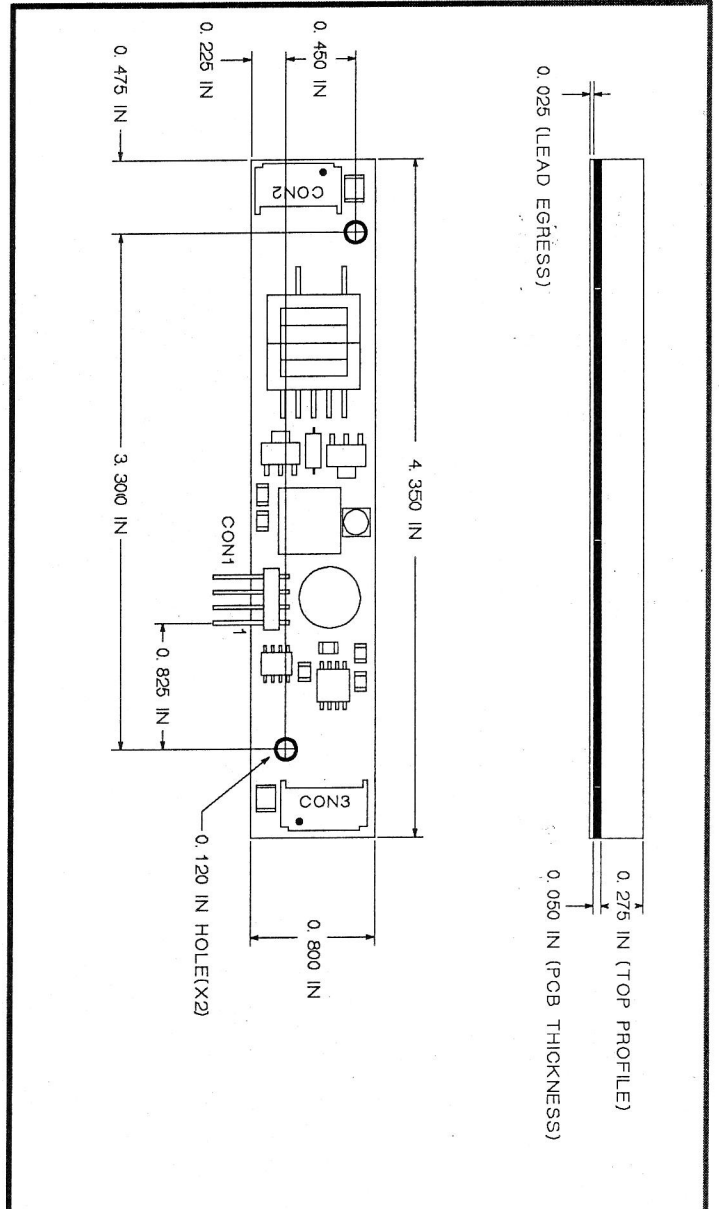
Size (L x W x H) = 4.35 IN x 0.8 IN x 0.35 IN

PCB thickness = 0.047 IN

Mounting Holes = 0.120 IN diameter (X2)

Input Power & Control Connector = CON1

CCFL Output Connectors = CON2, CON3



INPUT CONNECTOR  
CON1  
MOLEX 22-28-8041

OUTPUT CONNECTOR  
CON2, CON3  
JST SM03(4, 0)B-BHS-1-TB

PIN #	FUNCTION
1	+VIN
2	GND
3	VCNTL
4	ENABLE

PIN #	FUNCTION
1	CCFL HOT
2	NC
3	CCFL COLD



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**MAXIMUM RATINGS\***

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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
Pin	Input Power (DC Input Voltage x DC Input Current)	8	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	400	600	Vrms
Vcntl	Intensity Control Voltage	0.5	4.5	Vdc

**ELECTRICAL CHARACTERISTICS**

Vin = +12V, Lsv = 500Vrms, Vcntl = +4.5V, Enable = +5V unless otherwise specified

Symbol	Parameter	Test Conditions	Min	Max	Unit
Lstart	Lamp Starting Voltage		1400		Vrms
Lout	Lamp Output Current		5.4	6.6	mArms
Lfreq	Lamp-Current Frequency		47	59	Khz
Pdc	PWM Duty Cycle Range	Vcntl (Pin 3) = 0.5V to +4.5V	0	100	%
ENoff	Enable Control, unit OFF (Pin 4)			0.5	
ENon	Enable Control, unit ON (Pin 4)		2.0		
Iin	Input Current Draw			0.61	Adc
Eff	Electrical Efficiency		90		%