

# 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

# AC2-A1-1576

PRODUCT DATA SHEET - PAGE 1 OF 2

## CCFL INVERTER

(For Multiple Tube Applications)

1/5/06

### GENERAL DESCRIPTION

The AC2-A1-1576 is designed to power 6 CCFL's to a nominal power level of 12 watts.

Intensity control is accomplished by the use of an ambient light sensor (CDS cell) connected to pins 6 & 7 of CON1.

The inverter is designed to interface with an NTC type CDS photocell.

This unit features a health status output signal intended to drive an external led. The action of the led will determine the number of on-time hours that have accumulated.

All outputs are open and short circuit protected.

### MECHANICAL / ENVIRONMENTAL

Weight = 30 grams

Altitude = 10,000 Ft maximum

Humidity < 85% non-condensing

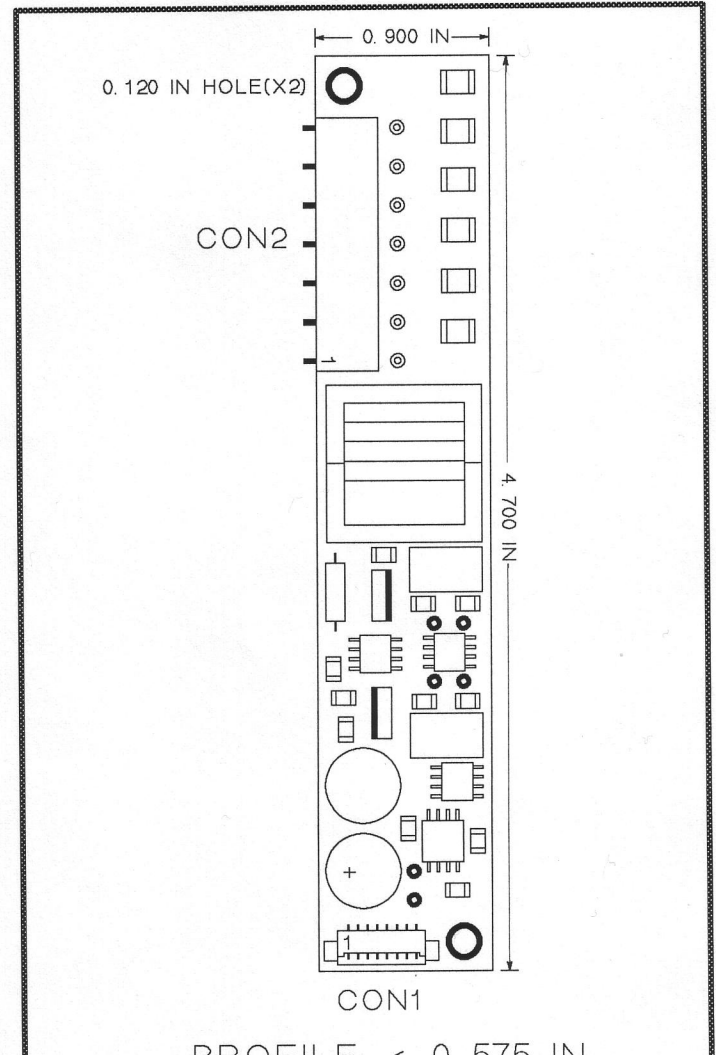
Size (L x W x H) = 4.7 IN x 0.9 IN x 0.575 IN

PCB thickness = 0.062 IN

Two mounting holes = 0.120 IN diameter

Input Power & Control Connector = CON1

CCFL Output Connector = CON2

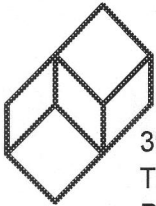


PROFILE < 0.575 IN

INPUT CONNECTOR  
CON1  
MOLEX 53261-0890

OUTPUT CONNECTOR  
CON2  
MOLEX 22-28-1130

PIN #	FUNCTION	PIN #	FUNCTION
1	+12V(PWR)	1	CCFL COMMON
2	+12V(PWR)	2	NC
3	GND(PWR)	3	CCFL6
4	GND(PWR)	4	NC
5	N/C	5	CCFL5
6	CDS CELL SIG	6	NC
7	CDS CELL +5V	7	CCFL4
8	STATUS LED	8	NC
		9	CCFL3
		10	NC
		11	CCFL2
		12	NC
		13	CCFL1



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PRODUCT DATA SHEET - PAGE 2 OF 2

**MAXIMUM RATINGS\***

1/5/06

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)	16	W
Iled	Health Status Led Source Current	25	mAdc
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	410	Vrms
Iled	Health Status Led Source Current		20	mAdc
CDS	CDS dark to light nominal range	0.3	32	Kohm

**ELECTRICAL CHARACTERISTICS**

Vin = +12V, Lsv = 330Vrms 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		42	51	Khz
Pfreq	PWM Dimming Frequency		99	105	Hz
Pdc	PWM Duty Cycle Range	37%: CON1 pin 6 open 100%: CON1 pin 6,7 shorted	37	100	%
Fleds	Health Status Slow Flash	1 second on/off: after 8760 hours.	0.9	1.1	seconds
Fledf	Health Status Fast Flash	200ms on/off: after 20,000 hours	180	220	ms
Trngs	Accrued Timing Accuracy		7884	9636	hours
Trngf	Accrued Timing Accuracy		18000	22000	hours
Iin	Input Current Draw			1.2	Adc
Eff	Electrical Efficiency		90		%