



**APPLIED
CONCEPTS INC.**

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Tully, New York 13159-1175
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AC5-A1-1565

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CCFL INVERTER

(For Multiple Tube Applications)

11/7/05

GENERAL DESCRIPTION

The AC5-A1-1565 is designed to power 8 CCFL's to a nominal power level of 21 watts from a +12V source.

Intensity control is accomplished by the use of an ambient light sensor (CDS cell) connected to pins 4 & 5 of CON1.

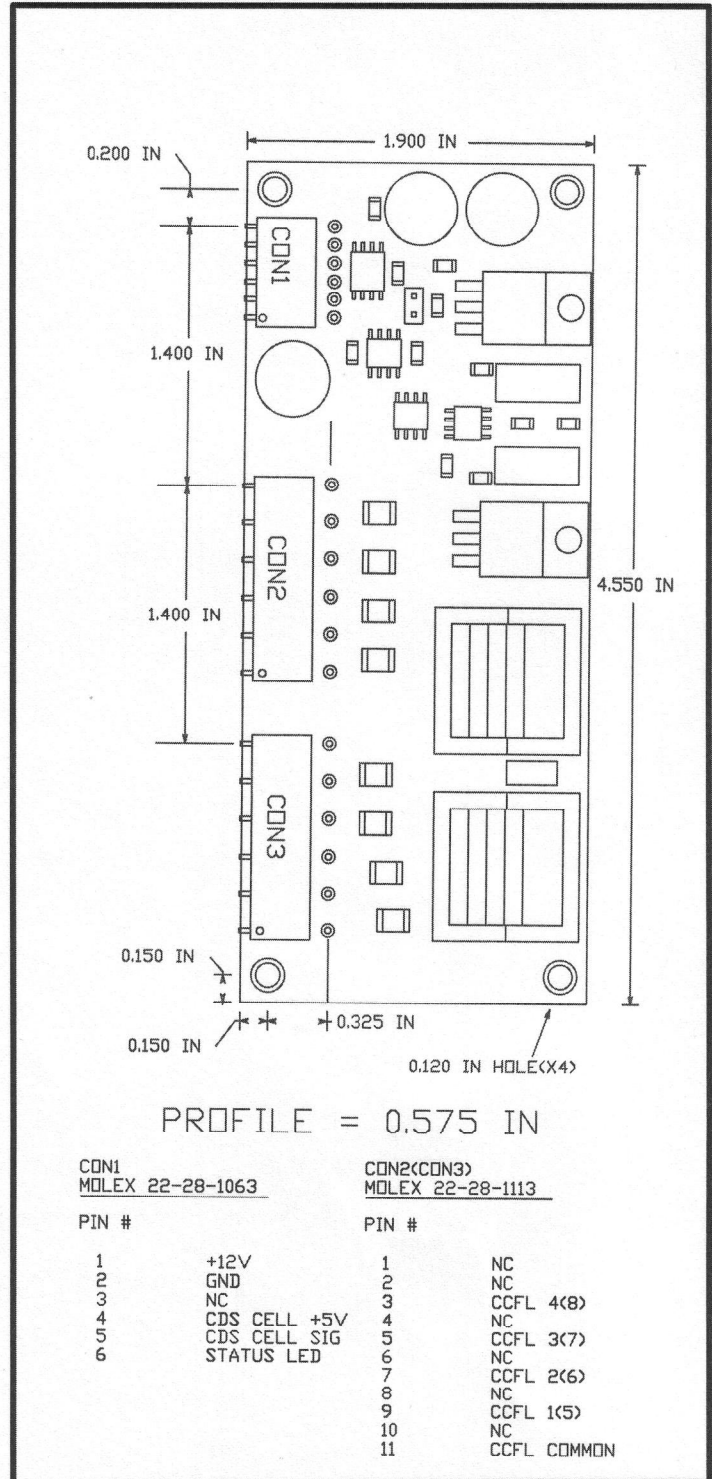
The inverter is designed to interface with an NTC type CDS photocell.

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 = 60 grams
Altitude = 10,000 Ft maximum
Humidity < 90% non-condensing
Size (L x W x H) = 4.55 x 1.90 x 0.575
PCB thickness = 0.062 IN
Mounting Holes = 0.120 IN diameter (X4)
Input Power & Control Connector = CON1
CCFL Output Connector(s) = CON2 - CON3





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MAXIMUM RATINGS*

11/7/05

Symbol	Parameter	Value	Unit
Vin	Supply Voltage (Referenced to Ground)	-0.3 to 13.5	Vdc
Vip	Voltage applied to any Input Pin (Referenced to Ground)	-0.3 to 5.3	Vdc
Iop	Current sourced or sinked from any Output Pin	+/- 10	mAdc
Pin	Input Power (DC Input Voltage x DC Input Current)	29	W
Iled	Health Status Led Source Current	25	mAdc
Top	Operating Temperature (Still air ambient around Inverter)	0 to +70	DegC
Tstg	Storage Temperature	-40 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	425	625	Vrms
Iled	Health Status Led Source Current		20	mAdc
CDS	Nominal CDS cell dark to light resistance change range	0.3	32	Kohm

ELECTRICAL CHARACTERISTICS

Vin = +12V, Lsv = 525Vrms unless otherwise specified

Symbol	Parameter	Test Conditions	Min	Max	Unit
Lstart	Lamp Starting Voltage	Open circuit	1700		Vrms
Lout	Lamp Output Current		4.5	5.5	mArms
Lfreq	Lamp-Current Frequency		36	44	Khz
Pfreq	PWM Dimming Frequency		95	101	Hz
Pdc	PWM Duty Cycle Range	37% : CON1 pin 5 open 100% : CON1 pin 4,5 shorted	37	100	%
Fleds	Health Status Slow Flash	1second 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			2.2	Adc
Eff	Electrical Efficiency		90		%