

**APPLIED
CONCEPTS INC.**

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AC-1651

PRODUCT DATA SHEET - PAGE 1 OF 2

CCFL INVERTER

(For Multiple Tube Applications)

9/10/07

GENERAL DESCRIPTION

The AC-1651 is designed to power 2 CCFL's to a nominal power level of 7.2 watts from an input voltage of +5V.

Intensity control is accomplished by the user providing a variable dc level @ pin 3 of CON1.

A PWM output signal is available @ pin 4 of CON1 for external use.

All outputs are open and short circuit protected.

MECHANICAL / ENVIRONMENTAL

Weight = 15 grams

Altitude = 10,000 Ft maximum

Humidity < 85% non-condensing

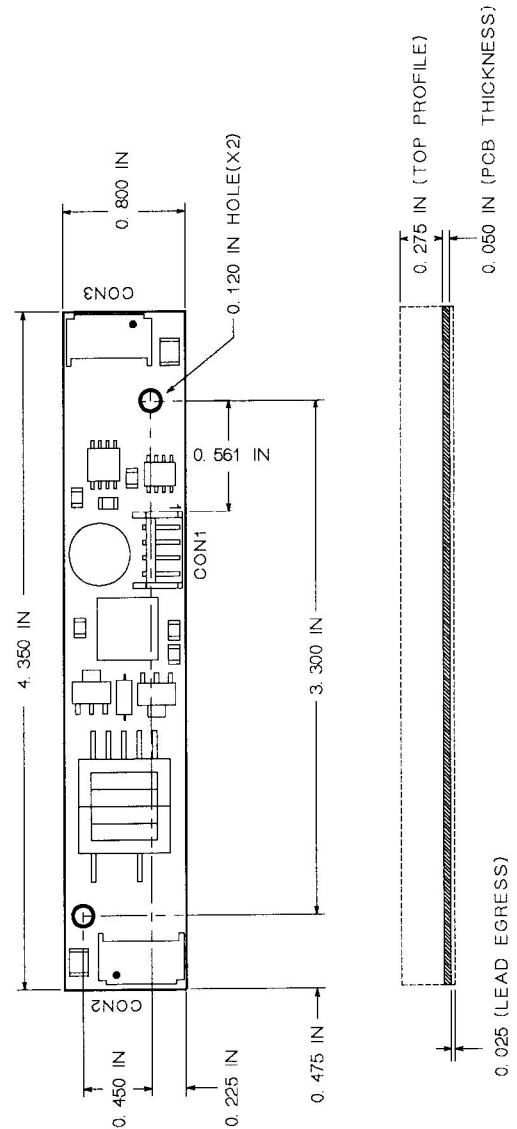
Size (L x W x H) = 4.350 IN x 0.800 IN x 0.350 IN

PCB thickness = 0.050 IN

Mounting Holes = 0.120 IN diameter (X2)

Input Power & Control Connector = CON1

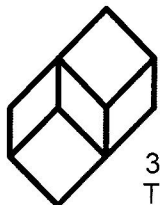
CCFL Output Connectors = CON2, CON3



INPUT CONNECTOR
CON1
JST S-4B-EH

OUTPUT CONNECTOR
CON3
JST SM03(4.0)B-BHS-1-TB

PIN #	FUNCTION	PIN #	FUNCTION
1	+5V	1	CCFL HOT
2	GND	2	NC
3	VCNTL	3	CCFL COLD
4	PWM OUT		



MAXIMUM RATINGS*

9/10/07

Symbol	Parameter	Value	Unit
Vin	Supply Voltage (Referenced to Ground)	-0.7 to 6.0	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)	9.0	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)	4.75	5.25	Vdc
Lsv	Cold Cathode Fluorescent Lamp Sustaining Voltage	500	700	Vrms
Vcntl	Intensity Control Voltage	0	5.0	Vdc

ELECTRICAL CHARACTERISTICS

Vin = +5V, Lsv = 600Vrms, Vcntl = +5V, unless otherwise specified

Symbol	Parameter	Test Conditions	Min	Max	Unit
Lstart	Lamp Starting Voltage		1450		Vrms
Lout	Lamp Output Current		5.4	6.6	mArms
Lfreq	Lamp-Current Frequency		48.0	60.0	Khz
Pfreq	PWM Dimming Frequency	Vcntl (Pin 3) = +2.5V	95	101	Hz
Pdc	PWM Duty Cycle Range	Vcntl (Pin 3) = 0 to +5V	0	100	%
PWMhi	VoH	2.2K Load on Pin 4	4.3		V
PWMlo	VoL	2.2K Load on Pin 4		0.6	V
Iin	Input Current Draw			1.76	Adc
Eff	Electrical Efficiency		90		%