

## CCFL INVERTER

(For Quad Tube Applications)

### GENERAL DESCRIPTION

The AC8-V2-1694 is designed to power typically 4 CCFLs up to power levels of 20 Watts from a nominal +12 VDC source.

Intensity control is accomplished by the user providing DC voltage level at PIN 6 of CON1.

Enable control is accomplished at pin 5 of CON1.

A +5V reference voltage is available at PIN 7 of CON1 for external use.

The PWM dimming frequency of the inverter can be synchronized to the LCD frame rate via PIN 8 of CON1.

All outputs are open and short circuit protected.

### MECHANICAL/ENVIRONMENTAL

Weight = 40 grams

Altitude = 10,000 ft max.

Humidity < 85% non-condensing

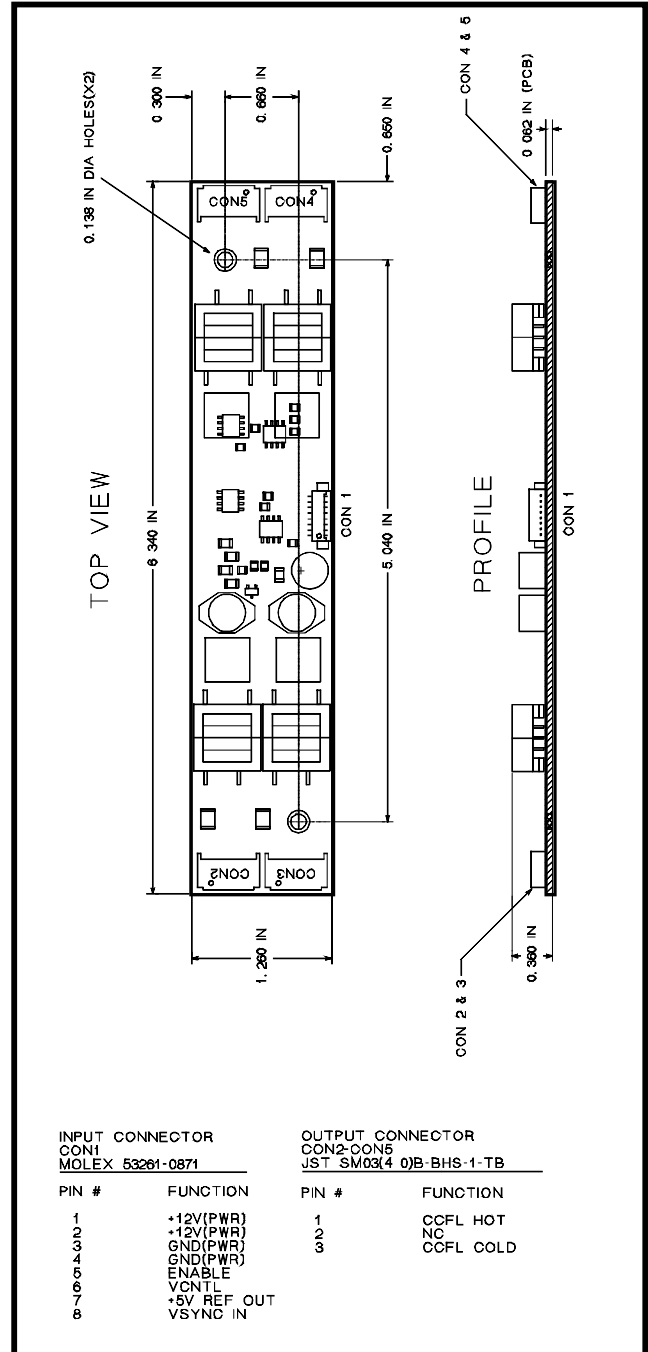
Size (L x W x H) = 6.34 IN x 1.26 IN x 0.360 IN

PCB thickness = 0.062 IN

Mounting Holes = 0.138 IN diameter (X2)

Input Power & Control Connector = CON1

CCFL Output Connectors = CON2 – CON5



### MAXIMUM RATINGS\*

Symbol	Parameter	Value	Unit
Vin	Supply Voltage (Referenced to Ground)	-0.7 to 14.0	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)	27.5	W
Top	Operating Temperature (Still air ambient around Inverter)	0 to +70	°C
Tstg	Storage Temperature	-20 to +105	°C

\*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	500	850	Vrms
VSYif	Vertical Synchronization Input Frequency	48	62	Hz
Vcntl	Intensity Control Voltage	0.5	4.5	Vdc

### ELECTRICAL CHARACTERISTICS

Vin = +12.0V, Lsv = 675Vrms, Vcntl = +4.5V, Enable = +5V unless otherwise specified

Symbol	Parameter	Test Conditions	Min	Max	Unit
Lstart	Lamp Starting Voltage	Open Circuit	1800		Vrms
Lout	Lamp Output Current		6.75	8.25	mArms
Lfreq	Lamp-Current Frequency		48	58	KHz
Pfreq	PWM Dimming Frequency	Vcntl (PIN 6) = +2.5V Vsync-In (Pin 8) = 0V Vsync-In (PIN 8) = 60 Hz	95 119.8	101 120.2	Hz Hz
Pdc	PWM Duty Cycle Range	Vcntl (PIN 6) = 0.5 to +4.5V	0	100	%
ENoff	Enable Control, unit OFF (Pin 5)			0.8	Vdc
ENon	Enable Control, unit ON (PIN 5)		2.0		Vdc
VSYhi	Vertical Sync In HI Level (PIN 8)		3.5		Vdc
VSYlo	Vertical Sync In LO Level (PIN 8)			0.8	Vdc
+5Vout	+5V Reference Out (PIN 7)	10K Load to Ground	4.6	5.25	Vdc
Iin	Input Current Draw			2.1	Adc
Eff	Electrical Efficiency		90		%