

CCFL INVERTER

(For Single Tube Applications)

GENERAL DESCRIPTION

The AC-2194 is designed to power a single CCFL tube to a nominal power level of 5.6 Watts from an input voltage of +24V DC.

Intensity control is accomplished by the user providing a variable DC voltage or PWM signal at pin 5 of CON1.

All outputs are open and short circuit protected.

This inverter is designed to drive the Sharp LQ080V3DG01 display.

MECHANICAL/ENVIRONMENTAL

Weight = 24 grams

Altitude = 10,000 ft max.

Humidity < 85% non-condensing

Size (L x W x H) = 5.32 IN x 0.97 IN x 0.39 IN

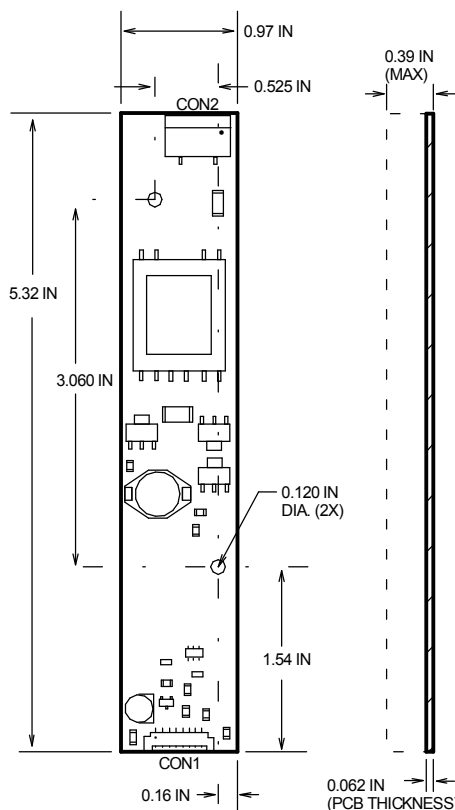
PCB thickness = 0.062 IN

Mounting Holes = 0.120 IN diameter (X2)

Input Power & Control Connector = CON1

CCFL Output Connector = CON2

RoHS Compliant



INPUT CONNECTOR

CON1

MOLEX 53261-0871

OUTPUT CONNECTOR

CON2

JST SM03(4.0)B-BHS-1-TB(LF)(SN)

PIN # FUNCTION

1	+24V(PWR)
2	+24V(PWR)
3	GND(PWR)
4	GND(PWR)
5	VCNTL/PWM IN
6	GND
7	GND
8	GND

PIN # FUNCTION

1	CCFL HOT
2	NC
3	CCFL COLD

MAXIMUM RATINGS*

Symbol	Parameter	Value	Unit
Vin	Supply Voltage (Referenced to Ground)	-0.7 to 30	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)	7.4	W
Top	Operating Temperature (Still air ambient around Inverter)	-40 to +85	°C
Tstg	Storage Temperature	-40 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)	21.6	26.4	Vdc
Lsv	Cold Cathode Fluorescent Lamp Sustaining Voltage	688	1032	Vrms
Vcntl	Intensity Control	0	5	Vdc
PWMin	Intensity Control PWM Frequency Range (User Supplied Input)	100	1000	Hz

ELECTRICAL CHARACTERISTICS

Vin = +24.0V, Lsv = 860Vrms, Vcntl = +5.0V, unless otherwise specified.

Symbol	Parameter	Test Conditions	Min	Nom.	Max	Unit
Lstart	Lamp Starting Voltage	Open Circuit	2200			Vrms
Lout	Lamp Output Current		5.8	6.5	7.2	mArms
Lfreq	Lamp-Current Frequency		28	31	34	KHz
Pfreq	PWM Dimming Frequency Out of Inverter	Vcntl (Pin 5) = +2.5V, or PWMin = 50%	95		101	Hz
Pdc	PWM Duty Cycle Range Out of Inverter	Vcntl (Pin 5) = 0V or PWMin = 0%			0	%
		Vcntl (Pin 5) = +5V or PWMin = 100%	100			%
Iin	Input Current Draw			0.26		Adc
Eff	Electrical Efficiency			87		%