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Specifications and Applications Information

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Preliminary

The E2039 (E200II Series) dc to ac inverter is specifically designed to power the Sharp LQ5AW116 LCD display to a moderate brightness level from a +12 volt dc source.

The E2039's small size and encapsulated package makes it the ideal power source for applications where small size, high efficiency and reliability are critical.

This inverter is designed to satisfy the most common cold-cathode lighting requirements for the Sharp LQ5AW116 LCD display. Custom units, providing different inputs, outputs or package refinements are available.

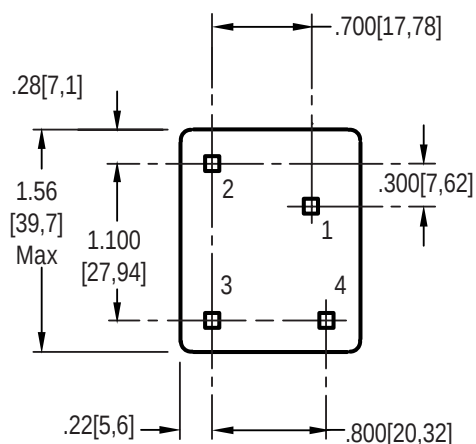
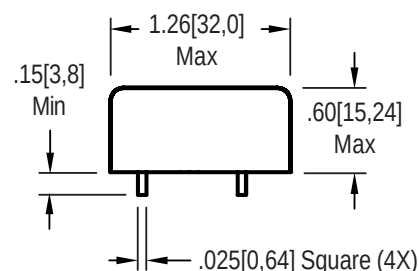
E2039

Single Lamp
DC to AC Inverter



E200II Package

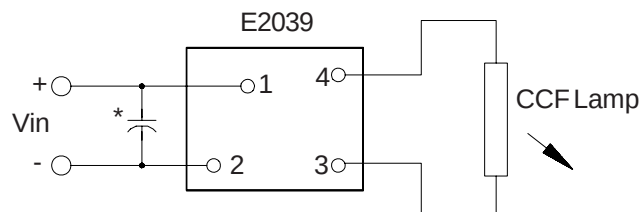
Package Configuration



1. Vin(+)
2. Vin(-)
3. ACreturn
4. ACout



Connection Diagram



* Low ESR type input by-pass capacitor (22 uf - 100 uf) may be required to reduce reflected ripple.



Absolute Maximum Ratings

Rating	Symbol	Value	Units
Input Voltage Range	Vin	-0.3 to +13.2	Vdc
Storage Temperature	Tstg	-40 to +85	°C

Operating Characteristics

With a load simulating the referenced display and lamp warm-up of 5 minutes.
Unless otherwise noted Vin = 12.00 Volts dc and Ta = 25°C

Characteristic	Symbol	Min	Typ	Max	Units
Input Voltage	Vin	+10.8	+12.0	+12.6	Vdc
Component Surface Temperature (note 2)	Ts	-20	-	+80	°C
Input Current (note 1)	Iin	-	0.41	0.48	Adc
Operating Frequency	Fo	31	36	41	kHz
Minimum Output Voltage (note 3)	Vout (min)	1350	-	-	Vrms
Efficiency	η	-	80	-	%
Output Current (per lamp)	Iout	-	6.7	-	mA rms
Output Voltage	Vout	-	585	-	Vrms

Specifications subject to change without notice.

(Note 1) Input current in excess of maximum may indicate a load/inverter mismatch condition, which can result in reduced reliability. Please contact ERG technical support.

(Note 2) Surface temperature must not exceed 80 degrees C; thermal management actions may be required.

(Note 3) Provided data is not tested but guaranteed by design.

Application Notes:

- 1) Printed circuit boards should be free of traces beneath the inverter.
- 2) The minimum distance from high voltage areas of the inverter to any conductive material should be .12 inches per kilovolt of starting voltage.
- 3) Contact ERG for possible exceptions.



Endicott Research Group, Inc. (ERG) reserves the right to make changes in circuit design and/or specifications at any time without notice. Accordingly, the reader is cautioned to verify that data sheets are current before placing orders. Information furnished by ERG is believed to be accurate and reliable. However, no responsibility is assumed by ERG for its use.