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E1950

Specifications and Applications Information

03/23/10

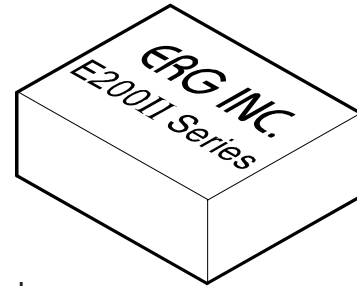
Preliminary

The E1950 (E200II Series) dc to ac inverter is specifically designed to power the Sharp LQ10D421 LCD display backlight to a moderate brightness level from a +12 volt dc source.

The E1950's small size and encapsulated package makes it the ideal power source for applications where small size, high efficiency and reliability are critical.

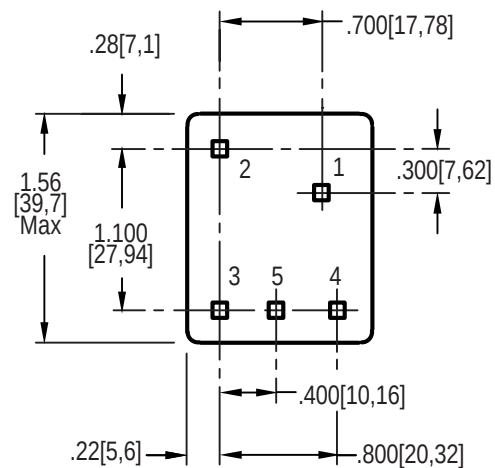
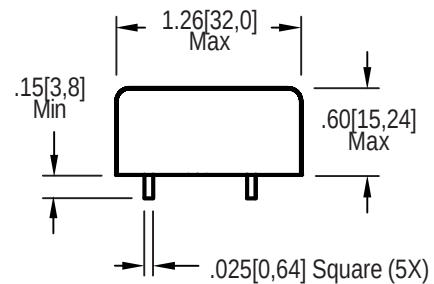
This inverter is designed to satisfy the most common cold-cathode lighting requirements for the LQ10D421 display. Custom units, providing different inputs, outputs or package refinements are available.

Two Lamp DC to AC Inverter



E200II Package

Package Configuration

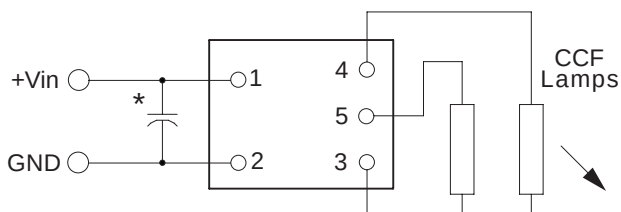


- 1. +Vin
- 2. GND
- 3. ACreturn
- 4. ACout
- 5. ACout



Connection Diagram

E1950



* 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	V_{in}	-0.3 to +13.2	Vdc
Storage Temperature	T_{stg}	-40 to +85	°C

Operating Characteristics

With the referenced display and lamp warm-up of 5 minutes.
 Unless otherwise noted $V_{in} = 12.00$ Volts dc and $T_a = 25^{\circ}\text{C}$.

Characteristic	Symbol	Min	Typ	Max	Units
Input Voltage	V_{in}	+10.8	+12.0	+12.6	Vdc
Component surface Temperature (note 1)	T_s	-20	-	+80	°C
Input Current (note 2)	I_{in}	-	0.57	0.64	Adc
Operating Frequency	F_o	24	29	34	kHz
Minimum Output Voltage (note 3)	$V_{out} \text{ (min)}$	1200	-	-	Vrms
Efficiency	η	-	88	-	%
Output Current (per lamp)	I_{out}	-	6.0	-	mArms
Output Voltage	V_{out}	-	500	-	Vrms

Specifications subject to change without notice.

(Note 1) Surface temperature must not exceed 80 degrees C; thermal management actions may be required.

(Note 2) 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 3) Provided data is not tested but guaranteed by design.

Application Notes:

- 1) Printed circuit boards to 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) ACreturn should be left floating, not grounded.
- 4) Contact ERG for possible exceptions.



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