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# E1950

## Specifications and Applications Information

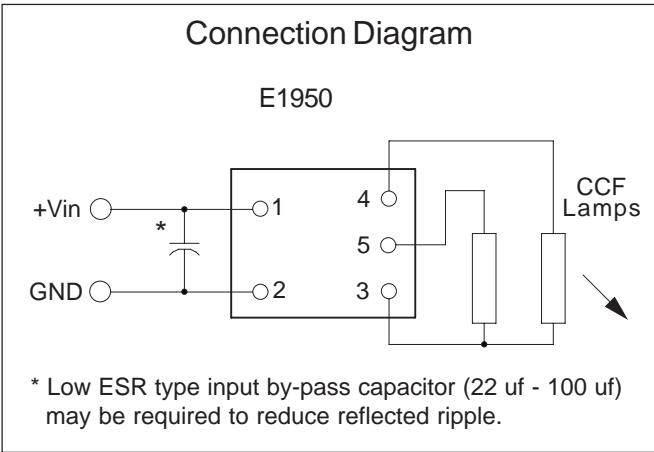
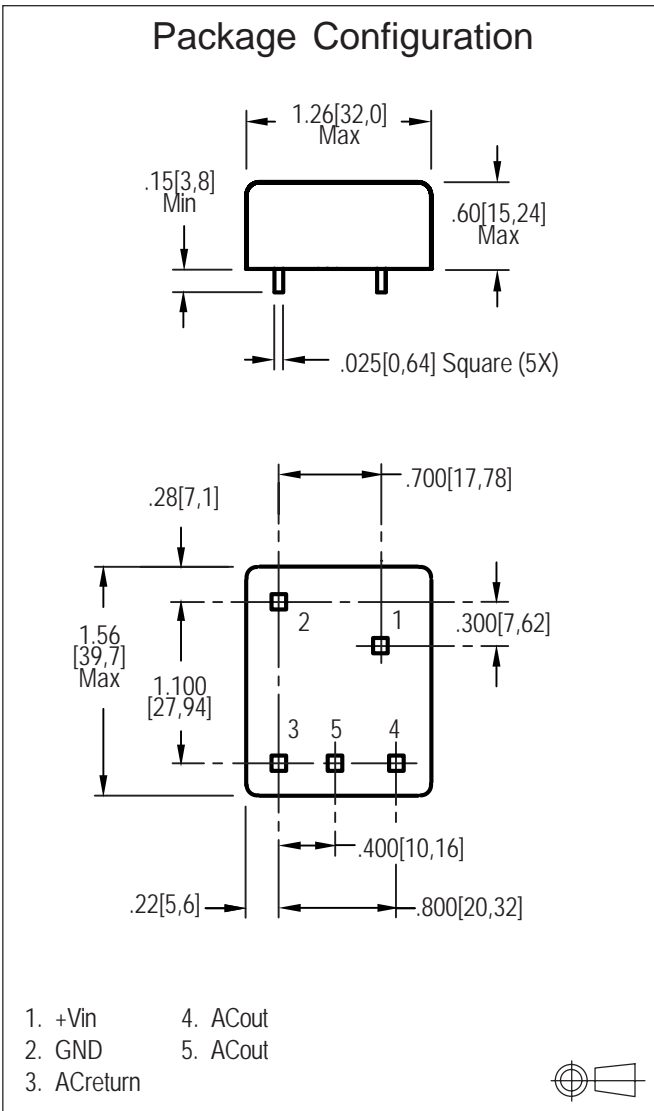
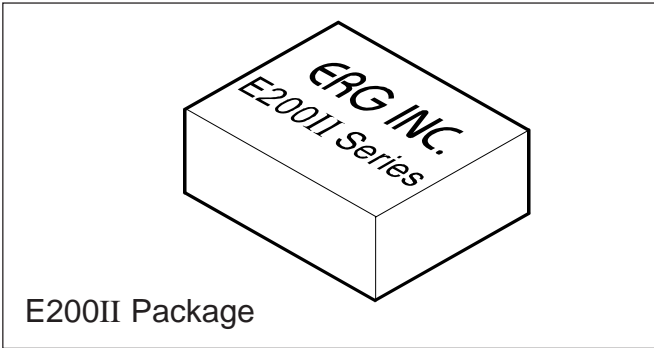
03/23/10 Preliminary

## Two Lamp DC to AC Inverter

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.



**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)	$V_{out}$ (min)	1200	-	-	Vrms
Efficiency	$\eta$	-	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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