



**Endicott Research Group, Inc.**

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<http://www.ergpower.com>

**Specifications and Applications Information**

02/17/06

Preliminary

**8mA22997**

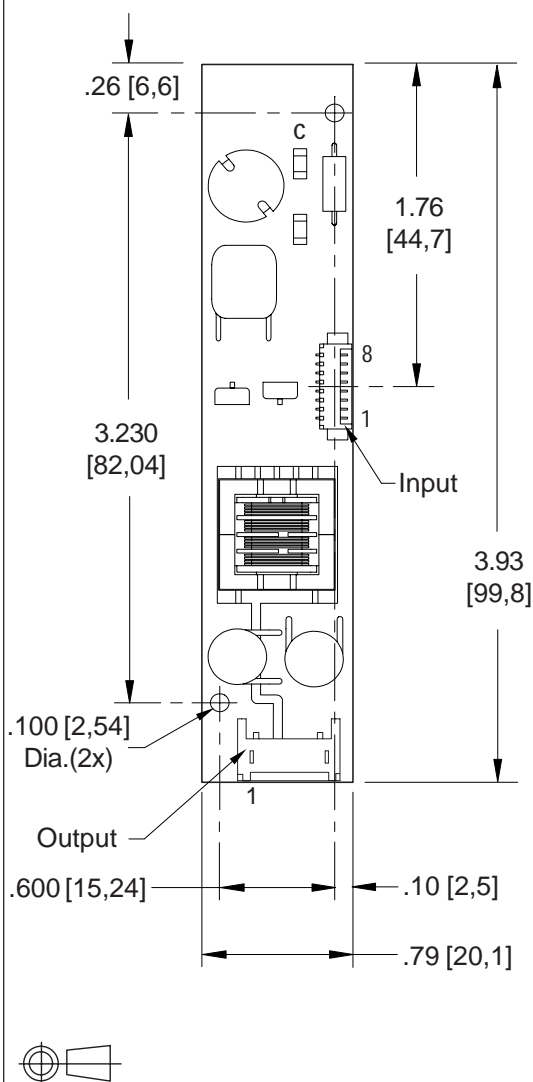
**Two Lamp  
DC to AC Inverter**

The ERG 8mA22997 (*8m Class*) low profile dc to ac inverter is specifically designed to power the AU Optronics B104SN02 LCD display module to a moderate brightness level from a +12 volt dc source.

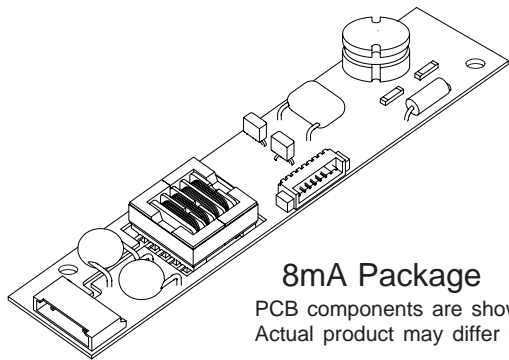
This low profile inverter features:

- ✓ Less Than 8 mm in Height
- ✓ LCD Module Specific
- ✓ Display Compatible Output Connector
- ✓ Firm Specifications
- ✓ Application Information
- ✓ Designed, Manufactured and Supported in the USA
- ✓ Custom Input and Output Voltages
- ✓ Flexible System Interface
- ✓ Notebook Display Head Compatible

**Package Configuration**



PCB components are shown for reference only. Actual product may differ from that shown.



**8mA Package**

PCB components are shown for reference only.  
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**Pin Descriptions**

J1-1 Vin(+)	J2-1 ACcommon
J1-2 Vin(+)	J2-2 ACout
J1-3 GND	J2-3 ACout
J1-4 GND	
J1-5 Enable	
J1-6 N/C	
J1-7 N/C	
J1-8 GND	

**Connectors**

Input J1  
 Molex  
 53261-0871

Output J2  
 JST  
 SM03(4.0)B-BHS-1-TB

**Absolute Maximum Ratings**

Rating	Symbol	Value	Units
Input Voltage Range	V <sub>in</sub>	-0.3 to +13.2	V <sub>dc</sub>
Operating Temperature	T <sub>o</sub>	0 to +70	°C
Storage Temperature	T <sub>stg</sub>	-40 to +85	°C

**Recommended Operating Conditions**

Rating	Symbol	Value	Units
Input Voltage	V <sub>in</sub>	+10.8 to 12.6	V <sub>dc</sub>

**Electrical Characteristics**

Unless otherwise noted V<sub>in</sub> = 12.00 Volts dc and T<sub>a</sub> = 25°C

Characteristic	Symbol	Min	Typ	Max	Units
Input Current (Note 1)	I <sub>in</sub>	-	.69	.80	A <sub>dc</sub>
Operating Frequency	F <sub>o</sub>	50	55	60	KHz
Minimum Output Voltage	V <sub>out</sub> (min)	1050	-	-	V <sub>rms</sub>
Efficiency	$\eta$	-	81	-	%
Output Current (per lamp)	I <sub>out</sub>	-	6	-	ma <sub>rms</sub>
Output Voltage (When powering a load simulating the referenced display)	V <sub>out</sub>	-	560	-	V <sub>rms</sub>
Pin5 Input Current Requirement	-	-	7	-	ma <sub>dc</sub>

After lamp has been allowed to warm-up for 5 minutes.

External Disable Circuit shown on page 3.

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.

**Application Notes:**

- 1) The minimum distance from high voltage areas of the inverter to any conductive material should be .12 inches per kilovolt of starting voltage.
- 2) Mounting hardware should be non-conductive.
- 3) Open framed inverters should not be used in applications at altitudes over 10,000 feet.
- 4) Contact ERG for possible exceptions.



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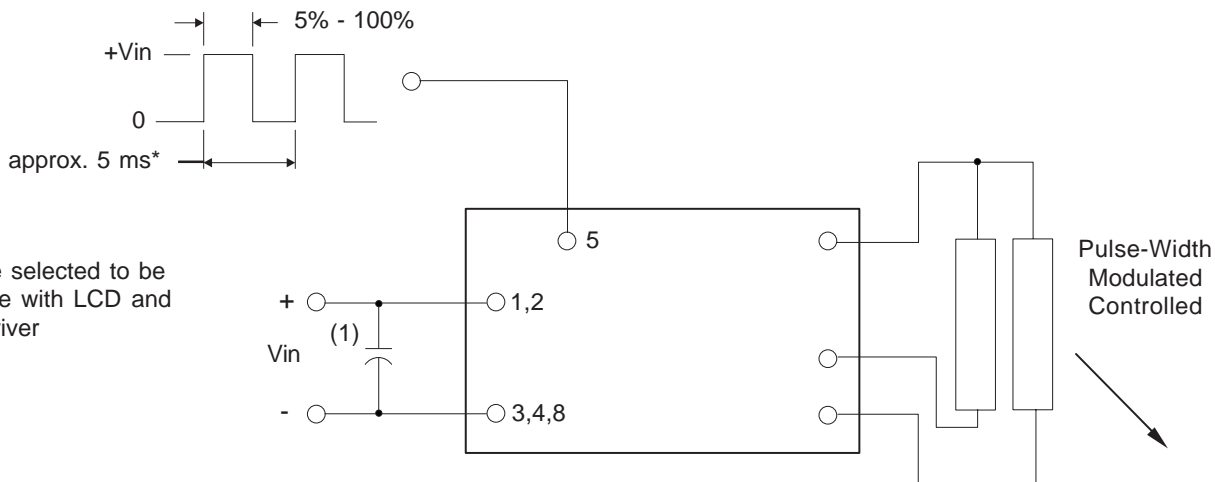
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### Dimming Option

(Valid with the "C" jumper removed)

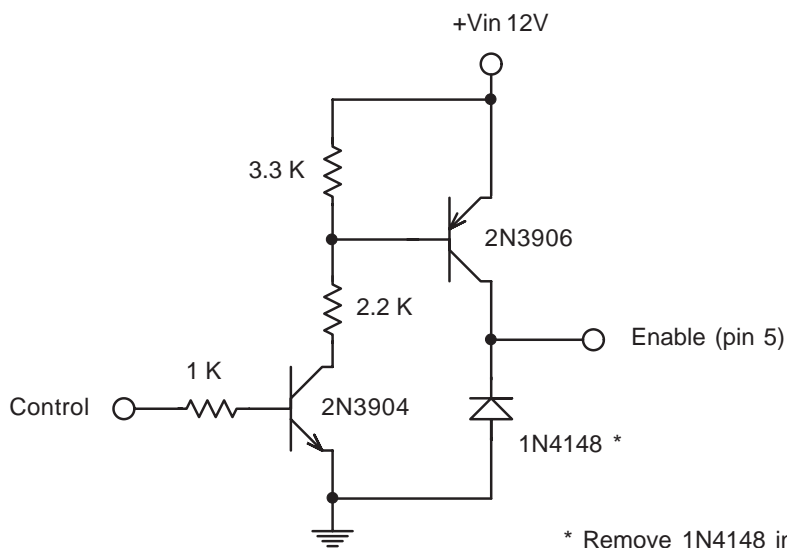


\* should be selected to be compatible with LCD and display driver

Note: 1 Low ESR type input by-pass capacitor (22 uf - 100 uf) may be required to reduce reflected ripple.

### Disable Circuit

(Valid with the "C" jumper removed)



\* Remove 1N4148 in applications where excessive ground bounce voltages exist.



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.