



Endicott Research Group, Inc.

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## Specifications and Applications Information

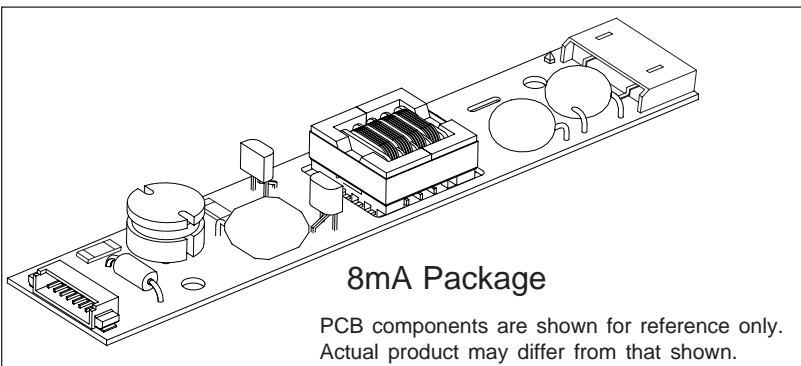
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Preliminary

The ERG 8mA23124 (**8m Class**) low profile dc to ac inverter is specifically designed to power the Sharp LQ070T5GG01S display module to a moderate brightness level from a +5 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



### Connectors

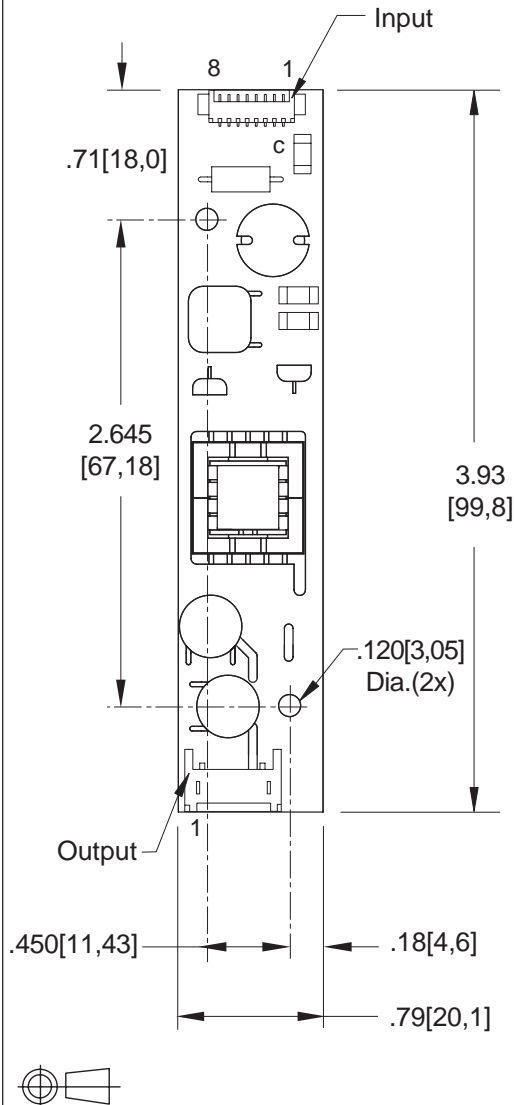
Input J1  
Molex 53261-0890

Output J2  
JST SM04(4.0)B-BHS-1-TB

# 8mA23124

Two Lamp  
DC to AC Inverter

### Package Configuration



### Pin Descriptions

J1-1 Vin	J2-1 ACout
J1-2 Vin	J2-2 ACout
J1-3 GND	J2-3 ACcommon
J1-4 GND	J2-4 ACcommon
J1-5 Control *	
J1-6 N/C	
J1-7 N/C	
J1-8 GND	

\* Valid with the "C" jumper removed

**Absolute Maximum Ratings**

Rating	Symbol	Value	Units
Input Voltage Range	Vin	-0.3 to +5.5	Vdc
Operating Temperature	To	-0 to +70	°C
Storage Temperature	Tstg	-40 to +85	°C

**Recommended Operating Conditions**

Rating	Symbol	Value	Units
Input Voltage	Vin	+4.50 to 5.25	Vdc

**Electrical Characteristics**

Unless otherwise noted Vin = 12.00 Volts dc and Ta = 25°C

Characteristic	Symbol	Min	Typ	Max	Units
Input Current	lin	-	1.10	1.26	Adc
Operating Frequency	Fo	35	40	45	KHz
Minimum Output Voltage	Vout (min)	1400	-	-	Vrms
Efficiency	h	-	78	-	%
Output Current (Note 5)	Iout	-	10.1	-	marms
Output Voltage (When powering a load simulating the referenced display)	Vout	-	425	-	Vrms
Pin5 Input Current Requirement	-	-	13	-	madc

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: 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.
- 5) Specified inverter output current loaded with two lamps.



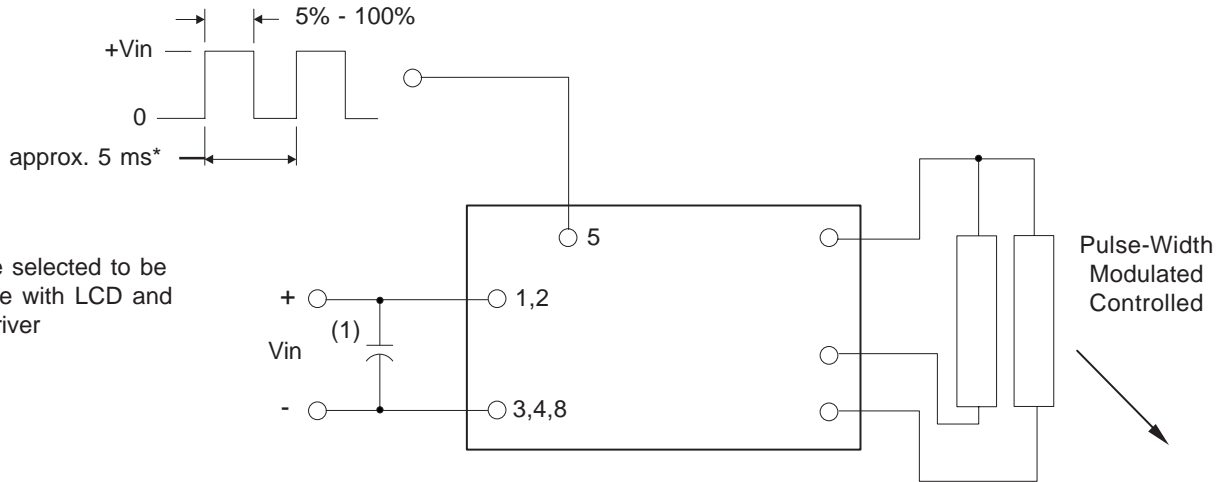
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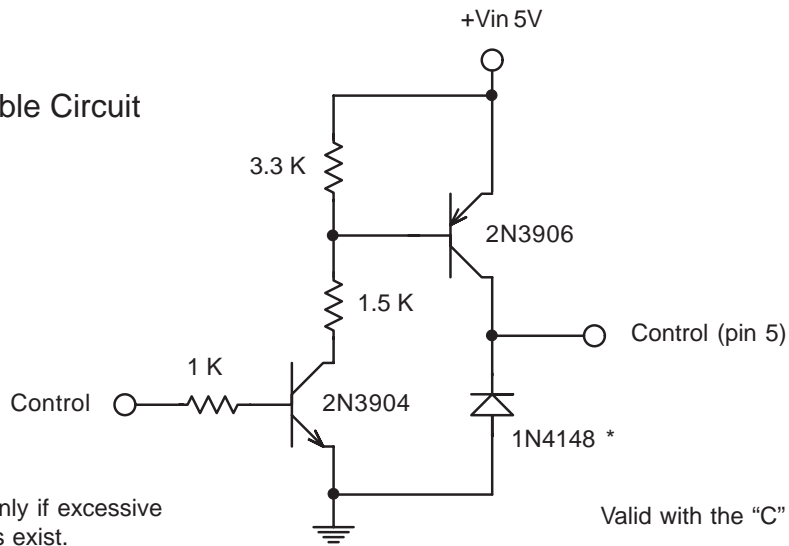
Dimming Option  
(Valid with the "C" jumper removed)



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

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

Disable Circuit



\* Delete 1N4148 diode only if excessive ground bounce voltages exist.

Valid with the "C" jumper removed

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.