



Endicott Research Group, Inc.

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## Specifications and Applications Information

04/28/06

Preliminary

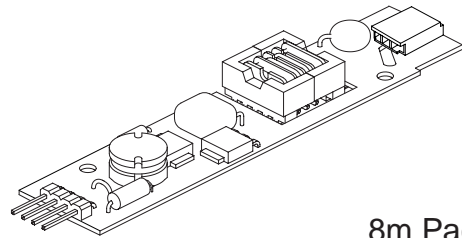
The ERG 8m123458 (**8m Class**) low profile dc to ac inverter is specifically designed to power the Samsung LTG500QV-F03 display module to a moderate brightness level from a +12 volt dc source.

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

# 8m123458

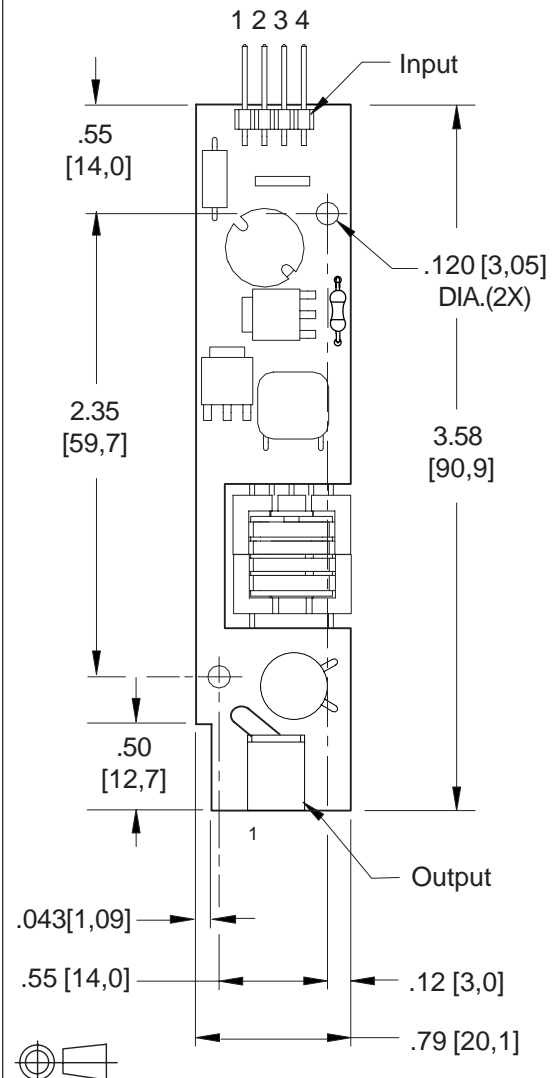
## 8m Class DC to AC Inverter



**8m Package**

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

### Package Configuration



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

### Connectors

Input Connector	Output Connector
4 pins are 0.315" [8,00] Long, 0.025" [0,63] Square and are on 0.100" [2,54] Centers.	JST SM02B-BHSS-1-TB
J1-1 Vin(+) J1-2 GND J1-3 Control J1-4 N/C	J2-1 ACout J2-2 ACout

## Absolute Maximum Ratings

Rating	Symbol	Value	Units
Input Voltage Range	Vin	-0.3 to +13.2	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	+11.4 to 12.6	Vdc

## Electrical Characteristics

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

Characteristic	Symbol	Min	Typ	Max	Units
Input Current <sup>(note 1)</sup>	Iin	-	.35	.41	Adc
Operating Frequency	Fo	33	38	43	KHz
Minimum Output Voltage	Vout (min)	1500	-	-	Vrms
Efficiency	-	-	84	-	%
Output Current (per lamp)	Iout	-	5.2	-	marms
Output Voltage (When powering a load simulating the referenced display)	Vout	-	675	-	Vrms
Pin3 Input Current Requirement	-	-	2.9	-	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 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.

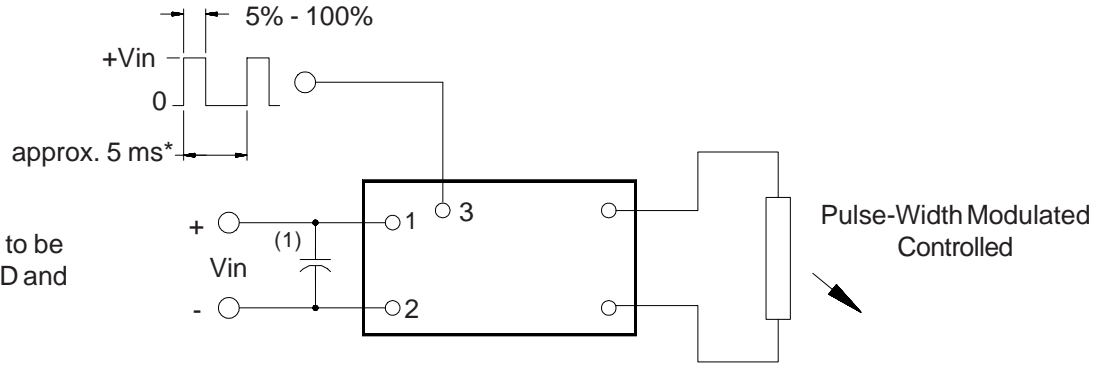


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Made in USA

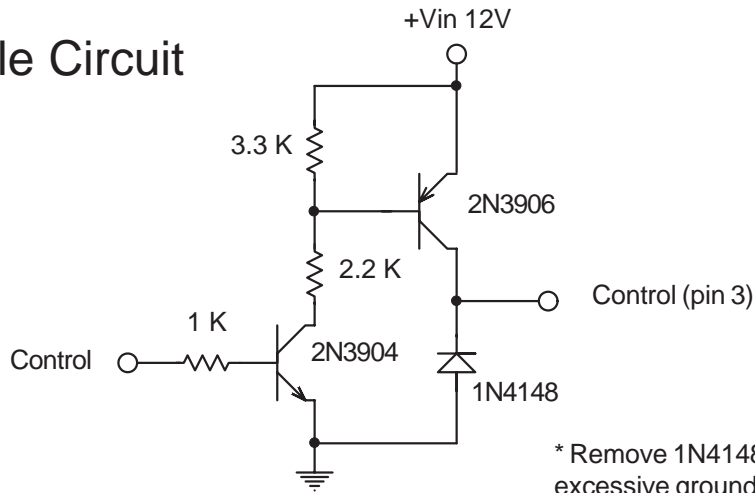
## Dimming Option



\* 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



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