



Endicott Research Group, Inc.

2601 Wayne St., Endicott, NY 13760
607-754-9187 Fax 607-754-9255
<http://www.ergpower.com>

SE3464F

RoHS
Compliant

Specifications and Applications Information

08/21/08

Preliminary

8m Class
DC to AC Inverter

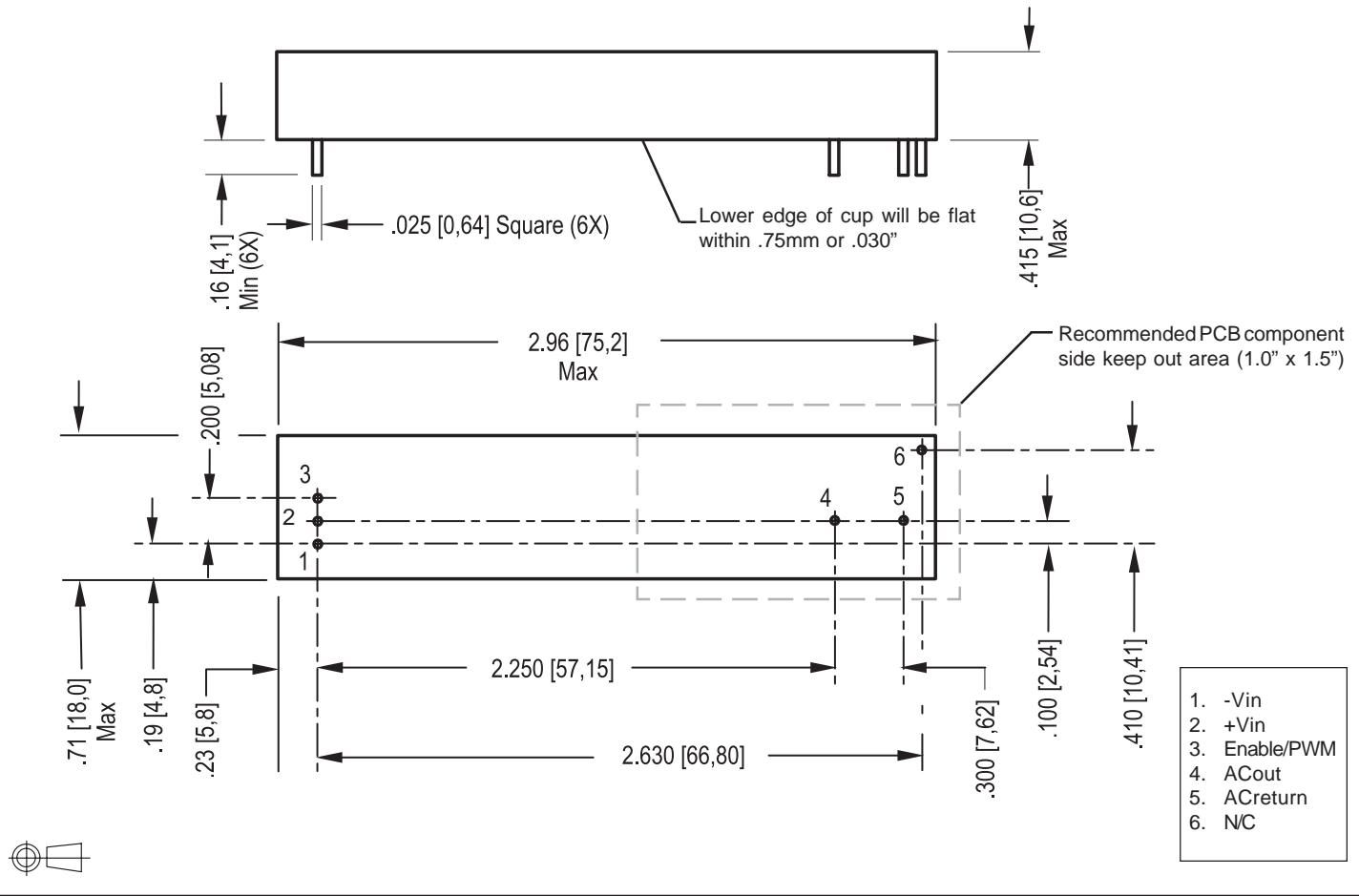
The SE3464F (*S-Series*) dc to ac inverter is specifically designed to power the AU Optronics A065GW01 display to a moderate brightness level from a +5 volt dc source.

The SE3464F's small size and encapsulated package makes it the ideal power source for applications where size, high efficiency and reliability are critical.

This standard inverter is designed to satisfy the most common cold-cathode lighting requirements for the A065GW01 display. Custom units, providing different inputs, outputs or package refinements are available.

S-Series

Package Configuration



Absolute Maximum Ratings

| Rating | Symbol | Value | Units |
|---------------------|------------------|--------------|------------------|
| Input Voltage Range | V _{in} | -0.3 to +5.5 | V _d c |
| 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} = 5.00 Volts dc and T_a = 25°C

| Characteristic | Symbol | Min | Typ | Max | Units |
|---|------------------------|-------|-------|-------|--------------------|
| Input Voltage | V _{in} | +4.50 | +5.00 | +5.25 | V _d c |
| Component Surface Temperature (note 2) | T _s | -20 | - | +80 | °C |
| Input Current (note 1) | I _{in} | - | 0.72 | 0.83 | A _d c |
| Operating Frequency | F _o | 34 | 39 | 44 | k _{Hz} |
| Minimum Output Voltage (note 3) | V _{out} (min) | 1400 | - | - | V _r ms |
| Efficiency | η | - | 92 | - | % |
| Output Current (per lamp) | I _{out} | - | 6.0 | - | m _A rms |
| Output Voltage | V _{out} | - | 550 | - | V _r ms |
| Enable Pin Input Current Requirement (note 4) | I _{in} | - | 9.0 | - | m _A dc |

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.

(Note 2) Surface temperature must not exceed 80 degrees C; thermal management actions may be required.

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

(Note 4) Required User Enable/Disable Interface Circuit is shown on page 3.

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) Contact ERG for possible exceptions.



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Made in USA

PWM Dimming

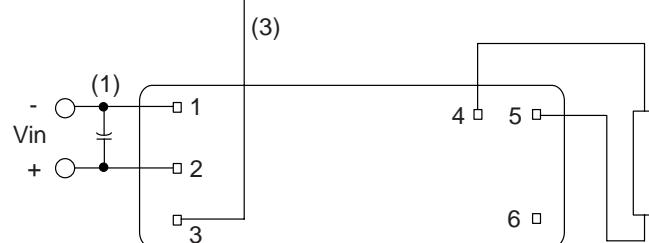
Required User Enable/Disable Interface Circuit

Circuit or equivalent required for proper inverter turnoff.

(2) V_{PWM} (4) 0% - 100%
approx. 1.5 ms*

| V_{in} | R1 | R2 |
|----------|-------|------|
| 5V | 3.3K | 1.5K |
| 8V | 3.3K | 1.8K |
| 12V | 3.3K | 2.2K |
| 24V | 10.0K | 8.2K |

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



- (1) Low ESR type input by-pass capacitor (22 uf - 100 uf) may be required to reduce reflected ripple.
- (2) V_{PWM} from 2.4V to less than or equal to 13.2V.
- (3) Full brightness without PWM control requires that pin 3 be tied to $V_{in}(+)$. Pin 3 must be at 0V to turn off.
- (4) Duty Cycle 0% - 100%.



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.