 DESCRIPTION:
This low profile DC to AC Inverter is developed for dual lamps, low power LCD back-light. Application includes industrial PC and LCD monitor.

Applicable LCD: NL8060BC31-20 / NL8060BC31-17 (NEC)
Lamp Voltage 600Vrms
Lamp Current 5mA rms
Lamp Start Up Voltage 1250Vrms (Vin : 12V)

FEATURES:
Wide operating temperature range
Alarm signal function
PWM dimming type.
Current Feedback Circuit
Silicon Coating in High Voltage area

TEMPERATURE & HUMIDITY:
Operating Temperature Range -10°C ~ +70°C
Storage Temperature Range -30°C ~ +85°C
Humidity 95%RH max

DIMENSIONS:

Units: mm
Weight: 20 (g) typ.

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No. Part Description Qty. Note
1 PWB 1 UL94V-0 t=1.0mm
2 Connector CN1 1 53261-0890 (Molex)
3 Connector CN2 1 SM03(4.0)B-BHS (JST)

CN1 : 53261-0890 (Molex)

<table>
<thead>
<tr>
<th>Pin</th>
<th>Symbol</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>CN1-1</td>
<td>Vin</td>
<td>10.8 ~ 13.2V</td>
</tr>
<tr>
<td>CN1-2</td>
<td>GND</td>
<td>0 V</td>
</tr>
<tr>
<td>CN1-3</td>
<td>Vrmt</td>
<td>0 ~ 0.4V: OFF</td>
</tr>
<tr>
<td>CN1-4</td>
<td>Vbr1 / Rbr1</td>
<td>0 ~ 2.5V / 0 ~ 50kΩ</td>
</tr>
<tr>
<td>CN1-5</td>
<td>Vbr2 / Rbr2</td>
<td>GND / 0 ~ 50kΩ</td>
</tr>
<tr>
<td>CN1-6</td>
<td>Vst</td>
<td>0V / 5V</td>
</tr>
</tbody>
</table>

CN2 : SM03(4.0)B-BHS (JST)

<table>
<thead>
<tr>
<th>Pin</th>
<th>Symbol</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>CN2-1</td>
<td>Vlow</td>
<td>(2V)</td>
</tr>
<tr>
<td>CN2-2</td>
<td>Vhigh2</td>
<td>600Vrms (5mA rms)</td>
</tr>
<tr>
<td>CN2-3</td>
<td>Vhigh1</td>
<td>600Vrms (5mA rms)</td>
</tr>
</tbody>
</table>

*1. This is an output pin and it is active high (+5V) if any Lamp opens / fails
## General Information

All specifications are subject to change without notice.

- Tel: +81-3-5201-7206 (Japan)
- Tel: +1-847-390-4439 (USA)
- Tel: +44-118-921-6206 (EU)

## Electrical Characteristics:

### Test Circuit:

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Symbol</th>
<th>Conditions</th>
<th>Specifications</th>
</tr>
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<tbody>
<tr>
<td>Vin (V)</td>
<td>Vrmt (V)</td>
<td>Vbr / VR</td>
<td>Ta (°C)</td>
</tr>
<tr>
<td>12 ± 1.2</td>
<td>5 ± 0.25</td>
<td>0V / 0 Ω</td>
<td>-10 ~ +70</td>
</tr>
</tbody>
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<tr>
<td>RL2 (kΩ) // CL2(pF)</td>
<td>2.5V / 50kΩ</td>
<td>23 ± 5</td>
<td>TBD</td>
</tr>
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</table>

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<tr>
<td>Input Current 1</td>
<td>Iin1</td>
<td>12 ± 0.6</td>
<td>5 ± 0.25</td>
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<tr>
<td>Input Current 2</td>
<td>Iin2</td>
<td>12 ± 0.6</td>
<td>0 ± 0.25</td>
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<tr>
<td>Frequency (F1)</td>
<td>F1</td>
<td>12 ± 0.6</td>
<td>5 ± 0.25</td>
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<tbody>
<tr>
<td>Frequency (Duty) (F2)</td>
<td>F2</td>
<td>12 ± 0.6</td>
<td>5 ± 0.25</td>
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<tbody>
<tr>
<td>Open Voltage</td>
<td>Vopen</td>
<td>10.8</td>
<td>5 ± 0.25</td>
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<td>Alarm Signal (Note 4)</td>
<td>Vst</td>
<td>12 ± 1.2</td>
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### Notes:

1. Please keep minimum of 2mm clearance (all directions) between inverter high voltage area as marked on mechanical drawing and any conductors.

2. Open circuit on all lamps for more than 3 seconds, will shut the inverter down.

3. In test circuit; 5pF capacitor across the load resistor is add to simulate LCD back-light stray capacitor.

4. In test circuit; if any of switches SW3, SW4 or SW5 opens , then the alarm signal will be activated (+5V).

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**Diagram Note:**

- **SW1**: Operation of unit
  - a: Operation
  - b: Non operation

- **SW2**: Operation of unit
  - a: Voltage dimming
    - Vbr=0–2.5V
  - b: Variable resistance dimming
    - VR=0–50kΩ

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