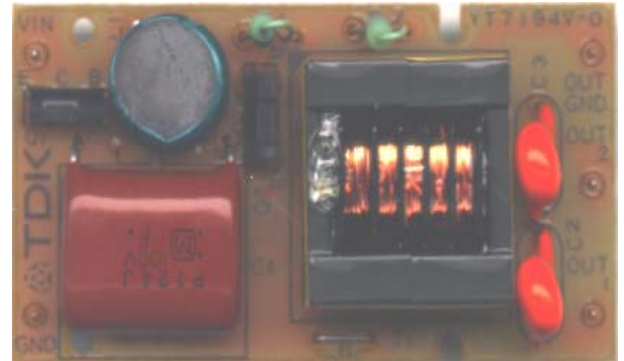


**DESCRIPTION :**

TDK DC/AC Inverter, CXA-series, are low-noise, high frequency power sources developed for driving Cold Cathode Fluorescent Lamps operating at 20~80 kHz. These inverters are designed to handle a wide range of lamp characteristics.

**FEATURES :**

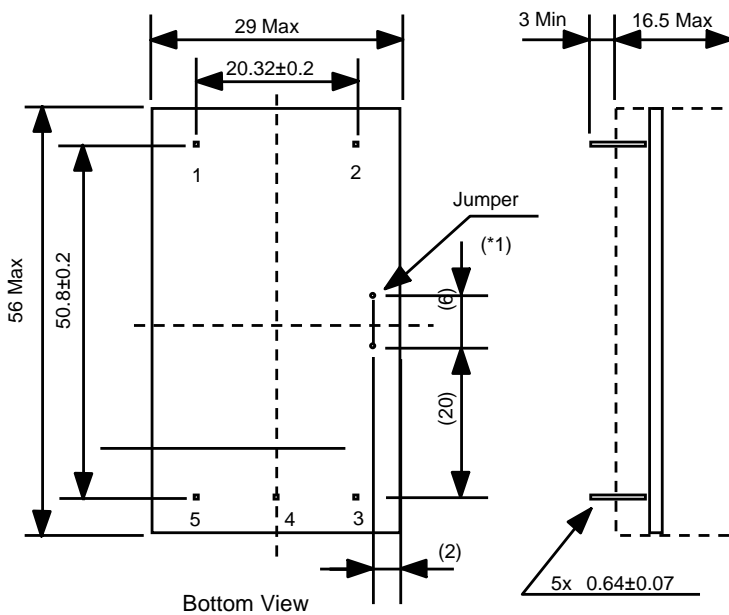
- Constant current output ensures compatibility with a wide range of discharge lamps.
- High efficiency resonant circuitry produces low-noise, sinusoidal-wave output.
- One-lamp/two-lamp combined-use capability allows use in four different configurations.
- Common ground or floating bulb configurations.
- Compact size and light weight facilitate PC board mounting.
- High Efficiency (80%)



**TEMPERATURE & HUMDITY :**

- Operating Temperature Range    -10 °C ~ +60°C
- Storage Temperature Range       -20 °C ~ +85°C
- Humidity                                95 %RH max (No dew)

**DIMENSIONS :**



Unit : mm  
Weight: 21.0g typ.

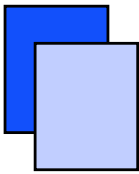
| Pin | Symbol   | Note      |
|-----|----------|-----------|
| 1   | Vin      | 0 ~ 6 Vdc |
| 2   | GND      | 0 Vdc     |
| 3   | Iout1    |           |
| 4   | Iout2    |           |
| 5   | Iout-ret |           |

\*1 Remove for Isolated Ground                      Unit : mm

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Address: Dörnet 8 ; 74360 Ilsfeld-Auenstein / Germany  
Tel. :                    + 49 / 70 62 / 67 59 - 6  
Fax:                    + 49 / 70 62 / 67 59 - 80



**CONNECTOR CONFIGURATION:**

| Pin No. | Symbols | Ratings |
|---------|---------|---------|
| 1       | Vin     | 5V      |
| 2       | GND     | 0V      |
| 3       | OUT1    | 400Vrms |
| 4       | OUT2    | 400Vrms |
| 5       | OUT GND | 0V      |

**ABSOLUTE MAXIMUM RATINGS:**

| Items         | Symbols | Specification | Unit |
|---------------|---------|---------------|------|
| Input Voltage | Vin     | 0~6.0         | VDC  |
| Output Power  | Pout    | 6             | W    |

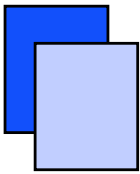
**ELECTRICAL CHARACTERISTICS:**

| Items                | Symbols       | Conditions |         |         | Specification |      |         | Unit  | Connection |
|----------------------|---------------|------------|---------|---------|---------------|------|---------|-------|------------|
|                      |               | Vin [V]    | Ta [°C] | RL [KΩ] | Min.          | Typ. | Max.    |       |            |
| Output Current       | Iout          | 5±0.05     | 23±5    | 40      | 9             | 10   | 11      | mArms | 1          |
|                      |               | 5±0.25     | -10~60  | 30~50   | 8             | 10   | 12      |       |            |
| Input Current        | Iin           | 5±0.25     | -10~60  | 30~50   | -             | 1000 | 1500    | mA DC |            |
| Frequency            | F             | 5±0.25     | -10~60  | 30~50   | 23            | 28   | 33      | kHz   |            |
| Open Circuit Voltage | Vopen         | 5±0.25     | -10~60  | ∞       | 1000          | 1200 | -       | Vrms  |            |
| Output Current       | Iout          | 5±0.05     | 23±5    | 67      | 5.1           | 6    | 6.5     | mArms | 2          |
|                      |               | 5±0.25     | -10~60  | 50~84   | 4.5           | 6    | 7.1     |       |            |
| Input Current        | Iin           | 5±0.25     | -10~60  | 50~84   | -             | 600  | 1000    | mA DC |            |
| Frequency            | F             | 5±0.25     | -10~60  | 50~84   | 27            | 32   | 37      | kHz   |            |
| Open Circuit Voltage | Vopen         | 5±0.25     | -10~60  | ∞       | 1000          | 1200 | -       | Vrms  |            |
| Output Current       | Iout          | 5±0.05     | 23±5    | 80      | 4.2           | 5    | 5.4     | mArms | 3          |
|                      |               | 5±0.25     | -10~60  | 60~100  | 3.7           | 5    | 5.9     |       |            |
| Input Current        | Iin           | 5±0.25     | -10~60  | 60~100  | -             | 600  | 900     | mA DC |            |
| Frequency            | F             | 5±0.25     | -10~60  | 60~100  | 23            | 28   | 33      | kHz   |            |
| Open Circuit Voltage | Vopen         | 5±0.25     | -10~60  | ∞       | 1000          | 1200 | -       | Vrms  |            |
| Output Current       | Iout1 / Iout2 | 5±0.05     | 23±5    | 80      | 4.5/4.5       | 5/5  | 5.5/5.5 | mArms | 4          |
|                      |               | 5±0.25     | -10~60  | 60~100  | 4/4           | 5/5  | 6/6     |       |            |
| Input Current        | Iin           | 5±0.25     | -10~60  | 60~100  | -             | 1000 | 1500    | mA DC |            |
| Frequency            | F             | 5±0.25     | -10~60  | 60~100  | 23            | 28   | 33      | kHz   |            |
| Open Circuit Voltage | Vopen         | 5±0.25     | -10~60  | ∞       | 1000          | 1200 | -       | Vrms  |            |

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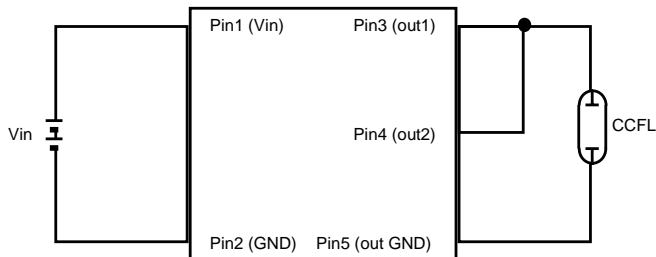
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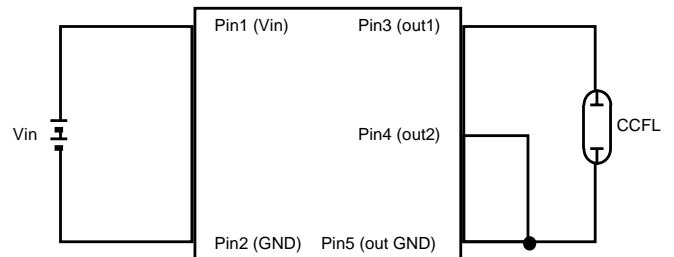


## APPLICATION

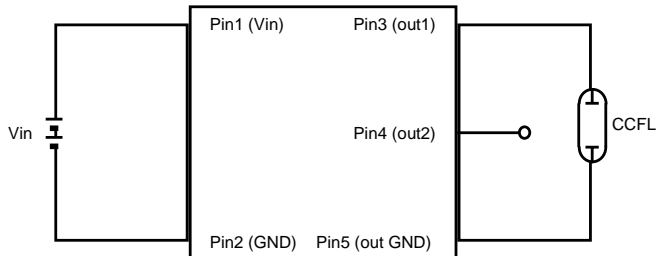
Connection 1



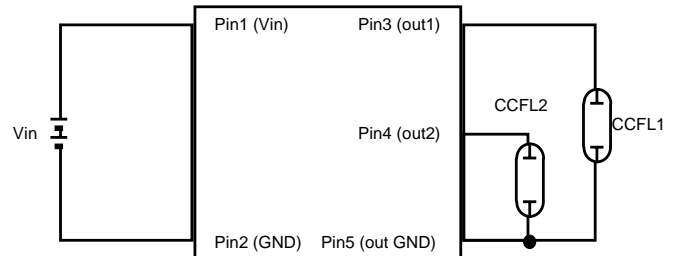
Connection 3



Connection 2



Connection 4

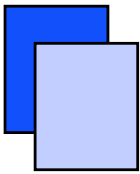


- Note 1. For circuit connection, please prefer to test circuit diagram.
- Note 2. Please use minimum of 2mm clearance (all directions) between inverter high voltage area and any conductors. Please refer to mechanical drawing for marking of high voltage area.
- Note 3. Open voltage (strike voltage) is measured across the transformer secondary winding at no load as the reading at the output connector would be less than the actual value.
- Note 4. If the start up voltage falls below Cold Cathode Tube strike voltage, the CCFL will not light up easily specially at lower ambient temperature. Please review mounting instruction to avoid any abnormal operation due to coupling/leakage capacitance of inverter high voltage area to any surrounding conductor.
- Note 5. For operation in floating mode, please remove jumper (J1) on top side of PCB that pin2 and pin5.
- Note 6. To prevent electrical discharge from high voltage area, please use non-conductive fastener in U mounting hole.

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**TEST CIRCUIT**

|  |  |   |
|--|--|---|
|  |  |   |
|  |  |   |
|  | <p style="text-align: center; font-size: 2em;"><b>Connection</b></p> |   |
|  |  | <p style="text-align: center; font-size: 2em;"><b>lin<br/>A</b></p> |