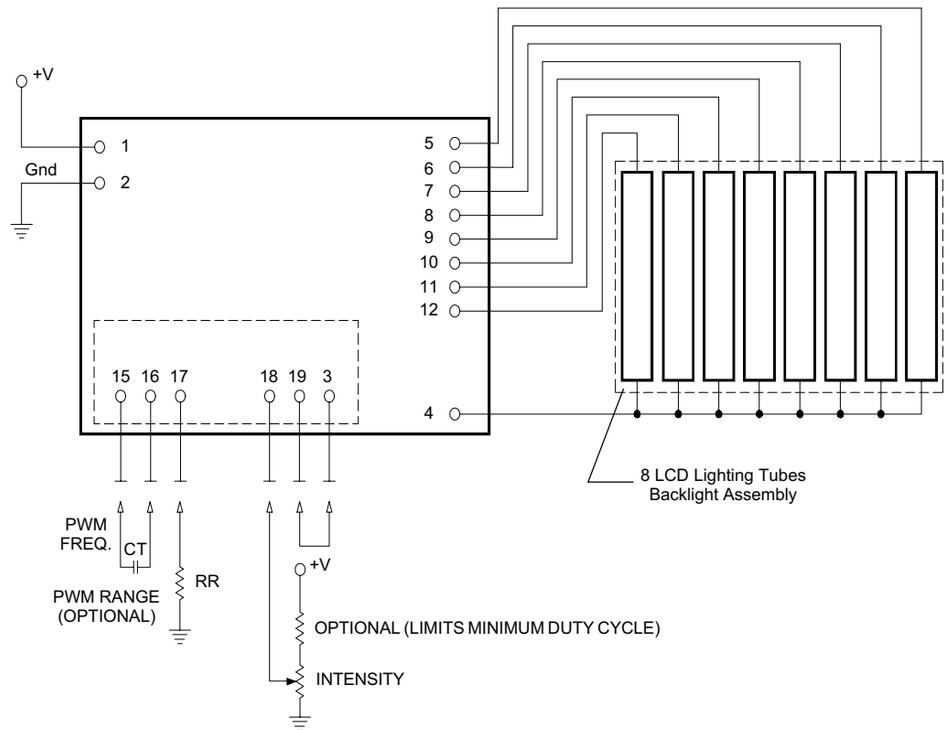
FIGURE 4 - TYPICAL CONNECTION UTILIZING INTERNAL PWM GENERATOR

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R282258

# Specifications and Applications Information

6/1/99 Preliminary

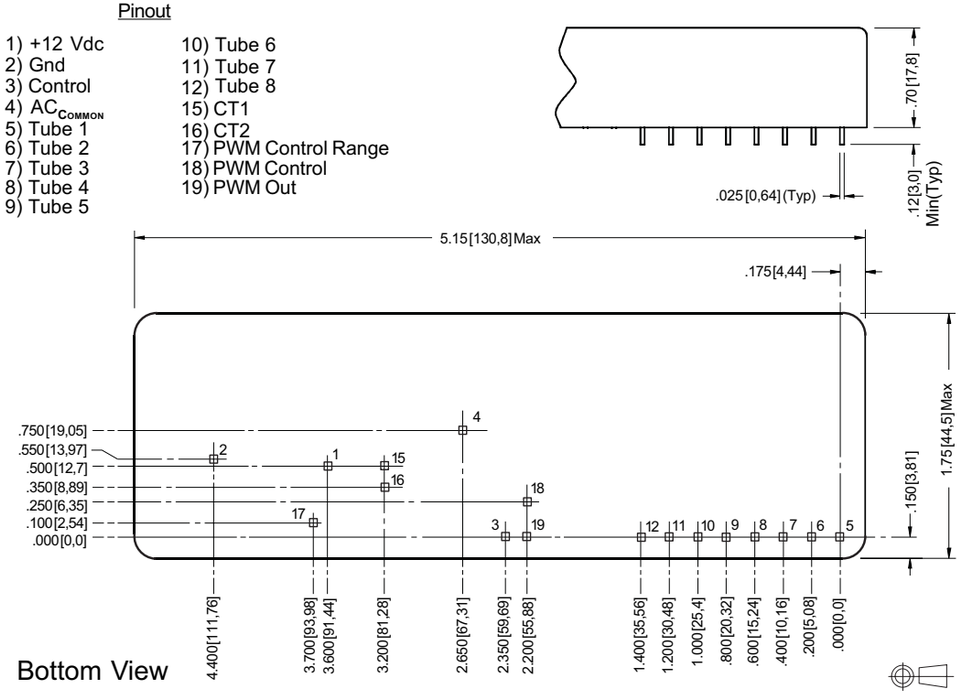
## 8 Tube DC to AC Inverter

The ERG R282258 dc to ac inverter is specifically designed to power 8 tubes of the Landmark BL-C073 backlight assembly. It provides for flicker-free dimming from either an analog or digital control input.

The R282258's high power density, diming control, and encapsulated package make it the ideal power source for applications where high efficiency and reliability in lighting multiple tube backlights are critical.

Pinout

1) +12 Vdc
2) Gnd
3) Control
4) $AC_{COMMON}$
5) Tube 1
6) Tube 2
7) Tube 3
8) Tube 4
9) Tube 5
10) Tube 6
11) Tube 7
12) Tube 8
15) CT1
16) CT2
17) PWM Control Range
18) PWM Control
19) PWM Out




Bottom View

## FIGURE 1 - ELECTRICAL CHARACTERISTICS

**Absolute Maximum Ratings**

| Rating | Symbol | Value | Units |
|---|---|---|---|
| Input Voltage Range | Vin | -0.3 to +15 | 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 | +10.8 to 13.2 | Vdc |

**Electrical Characteristics**

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

| | Characteristic | Symbol | Min | Typ | Max | Units |
|---|---|---|---|---|---|---|
| INVERTER SECTION | Input Current | Iin | - | 2.0 | - | Adc |
| | Operating Frequency | Fo | - | 35 | - | KHz |
| | Tube Starting Voltage * | Vstart | 1160 | - | - | Vrms |
| | Inverter Efficiency | η | - | 88 | - | % |
| | Tube Operating Current (per tube) | Io | - | 6.5 | - | marms |
| | Tube Sustaining Voltage (per tube) ** | Vs | - | 385 | - | Vrms |
| SHUT-DOWN SECTION | CCFT Control Level (Pin 3)<br>CCFT Output Off<br>CCFT Output On | | <br><br>2.2 | | <br><br>1.5 | Vdc |
| | CCFT Control Pin Sink Current | | | 1.1 | 1.4 | madc |
| INTERNAL PWM GENERATOR | PWM Frequency Range | | 50 | | 1000 | Hz |
| | PWM Frequency *** | | | 180 | | Hz |
| | PWM Control Voltage (Pin 18) | | 0 | | +Vin-2 | Vdc |
| | Input Bias Current (Pin 18) | | | 45 | 250 | nAdc |
| | PWM Control Range Program Resistance (Pin 17) | | 1 | | | Kohm |
| | PWM Output Level (Pin 19)<br>Low<br>High | | <br><br>10 | <br>5<br>11 | <br><br>50 | <br>mVdc<br>Vdc |

* Valid over entire operating temp. range

** Measured, not guaranteed
Specifications subject to change without notice

**Endicott Research Group, Inc.**





## Typical Performance Curves (No Dimming)

**FIGURE 6 - TUBE FREQUENCY VS. INPUT VOLTAGE**

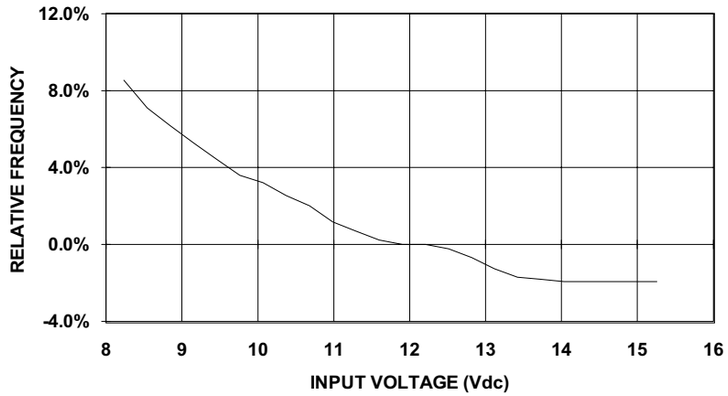
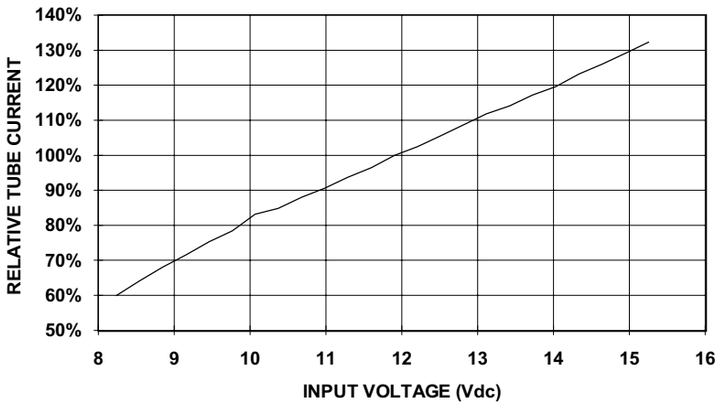



**FIGURE 7 - TUBE CURRENT VS. INPUT VOLTAGE**

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