



Endicott Research Group, Inc.

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

DMA22570

Specifications and Applications Information

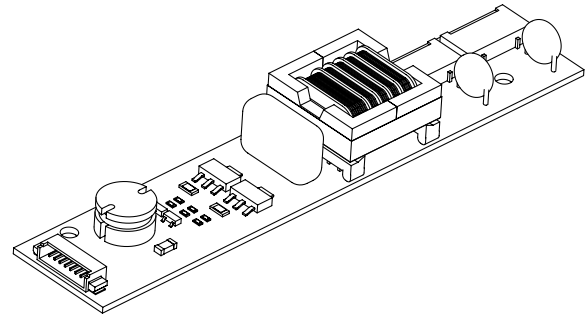
05/02/04

Preliminary

Two Tube
DC to AC Inverter

The ERG DMA22570 (DMA Series) DC to AC inverter features onboard connectors and can be easily dimmed using an external pulse-width modulated control signal. This unit is less than 13mm in height and the two mounting holes makes installation very straight forward.

Powered by a regulated 12 volt DC source the DMA22570 is specially designed to power the Samsung LTM121SI-T01 backlight.

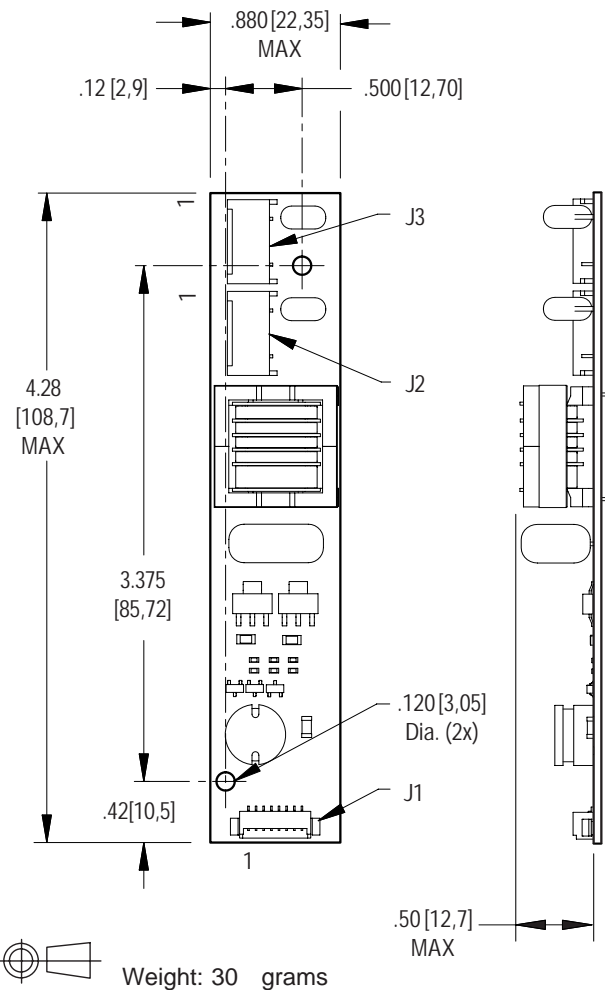


DMA Package

Product Features

- ✓ Small Package Size, less than 13mm in height.
- ✓ High Efficiency
- ✓ Made in U.S.A.

Package Configuration



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

Connectors

J1 - (Input)
MOLEX
532-61-0890

J2,J3 - (Outputs)
JST
SM02(8.0)B-BHS-1-TB

Pinouts

| | | | |
|------|----------|------|------------|
| J1-1 | V_{in} | J2-1 | AC_{out} |
| J1-2 | V_{in} | J2-2 | AC_{com} |
| J1-3 | GND | | |
| J1-4 | GND | | |
| J1-5 | Enable | | |
| J1-6 | N/C | J3-1 | AC_{out} |
| J1-7 | N/C | J3-2 | AC_{com} |
| J1-8 | N/C | | |



Absolute Maximum Ratings (Note 1)

| Rating | Symbol | Value | Units |
|-----------------------|--------------|---------------|-------|
| Input Voltage | V_{in} | -0.3 to +13.2 | Vdc |
| Enable | V_{Enable} | -0.3 to +13.2 | Vdc |
| Operating Temperature | T_a | -0 to +85 | °C |
| Storage Temperature | T_s | -40 to +85 | °C |

Recommended Operating Conditions

| Rating | Symbol | Value | Units |
|---|----------|---------------|-------|
| Input Voltage | V_{in} | +10.8 to 12.6 | Vdc |
| Operating Temperature <small>(Note 2)</small> | T_a | 0 to +50 | °C |

Electrical Characteristics

Unless otherwise noted $V_{in} = 12.00$ Volts dc and $T_a = 25^{\circ}\text{C}$

| Characteristic | Symbol | Min | Typ | Max | Units |
|--|-------------|------|-----|-----|---------------------|
| Input Current | I_{in} | - | .59 | .70 | A_{DC} |
| Input Ripple Current | I_{rip} | - | - | - | mA_{pk-pk} |
| Operating Frequency | F_o | 32 | 37 | 42 | KHz |
| Efficiency | η | - | 90 | - | % |
| Output Voltage (no load) <small>(Note 3)</small> | V_{start} | 1500 | - | - | V |
| Output Voltage (with lamp) | V_{out} | - | 550 | - | V |
| Output Current (per tube) | I_{out} | - | 6 | - | mA_{rms} |
| Enable (pin J1-5) | | | | | |
| Turn-Off Threshold | V_{thoff} | - | - | 0.7 | V |
| Turn-On Threshold | V_{thon} | 2.0 | - | - | V |

(Note 1) Reliable and predictable operation of the device are not guaranteed with applied stresses at or beyond those listed in "Absolute Maximum Ratings". Operation at these limits may reduce device reliability and is therefore not recommended. Please refer to "Recommended Operating Conditions" for reliable operation of the device.

(Note 2) Operation above 50°C is possible if airflow is provided.

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

Input voltage specification modified for clarity on 5/2004.