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DMA23140

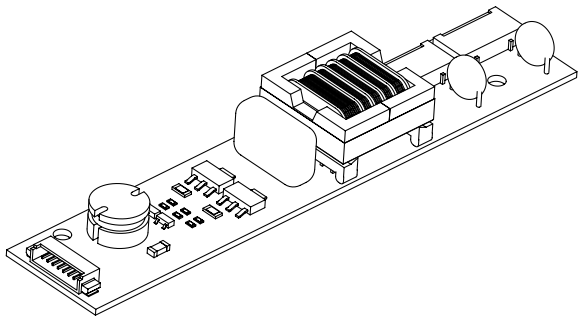
Specifications and Applications Information

07/22/04 Preliminary

Two Tube
DC to AC Inverter

The ERG DMA23140 (DMA Series) DC to AC inverter features onboard connectors and can be easily dimmed using an external pulse-width modulated control signal.

Powered by a regulated 12 volt DC source the DMA23140 is specially designed to power the Sharp LQ070T5DR01 backlight.

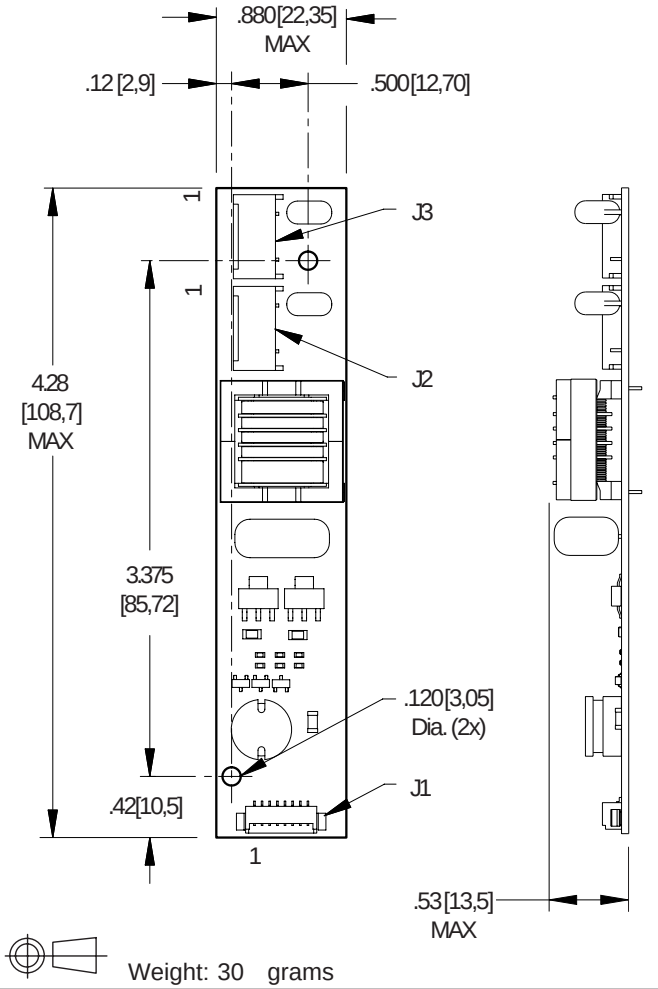


DMA Package

Product Features

- ✓ Small Package Size.
- ✓ High Efficiency
- ✓ Made in U.S.A.

Package Configuration



Weight: 30 grams

Connectors	
J1 - (Input) MOLEX 532-61-0890	**J2,J3 - (Outputs)** JST SM02(8.0)B-BHS-1-TB

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

DMA23140

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 (Note 2)	T_a	0 to +50	°C

Electrical Characteristics

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

Characteristic	Symbol	Min	Typ	Max	Units
Input Current	I_{in}	-	.49	.57	A_{DC}
Input Ripple Current	I_{rip}	-	-	-	mA_{pk-pk}
Operating Frequency	F_o	34	39	44	KHz
Efficiency	h	-	74	-	%
Output Voltage (no load) (Note 3)	V_{start}	1500	-	-	V
Output Voltage (with lamp)	V_{out}	-	370	-	V
Output Current (per tube)	I_{out}	-	5.9	-	mArms
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.

Application Notes:

1) The minimum distance from high voltage areas of the inverter to any conductive material should be .12 inches per kilovolt of starting voltage.
2) Mounting hardware should be non-conductive.
3) Open framed inverters should not be used in applications at altitudes over 10,000 feet.
4) Contact ERG for possible exceptions.