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DMB42289

Specifications and Applications Information

7/26/99 Preliminary

Two Tube DC to AC Inverter

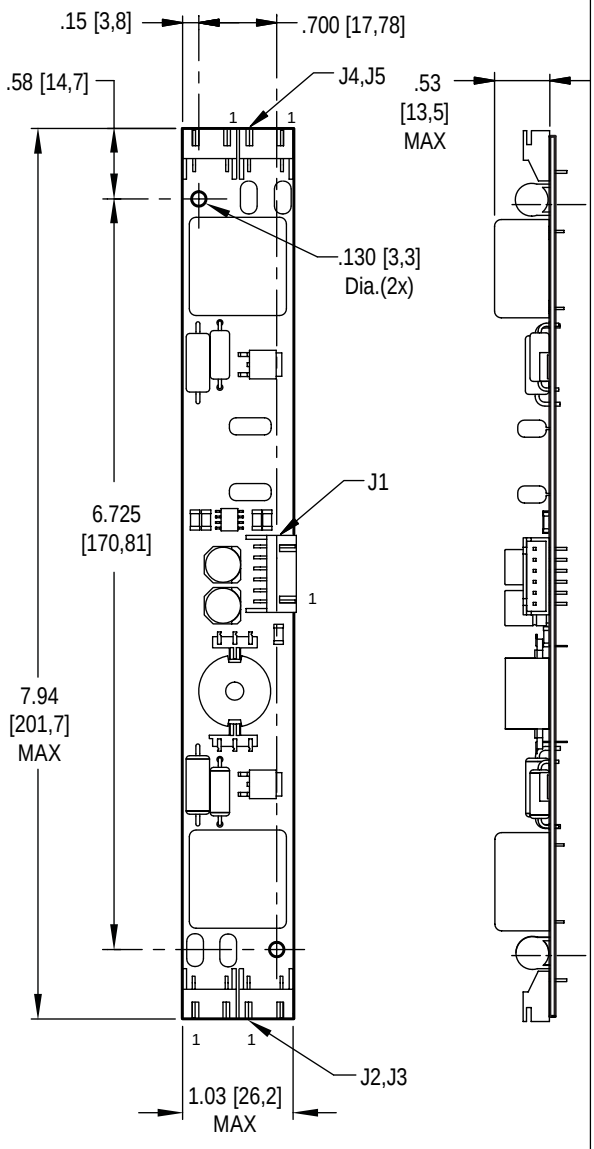
The ERG DMB42289 (DMB Series) DC to AC inverter features onboard connectors and can be easily dimmed using an external pulse-width modulated control signal. This unit is less than 17mm in height and the two mounting holes makes installation very straight forward.

Powered by a regulated 12 volt DC source the DMB42289 is specially designed to power the LG Electronics LM181E1 backlights.

Product Features

- ✓ Small Package Size, less than 17mm in height.
- ✓ High Efficiency
- ✓ Made in U.S.A.

Package Configuration



Weight: 59 grams

Connectors		
J1 JST S6B-XH-A	J2,J3 JST SM02(4.0) B-BHS-1-TB	J4,J5 JST SM02(4.0) B-BHS-1-TB

Pinouts		
J1-1 Vin J1-2 Vin J1-3 GND J1-4 GND J1-5 NC J1-6 Control	J2-1 ACout J2-2 ACcom	J4-1 ACout J4-2 ACcom
	J3-1 ACout J3-2 ACcom	J5-1 ACout J5-2 ACcom

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Absolute Maximum Ratings (Note 1)

Rating	Symbol	Value	Units
Input Voltage	V_{in}	-0.3 to +15	V_{DC}
Control	$V_{Disable}$	-0.3 to +5.5	V_{DC}
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 13.2	V_{DC}
Operating Temperature (Note 2)	T_a	0 to +50	°C

Electrical Characteristics

Unless otherwise noted Vin = 12.00 Volts DC , T_a = 25 °C and unit has been running for 15 minutes.

Characteristic	Symbol	Min	Typ	Max	Units
Inverter					
Input Current	I_{in}	-	2.00	2.20	A_{DC}
Input Ripple Current	I_{rip}	-	-	-	mA_{pk-pk}
Operating Frequency	F_o	31	36	41	KHz
Efficiency	η	-	87	-	%
Output Voltage (no load) (Note 3)	V_{start}	1300	-	-	V
Output Voltage (with lamp)	V_{out}	-	705	-	V
Output Current (per tube)	I_{out}	-	7.5	-	mArms
Control (pin J1-5)					
Turn-Off Threshold	V_{thoff}	-	-	4.5	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.