

**DESCRIPTION**

The LX1697 is a high performance CCFL controller optimized for wide input voltage range notebook display backlighting applications.

Its brightness control architecture supports Intel's DPST (Display Power Saving Technology) that adjusts the brightness as a function of video content.

Digital Dimming duty cycle is controlled by providing either a dc voltage or a digital PWM signal to the BRITE\_D pin. Burst frequency can be controlled either by the on chip burst oscillator or directly by a low frequency PWM logic signal at BRITE\_D.

The LX1697 includes a built in 5.1V regulator so it can be operated directly from the battery without the need of an external 5V supply from the system. The controller's power

stage consists of direct coupled full bridge high voltage drivers for the external N-channel high side and N-channel low side power FETs.

The LX1697 includes lamp current and open lamp voltage regulation, fully programmable lamp frequency and burst dimming frequency oscillators, and our patented fool-proof lamp strike circuitry.

Additional features comprise an enable input, under-voltage lockout, analog programmable open lamp strike time-out, over voltage, and short circuit fault detection.

The LX1697 can also be used with Microsemi's LX1801 SMBus controller to provide a completely digital interfaced backlight control system.

The LX1697 is available in the 24 pin 4x4 mm MLPQ surface mount package and is specified from -20°C to 70°C.

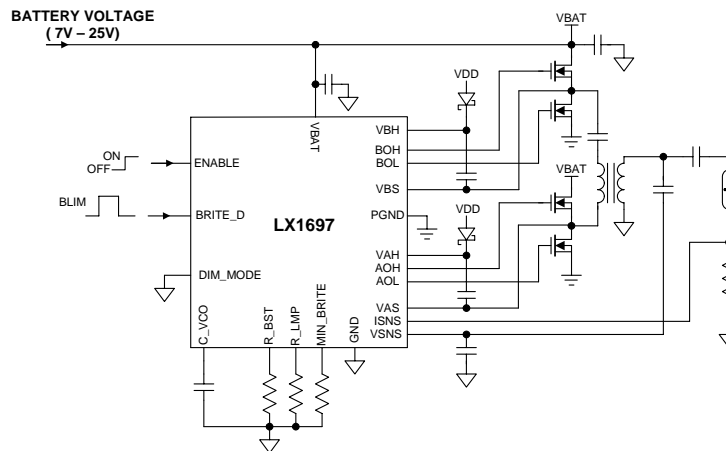
**KEY FEATURES**

- 7 to 25 Volts Wide Input Voltage Range
- Resistor Programmable Lamp Operating Frequency within  $\pm 3\%$  Tolerance
- Resistor Programmable Burst Operating Frequency
- Support Intel™ DPST for System PWM input
- Compatible with Microsemi's new SMBus CCFL controllers
- Fully Programmable Open Lamp and Load Fault Time Outs
- On Chip Full Wave Rectifiers for Lamp Voltage and Current
- Cost Effective and Low Parts Count Inverter Modules
- Uses Industry Standard High Voltage Transformers

**APPLICATIONS**

- Note Book LCD displays
- Transportable Computers
- Web Tablet LCD displays

**IMPORTANT:** For the most current data, consult MICROSEMI's website: <http://www.microsemi.com>  
Protected by U.S. Patents: 5,615,093; 5,923,129; 5,930,121; 6,198,234; 7,112,929; Patents Pending

**PRODUCT HIGHLIGHT**

**PACKAGE ORDER INFO**

$T_A$ (°C)	<b>LQ</b> Plastic 24pin MLPQ 4x4mm
	RoHS Compliant / Pb-free
-20 to 70	<b>LX1697CLQ</b>

Note: Available in Tape & Reel. Append the letters "TR" to the part number. (i.e. LX1697CLQ-TR)



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## INFORMATION

*Thank you for your interest in Microsemi<sup>®</sup> Analog Mixed Signal products.*

The full data sheet for this device contains proprietary information.

To obtain a copy, please contact your local Microsemi sales representative. The name of your local representative can be obtained at the following link

<http://www.microsemi.com/contact/contactfind.asp>

**or**

Contact us directly by sending an email to:

[IPGdatasheets@microsemi.com](mailto:IPGdatasheets@microsemi.com)

Be sure to specify the data sheet you are requesting and include your company name and contact information and or vcard.

*We look forward to hearing from you.*