

# High Performance CCFL Controller w/ALS

**PRODUCTION DATA SHEET** 

## **DESCRIPTION**

back lighting applications.

Its new brightness of panel brightness. It also supports supply from the system. Intel's DPST (Display Power Saving Technology) that adjusts is compatible with all Microsemi FETs. visible light sensor products.

ALS IN for the BRITE D for brightness and BST SYNC for digital dimming and circuitry. synchronization..

either by the on chip burst oscillator or circuit fault detection are directly by an external logic signal at implemented. BST SYNC. oscillator can either free run or

The LX1693 is a high performance synchronize to an external signal. CCFL controller optimized for wide Digital Dimming duty cycle is input voltage range notebook display controlled by providing either a DC voltage or a PWM signal to the control BRITE\_D pin. The LX1693 can be architecture provides versatile support operated directly from the battery for ambient light sensor (ALS) control without the need of an external 5V

The LX1693 power stage includes the direct coupled full bridge high voltage brightness as a function of video drivers for the external N-channel high content. The ALS control architecture side and N-channel low side power

The LX1693 includes lamp current The controller's digital dimming and open lamp voltage regulation, mode includes three brightness inputs: fully programmable lamp frequency and light sensor, burst dimming frequency oscillators, and our patented fool-proof lamp strike

Analog programmable open lamp Burst frequency can be controlled strike time-out, over voltage, and short

> The on chip burst The LX1693 is available in the 28 pin 4 x 5 MLPQ surface mount package.

**KEY FEATURES** 

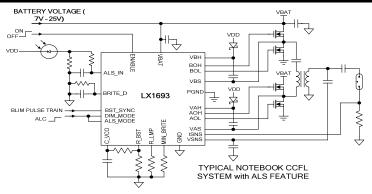
- 7 to 25 Volts Wide Input Voltage Range
- Versatile Support for Ambient Light Sensor Brightness Control
- Resistor Programmable Lamp Operating Frequency within ±4% Tolerance
- Resistor Programmable Burst Operating Frequency Support Intel<sup>TM</sup> DPST for System
- PWM input
- Compatible with Microsemi's 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 Plastic MLPQ 4x5mm 28 pin $T_A$ (°C) RoHS Compliant / Pb-free -20 to 70 LX1693CLQ

Note: Available in Tape & Reel. Append the letters "TR" to the part number. (i.e. LX1693CLQ-TR)



## INFORMATION

Thank you for your interest in Microsemi® 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 <a href="http://www.microsemi.com/contact/contactfind.asp">http://www.microsemi.com/contact/contactfind.asp</a>

or

Contact us directly by sending an email to:

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.