

**DESCRIPTION**

The LX6501 is a high performance CCFL controller optimized for LCD-TV and other multi-lamp LCD display applications.

The controller includes fully integrated on chip gate drivers with adequate capacity to drive N channel power MOSFET's on both low side and high side of a full bridge inverter with input voltage of up to 27V. An on-chip regulator generates the internal driver operating voltage to supply the output gate drive circuit. This allows a direct connection of the controller to the inverter supply minimizing external components.

In addition, it also provides synchronization capability that allows the user to synchronize both the frequency and phase of the lamp current between inverters or to an external synchronization signal.

The lamp current regulation performance is also enhanced to improve both the regulation accuracy and the dynamic response at transient conditions.

In addition a comprehensive dimming control feature is facilitated to satisfy various brightness control requirements.

The LX6501 includes extensive fault detection functions, including open lamp, over voltage, short circuit, over current, and over temperature protection. A programmable input Under Voltage Lock Out (UVLO) protection circuit monitors the input voltage and protects the inverter from under voltage operation.

The device is available in the 28 lead TSSOP, and SOWB surface mount packages in the industrial temperature range.

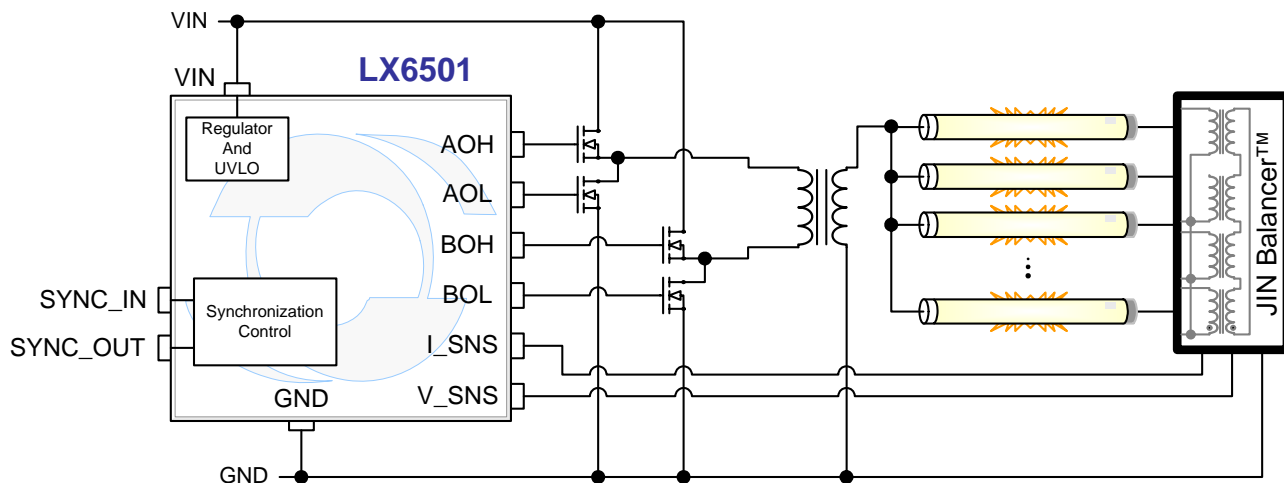
**IMPORTANT:** For the most current data, consult MICROSEMI's website: <http://www.microsemi.com>  
Protected by U.S. Patent No. 7,112,929, Patents Pending

**KEY FEATURES**

- Integrated Gate Driver to Support High Side N Channel MOSFET
- 0.6A Sourcing and 1.2A Sinking Drive Current
- 10 to 27 Volt Power Rail for Inverter Operation (35V Absolute Maximum)
- On Chip Regulator with Under Voltage Lock Out Protection
- Inverter Operating Frequency and Phase Synchronization
- Programmable Strike Time, Fault Time, Strike Frequency, and Burst Dimming Frequency
- Multiple Voltage and Current Sense Inputs
- Programmable Input Under Voltage Lockout

**APPLICATIONS**

- LCD-TV
- Multi-Lamp LCD Monitors
- CCFL, EEFL, FFL Backlight Systems

**PRODUCT HIGHLIGHT**

**PACKAGE ORDER INFO**

$T_A$ (°C)	PW	Plastic TSSOP 28-Pin RoHS Compliant / Pb-free	DW	Plastic SOWB 28-Pin RoHS Compliant / Pb-free
-40 to 85		<b>LX6501PW</b>		<b>LX6501DW</b>

Note: Available in Tape & Reel. Append the letters "TR" to the part number. (i.e. LX6501PW-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.*