

## LED Driver with Dynamic Headroom Control and Thermal Control Interface

### General Description

The LM3464 is a 4-channel high voltage current regulator that provides a simple solution for LED lighting application. It incorporates four individual current regulator channels, work in conjunction with external N-channel MOSFETs and sense resistors to give accurate driving current for every LED string. Additionally, the Dynamic Headroom Control (DHC) output can interface with the external power supply to adjust the LED supply voltage to the lowest level that adequate to maintain all the string currents in regulation, yielding the optimal overall efficiency.

Digital PWM or analog voltage signal can be used to control the duty cycle of the all the channels. When analog control is selected, the dimming frequency can be programmed via an external capacitor. A minimum duty cycle control is provided in condition the analog dimming is configured as thermal feedback.

Protection features includes VIN under-voltage lock-out, LED open/short circuit and over-temperature fault signaling to the system controller.

### Features

- Wide input voltage range (12V-80V)
- Dynamic Headroom Control ensures maximize efficiency
- 4 output channels with individual current regulation
- High channel to channel accuracy
- Digital PWM/Analog dimming control interface
- Resistor programmable dimming frequency & minimum duty cycle (analog dimming mode)
- Direct interface to thermal sensor
- Fault indication
- Over temperature indication
- Thermal shutdown
- Under voltage lockout

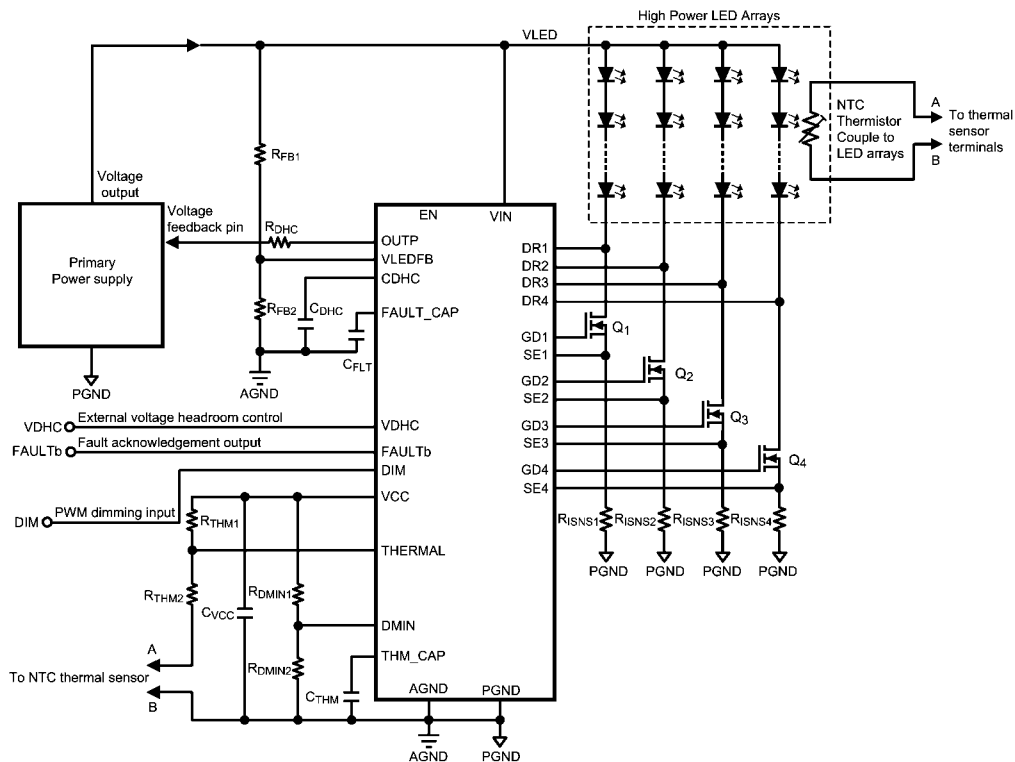
### Applications

- Streetlights
- Solid State Lighting Solutions

### Package

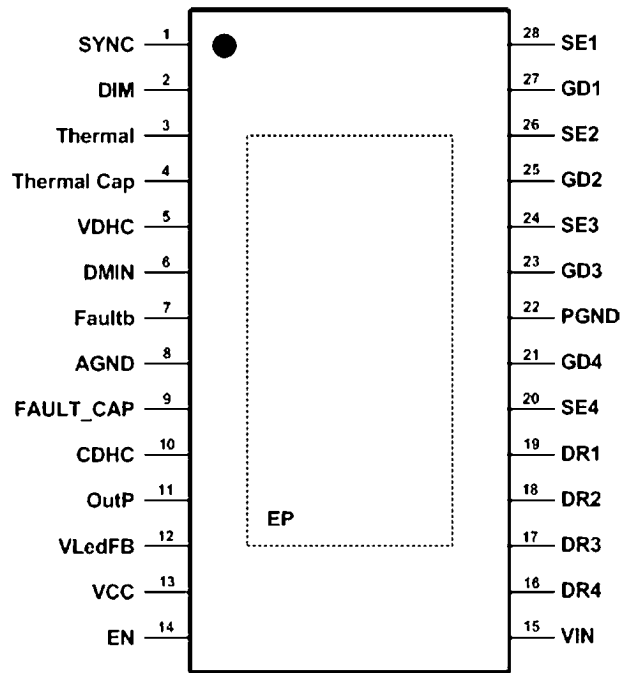
- 28-Lead eTSSOP Package

### Typical Application



30115001

## Connection Diagram



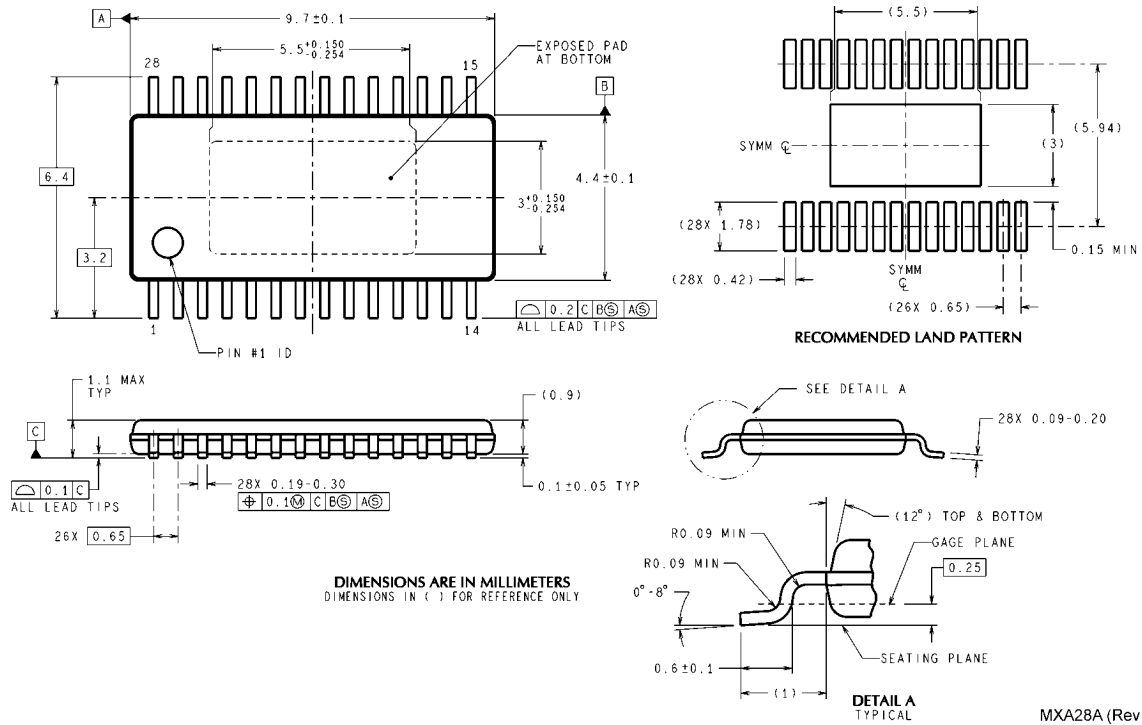
**Top View**  
 28 Lead Plastic eTSSOP-28  
 NS Package Number MXA28A

30115002

## Ordering Information

Order Number	Package Type	NSC Package Drawing	Supplied As
LM3464MH	Exposed Pad TSSOP-28	MXA28A	73 Units per Anti-Static Type
LM3464MHX			2500 Units on Tape and Reel

**Physical Dimensions** inches (millimeters) unless otherwise noted



DIMENSIONS ARE IN MILLIMETERS  
DIMENSIONS IN ( ) FOR REFERENCE ONLY

**28-Lead eTSSOP Package**  
**NS Package Number MXA28A**

MXA28A (Rev D)

## Notes

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LVDS	<a href="http://www.national.com/lvds">www.national.com/lvds</a>	Packaging	<a href="http://www.national.com/packaging">www.national.com/packaging</a>
Power Management	<a href="http://www.national.com/power">www.national.com/power</a>	Green Compliance	<a href="http://www.national.com/quality/green">www.national.com/quality/green</a>
Switching Regulators	<a href="http://www.national.com/switchers">www.national.com/switchers</a>	Distributors	<a href="http://www.national.com/contacts">www.national.com/contacts</a>
LDOs	<a href="http://www.national.com/ldo">www.national.com/ldo</a>	Quality and Reliability	<a href="http://www.national.com/quality">www.national.com/quality</a>
LED Lighting	<a href="http://www.national.com/led">www.national.com/led</a>	Feedback/Support	<a href="http://www.national.com/feedback">www.national.com/feedback</a>
Voltage References	<a href="http://www.national.com/vref">www.national.com/vref</a>	Design Made Easy	<a href="http://www.national.com/easy">www.national.com/easy</a>
PowerWise® Solutions	<a href="http://www.national.com/powerwise">www.national.com/powerwise</a>	Applications & Markets	<a href="http://www.national.com/solutions">www.national.com/solutions</a>
Serial Digital Interface (SDI)	<a href="http://www.national.com/sdi">www.national.com/sdi</a>	Mil/Aero	<a href="http://www.national.com/milaero">www.national.com/milaero</a>
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