New Product Announcement

AL8808

Simple Cost Effective LED driver for high-brightness LED lamps

The AL8808 is Diodes’ latest high brightness buck LED driver to meet the demands of latest low voltage LED lamps.

The AL8808 provides protection against a number of potential faults within a lamp:
1. Over-temperature condition → switches itself off,
2. Open-LEDs → automatically stops switching
3. Short-LEDs → continues switching but at reduced duty cycle minimising power dissipation

The AL8808 can operate up to 1MHz – reducing the size of external components. The small TSOT25 package size coupled with the need for only 4 external components produces a small solution footprint.

The accuracy, temperature range and cost make it ideally suited for cost sensitive lighting applications.

The Diodes advantage

The AL8808 provides a simple low EMI solution for Low Voltage general illumination LED lamps

- **Reduced switching noise and ringing**
  Solves EMI issues – especially in non-optimised PCB layout

- **Open-LED, short-LED and Over-Temperature Protection**
  Open-LED → automatically stops switching,
  Short-LED → \( f_{SW} \) & duty cycle reduction
  \( T_J > 145^\circ C \) → Thermal trip

- **Small footprint packages – TSOT25**
  High power density small PCB footprint solution

- **5% initial average LED current accuracy**
  Meets accuracy requirements of most lighting apps at cost effective price and improves inter-channel matching.

- **Simple PWM dimming And Analog dimming on the CTRL pin**
  Provides flexible scheme to users with different dimming methods:
  Analog for thermal control, PWM for brightness control (doesn’t over drive the LED current)

Applications

- General illumination
- Multi-substrate LED driving
- Driving of parallel LED chains
- MR16 lighting
- \( 12V_{AC/DC} \) and \( 24V_{DC} \) lighting
- SELV lighting
Diodes Medium Voltage High brightness LED Drivers

<table>
<thead>
<tr>
<th>Part number</th>
<th>Comment</th>
<th>V_IN</th>
<th>Current</th>
<th>LED accuracy</th>
<th>Efficiency</th>
<th>Switching Frequency</th>
<th>Dimming</th>
<th>Temp range</th>
<th>Protection</th>
<th>Soft-start</th>
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To find out more information:
Medium voltage LED Driver Web page
Datasheet
http://www.diodes.com/datasheets/AL8808.pdf

Ordering information

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Part Mark
Y: Year 0~9
W: A~Z week 1~26 a~Z week 27~53
X: A~Z: Internal code

All variants are in packages that are "Green" Molding Compound (No Br, Sb) with Lead Free Finish/RoHS Compliant (Note 1)
Notes: 1. EU Directive 2002/95/EC (RoHS). All applicable RoHS exemptions applied, see EU Directive 2002/95/EC Annex Codes for date coding on part marks