STEVAL-TLL001V1

White LED controller evaluation board based on the STLD40D

Data Brief

Features

- Inductor switches boost controller
- PFM mode control
- High efficiency over wide range of input voltage from 3.0 V to 5.5 V
- Over-voltage protection with automatic restart
- Adjustable peak current limit
- Enable pin with possibility of PWM dimming control
- Low shutdown current <1 µA

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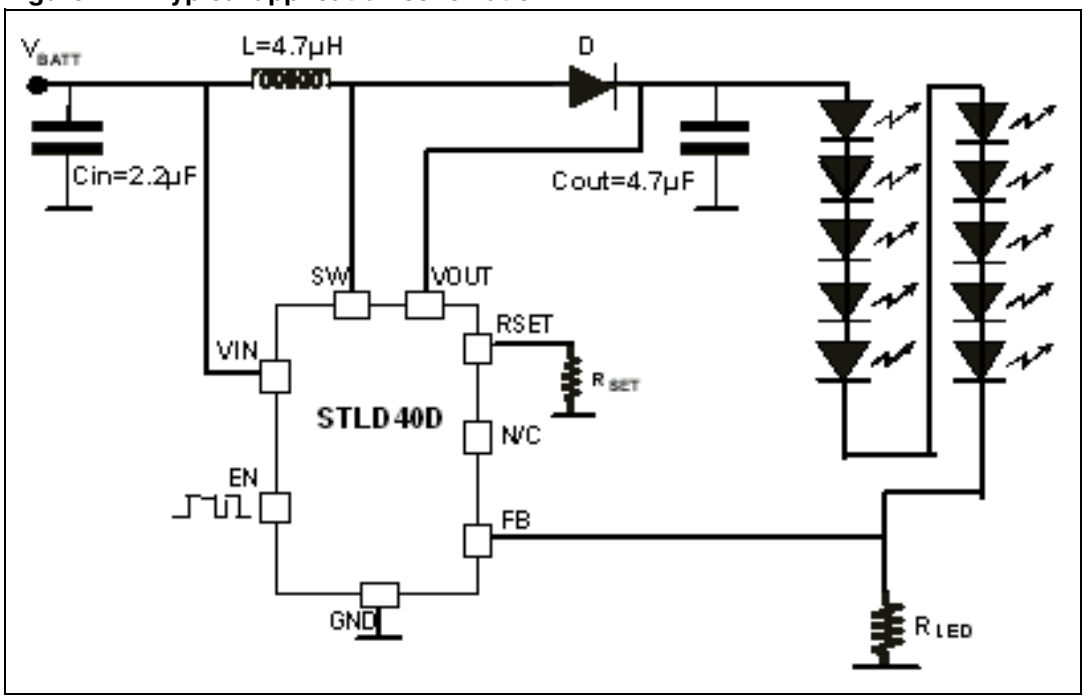
Description

This evaluation board is based on the STLD40D that is a boost converter that operates from 3.0 V to 5.5 V and can provide an output voltage as 37 V and can drive up to 10 white LEDs in series. The converter is a PFM (pulse frequency modulation) inductor switches and can work in discontinuous (DCM) mode operation. A minimum OFF time of the embedded boost switch TSW is fixed internally and allows limiting the switching frequency. The output current capability is 20 mA with an output voltage of 37 V. The regulation is done by sensing the led current through the resistor R_{LED}. The device can be turned ON/OFF through the logic enable signal pin EN. Applying a low frequency PWM signal the LEDs can be dimmed. The maximum peak inductor current can be programmed.

1 Board schematic

Figure 1. Typical application schematic



2 Revision history

Table 1. Document revision history

Date	Revision	Changes
27-Oct-2008	1	Initial release

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