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STEVAL-ILL026V1

3 W non-isolated offline LED driver demonstration board based on the VIPer22A-E

Data brief

Features

- Input voltage: 90 to 265 V_{RMS}
- Provides 350 mA constant current for LEDs
- Capable of driving 3 x 1 W LEDs in series with high-precision constant current ($\pm 5\%$ tolerance)
- Overtemperature protection
- LED open circuit protection
- LED short-circuit protection
- 230 V_{AC} input version with no electrolytic capacitor
- EN55015 & EN6100-3-2 compliant
- RoHS compliant



STEVAL-ILL026V1

Description

The progress made in the field of LEDs is visible on an almost day-by-day basis. Many high power LEDs are currently on the market, such as 0.7 A and 1 A devices. However, the most commonly used LEDs are those with a current of 0.350 A.

This demonstration board is designed for 350 mA LEDs and is capable of driving three 1 W LEDs in series with high-precision constant current ($\pm 5\%$ tolerance). The design is based on the VIPer22A-E, which combines a dedicated current mode PWM controller with a high voltage power MOSFET on the same silicon chip.

The internal control circuit offers a large input voltage range on the V_{DD} pin, accommodates changes in auxiliary supply voltage, and supports automatic burst mode in low load conditions. The board also features protections against overtemperature, overcurrent and overvoltage conditions.

2 Revision history

Table 1. Document revision history

Date	Revision	Changes
11-Nov-2009	1	Initial release.
04-Dec-2009	2	Updated title in Figure 1: STEVAL-ILL026V1 schematic diagram .

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