



STEVAL-TLL011V1

Driver for up to 40 white LEDs for mid-sized LCD display backlight based on the STLD41

Data brief

Features

- Boost DC-DC converter
- Drives up to 40 LEDs (4 strings of 10) with a total current up to 120 mA
- Input voltage range: 3.0 V to 21 V
- Output current control
- 1.8 MHz fixed frequency PWM control
- PWM input for output current dimming with a frequency range of 25 kHz - 50 kHz
- 2 A integrated switch
- Overvoltage protection
- Chip overtemperature detection and protection
- Less than 1 μ A standby current
- Soft-start function
- RoHS compliant



Description

The STEVAL-TLL011V1 demonstration board demonstrates the performance of the STLD41, a boost converter that operates from 3.0 V to 21 V and which can provide an output voltage as high as 38 V.

It can drive up to 40 white LEDs connected in 4 strings of 10 LEDs in series. The total output current capability is 120 mA at an output voltage of 38 V.

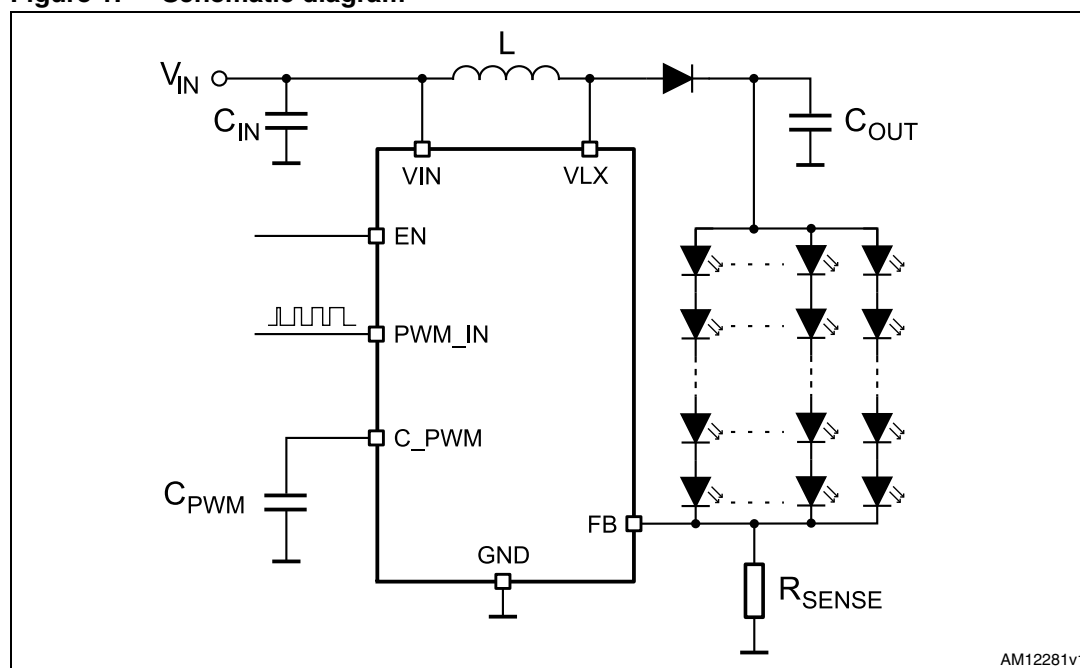
Regulation is performed by the internal error amplifier which works with the feedback voltage from the sensing resistor.

The device can be turned ON/OFF by way of the logic signal connected to the EN pin.

The LEDs can be dimmed by applying a PWM signal to the PWM input.

1 Schematic diagram

Figure 1. Schematic diagram



2 Revision history

Table 1. Document revision history

Date	Revision	Changes
28-May-2012	1	Initial release.
30-May-2012	2	Minor text changes to improve readability

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