

## High-power LED driver demonstration board for single flash with I<sup>2</sup>C interface based on the STCF06

Data brief

### Features

- Buck-boost DC-DC converter
- Drives one power LED up to:
  - 1.5 A between 3.5 V to 5.5 V
  - 1.3 A between 3.0 V to 5.5 V
  - 1 A between 2.7 V to 5.5 V
- Efficiency up to 85%
- LED current control
- 1.8 MHz fixed frequency PWM
- Full I<sup>2</sup>C control
- Motherboard based on  $\mu$ PSD used as USB bridge
- RoHS compliant



### Description

This demonstration board implements a flash LED driver using the STCF06 device, which is a buck-boost current mode converter with an I<sup>2</sup>C interface.

The flash LED driver STCF06 has a high operating frequency (1.8 MHz) which allows the usage of small external components.

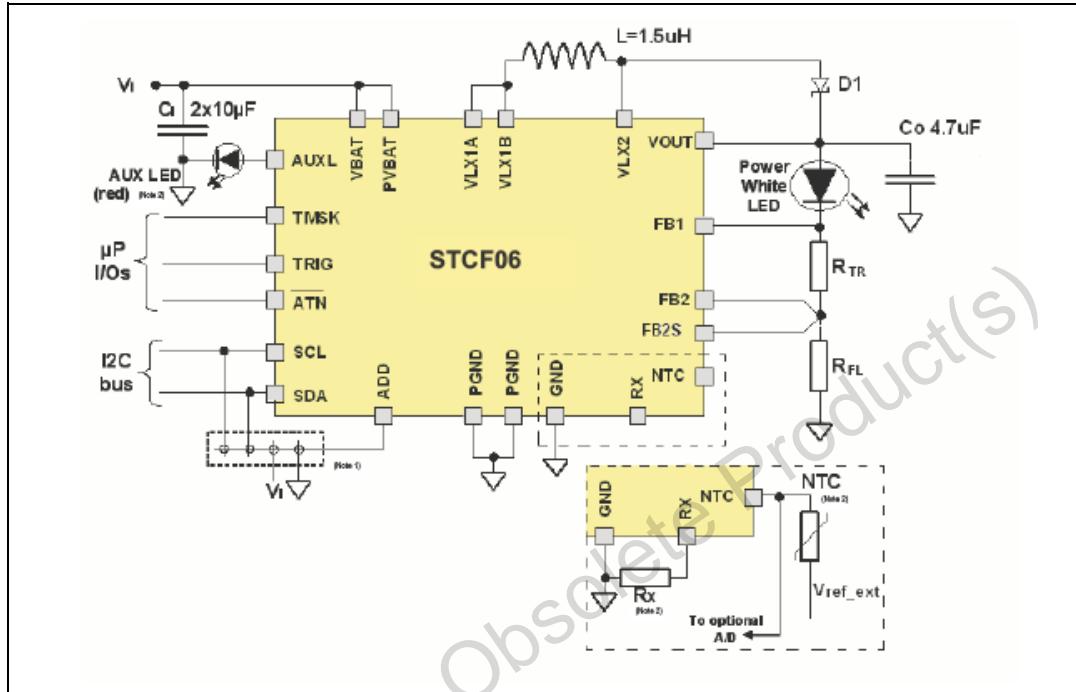
The demonstration board is designed for driving a single LED with a forward voltage range from 2.7 to 5 V.

For easy connection to a PC, the STEVAL-TLL006V1 uses a  $\mu$ PSD-based motherboard used as a bridge.

The STCF06 motherboard uses an USB human interface device to communicate with the PC. It is not necessary to install a driver, if the operating system in use is capable of enumerating USB human interface devices.

# 1 Circuit schematic

Figure 1. Typical application schematic



## 2 Revision history

**Table 1. Document revision history**

Date	Revision	Changes
20-May-2009	1	Initial release.

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