

STEVAL-TLL007V1

High-power LED driver demonstration board for dual flash with I²C interface based on the STCF05

Data brief

Features

- Boost DC-DC converter with synchronous rectification
- Drives two power white LEDs in series with a current up to 400 mA
- Efficiency up to 85%
- 3 passive components only
- 24 mm² PCB area only
- 1.8 MHz fixed frequency PWM
- Full I²C control
- Motherboard based on µPSD used like USB bridge
- RoHS compliant

STEVAL-TLL007V1

Description

This demonstration board is dedicated to the STCF05 flash LED driver IC, which is a boost current mode converter with an I²C interface and internal current source. The STCF05 is designed to drive two LEDs in series with a total forward voltage from 5.3 V to 10.2 V.

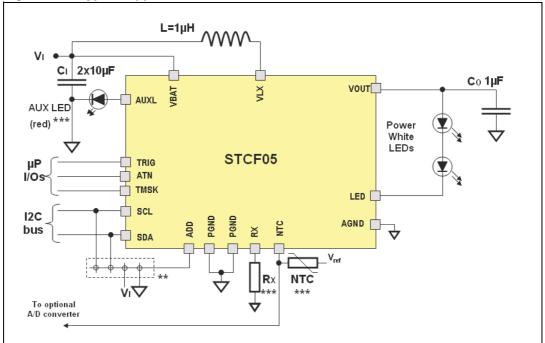
For easy connection to a PC, the STEVAL-TLL007V1 uses a μ PSD-based motherboard used as a bridge.

The STCF05 motherboard uses a 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.

Circuit schematic STEVAL-TLL007V1

1 Circuit schematic





STEVAL-TLL007V1 Revision history

2 Revision history

Table 1. Document revision history

Date	Revision	Changes
15-May-2009	1	Initial release.
12-Jan-2010	2	Minor text changes.

Please Read Carefully:

Information in this document is provided solely in connection with ST products. STMicroelectronics NV and its subsidiaries ("ST") reserve the right to make changes, corrections, modifications or improvements, to this document, and the products and services described herein at any time, without notice.

All ST products are sold pursuant to ST's terms and conditions of sale.

4/4

Purchasers are solely responsible for the choice, selection and use of the ST products and services described herein, and ST assumes no liability whatsoever relating to the choice, selection or use of the ST products and services described herein.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted under this document. If any part of this document refers to any third party products or services it shall not be deemed a license grant by ST for the use of such third party products or services, or any intellectual property contained therein or considered as a warranty covering the use in any manner whatsoever of such third party products or services or any intellectual property contained therein.

UNLESS OTHERWISE SET FORTH IN ST'S TERMS AND CONDITIONS OF SALE ST DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTY WITH RESPECT TO THE USE AND/OR SALE OF ST PRODUCTS INCLUDING WITHOUT LIMITATION IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE (AND THEIR EQUIVALENTS UNDER THE LAWS OF ANY JURISDICTION), OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT.

UNLESS EXPRESSLY APPROVED IN WRITING BY AN AUTHORIZED ST REPRESENTATIVE, ST PRODUCTS ARE NOT RECOMMENDED, AUTHORIZED OR WARRANTED FOR USE IN MILITARY, AIR CRAFT, SPACE, LIFE SAVING, OR LIFE SUSTAINING APPLICATIONS, NOR IN PRODUCTS OR SYSTEMS WHERE FAILURE OR MALFUNCTION MAY RESULT IN PERSONAL INJURY, DEATH, OR SEVERE PROPERTY OR ENVIRONMENTAL DAMAGE. ST PRODUCTS WHICH ARE NOT SPECIFIED AS "AUTOMOTIVE GRADE" MAY ONLY BE USED IN AUTOMOTIVE APPLICATIONS AT USER'S OWN RISK.

Resale of ST products with provisions different from the statements and/or technical features set forth in this document shall immediately void any warranty granted by ST for the ST product or service described herein and shall not create or extend in any manner whatsoever, any liability of ST.

ST and the ST logo are trademarks or registered trademarks of ST in various countries.

Information in this document supersedes and replaces all information previously supplied.

The ST logo is a registered trademark of STMicroelectronics. All other names are the property of their respective owners.

© 2010 STMicroelectronics - All rights reserved

STMicroelectronics group of companies

Australia - Belgium - Brazil - Canada - China - Czech Republic - Finland - France - Germany - Hong Kong - India - Israel - Italy - Japan - Malaysia - Malta - Morocco - Philippines - Singapore - Spain - Sweden - Switzerland - United Kingdom - United States of America

www.st.com

Doc ID 15721 Rev 2

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for LED Lighting Development Tools category:

Click to view products by STMicroelectronics manufacturer:

Other Similar products are found below:

MIC2870YFT EV ADP8860DBCP-EVALZ LM3404MREVAL ADM8843EB-EVALZ TDGL014 ISL97682IRTZEVALZ LM3508TLEV EA6358NH MAX16826EVKIT MAX16839EVKIT+ TPS92315EVM-516 MAX6956EVKIT+ OM13321,598 DC986A DC909A DC824A STEVAL-LLL006V1 IS31LT3948-GRLS4-EB 104PW03F PIM526 PIM527 MAX6946EVKIT+ MAX20070EVKIT# MAX21610EVKIT# MAX6951EVKIT MAX20090BEVKIT# MAX20092EVSYS# PIM498 AP8800EV1 ZXLD1370/1EV4 MAX6964EVKIT TLC59116EVM-390 1216.1013 TPS61176EVM-566 TPS61197EVM TPS92001EVM-628 1270 1271.2004 1272.1030 1273.1010 1278.1010 1279.1002 1279.1001 1282.1000 1293.1900 1293.1800 1293.1500 1293.1500 1293.1100 1282.1400