The Analog Mixed Signal Company

Kit Description

Rev. 1.1 / August 2011

ZLED7002

ZLED7002KIT-E1 Evaluation Kit

Important Notice

Restrictions in Use

ZMDI's ZLED7002KIT-E1 Evaluation Kit hardware is designed for ZLED7002 demonstration, evaluation, laboratory setup, and module development only. The ZLED7002KIT-E1 Evaluation Kit hardware must not be used for module production or production test setups.

Disclaimer

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1 Kit Contents

The ZLED7002KIT-E1 Evaluation Kit consists of the following parts:

- ZLED7002-E1 Evaluation Board
- Kit Disclaimer

The ZLED7002KIT-E1 Demo Kit is fully assembled and ready for immediate operation. This manual is available from http://www.zmdi.com.

2 Kit Description

2.1. Overview

The ZLED7002KIT-E1 Evaluation Kit provides a quick and easy method for evaluating the ZLED7002 IC product within its basic application circuit. Reading the *ZLED7002 Data Sheet* before using the Demo Kit is recommended for understanding of the operation of the ZLED7002 IC product and the application circuit on this evaluation board.

The ZLED7002 toggle (side-step) dual-channel LED driver is one of ZMDI's LED driver family ICs. It operates in the lower DC voltage supply range of 2.7V to 5.5V. This unique LED driver is capable to control a MAIN channel and a SUB channel, respectively. Typically, only one of the two channels is active and the ZLED7002 toggles between the channels automatically controlled by the supply voltage level thus the related voltage at the UV (under-voltage protection) pin.The ZLED7002 IC can drive LEDs with a current up to 250mA.

The main features of ZLED7002 driver are:

- The Automatic MAIN channel short-circuit protection switches the output current to the SUB channel if the MAIN LED is shorted
- Under-voltage power supply detection
- Over-temperature protection
- Voltage supply: 2.7V to 5.5V DC

Figure 1 shows the top view of the populated kit PCB.

2.2. Power Supply

The Evaluation Board contains a standard battery holder for 3xAA batteries for power supply. Optional a two pin connector (J3) is present for an external power supply.

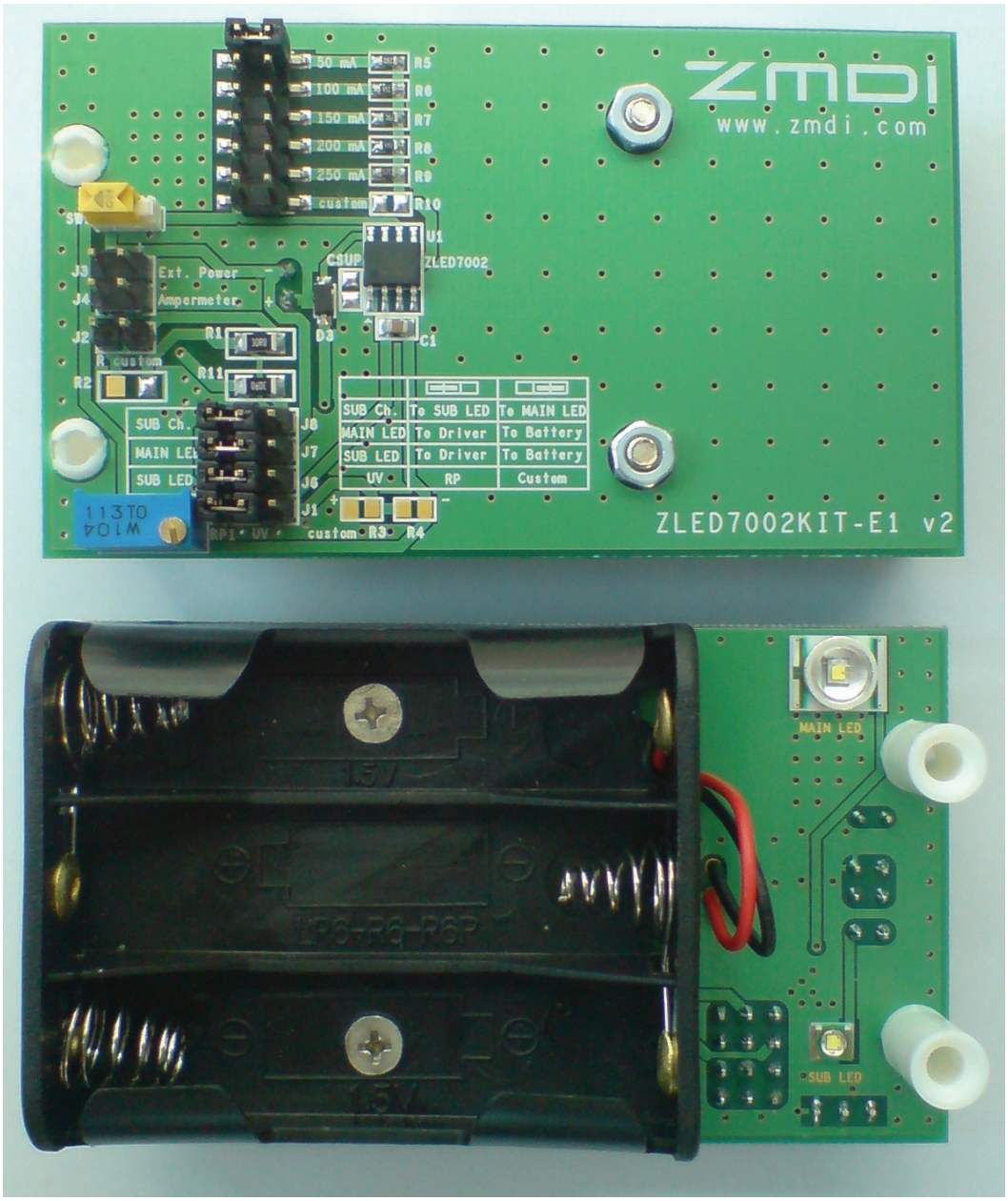
Note:

Since the system is not reverse polarity protected, exercise caution when connecting an external power supply or inserting/replacing batteries.

Never use batteries in parallel to an external power supply.

Remove batteries in case the kit is not going to be used for a long time.

Figure 1 ZLED7002KIT-E1 Evaluation Board (Top and Back view)



2.3. Interface

The Evaluation Board has two LEDs – MAIN LED and a SUB LED (one LED per IC channel).

Jumper setup for configuring of the ZLED7002 working modes:

J1 – Under Voltage protection level selection. This jumper determines how this level will be defined – by the potentiometer RP1 or by the voltage divider R3 and R4. The resistors R3 and R4 are not populated. The user must choose appropriate values..

J6 – SUB LED working mode. Two options are available – SUB LED to be driven from ZLED7002 or to be directly connected to the supply voltage.

J7 – MAIN LED working mode. Two options are available – MAIN LED to be driven from ZLED7002 or to be directly connected to the supply voltage.

J8 – SUB CHANNEL working mode. Two options are available – SUB CHANNEL drives SUB LED or MAIN LED.

Please refer also to the table printed on the board!

J5 – Current selection jumper. User can chose between five predefined current rates. In addition to that a custom current rate is electable. The desired custom current rate can be set by populating of R10 with an appropriate resistor value (see the Datasheet for details).

J2 - Applying a user selectable resistor to the SUB LED

J3 – Allows connecting of an external power supply

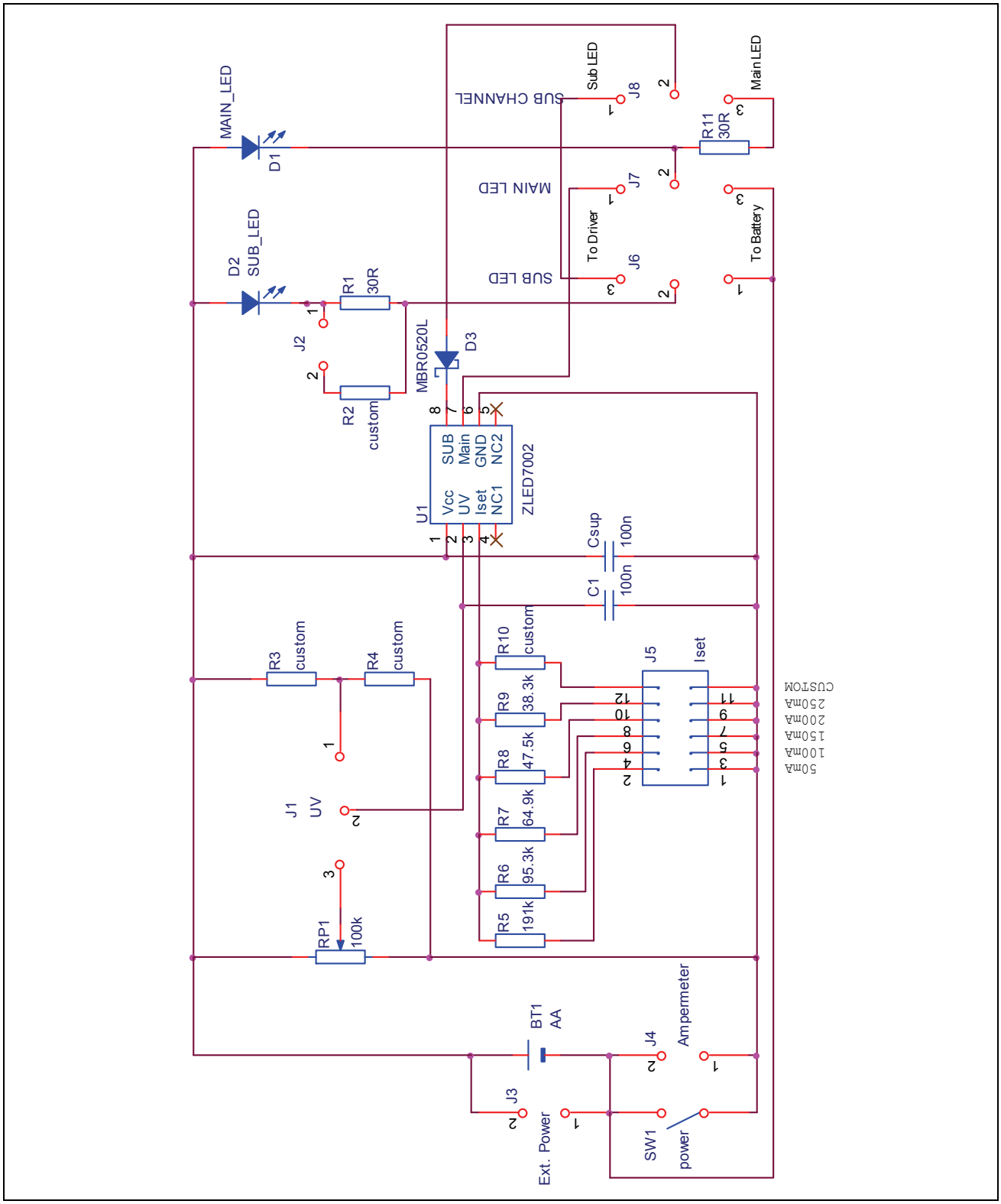
J4 – Allows connecting of an ampere meter

SW1 – main power switch

2.4. Key Features and Benefits of the Demo Board

- Input voltage selection
- Battery or external power supply
- Current selection for MAIN and SUB LEDs
- Under Voltage protection setting
- Current measuring by an optional ampere meter
- Different working modes are selectable

Figure 2 ZLED7002KIT-E1 Schematic Diagram



3 Ordering Information

Product Sales Code	Description
ZLED7002KIT-E1	ZLED7020KIT-E1 Evaluation Kit V2.0

4 Related Documents

Document	File Name
ZLED7002 Datasheet	*ZLED7002_DataSheet_Rev_X.x.pdf*

Visit ZMDI's website www.zmdi.com or contact your nearest sales office for the latest version of these documents.

5 Document Revision History

Revision	Date	Description
1.0	August 04, 2011	Initial release

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