Product Brief

ILD2111

Digital buck controller tailor-made for LED lighting

The ILD2111 is a high-performance configurable buck controller, designed as a constant current source with hysteretic output current regulation. The IC supports output current setting at the end user with a simple resistor (Led-set like). Important parameters like current assignment and protection features can be configured by a dedicated single pin UART interface. The ILD2111 buck controller is dimmable by an external PWM signal.

The controller typically uses a low-side switch buck topology operating in a Continuous Conduction Mode (CCM). The device selects automatically an optimal operating window with respect to switching frequency and output current ripple. This ensures highest efficiency under various application conditions. This characteristic can be customized by several parameters.

The controller provides protection features against overload, open and short load conditions, as well as an intelligent overtemperature protection.

Applications
› LED drivers typ. from 10–80 W, e.g. 2-stage professional lighting systems
› Integrated electronic control gear for LED luminaries

Product summary

Type	Package	Description	Ordering code
ILD2111	PG-DSO-8	Digital DC/DC buck controller IC	SP001415548

For download of data sheets, application motes and Add-On package for .dp Vision GUI please register here: http://infineon-community.com/LP=455

Key Features

› Adjustable output current via simple external resistor also at end user (Led-set like)
› Highly configurable using a comprehensive parameter set to tune operation and protection features
› Flicker-free and phase-aligned PWM dimming down to 1%
› High output current accuracy of ±5% over full output current and temperature range

Key Benefits

› Quick design and easy variant handling supported by parameter configurability with .dp Vision GUI for shortened development cycles and more flexibility
› The input voltage range is fully scalable between 2.5 V and 1.6 kV thanks to low side current sensing
› Full protection incl. intelligent thermal management

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Typical application diagram
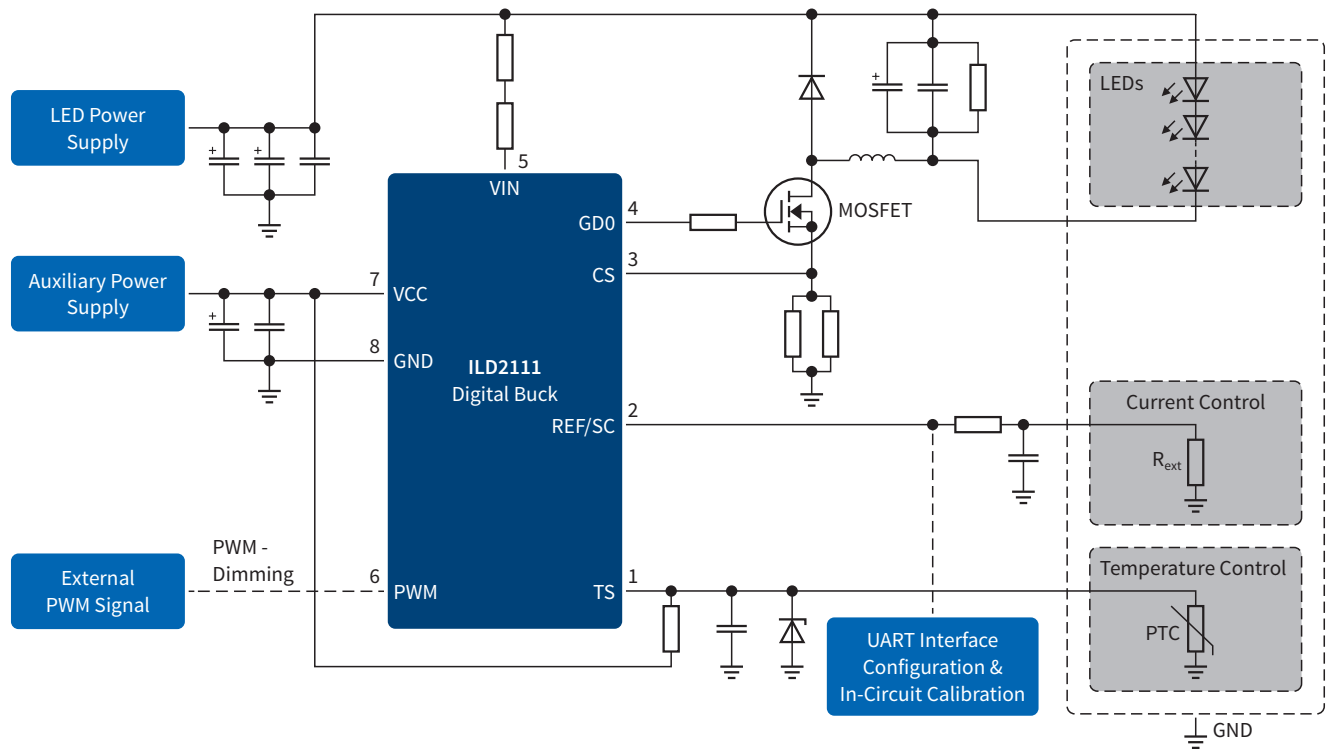
Design support tools

Type	Description	Ordering code
EVALLEDILD2111E1	Evaluation board ILD2111 output current from 250–800 mA	SP001296080
IF-BOARD.DP-GEN2	Interface board to PC	www.hitex.com/dp
.dp Vision GUI	Graphical user interface to configure parameters via PC	www.hitex.com/dp

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