

Development Kit Product Brief

DK-236

(Preliminary)



Overview

The DK-236 development kits for Luminus devices are comprehensive solutions designed specifically to allow for evaluation of products in minutes. The kits include high current, low voltage drivers optimized for Luminus LEDs and an efficient thermal management infrastructure to ensure the devices can be operated at their optimum point, whether it is for maximum brightness, maximum efficiency or anywhere in-between. This plug and play solution can easily be connected to standard laboratory equipment through standard connectors and allows system designers to save weeks in their development cycles.

Key Characteristics

- Compatibility with all core board Low Voltage High Current Devices with optimization above 30A
- Output switching response below 2 μ s
- Driver board supplies max currents of up to 36A (PWM) and 30A (DC)
- Included with blower style fan driven by board suitable for power dissipation up to 125W
- 18V output voltage capability supports Luminus latest Specialty high voltage LEDs or driving discrete LEDs in series (up to 150W maximum)

Main Features

- Can be operated either in pulsed or continuous waveform (CW) modes via opto-isolated PWM control
- Static current control via on board current adjustment
- Pulse width modulation input supports pulsed mode operation with duty cycles with a minimum pulse width of 8 μ s
- Dynamic PWM control interface allows drive pulse via 5V min to 8V max Pk-Pk utilizing active low (LED output is ON when signal is low)
- Fast driver switching frequency (420KHz)
- Device and circuit parameters reading through test ports, including:
 - Forward voltage, V_F
 - Forward current, I_F
- Device temperature monitoring through thermistor connection (LEDs with built-in thermistor only).
- Rise and fall times under 4 μ s based on output

Output Voltage (V)	Output Current (A)	Rise Time (μ s)	Fall Time (μ s)
3	30	1.2	3.9
5	30	1.4	5.5
10	30	1.2	2.8
18	15	2	1

Development Kit Contents

- 1 comprehensive driver board capable of providing up to 36A to the LED (designed by Cuvée Systems)
- 1 high performance thermal interface material
- Simple cable interfaces to user-supplied Luminus Low Voltage High Current devices.
- Blower style fan with mounting hardware
- User Manual

User Required Equipment

- Standard 12V/24V power supply (Recommendation from supplier: > 150W)
 Example: *Manufacturer:* FastTech
Part Number: S-300-12 (12V for LED <8V)
Alternative: S-250-24 (24V for LED >8V)
- Standard laboratory instrumentation – Volt meter, Oscilloscope, and/or Photodetector for monitoring
- PWM control recommended for dimming

Note: Luminus LED products are not included in the development kits and must be purchased separately. Product compatibility is not limited to the table below.

Product Compatibility

Luminus LEDs Max Drive Current	Compatible Luminus LEDs
1.5A-8A †	SST-70X-W (6V)
6A-9.57A † / 12A-13.5A †	PT-26-RA/CG/B , PT-39-DR/G/B , PTM-40-RA/CG/B, CBM-50X-UV, SBM-120-UV
13.5A-18A †	SBT-70-B/G , SBT-90-R , CBM-90-IRD , CBM-120-UV/FR , CBT-90-W
18.9A-28A	PT-50-RA/CG/B , PT-54-RAX/G/B , CBT-90-R/G/B/UV , CFT-90 , CBT-140-W
30A/36A*	PT-120-RAX/G/B , PT-121-G/B, PT-121-RAX

Notes * : Recommended product for optimal use † : Product can be used, but is prone to overdriving conditions

Ordering Information

Ordering Part Number	Product	Description
DK-236	DK-236 Development Kit Single Channel	Single channel development kit, with Cuvée driver board, heat sink, cable assemblies and user manual

The products, their specifications and other information appearing in this document are subject to change by Luminus Devices without notice. Luminus Devices assumes no liability for errors that may appear in this document, and no liability otherwise arising from the application or use of the product or information contained herein. None of the information provided herein should be considered to be a representation of the fitness or suitability of the product for any particular application or as any other form of warranty. Luminus Devices' product warranties are limited to only such warranties as accompany a purchase contract or purchase order for such products. Nothing herein is to be construed as constituting an additional warranty. No information contained in this publication may be considered as a waiver by Luminus Devices of any intellectual property rights that Luminus Devices may have in such information.

This product is protected by U.S. Patents 6,831,302; 7,074,631; 7,083,993; 7,084,434; 7,098,589; 7,105,861; 7,138,666; 7,166,870; 7,166,871; 7,170,100; 7,196,354; 7,211,831; 7,262,550; 7,274,043; 7,301,271; 7,341,880; 7,344,903; 7,345,416; 7,348,603; 7,388,233; 7,391,059 Patents Pending in the U.S. and other countries.