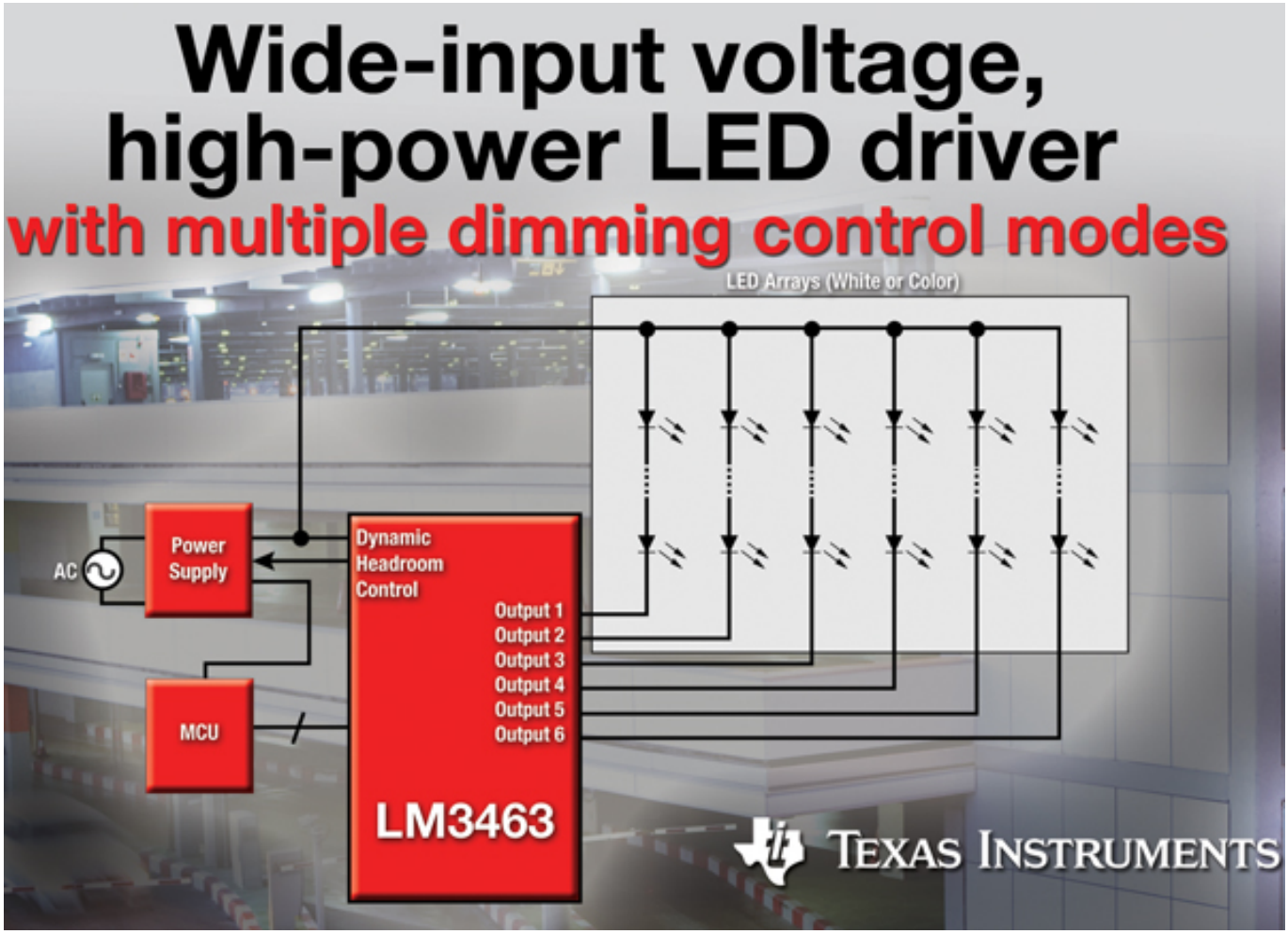
LED driver includes multiple dimming control modes

Texas Instruments introduced a six-channel LED driver with dynamic headroom control for high-power applications, which accurately and efficiently drives up to six strings of LEDs. The LM3463 is the industry's first wide-input voltage LED driver with multiple dimming control modes that maximizes system efficiency and reduces complexity in LED area lighting applications, such as street, high-bay and ceiling lights. For more information and samples, visit www.ti.com/lm3463-pr [1].

The LM3463 is a 12-V to 95-V wide input voltage, six-channel LED current controller. It drives up to 28 LEDs per string with dimming control that is easily managed by an external microcontroller via the dimming input pins. It works in conjunction with external N-channel MOSFETs and sense resistors to accurately and individually regulate current to each LED string. Dynamic headroom control improves system efficiency by automatically adjusting the LED supply to the lowest level required for LED current conduction. This reduces component count and increases system efficiency while reducing system complexity and cost.



The LM3463 joins TI's LED driver family that includes the four-channel LM3464 [2]

and eight-channel TLC5960 [3]. For more information on all of TI's lighting products, visit www.ti.com/lighting-pr [4].

Key features and benefits of the LM3463 LED driver

- Three dimming modes simplify operation with common control systems: PWM input signals, analog-to-PWM input control or 4-byte data code.
- Global analog brightness control operates independently of dimming control modes and can be used for thermal foldback, protecting the LED array from over-temperature conditions.
- Multiple LM3463 LED drivers can be cascaded in a master-slave configuration for applications requiring more than six-string LED operation.
- Protection features include input under-voltage lock-out, LED open/short circuit, MOSFET thermal protection and over-temperature shutdown. A fault output signal can be used to notify the system controller of an open LED string.

Availability, packaging and pricing

The LM3463 is available in volume now from TI and its authorized distributors. The LM3463 is offered in a 7-mm by 7-mm, 48-pin LLP [5] package and is priced at US$4.19 each in 1,000-unit quantities.

Find out more about TI's LED lighting portfolio:

- Order samples and an evaluation module of the new LED driver: www.ti.com/lm3463-pr [1].
- Get more information on all of TI's lighting products: www.ti.com/lighting-pr [4].
- Design a complete LED power management system with TI's WEBENCH LED Architect: www.ti.com/ledwebench-pr [6].
- Ask questions and share knowledge in the LED forum in the TI E2E Community: www.ti.com/ledforum-pr [7].
- Download LED reference designs from TI's PowerLab Reference Design Library: www.ti.com/powerlab-pr [8].

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