



AS3661 Smartlight LED Driver IC

Programmable, 9 channel smartlight LED driver

Description

The AS3661 is a 9-channel LED driver designed to produce lighting effects for mobile devices. A highefficiency charge pump enables LED driving over full Lilon battery voltage range. The device is equipped with an internal program memory, which allows operation without processor control. The AS3661 maintains excellent efficiency over a wide operating range by autonomously selecting the best charge pump gain based on LED forward voltage requirements. AS3661 is able to automatically enter power-save mode when LED outputs are not active, thus lowering idle current consumption down to 10 μA (typ).

The AS3661 has an I2C-compatible control interface with four pin selectable addresses. Also, the device has a flexible General Purpose Output (GPO), which can be used as a digital control pin for other devices. INT pin can be used to notify processor when a lighting sequence has ended (interrupt - function). Also, the device has a trigger input interface, which allows synchronization between multiple devices. The device requires only four small and low-cost ceramic capacitors.

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Key Features

- Three independent program execution engines; 9 programmable outputs with 25.5 mA full-scale current, 8- bit current setting resolution and 12-bit PWM control resolution
- Adaptive charge pump with 1x and 1.5x gain provides up to 95% LED drive efficiency
- Charge pump with soft start and overcurrent/short circuit protection
- Built-in LED test
- Automatic power save mode; IVDD = 10 μA (typ.)
- Two wire, I2C-compatible, control interface
- Flexible instruction set
- Large SRAM program memory
- Small application circuit
- Source (high side) drivers
- Minimum number of external components
- Architecture supports color control

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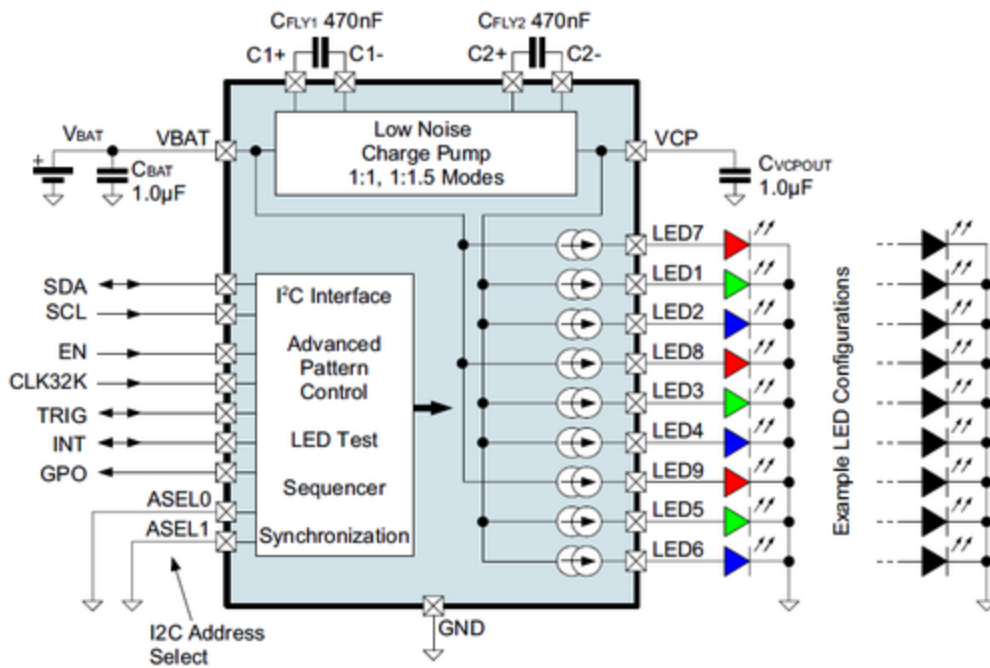
Applications

The product is ideal for fun and indicator lights, LD backlighting, and programmable current source.

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Block diagram for AS3661 Smartlight LED Driver IC

[Print Block diagram for AS3661 Smartlight LED Driver IC](#)



AS3661 LED Driver Block Diagram

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