

NCL30086BH

Analog/Digital Dimmable Quasi-Resonant Current-Mode Controller for LED Lighting



EBV Elektronik presents the NCL30086BH - a controller targeting isolated and non-isolated “smart-dimmable” constant-current LED driver.

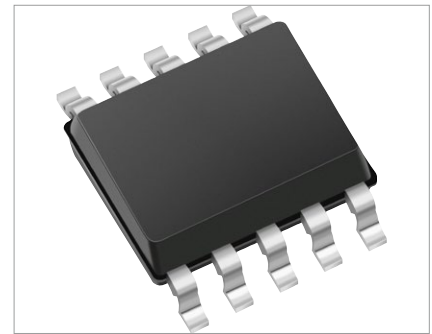
Designed to support flyback, buck-boost, and SEPIC topologies, its proprietary current control algorithm provides near unity power factor and tightly regulates a constant LED current from the primary side. This eliminates the need for a secondary side feedback circuitry or an optocoupler. Housed in the SOIC10 which has the same body size as a standard SOIC8, the NCL30086BH is specifically intended for space efficient designs. The device is highly integrated with a minimum number of external components. A robust suite of safety protections is built in to simplify the design. To ensure reliable operation at elevated temperatures, a user configurable current foldback circuit is also provided. In addition, it supports analog and PWM dimming with a dedicated dimming input to control the average LED current. Pin-to-pin compatible to the NCL30086, the NCL30086BH provides the same benefits along with an increased resolution of the digital current control algorithm for a 75% reduction in the LED current quantization ripple.

KEY FEATURES

- Constant current control with primary side feedback
- Power factor correction with low harmonic distortion
- Precise current regulation accuracy
- Line feedforward for enhanced regulation accuracy
- Wide Vcc operating range
- User programmable thermal foldback
- Open and shorted LED/Output diode protection
- Wide temperature range of -40 to 125 °C
- Dedicated analog/digital dimming control
- VCC undervoltage and overvoltage protection

APPLICATION EXAMPLES

- Integrated LED drive electronics
- LED driver
- Open frame LED driver



Package Photo