

Market News

New 60 V linear LED controller ICs from Infineon for general lighting

Munich, Germany – 18 March 2019 – With the [BCR601](#) and [BCR602](#) Infineon Technologies AG (FSE: IFX / OTCQX: IFNYY) introduces two new members of its successful BCR linear LED controller IC portfolio. The BCR601 features an innovative voltage feedback to the primary side also known as “active headroom control” (AHC), enabling cost- and power-effective [LED driver](#) applications. The BCR602, on the other hand, targets dimmable LED applications such as light engines, modules and strips. Its wide voltage range of up to 60 V makes it ideal fit for 48 V designs and DC/DC grids.

The supply voltage of the LED controller ICs ranges from 8 V to 60 V up to the SELV limit. Both, BCR601 and BCR602, operate with an external driver transistor, either an NPN bipolar transistors or an N-channel MOSFET to support a wide LED current and power range. With the ICs, the LED current can be adjusted by resistors as well as dimmed analog, while the BCR602 also accepts digital PWM up to 3.5 kHz and combined dimming. BCR601 and BCR602 represent an inherent AC ripple suppression, thus driving a constantly stable LED current to prevent light flicker and provide high light quality.

The AHC of the BCR601 allows controlling the output voltage of the primary side converter such as the [XDPL8218](#) flyback controller from Infineon. This architecture helps a linear LED controller to achieve maximum system efficiency by actively adjusting the AC/DC feedback loop to set minimum voltage headroom.

Adjusting the minimum necessary voltage across the pass transistor optimizes system efficiency which can normally only be achieved by secondary switched mode solutions. An optimized efficiency reduces component temperatures and stress. Further advantage of this solution is reduced EMI compared to switched mode supplies in combination with a low BOM. Additionally, the BCR601 features an adjustable over-voltage protection to prevent any damage to the LEDs.

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Both ICs also offer embedded hot-plug protection. This allows connecting or disconnecting the LED load without power down protecting the LEDs from electrical over-stress events. The over-temperature protection reduces the LED current by 30 percent of the nominal current as soon as the junction temperature exceeds the defined threshold. The LED controller ICs resume regular operation as soon as the temperature drops below the hysteresis.

Availability

The BCR601 and BCR602 are now available. More information is available at www.infineon.com/bcr.

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