

Product Brief

BCR430U

Linear low-voltage drop LED driver IC

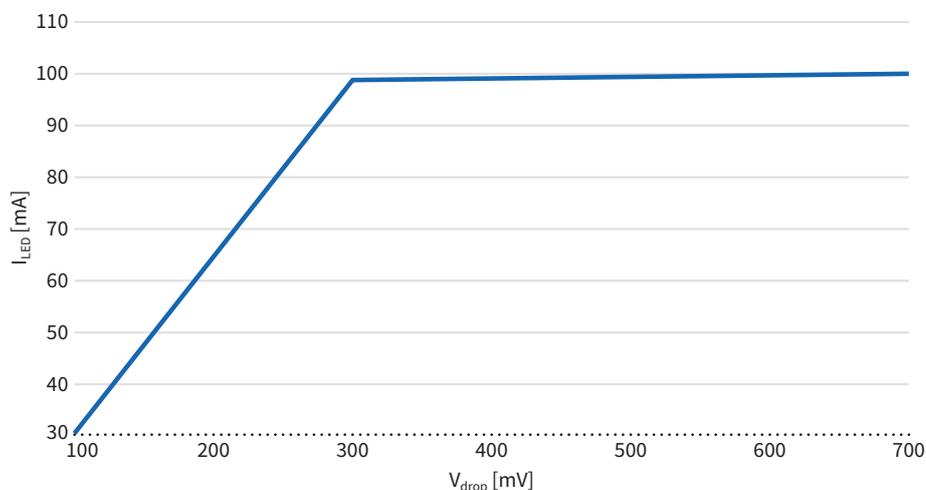
Long term reliability and longevity of LEDs are key. BCR430U is the best choice when you need to drive low power LED strings and strips supplied by a DC voltage source and at the same time requesting more flexibility in voltage headroom.

BCR430U is a linear LED controller IC in a small SOT23-6 package regulating the LED current in standalone operation without the need of any external power transistor. It is suitable for driving currents from 5 to 100 mA and the IC supply voltage range is from 6 V up to 42 V. The LED current level can be adjusted connecting a high ohmic resistor R_{set} to pin RS.

The voltage drop at the integrated LED driver stage can go down to 200 mV at 50 mA and less improving the overall system efficiency and providing extra voltage headroom to compensate for tolerances of LED forward voltage or supply voltage. This means to be able to have e.g. one LED more on board or reducing controllers needed saving space and BOM.

The driving current is always under control, no matter at which temperature thanks to a smart temperature controlling circuit reducing the LED current when junction temperature of BCR430U is very high.

LED current versus voltage drop ($V_s = 24\text{ V}$, $R_{set} = 6.2\text{ k}\Omega$)



Key features

- > Supply voltage from 6 to 42 V
- > Controls up to 100 mA LED current
- > Typ. 135 mV saturation voltage at 50 mA
- > LED current precision $\pm 5\%$
- > Smart over temperature protection

Typical applications

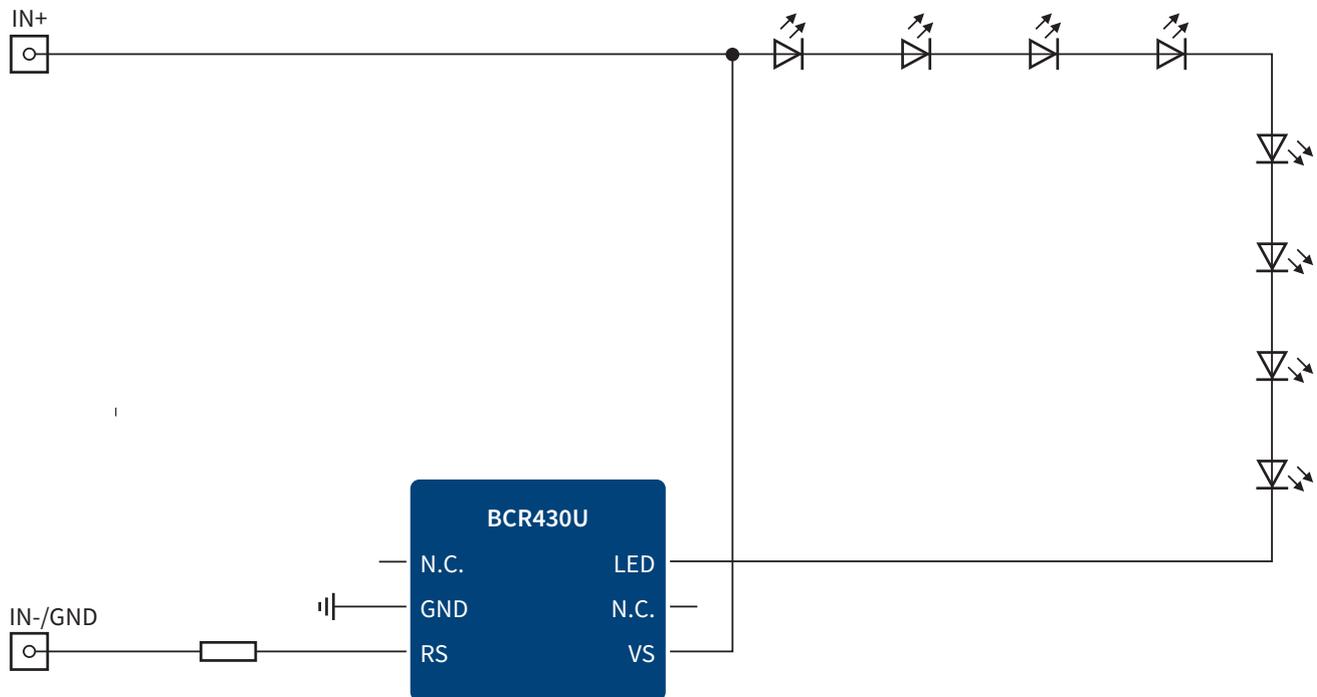
- > LED strips
- > Architectural LED lighting
- > LED displays and channel letters
- > Emergency lighting
- > Retail lighting
- > White good lighting



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Typical application diagram 24 V LED driver



Order information

Type	Description	Order information
BCR430U	Linear LED controller IC	SP001659266
BCR430U LED board	Evaluation board BCR430U	SP001709472

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