

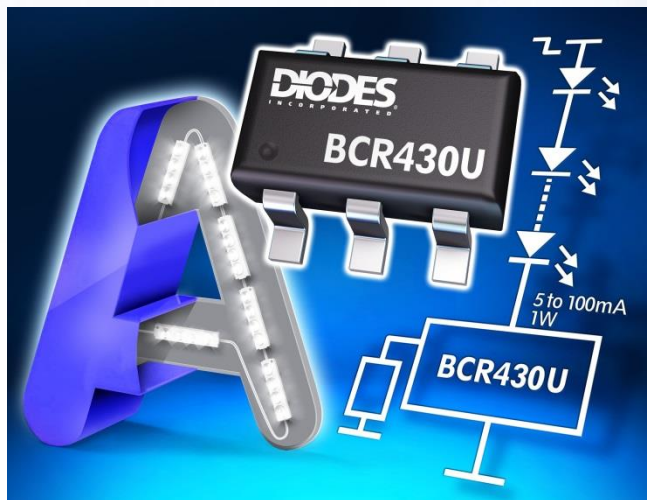
High-Precision Linear LED Driver IC

The BCR430U provides designers with ultra-precise constant current regulation for LED modules used in illumination applications where matching, uniform light output is important.

Providing a robust and stable output, the BCR430U drives LED strings and strips with 5mA to 100mA ($\pm 5\%$) across supply voltages from 5V to 42V and output voltages from 0.5V to 40V.

Requiring no external drive transistor or any stability capacitors simplifies designs and reduces component costs.

The industry leading 115mV ultra-low voltage drop (typ.) and 285 μ A consumption mean greater system efficiency with flexibility to drive more LEDs compared to similar solutions.



DIODES Advantage

- Low Saturation Voltage**
 The ultra-low voltage drop of 115mV means more voltage headroom is available to drive an extra LED in each string.
- Matched Lighting Output**
 Maintains precise LED current within $\pm 5\%$ across operating temperatures and supply voltages (from 5V to 42V)
- Flexible Current Regulation**
 The desired LED current is easily set between 5mA and 100mA
- Increased Safety and LED Longevity**
 Thermal protection reduces LED current at elevated temperatures
- Increased Reliability**
 Robust output protects from issues such as LED leakage voltages, supply transients, manual handling errors, etc.
- Supports Larger Arrays and Brighter LEDs**
 High-power output capable of up to 1W and support for paralleling

Applications

Targeted at 12V and 24V linear LED strips and panels in:

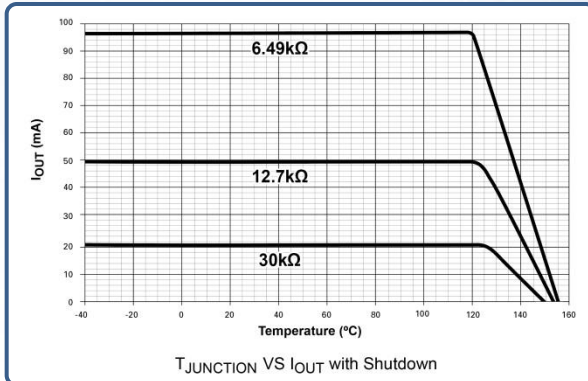
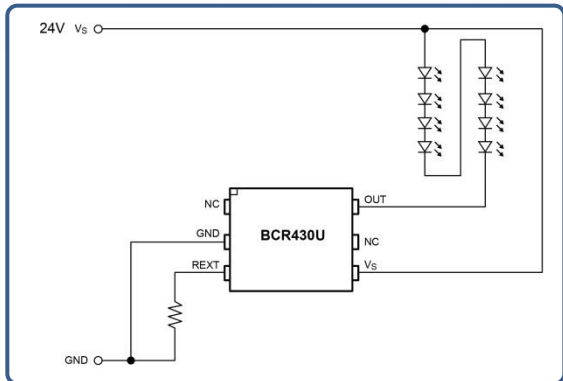
- LED Strip/String Modules
- Architectural Lighting
- Signage Lighting
- Undercounter Lighting



New Product Announcement

BCR430U

Typical Application Schematic



Thermal protection reduces LED current at elevated temperatures increasing safety and LED longevity. LED dimming is achievable by pulse width modulation (PWM) of the supply rail.

BCR4xxU Family

Part Number	Configuration	Max Vout (V)	Vdrop Typ. (V)	Adjustable Output (mA)
BCR430UW6	Low-Side CCR	40	0.115	5 to 100
BCR401UW6/Q	PNP High-Side	40	1.4	10 to 100
BCR402UW6/Q	PNP High-Side	40	1.4	20 to 100
BCR405UW6/Q	PNP High-Side	40	1.4	50 to 100
BCR420UW6/Q	NPN Low-Side	40	1.4	10 to 200
BCR421UW6/Q	NPN Low-Side	40	1.4	10 to 350

Part numbers with Q suffix are AEC-Q101 automotive compliant versions.

Cross Reference

Part	Diodes Inc. Orderable (OPN)	Infineon Orderable (OPN)
BCR430U	BCR430UW6-7	BCR430UXTSA1

Ordering Information

Part Number	Quantity	Suffix
BCR430UW6	3000 (7" reel)	-7



To find out more information:

Product page <https://www.diodes.com/part/view/BCR430UW6>

Datasheet <https://www.diodes.com/assets/Datasheets/BCR430UW6.pdf>