

Description

The XR46083 is a Three Terminal Current Controller (TTCC) for regulating the current flowing through an LED string.

The application of the XR46083 is configured in parallel with an LED string. The XR46083 can work as voltage controlled current source, current regulator, or cut-off. It is suitable for the applications adopting periodical AC voltage source.

The layout is very flexible allowing for PCB designs in any conceivable shape. Whether high bay, downlights, or unique architectural shapes the XR46083 can provide an excellent LED lighting solution

Typical Application

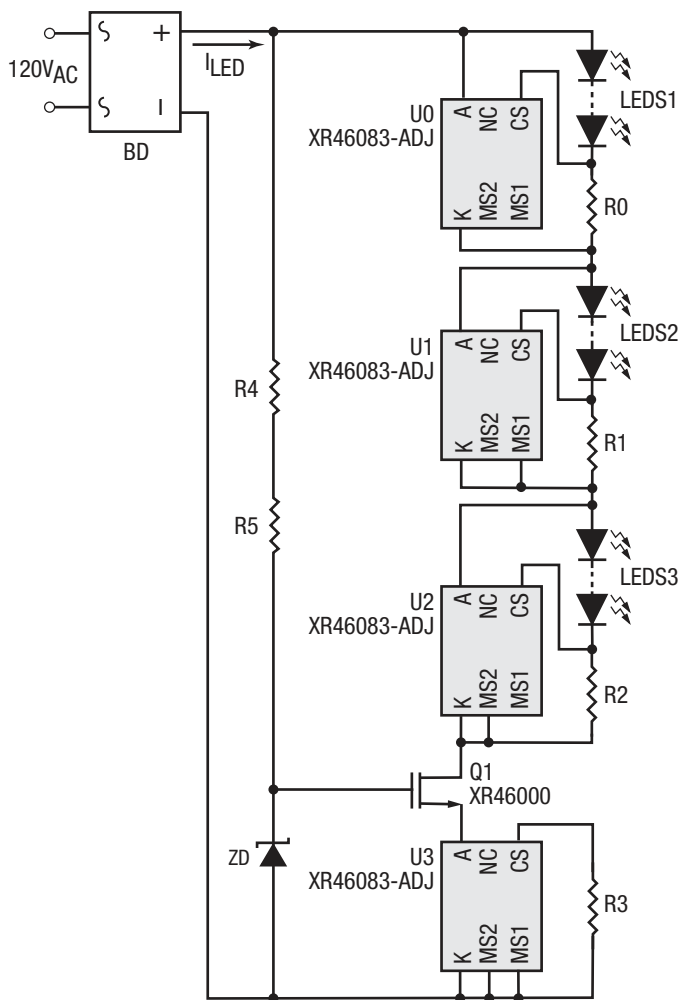


Figure 1. Typical Application

FEATURES

- System
 - All solid state components
 - No electrolytic capacitor required
 - Compact size to minimize mechanical cost
 - Driver-on-board and chip-on-board available which minimize process flow and assembly cost
 - High PF and low THD performance
 - High efficiency achieved
 - Flexible PCB layout style
 - Wide range of LED forward voltage selection
 - Distributed heat to several chips
 - TRIAC dimmable
- Chip
 - 88V input sustaining voltage
 - < 3V dropout voltage for up to 150mA regulating current

APPLICATIONS

- LED Lighting Applications
 - Downlight
 - High bay
 - Specialty
 - Architectural

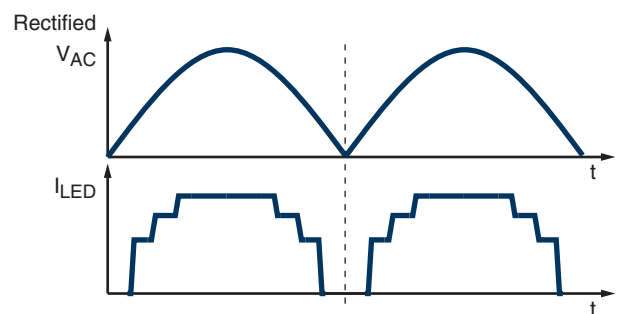


Figure 2. Typical Performance

Ordering Information⁽¹⁾

Part Number	Regulating Current (mA)	Operating Temperature Range	Lead-Free	Package	Packag Method
XR46083EHTR-C1 ⁽³⁾	40	-40°C ≤ T _J ≤ 150°C	Yes ⁽²⁾	TDFN6 2x2	Reel
XR46083EHTR-C2 ⁽³⁾	66				
XR46083EHTR-C3 ⁽³⁾	52				
XR46083EHTR-D1 ⁽³⁾	80				
XR46083EHTR-D2 ⁽³⁾	130				
XR46083EHTR-D3 ⁽³⁾	104				
XR46083EHTR-ADJ	Determined by external resistor only				
XR46083ESFTR-C1 ⁽³⁾	40	-40°C ≤ T _J ≤ 150°C	Yes ⁽²⁾	SOT-89-5	Reel
XR46083ESFTR-C2 ⁽³⁾	66				
XR46083ESFTR-C3 ⁽³⁾	52				
XR46083ESFTR-D1 ⁽³⁾	80				
XR46083ESFTR-D2 ⁽³⁾	130				
XR46083ESFTR-D3 ⁽³⁾	104				
XR46083ESFTR-ADJ	Determined by external resistor only				
XR46083ECF-C1 ⁽³⁾	40	-40°C ≤ T _J ≤ 150°C	Yes ⁽²⁾	Dice	Wafer
XR46083ECF-C2 ⁽³⁾	66				
XR46083ECF-C3 ⁽³⁾	52				
XR46083ECF-D1 ⁽³⁾	80				
XR46083ECF-D2 ⁽³⁾	130				
XR46083ECF-D3 ⁽³⁾	104				
XR46083ECF-ADJ	Determined by external resistor only				

NOTE:

1. Refer to www.exar.com/XR46084 for most up-to-date Ordering Information.
2. Visit www.exar.com for more information.
3. Contact factory for availability.

Please contact LEDtechsupport@exar.com to request a complete datasheet.



www.exar.com

48760 Kato Road
Fremont, CA 94538
USA

Tel.: +1 (510) 668-7000
Fax: +1 (510) 668-7001
Email: LEDtechsupport@exar.com

Exar Corporation reserves the right to make changes to the products contained in this publication in order to improve design, performance or reliability. Exar Corporation conveys no license under any patent or other right and makes no representation that the circuits are free of patent infringement. While the information in this publication has been carefully checked, no responsibility, however, is assumed for inaccuracies.

Exar Corporation does not recommend the use of any of its products in life support applications where the failure or malfunction of the product can reasonably be expected to cause failure of the life support system or to significantly affect its safety or effectiveness. Products are not authorized for use in such applications unless Exar Corporation receives, in writing, assurances to its satisfaction that: (a) the risk of injury or damage has been minimized; (b) the user assumes all such risks; (c) potential liability of Exar Corporation is adequately protected under the circumstances.

Reproduction, in part or whole, without the prior written consent of Exar Corporation is prohibited. Exar, XR and the XR logo are registered trademarks of Exar Corporation. All other trademarks are the property of their respective owners.