

### Description

The XR46084 is a Three Terminal Current Controller (TTCC) for regulating the current flowing through an LED string.

The application of the XR46084 is configured in parallel with an LED string. The XR46084 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 XR46084 can provide an excellent LED lighting solution.

### Typical Application

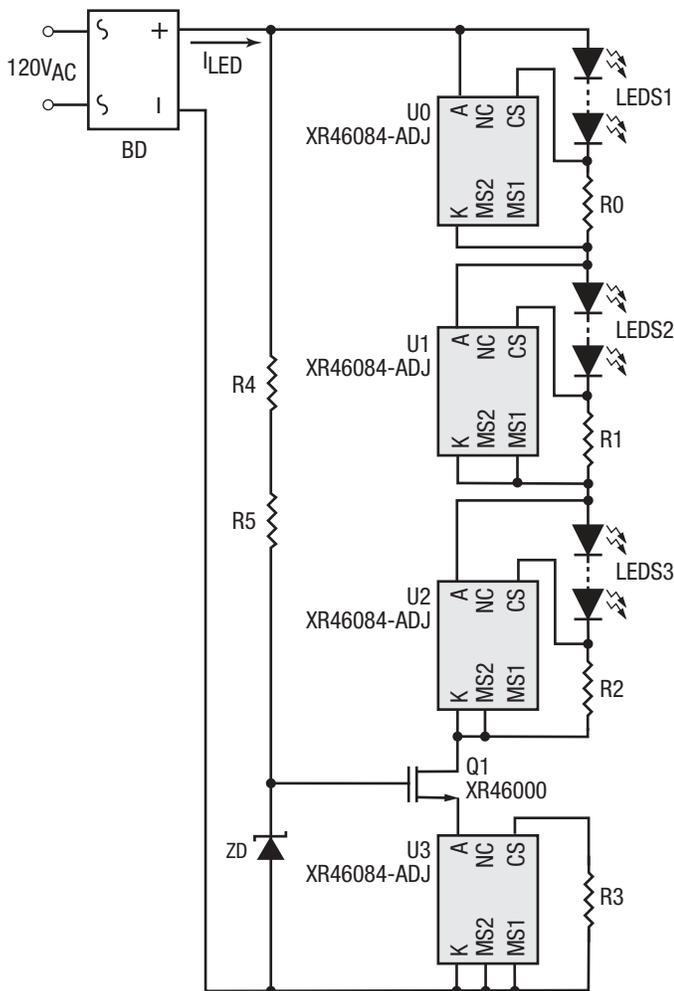


Figure 1. Typical Application

### 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

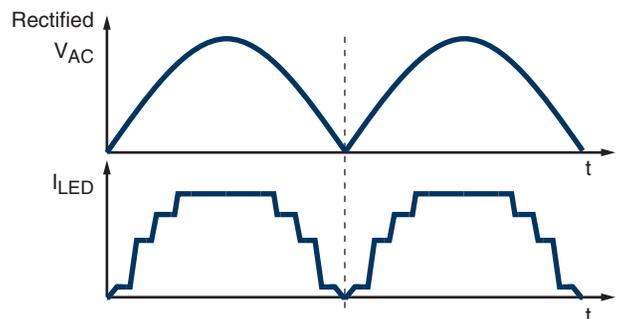


Figure 2. Typical Performance

Ordering Information<sup>(1)</sup>

Part Number	Regulating Current (mA)	Operating Temperature Range	Lead-Free	Package	Packag Method
XR46084EHTR-C1 <sup>(3)</sup>	40	-40°C ≤ T <sub>J</sub> ≤ 150°C	Yes <sup>(2)</sup>	TDFN6 2x2	Reel
XR46084EHTR-C2 <sup>(3)</sup>	66				
XR46084EHTR-C3 <sup>(3)</sup>	52				
XR46084EHTR-D1 <sup>(3)</sup>	80				
XR46084EHTR-D2 <sup>(3)</sup>	130				
XR46084EHTR-D3 <sup>(3)</sup>	104				
XR46084EHTR-ADJ	Determined by external resistor only				
XR46084ESFTR-C1 <sup>(3)</sup>	40	-40°C ≤ T <sub>J</sub> ≤ 150°C	Yes <sup>(2)</sup>	SOT-89-5	Reel
XR46084ESFTR-C2 <sup>(3)</sup>	66				
XR46084ESFTR-C3 <sup>(3)</sup>	52				
XR46084ESFTR-D1 <sup>(3)</sup>	80				
XR46084ESFTR-D2 <sup>(3)</sup>	130				
XR46084ESFTR-D3 <sup>(3)</sup>	104				
XR46084ESFTR-ADJ	Determined by external resistor only				
XR46084ECF-C1 <sup>(3)</sup>	40	-40°C ≤ T <sub>J</sub> ≤ 150°C	Yes <sup>(2)</sup>	Dice	Wafer
XR46084ECF-C2 <sup>(3)</sup>	66				
XR46084ECF-C3 <sup>(3)</sup>	52				
XR46084ECF-D1 <sup>(3)</sup>	80				
XR46084ECF-D2 <sup>(3)</sup>	130				
XR46084ECF-D3 <sup>(3)</sup>	104				
XR46084ECF-ADJ <sup>(3)</sup>	Determined by external resistor only				

**NOTE:**

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

Please contact [LEDtechsupport@exar.com](mailto:LEDtechsupport@exar.com) to request a complete datasheet.



**Corporate Headquarters:**  
 5966 La Place Court  
 Suite 100  
 Carlsbad, CA 92008  
 Tel.: +1 (760) 692-0711  
 Fax: +1 (760) 444-8598  
[www.maxlinear.com](http://www.maxlinear.com)

**High Performance Analog:**  
 1060 Rincon Circle  
 San Jose, CA 95131  
 Tel.: +1 (669) 265-6100  
 Fax: +1 (669) 265-6101  
 Email: [LEDtechsupport@exar.com](mailto:LEDtechsupport@exar.com)  
[www.exar.com](http://www.exar.com)

The content of this document is furnished for informational use only, is subject to change without notice, and should not be construed as a commitment by MaxLinear, Inc.. MaxLinear, Inc. assumes no responsibility or liability for any errors or inaccuracies that may appear in the informational content contained in this guide. Complying with all applicable copyright laws is the responsibility of the user. Without limiting the rights under copyright, no part of this document may be reproduced into, stored in, or introduced into a retrieval system, or transmitted in any form or by any means (electronic, mechanical, photocopying, recording, or otherwise), or for any purpose, without the express written permission of MaxLinear, Inc.

MaxLinear, Inc. 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 MaxLinear, Inc. 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 MaxLinear, Inc. is adequately protected under the circumstances.

MaxLinear, Inc. may have patents, patent applications, trademarks, copyrights, or other intellectual property rights covering subject matter in this document. Except as expressly provided in any written license agreement from MaxLinear, Inc., the furnishing of this document does not give you any license to these patents, trademarks, copyrights, or other intellectual property.

Company and product names may be registered trademarks or trademarks of the respective owners with which they are associated.

© 2016 - 2017 MaxLinear, Inc. All rights reserved