

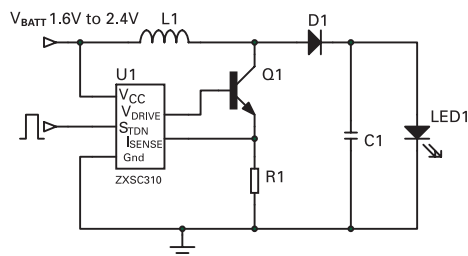
## Design Note 61

# ZXSC310 Solution for a 1W High Power White LED

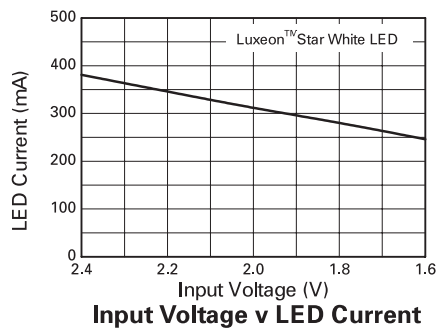
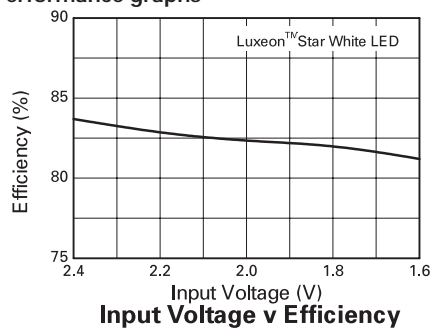
### Aim

This design note shows the ZXSC310 driving a 1W LED. The LED has 180Cd light output from a forward current of 350mA. The solution is optimised to drive the 1W LED at 350mA DC current from a dual cell input.

### Circuit diagram



### Performance graphs



### Bill of Materials

Reference	Part No.	Value	Manufacturer	Contact Details
U1	ZXSC310E5	LED driver	Zetex	<a href="http://www.zetex.com">www.zetex.com</a>
Q1	FMMT617	3A, low $V_{CE(SAT)}$	Zetex	<a href="http://www.zetex.com">www.zetex.com</a>
D1	ZHCS1000	2A, low $V_F$	Zetex	<a href="http://www.zetex.com">www.zetex.com</a>
L1	DO3316P-223	22uH, 2A	Coilcraft	<a href="http://www.coilcraft.com">www.coilcraft.com</a>
R1	Generic	22mΩ	Generic	
C1	Generic	2.2μF	Generic	
LED1	LXHL-NW98	White LED	Lumileds	<a href="http://www.lumileds.com">www.lumileds.com</a>

## Design Note 61

### ISSUE 3 - MARCH 2004

---

© Zetex plc 2004

Europe	Americas	Asia Pacific	Corporate Headquarters
Zetex GmbH Streitfeldstraße 19 D-81673 München Germany	Zetex Inc 700 Veterans Memorial Hwy Hauppauge, NY 11788 USA	Zetex (Asia) Ltd 3701-04 Metroplaza Tower 1 Hing Fong Road, Kwai Fong Hong Kong	Zetex plc Fields New Road, Chadderton Oldham, OL9 8NP United Kingdom
Telefon: (49) 89 45 49 49 0 Fax: (49) 89 45 49 49 49 europe.sales@zetex.com	Telephone: (1) 631 360 2222 Fax: (1) 631 360 8222 usa.sales@zetex.com	Telephone: (852) 26100 611 Fax: (852) 24250 494 asia.sales@zetex.com	Telephone (44) 161 622 4444 Fax: (44) 161 622 4446 hq@zetex.com

These offices are supported by agents and distributors in major countries world-wide.

This publication is issued to provide outline information only which (unless agreed by the Company in writing) may not be used, applied or reproduced for any purpose or form part of any order or contract or be regarded as a representation relating to the products or services concerned. The Company reserves the right to alter without notice the specification, design, price or conditions of supply of any product or service.

For the latest product information, log on to [www.zetex.com](http://www.zetex.com)

