

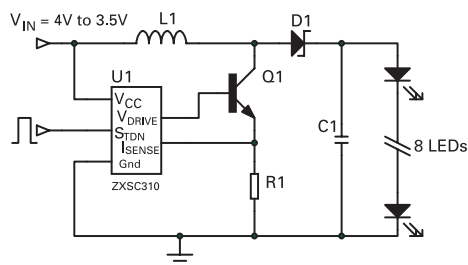
## Design Note 63

### ZXSC310 Solution to drive 8 LEDs connected in series

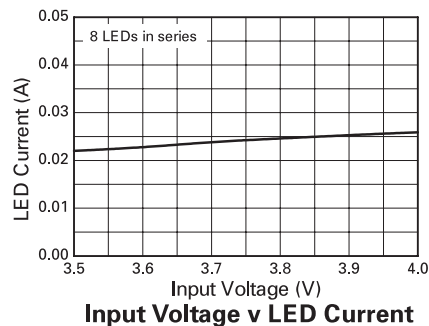
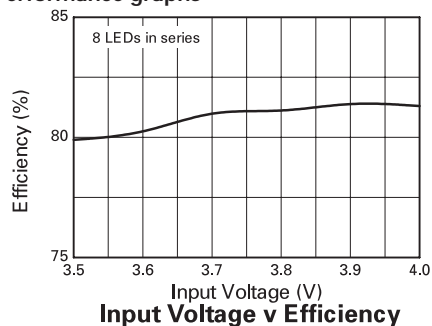
#### Aim

This solution is optimized for an input voltage range of 4V to 3.5V. The LED current is set to approximately at 25mA  $V_{IN} = 4V$  for 8 white LEDs connected in series.

#### Circuit diagram



#### Performance graphs



#### Bill of Materials

Reference	Part No.	Value	Manufacturer	Contact Details
U1	ZXSC310E5	N/A	Zetex	<a href="http://www.zetex.com">www.zetex.com</a>
Q1	FMMT619	N/A	Zetex	<a href="http://www.zetex.com">www.zetex.com</a>
D1	ZHCS1000	1A	Zetex	<a href="http://www.zetex.com">www.zetex.com</a>
R1	Generic	47mΩ	Generic	
C1	Generic	2.2μF	Generic	
L1	DO1608P-683	68μH	Coilcraft	<a href="http://www.coilcraft.com">www.coilcraft.com</a>
LED1-8	NSPW500BS	White LED	Nichia	<a href="http://www.nichia.com">www.nichia.com</a>

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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

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