

DN75

ZXSC310 Solar powered garden light reference design

Description

This design note shows a typical ZXSC310 LED driver circuit for a solar powered garden light. The input voltage ranges from 0.4V to 1.6V with a maximum output current of 43mA at 1V input.

A typical schematic diagram is shown in Figure 1.

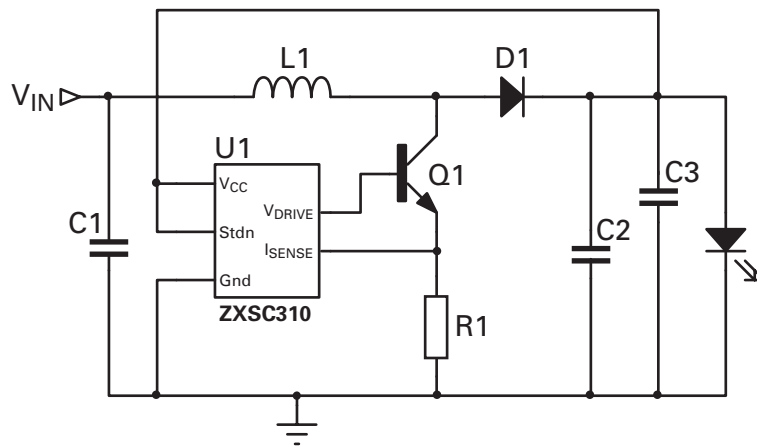


Figure 1 Schematic diagram

Ref.	Value	Part Number	Manufacturer	Comments
U1		ZXSC310E5	Zetex	LED Driver in SOT23-5
Q1		FMMT617	Zetex	Low sat NPN in SOT23
D1	1A	ZHCS1000	Zetex	1A Schottky in SOT23
L1	37 μ H			
R1	100m Ω	Generic	Generic	0805 size
C1	1 μ F	Generic	Generic	
C2	22 μ F	Generic	Generic	
C3	10 μ F	Generic	Generic	

Table 1 Bill of materials

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Typical operating characteristics

(For typical application circuit where $T_{amb} = 25^{\circ}\text{C}$ unless otherwise stated)

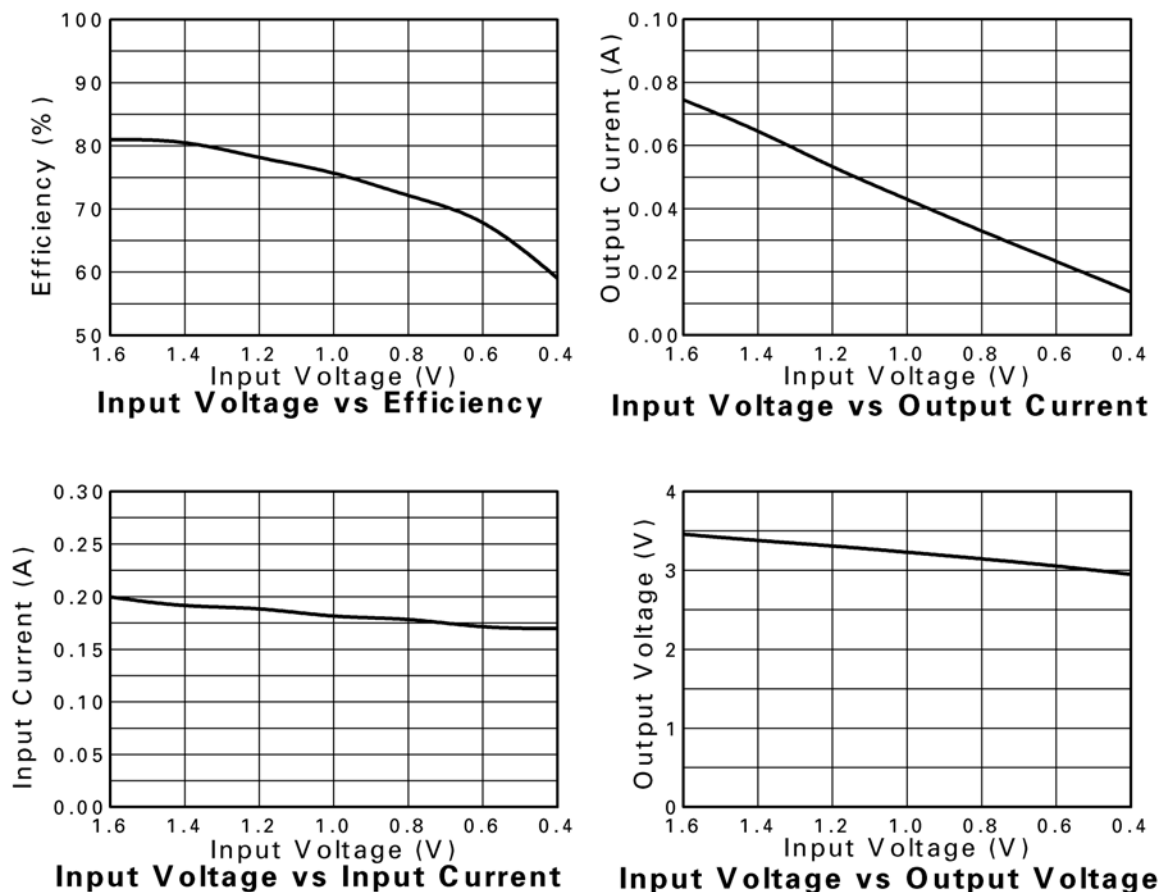


Figure 2 Performance graphs

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