



## 1.0 Design Specifications

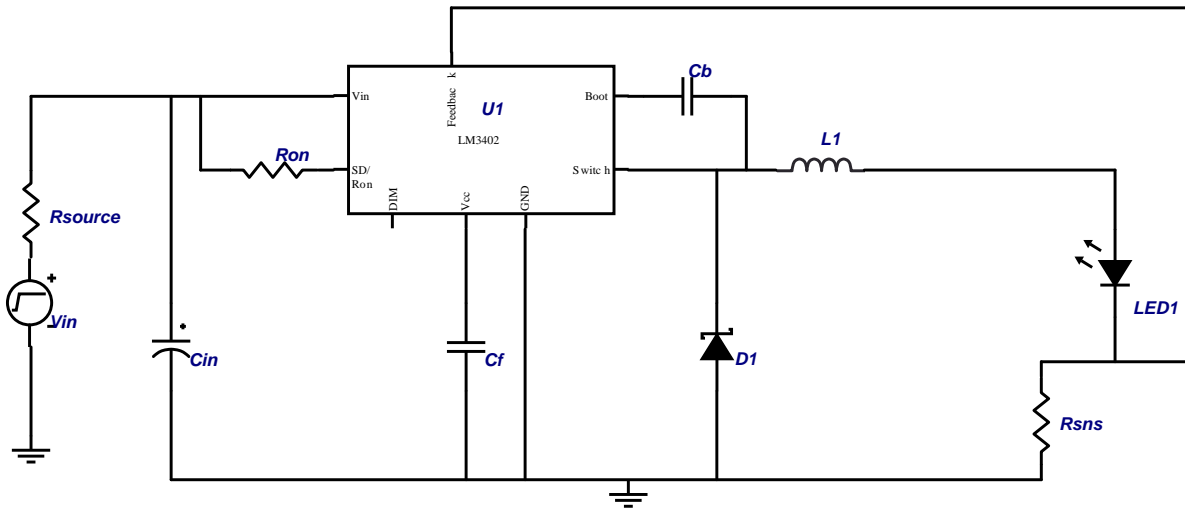
Inputs	Outputs #1
VinMin=6	Vout1=3.5
VinMax=40	Iout1=0.2

## 2.0 Design Description

This circuit is designed to drive a parallel array of GaP or GaN-based LEDs at a forward current of 200 mA with a total forward voltage ranging from 2.5V to 3.5V. LED/inductor current ripple will not exceed 50 mA pk-pk. Average output current varies from 192 mA to 6V to 208 mA at 40V.

The input is 6V to 40V including lowest battery voltage and charging transients. Switching frequency is 450 kHz to 650 kHz depending on LED chemistry (VF).

## 3.0 Schematic



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FIGURE 1. Example Schematic Showing Connection for all Components.

## 4.0 Bill Of Materials

Part	Manufacturer	Part#	Attributes
Cb	Vishay	VJ0805Y103KXXAT	1e-8 F
Cf	Vishay	VJ0805Y104KXXAT	1e-7 F
Cin	TDK	C3225X7R1H225M	NumCaps=1, 2.2e-6 F
D1	Central Semiconductor	CMSH1-40M	0.5 V
L1	TDK	SLF7045T-101MR50	0.0001 H, 0.25 Ohms
Ron	Vishay	CRCW08053832F	38300 Ohms
Rsns	Vishay	CRCW08051R07F	1.07 Ohms
U1	National Semiconductor	LM3402	

## Notes

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|--|---|

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