

Product Overview

NCV78763: Dual LED Driver and Power Ballast, for Automotive Front Lighting, 1.6 A, 2nd Generation

For complete documentation, see the data sheet.



The NCV78763 is a single-chip, highly efficient smart power ballast and dual LED driver designed for automotive front lighting applications like high beam, low beam, daytime running light (DRL), turn indicator, fog light, static cornering and so on.

The NCV78763 is a best fit for high current LEDs and provides a complete solution to drive two strings up to 60 V, by means of two internal independent buck switch channel outputs, with a minimum of external components. For each individual LED channel, the output current and voltage can be customized according to the application requirements. An on-chip diagnostic feature for automotive front lighting is provided, easing the safety monitoring from the microcontroller. The device integrates a current-mode voltage booster controller, realizing a unique input current filter with a limited BOM.

When more than two LED channels are required on one module, then two, three or more NCV78763 devices can be combined, with the possibility for the booster circuits to operate in multiphase-mode. This helps to further optimize the filtering effect of the booster circuit and allows a cost effective dimensioning for mid to high power LED systems.

Due to the SPI programmability, one single hardware setup can support multiple system configurations for a flexible platform solution approach.

Features

- Single Chip Boost-Buck Solution
 - Two LED Strings up to 60 V
 - High Current Capability up to 1.6 A DC per Output
 - High Overall System Efficiency
 - Minimum of External Components
 - Active Input Filter with Low Current Ripple from Battery
 - Integrated Switched Mode Buck Current Regulator
 - Integrated Boost Current-mode Controller
 - Programmable Input Current Limitation
 - Average Current Regulation Through the LEDs
- For more features, see the data sheet

Applications

- Front Lighting High Beam and Low Beam
- Day time Running Light (DRL)
- Position or Park light
- Turn Indicator
- Fog Light and Static Cornering

End Products

- Automotive

Part Electrical Specifications

Product	Pricing (\$/Unit)	Compliance	Status	Topology	V _{IN} Min (V)	V _{IN} Max (V)	V _O Max (V)	I _O Max (mA)	f _{SW} Typ (kHz)	Package Type
NCV78763DQ6AR2G		AEC Qualified PPAP Capable Pb-free Halide free	Active	Step-Up/Step-Down	4	40	68	1600 1900	350	SSOP-36 EP
NCV78763DQ9R2G	2.267	AEC Qualified PPAP Capable Pb-free Halide free	Active	Step-Up/Step-Down	4	40	68	1900 1600	350	SSOP-36 EP

For more information please contact your local sales support at www.onsemi.com.

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