

Product Overview

NSI45015W: LED Driver, Constant Current Regulator, 15 mA, 45 V

For complete documentation, see the data sheet.

The linear constant current regulator (CCR) is a simple, economical and robust device designed to provide a cost effective solution for regulating current in LEDs (similar to Constant Current Diode, CCD). The CCR is based on Self-Biased Transistor (SBT) technology and regulate current over a wide voltage range. It is designed with a negative temperature coefficient to protect LEDs from thermal runaway at extreme voltages and currents. The CCR turns on immediately and is at 35% of regulation with only 0.5 V V_{ak} . It requires no external components allowing it to be designed as a high or low side regulator. The high anode-cathode voltage rating withstands surges common in automotive, industrial and commercial signage applications. The CCR comes in thermally robust packages and is qualified to AEC-Q101 standard, and UL94-V0 certified.

Features

- Robust power package: 460 mW
- Wide operating voltage range, Immediate turn on, voltage surge suppressing protecting LEDs, SBT (Self Biased Transistor) technology, Negative temperature coefficient
- NSV Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q101 Qualified and PPAP Capable
- These Devices are Pb-Free, Halogen Free/BFR Free and are RoHS Compliant

Applications

- LED drive
- Battery charging
- Contact wetting

Benefits

- High or low side control, simple battery charge, reduce LED binning and therefore inventory, NO EMI

End Products

- Automotive Applications- Cluster and central console backlighting- Navigation/Audio/Infotainment systems- Vanity mirror light, car door puddle light, ambience lighting, CHMSL, turn signals, side repeaters, tail lamps, brake lighting, trailer lights and contact wetting
- Display and signage - Channel letters, display backlighting, neon bulb replacements, LED stripes and modules
- Architectural lighting Decorative, Task, Exterior, Landscape & Under counter.
- Computing and industrial indicator lamps, backlighting

Part Electrical Specifications

Product	Pricing (\$/Unit)	Compliance	Status	V_I Max (V)	I_O Max (mA)	LEDs in Series, Max #	LEDs in Parallel, Max #	Package Type
NSI45015WT1G	0.077	Pb-free Halide free non AEC-Q and PPAP	Active	45	15	80	16	SOD-123
NSV45015WT1G	0.0962	AEC Qualified PPAP Capable Pb-free Halide free	Active	45	15	80	16	SOD-123

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

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