Product Overview

NSI50010YT1G: LED Driver, Constant Current Regulator, 50 V, 10 mA

For complete documentation, see the data sheet.

The linear constant current regulator 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 constant current regulator is based on Self-Biased Transistor (SBT) technology and regulates 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 25% of regulation with only 0.5 V Vak. It requires no external components allowing it to be designed as a high or low-side regulator. The anode-cathode voltage rating withstands surges common in Automotive, Industrial and Commercial Sinage applications. The CCR comes in thermally robust packages and is qualified to AEC-101 standard, and UL94-V0 certified.

Features

- Robust Power Package: 460 mW, Wide operating voltage range, Immediate turn on, Voltage surge suppressing protecting LEDs, UL94-V0 certified, SBT (Self Biased Transistor) Technology, Negative Temperature Coefficient, This device is PB-Free, Halogen Free/BFR Free and is RoHS Compliant
- NSV Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q101 Qualified and PPAP Capable

Applications

- LED Drive, Battery Charging, Contact Wetting
- Automotive - Cluster & Central Console Backlighting, Navigation/Audio Systems, Vanity Mirror Light, Car Door Puddle Light, Ambience Lighting, CHMSL, Turn Signals, Side Repeaters, Tail Lamps, Brake Lighting, Trailer lights & Contact Wetting. Display & Signage - Channel letters, Display backlighting, Neon bulb replacements, LED stripes & modules. Architectural lighting Decorative, Task, Exterior, Landscape & Under counter. Computing and Industrial Indicator lamps, Backlights

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
NSI50010YT1G	0.1027	Pb-free Halide free non AEC-Q and PPAP	Active	50	10	80	16	SOD-123
NSV50010YT1G	0.1283	AEC Qualified PPAP Capable Pb-free Halide free	Active	50	10	80	16	SOD-123

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

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