

## Product Overview

### NSI45030: LED Driver, Constant Current Regulator, 30 mA, 45 V

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 constant current regulator turns on immediately and is at 25% 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 constant current regulator 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, AEC-Q101 qualified and PPAP Capable, UL94-V0 certified SBT (Self Biased Transistor) Technology, Negative Temperature Coefficient, This device is PB-Free, Halogen Free/BFR Free and is RoHS Compliant
- AEC-Q101 Qualified and PPAP Capable, UL94-V0 Certified

### 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 - 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
NSI45030T1G	0.077	Pb-free Halide free non AEC-Q and PPAP	Active	45	30	80	16	SOD-123
NSV45030T1G	0.0962	AEC Qualified PPAP Capable Pb-free Halide free	Active	45	30	80	16	SOD-123

For more information please contact your local sales support at [www.onsemi.com](http://www.onsemi.com).

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