



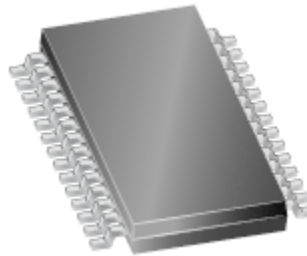
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## A8501 High Power WLED/RGB Driver for Medium Displays with Output Disconnect

Contact [Sales](#) for more information.

### Features

- Active current sharing between LED strings for tight current matching and accuracy
- Drive up to 9 series LEDs in 4 parallel strings, 36 LEDs maximum ( $V_f = 3.5\text{ V}$ ,  $I_f = 100\text{ mA}$ )
- Boost converter with integrated 40 V DMOS
- LED sinks rated for 100 mA
- Typical LED matching error <1%
- PWM dimming with LED duty cycle control
- 4000:1 dimming range
- 600 kHz to 2.2 MHz switching frequency
- Open LED disconnect
- Shorted LED protection
- Internal bias supply for single-supply operation
- External thermistor sensing to limit LED temperature
- Boost current limit, output short circuit limit, overtemperature protection (OTP), and soft start
- Output overvoltage protection
- Open Schottky and open OVP resistor protection
- True output disconnect
- Input under- and over-voltage protection (UVLO and OVP)
- <math>1\text{ }\mu\text{A}</math> typical shutdown current



28-pin TSSOP with exposed thermal pad (package LP)

### Applications

- Navigation systems
- Automotive infotainment systems



### Description

The A8501 is a multioutput WLED/RGB driver for backlighting medium-size displays. The A8501 integrates a boost converter and four current-sinks. It can work from a single power supply of 8 to 21 V and withstand up to 40 V.

The boost converter is a constant frequency, current-mode converter. Operating frequency can be set to 2 MHz in order to avoid interference with the AM radio band. The integrated boost DMOS switch is rated for 40 V at 3.6 A.

PWM dimming allows LED currents to be controlled at up to a 1000:1 ratio. Additional 4:1 dimming can be achieved by using the DIM pin.

The A8501 provides protection against output connector shorts through an integrated output disconnect switch. An optional external thermistor can be used to limit LED current based on panel temperature.

The device is supplied in a surface mount, 28-pin TSSOP package (suffix LP), with exposed thermal pad for enhanced thermal dissipation. It is lead (Pb) free with 100% matte-tin leadframe plating.

Complete Part Numbers							
Part Number	Package Type	RoHS Compliant	Part Composition/ RoHS Data	Temperature	Comments	Samples	Distributor Stock
A8501ELPTR-T	28-lead TSSOP	Yes	<a href="#">view data</a>	-40 °C to 125 °C	<i>new</i>	<a href="#">Contact Marketing Representative</a>	<input type="button" value="Check Stock"/>

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