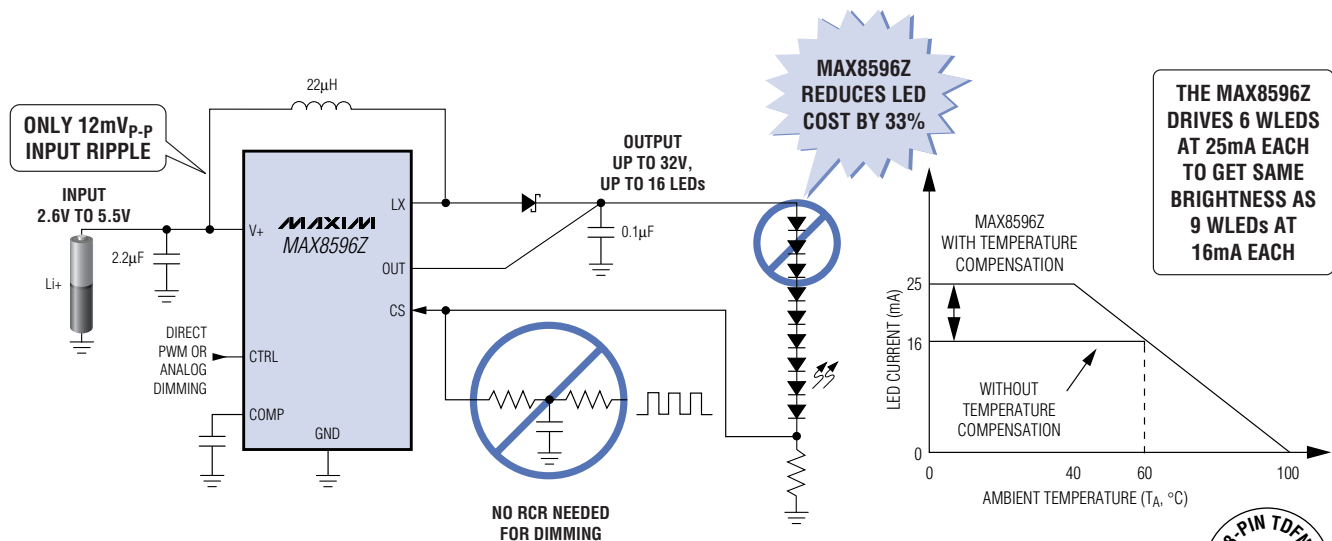


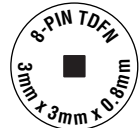
# TEMPERATURE-COMPENSATED, HIGH-EFFICIENCY LED DRIVER REDUCES COST BY 33%

## 1MHz, 32V Step-Up DC-DC Converter Provides 86% Efficiency

The MAX8596Z is the first 32V, step-up DC-DC converter that automatically adjusts its output current based on temperature in order to drive up to 8 white-LED (WLED) backlights in smartphones and PDAs. It delivers the maximum recommended LED current (based on the derating curves of popular white LEDs) at all temperatures. Consequently, because users do not need to guardband the current and use excessive LEDs, the MAX8596Z permits fewer LEDs to be used. In contrast, conventional driver designs limit room-temperature LED current to 16mA to prevent LED overheating at high temperatures. Those older designs require 3 additional LEDs at room temperature to achieve the desired brightness. By using fewer LEDs, the MAX8596Z reduces LED cost by 33%.



- ◆ Internal 37V MOSFET Switch
- ◆ Automatic Temperature Compensation (MAX8596Z)
- ◆ No Temperature Compensation (MAX8595Z)
- ◆ Powers 2 to 16 White LEDs (Maximum 8 LEDs per String)
- ◆ Zero In-Rush Current
- ◆ 1MHz Switching Permits Small, Low-Profile Inductor and C<sub>OUT</sub>
- ◆ 0.3µA Shutdown Current
- ◆ Pin Compatible with MAX1561/MAX1599
- ◆ Priced at \$1.45<sup>†</sup>



<sup>†</sup>2500-up recommended resale. Prices provided are for design guidance and are FOB USA. International prices will differ due to local duties, taxes, and exchange rates. Not all packages are offered in 1k increments, and some may require minimum order quantities.



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