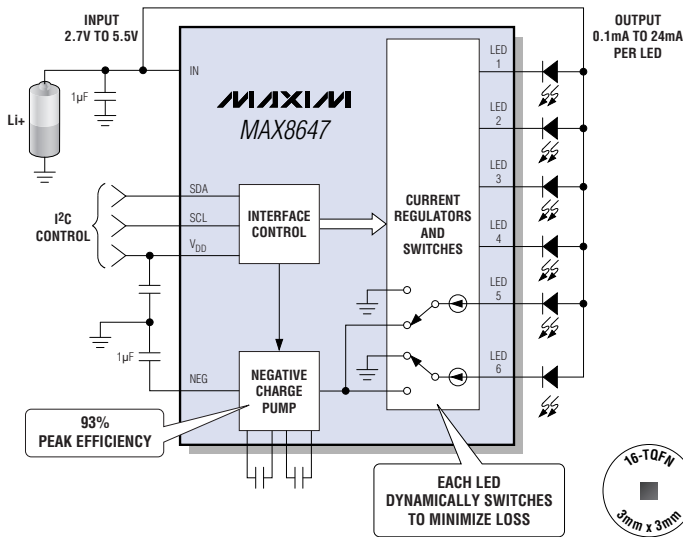


INDUSTRY'S FIRST NEGATIVE WHITE-LED CHARGE PUMPS ACHIEVE HIGHEST EFFICIENCY

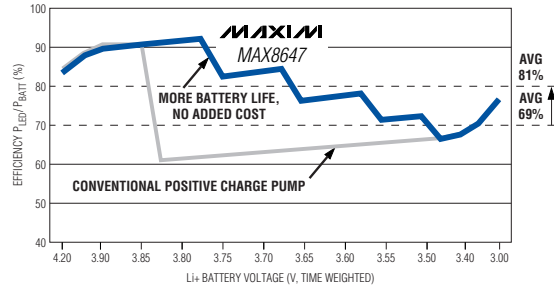
Independent Adaptive Mode Switching for Each LED Improves Efficiency by 12%

The MAX8647/MAX8648 utilize a negative charge-pump architecture to reduce in-line resistance and maximize efficiency by delaying mode switching from 1x to 1.5x operation during battery discharge. Combined with independent adaptive mode switching for each LED, this architecture improves efficiency by 12%, even with high LED forward-voltage (V_f) mismatching. These superior features make the MAX8647/MAX8648 ideal for cell phones, smartphones, portable media players, and other portable devices in which every milliamp-hour of battery life is crucial.



DELIVERS 12% HIGHER EFFICIENCY THAN COMPETITION

EFFICIENCY vs. Li+ BATTERY VOLTAGE
(Four LEDs, $I_f = 15\text{mA}$, $V_{F1} = 3.7\text{V}$, $V_{F2} = 3.6\text{V}$, $V_{F3} = 3.5\text{V}$, $V_{F4} = 3.4\text{V}$)



- ◆ Adaptive, Independent Current Regulator for Each LED
- ◆ Drive Up to Six White or RGB LEDs
- ◆ $\pm 0.4\%$ Accurate Current Matching
- ◆ Low $70\mu\text{A } I_Q$
- ◆ 1MHz Fixed-Frequency Switching for Small Components

- ◆ Multizone Light Management for Up to 32 Brightness Levels or 32,768 Colors with RGB LEDs
- ◆ Ambient Temperature Derating Protects LEDs at High Temperatures
- ◆ Serial Pulse Dimming Interface (MAX8648)
- ◆ EV Kit Available
- ◆ Prices Start at \$1.95[†] (MAX8647) and \$1.70[†] (MAX8648)

[†]2.5k-up pricing provided is for design guidance and is 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.



www.maxim-ic.com/MAX8647-info

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