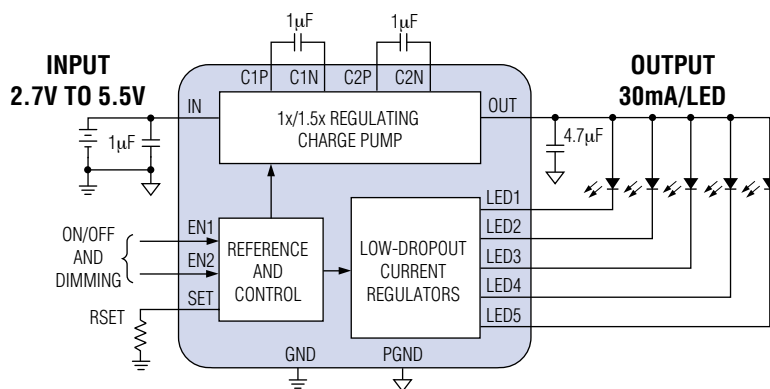


FIRST HIGH-EFFICIENCY 1x & 1.5x REGULATING CHARGE PUMP PROVIDES CURRENT MATCHING FOR WHITE LEDS

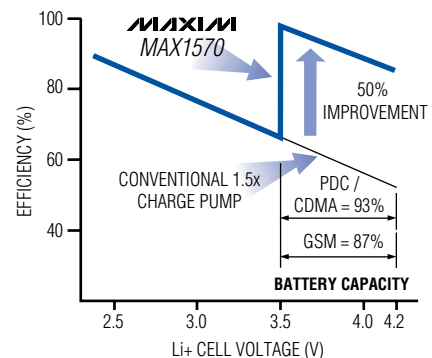
45% Longer Battery Life vs. 1.5x Charge Pump, 0.3% LED-to-LED Current Matching

The MAX1570 is the first integrated solution to combine the highest efficiency 1x/1.5x charge pump with low-dropout current regulators into a compact 4mm x 4mm QFN package. It powers up to five white LEDs with 0.3% current matching for uniform backlighting of color LCD displays. With constant 1MHz PWM switching frequency, the MAX1570 requires only two 1µF flying capacitors and one 4.7µF output capacitor for a complete solution. No external inductor or ballast resistors are required. The converter is designed to switch automatically between 1x and 1.5x charge-pump mode to maximize battery life of cell phones, PDAs, and digital cameras. Additional features include soft-start to limit in-rush current, brightness control (digital or PWM methods), and complete input-to-output disconnect during shutdown to eliminate battery leakage.

POWER UP TO FIVE WHITE LEDS WITH 0.3% LED-TO-LED CURRENT MATCHING



The MAX1570's current matching feature eliminates costly factory calibration and special LED batch ordering.



The MAX1570's 1x charge pump mode improves white LED efficiency by 50% over 87% to 93% of the battery's useful charge capacity.

- ◆ True Fractional 1x/1.5x Charge Pump
- ◆ Complete Solution with Four Ceramic Capacitors
- ◆ Low 200mV Dropout Voltage
- ◆ Digital or PWM Brightness Control
- ◆ Complete Input-to-Output Disconnect in Shutdown
- ◆ 4mm x 4mm 16-Pin QFN Package
- ◆ Evaluation Kit Available to Speed Designs
- ◆ Low Cost: \$1.90[†]

[†]1000-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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