

## Product Overview

### CAT3604V: LED Driver, 4-Channel

For complete documentation, see the data sheet.

The CAT3604V is a high efficiency fractional charge pump that can drive up to four LEDs with input supply voltages as low as 2.5V. An external RSET resistor is used to control the LED channel brightness while channel diagnostics include automatic detection for both short and open LED channel conditions, ensuring the CAT3604V maintains the highest efficiency level in all operating modes. Each operating mode uses a constant high frequency switching scheme which allows the use of small form factor external ceramic capacitors while delivering excellent low noise input supply ripple up to 5.5 volts. The EN input control supports direct PWM dimming and can accommodate dimming frequencies in excess of 10kHz thereby providing extremely high resolution brightness levels. The device is available in the 16-pad low profile 0.8mm thin QFN (4mm x 4mm).

### Features

- Quad-mode charge pump: 1x, 1.33x, 1.5x, 2x
- Drives up to 4 LEDs at 30mA each
- Pin compatible with industry standard &lsquo;604
- Open/short LED automatic detection
- Power efficiency up to 92%
- High resolution PWM dimming
- Low noise supply ripple in all modes
- Soft start and current limiting
- Short circuit and thermal overload protection

### Applications

- LCD Display Backlight

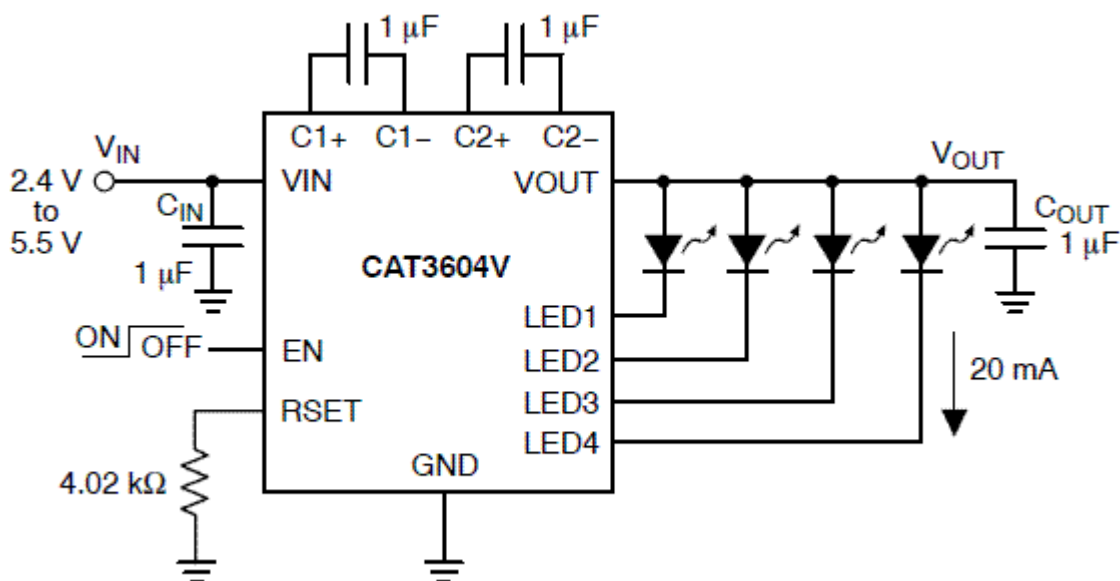
### End Products

- Mobile Phones
- Digital Still Cameras

### Part Electrical Specifications

Product	Pricing (\$/Unit)	Compliance	Status	Topology	V <sub>IN</sub> Min (V)	V <sub>IN</sub> Max (V)	V <sub>O</sub> Max (V)	I <sub>O</sub> Max (mA)	f <sub>sw</sub> Typ (kHz)	Package Type
CAT3604VHV4-GT2	0.4	Pb-free Halide free	Active	Charge Pump	2.5	5.5	6	120	1000	TQFN-16

### Application Diagram



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

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