

## Product Overview

### CAT3648: LED Driver, 4-Channel with 32 Dimming Levels

For complete documentation, see the data sheet.

The CAT3648 is a high efficiency fractional charge pump that can drive up to four LEDs programmable by a one wire digital interface. The inclusion of a 1.33x fractional charge pump mode increases device efficiency by up to 10% over traditional 1.5x charge pumps with no added external capacitors. Low noise input ripple is achieved by operating at a constant switching frequency which allows the use of small external ceramic capacitors. The multi-fractional charge pump supports a wide range of input voltages from 2.4 V to 5.5 V. The EN/DIM logic input functions as a chip enable and a digital dimming interface for setting the current in all the LED channels. The 1-wire pulse-dimming interface supports 32 linear steps from full-scale down to zero current.

### Features

- High efficiency 1.33x charge pump
- Quad-mode charge pump: 1x, 1.33x, 1.5x, 2x
- Drives up to 4 LEDs at 25 mA each
- 1-wire EZDim™; 32 linear steps
- Power efficiency up to 92%
- Low noise input ripple in all modes
- 'Zero' current shutdown mode
- Soft start and current limiting
- Short circuit protection
- Thermal shutdown protection

For more features, see the data sheet

### Applications

- LCD Display Backlight

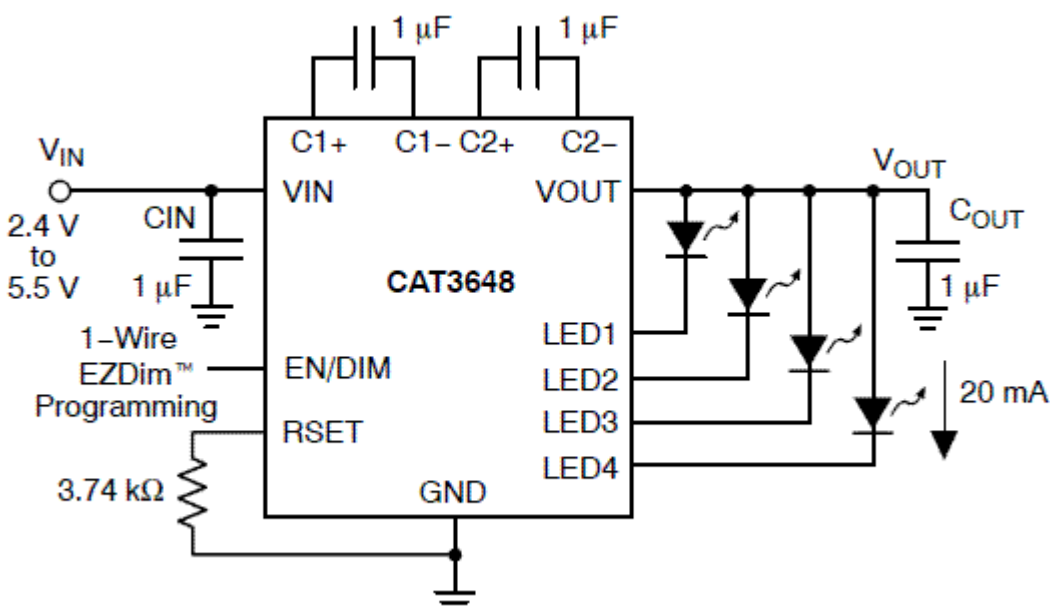
### End Products

- Mobile Phones
- Digital Still Camera

### 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
CAT3648HV3-GT2	0.3333	Pb-free Halide free	Active	Charge Pump	2.5	5.5	6	100	1000	TQFN-16

### Application Diagram



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

