

4-Channel Low-Dropout Constant-Current Parallel LED Driver with 1-Wire Pulse Counting Dimming Control

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General Description

The CP2142, a 4-channel low-dropout constant-current parallel LED driver, can be used to drive white LED, red LED, blue LED or any color LED whose forward operating voltage is lower than the battery voltage. The unique Auto-Mirror™ technology is introduced in CP2142, which can guarantee a constant LED current in various operating conditions. The CP2142 uses the 1-wire pulse counting technique to adjust the brightness of LEDs, with the pulse signal on the EN pin, the LED current varies according to 16 steps logarithmic scale.

The CP2142 is available in MSOP-8L package and is ideally suitable for portable device applications.



MSOP-8L
-40°C~85°C

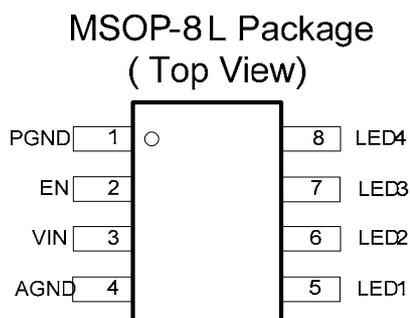
Features

- No external component required
- Only 100mV dropout voltage needed at 20mA per channel
- 1-wire pulse counting dimming: 16 steps logarithmic scale
- LED current matching: $\pm 2\%$ (typical)
- Over 90% efficiency can be reached
- No EMI and switch noise
- Thermal shutdown protection
- Supply voltage range: 2.7~5.5V
- Shutdown current less than 0.1 μ A
- RoHS compliant and 100% lead(Pb)-free

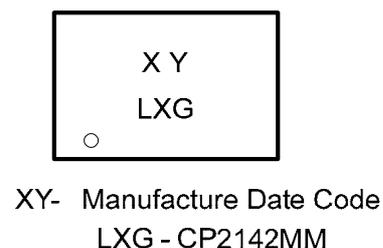
Applications

- Mobile phones
- Digital still camera
- MP3 PDA
- GPS Receivers

Pin Configuration



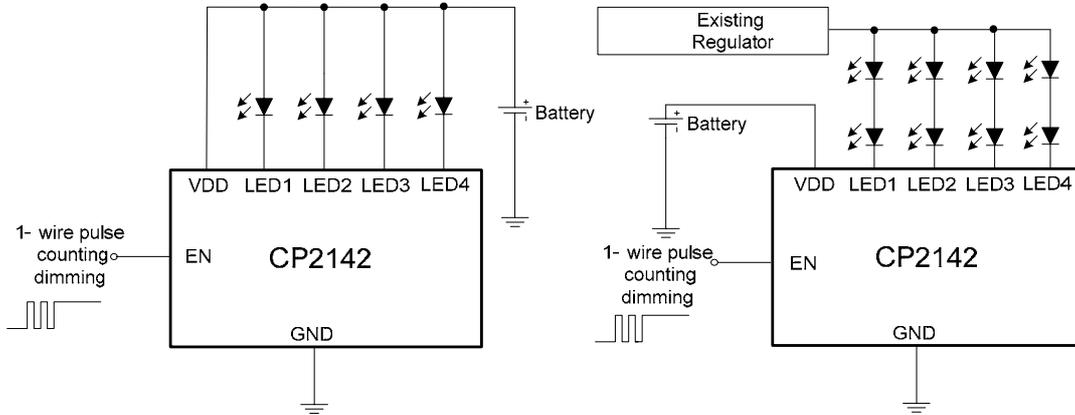
MSOP-8L Marking



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Typical Application Circuit

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