



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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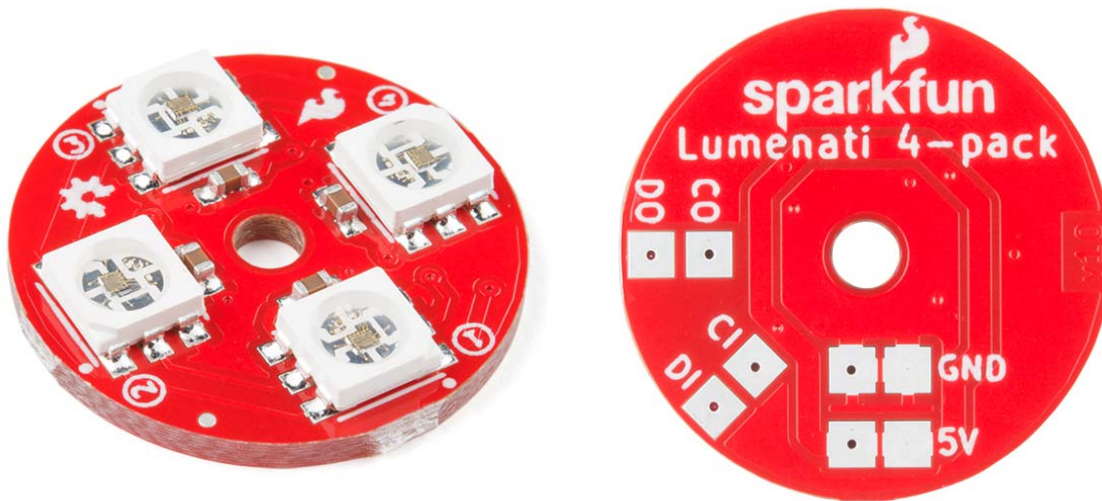
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## SparkFun Lumenati 4-pack

COM-14353 [Open Source Hardware](#)

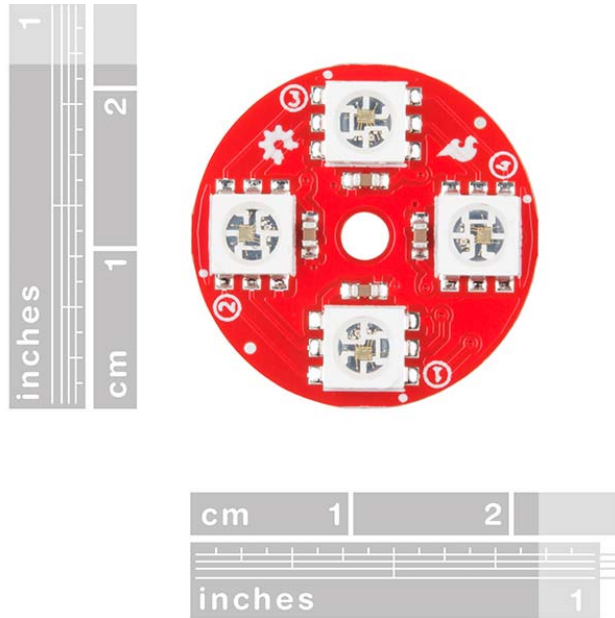


Designed to give your projects an edge in their lighting capacity, the SparkFun Lumenati 4-pack is a coin-sized board equipped with four APA102C LEDs surrounding the outer edge. The 4-pack board can be daisy-chained with other Lumenati boards, thanks to the multiple SMD pads on the back allowing for multiple design options and formations. Additionally, we have labeled the APA102C LEDs on each board with numbers indicating their position in the sequence to help you write code more easily. We especially love using the Lumenati boards to give our flying race drones a bit of style and panache.

The APA102C addressable LEDs operate on +5V power input, as well as 0–5V logic levels for clock and data, and employ a 2-wire communication protocol consisting of a clock line and a data line. While this requires one more wire than standard WS2812B LEDs, the advantage is that the communication with the LEDs becomes somewhat timing-independent, allowing you to run these directly off of a Raspberry Pi or other single-board computer that doesn't normally allow for a long, precisely timed data stream without the use of additional hardware.

**Note:** This product only includes one board, not four. The term “4-pack” refers to there being four APA102C LEDs equipped to the Lumenati.

- Dimensions: 21.5mm x 21.5mm x 3.2mm (0.85" x 0.85" x 0.12")
- Weight: 1.55g



**Notice.** This product requires other products in order to function properly.  
[See essential products.](#)

Essentials	
<a href="#">SparkFun SAMD21 Mini Breakout</a>	DEV-13664
<a href="#">SparkFun Logic Level Converter - Bi-Directional</a>	BOB-12009
<a href="#">Wall Adapter Power Supply - 5.1V DC 2.5A (USB Micro-B)</a>	TOL-13831
<a href="#">Soldering Iron - 30W (EU, 230VAC)</a>	TOL-11650