



Adafruit NeoPixel Digital RGB LED Strip - White 30 LED - WHITE

PRODUCT ID: 1376

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DESCRIPTION

You thought it couldn't get better than our world-famous 32-LED-per-meter Digital LED strip but we will prove you wrong! These NeoPixel strips have 30 digitally-addressable pixel LEDs per meter and are very affordable and are only 12.5 mm wide, 10 mm if you remove the strip from the casing. **This is the strip with white flex PCB, its identical to the black 30 LED/meter except it has a different color mask on the flex strip**

There are some things to watch for:

- These LED's use about 9.5 Watts max (~2 Amps @ 5V) per meter. The max rating is assuming all the LEDs are on full white, usually the actual current for colorful design is about 1/3 to 1/2 the max current. A good power supply such as our 5V 2A or 10A supply is key!
- Second, to get high density, the controller chip is inside the LED, which is kind of cool, but also means that the chip only uses a single pin for input and a single pin for output. The protocol used is very very timing-specific and can only be controlled by microcontrollers with highly repeatable 100ns timing precision. We have example code for using with the Arduino Uno/Mega microcontroller at 8MHz and 16MHz, and with a little effort you can use with the Raspberry Pi, or Beagle Bone Black, but it will not work with the Basic Stamp, NETduino, any other interpreted/virtual machine microprocessor or any processor slower than 8 MHz. For those processors, check our LPD8806-based digital LED strip which has SPI-like input/output and works easily with Pi, NETduino, and other processors.
- The way the pixels are controlled by an ARDUINO, the entire strip must be buffered in memory, and we've found many Arduino UNO projects only have about 1500bytes of RAM available after all the extras are included - enough for about 500 LED pixels. If you want to drive the entire strip and have some other libraries included, you may need to use a Mega.

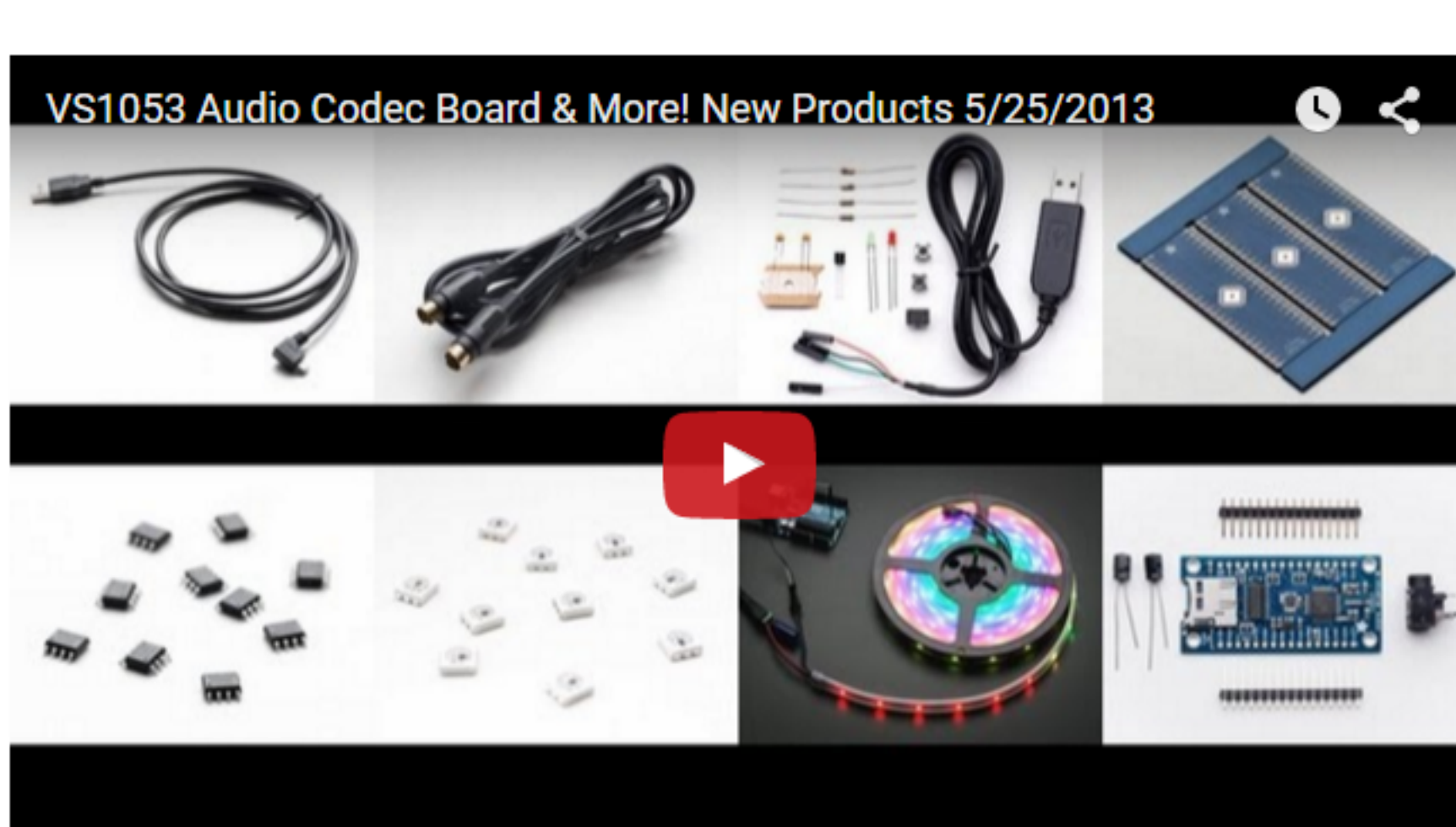
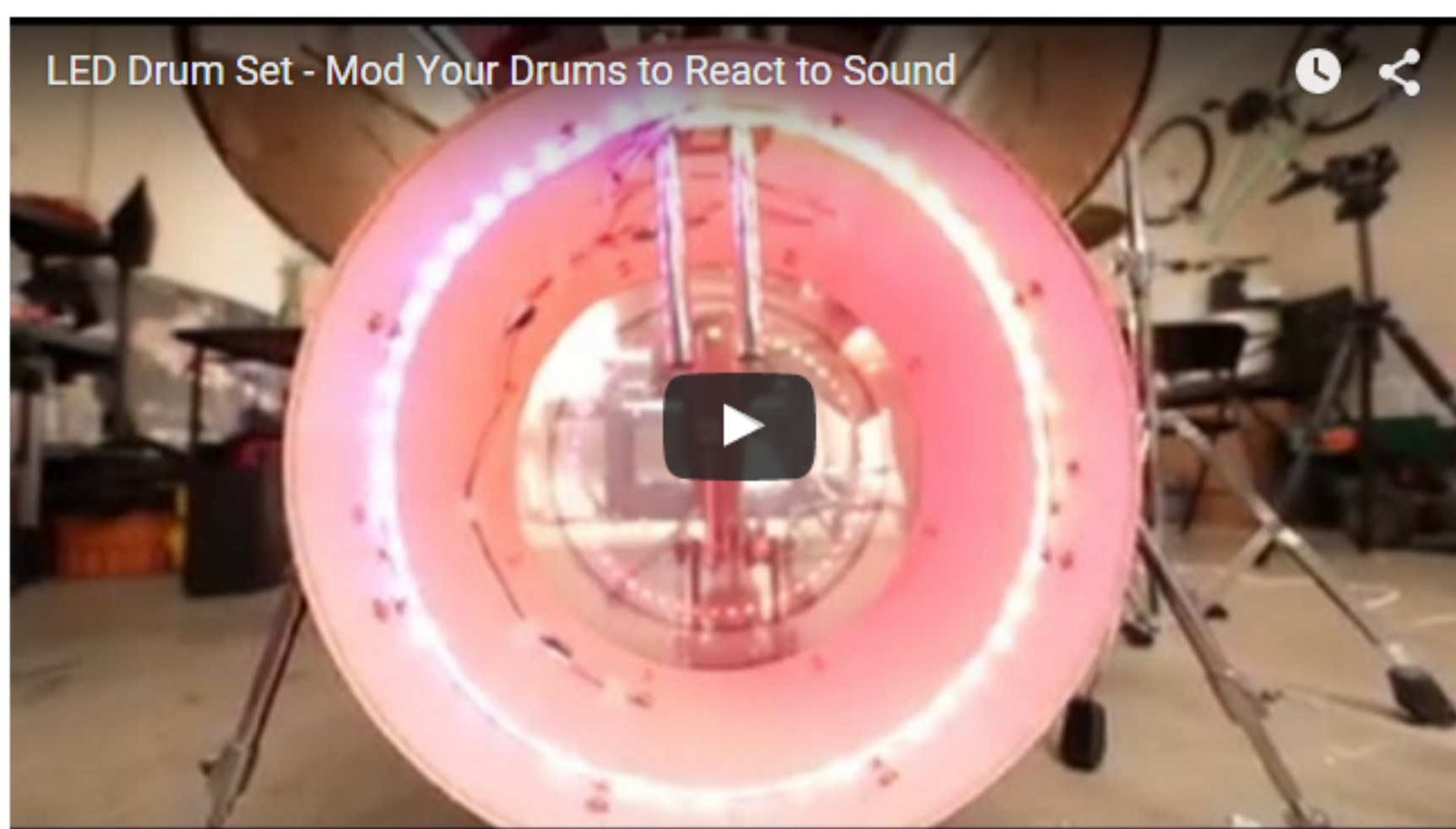
There are 30 RGB LEDs per meter, and you can control each LED individually! Yes, that's right, this is the digitally-addressable type of LED strip. You can set the color of each LED's red, green and blue component with 8-bit PWM precision (so 24-bit color per pixel). The LEDs are controlled by shift-registers that are chained up down the strip so you can shorten or lengthen the strip. Only 1 digital output pin are required to send data down. The PWM is built into each LED-chip so once you set the color you can stop talking to the strip and it will continue to PWM all the LEDs for you

The strip is made of flexible PCB material, and comes with a weatherproof sheathing. You can cut this stuff pretty easily with wire cutters, there are cut-lines every 1.3"/3.4cm (1 LED each). Solder to the 0.1" copper pads and you're good to go. Of course, you can also connect strips together to make them longer, just watch how much current you need! We have a 5V/2A supply that should be able to drive 1 meter and a 5V/10A supply that can drive up to 10 meters (depending on use) **You must use a 5V DC power supply to power these strips, do not use higher than 6V or you can destroy the entire strip**

As of May 20, 2014 these come in 5 meter reels with a 2 or 3-pin JST SM connector on each end and separated power/ground wires. These strips are **sold by the meter!** If you buy 5 meters at a time, you'll get full reels with two connectors. If you buy less than 5m, you'll get a single strip, but it will be a cut piece from a reel which may or may not have a connector on it.

To wire up these strips we suggest picking up some JST SM plug and receptacle cables. You'll want one of each, one wire is for ground the other is for signal. For the power wire, you will also probably want a 2.1mm DC jack to wire in so you can connect one of our wall adapters to power it.

Our detailed NeoPixel Überguide has everything you need to use NeoPixels in any shape and size, including ready-to-go library & example code for the Arduino UNO/Duemilanove/Diecimila, Flora/Micro/Leonardo, Trinket/Gemma, Arduino Due & Arduino Mega/ADK (all versions)



Adafruit NeoPixel Digital RGB LED Weatherproof Strip 30 LED -1m (10:58)

TECHNICAL DETAILS

Technical specs:

- **12.5mm (0.5") wide**, 4mm (0.16") thick with casing on, 33mm (1.3") long per segment
- 30 LEDs per meter
- Removable IP65 weatherproof strip (all LEDs on full brightness)
- Maximum 5V @ 60mA draw per 1.3" strip segment (all LEDs on full brightness)
- 5VDC power requirement (do not exceed 6VDC) - no polarity protection
- 1 integrated RGB LEDs per segment, individually controllable
- LED wavelengths: 630nm/530nm/475nm
- Connector: 2-pin JST SM
- We currently ship this product with the WS2812B 4-pin chip LED installed. Previous versions may have come with the WS2812S 6-pin LED. Both B and S LEDs can be chained together and are compatible with the NeoPixel Library. The 'B' chip type adds additional polarity protection and is the same brightness as the 'S' type.

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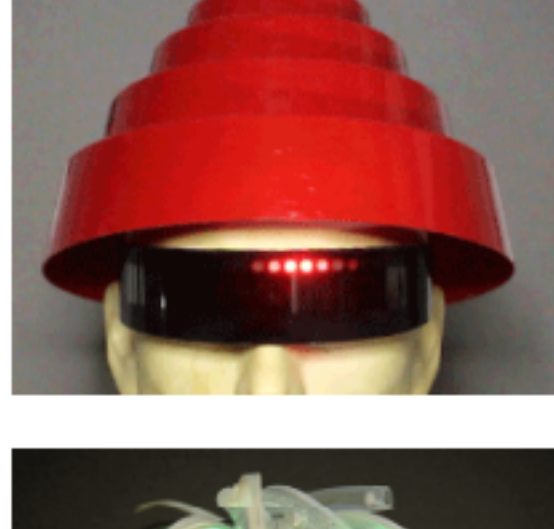
Citi Bike Helmet
Navigation & visibility with FLORA!



Adafruit NeoPixel Überguide
Everything you always wanted to know about Adafruit NeoPixels but were afraid to ask



Using NeoPixels with Netduino Plus 2
It used to be impossible to use NeoPixels with Netduino, until now!



Larson Scanner Shades (Trinket-Powered NeoPixel LED Strip Glasses)
A simple cyberpunk/Tronpunk fashion project!



NeoPixel Cyber Falls Wig
This Trinket project is really quite hairy!



Flora+NeoPixel LED Skateboard Upgrade
Flora+NeoPixel skateboard upgrade for maximum ground effects



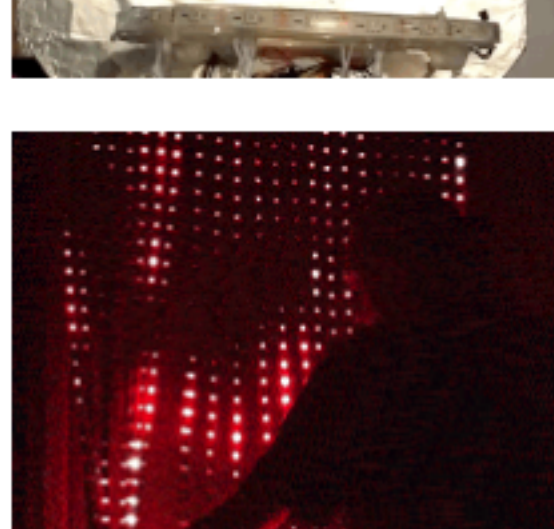
Gemma-Powered NeoPixel LED Sound Reactive Drums
Light up your drums with sound.



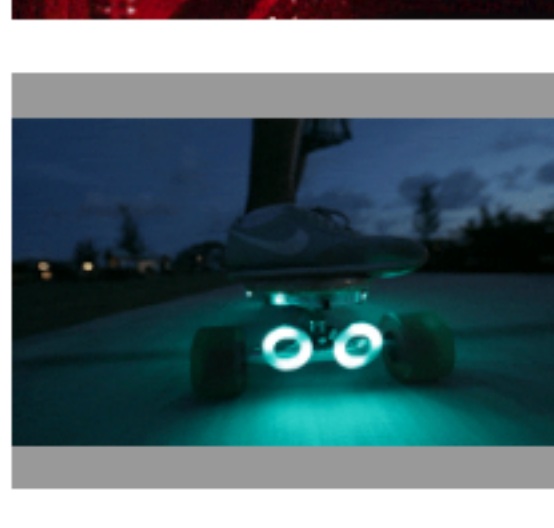
WiFi Controlled LED Christmahanukwanzaa Tree
Control NeoPixels through the web to light up a tree for any holiday occasion!



FLORAbrella
Bring your own rainbow



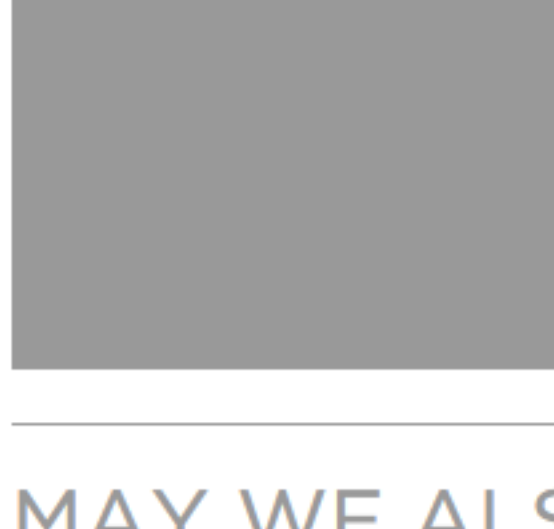
NeoPixel Basketball Hoop
Light up your mini or full sized basketball hoop with Gemma and NeoPixels.



1,500 NeoPixel LED Curtain with Raspberry Pi and Fadecandy
Make Something Beautiful. And Bright. Really Bright.



Trinket NeoPixel LED Longboard
Upgrade your ride with lots, and lots of NeoPixels!

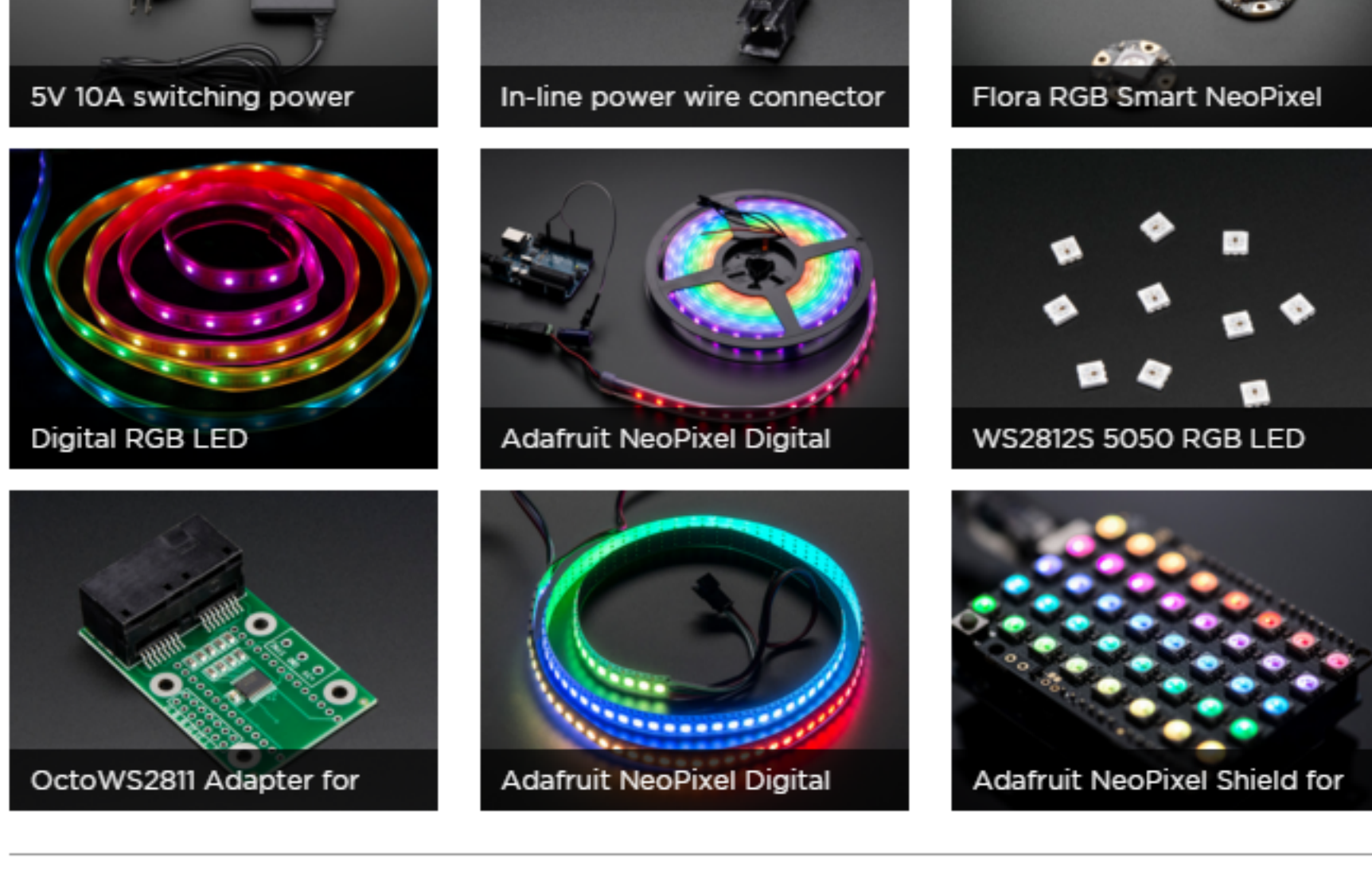


NeoPixels on Raspberry Pi
How to control NeoPixel LEDs with Python on a Raspberry Pi!



Techno-Tiki RGB LED Torch
Turn a Tiki torch into a beautiful animated LED light display.

MAY WE ALSO SUGGEST...



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"Failure is only the opportunity to begin again more intelligently"

- Henry Ford



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