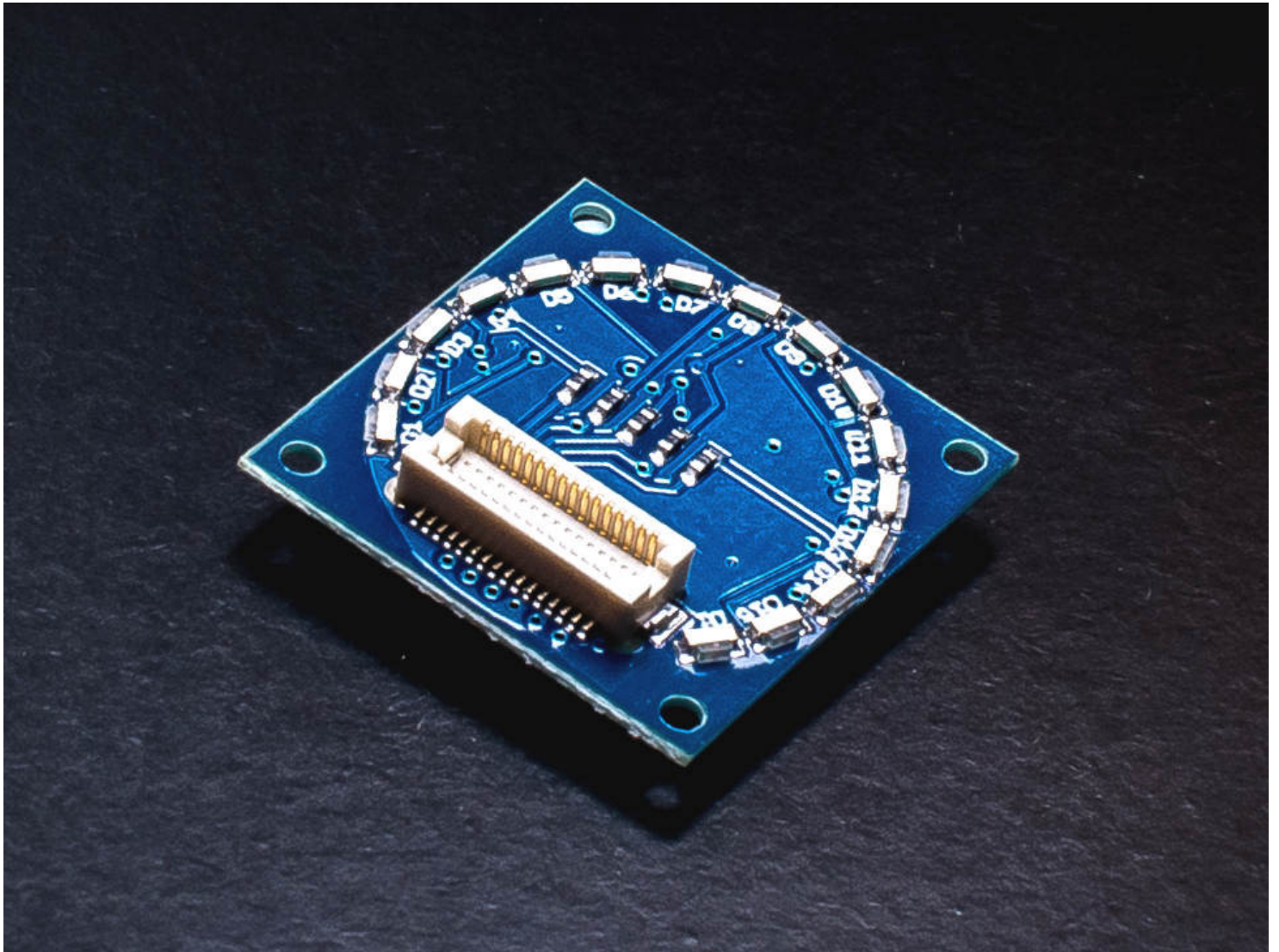# 16 Edge LED TinyShield - ASD2411-R

tinycircuits.com/collections/leds-displays/products/16-edge-led-tinyshield

DESCRIPTION

The 16 Edge LED TinyShield allows some cool and easy LED indications using only five I/O signals. The 16 LEDs are mounted around the outside of the board, and can easily be seen even when the LED board is in the middle of a TinyShield stackup. The LEDs are arranged using Charlieplexing, which is a technique to allow for control of multiple LEDs using fewer I/O signals. Available with Red, Green and Amber LED color options.

*To learn more about the **TinyDuino Platform,** click* **here**

TECHNICAL DETAILS

> *To see what other TinyShields this will work with or conflict with, check out the* **TinyShield Compatibility Matrix**

LED Specs

- 16 Side Mounted LEDs around the edge of the board
- Charlieplexed IO on 5 signals
- Available in Green, Amber or Red

TinyDuino Power Requirements

- Voltage: 3.0V - 5.5V
- Current:

    - 1.5mA per LED (3.0V)
    - 5.0mA per LED (5.0V)
    - Due to the low current, this board can be run using the TinyDuino coin cell option

Pins Used

- Pins 5, 6, 7, 8, and 9 are used, see schematic or sample code for connections

Dimensions

- 20mm x 20mm (.787 inches x .787 inches)
- Max Height (from lower bottom TinyShield Connector to upper top TinyShield Connector): 5.11mm (0.201 inches)
- Weight: 1 gram (.04 ounces)

Notes

- If the top connector is not needed, there is also the **Circle LED TinyShield** which has LEDs that circle the entire board.
- The LEDs are hooked up using **Charlieplexing**, a technique for driving many LEDs with only a few IO signals. See the tutorial to learn more about this and use our free library to control these easily.