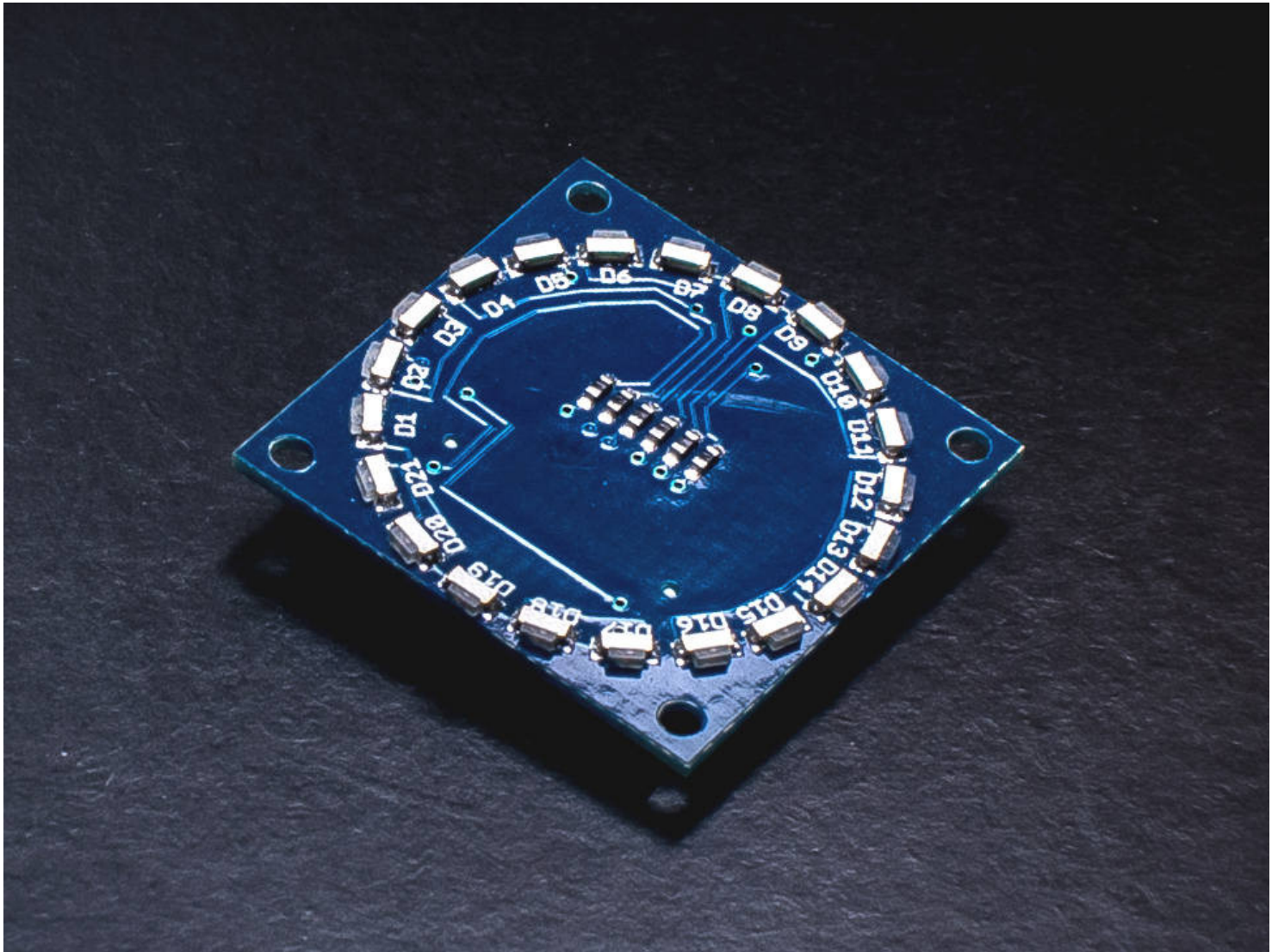# Circle Edge LED TinyShield - ASD2412-R

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

DESCRIPTION

The Circle Edge LED TinyShield uses only six I/O signals to create a wide variety of LED indications. This board includes 21 LEDs that are mounted around the outside of the board to form a full circle. It's designed to be placed on the top of your TinyShield stack. The LEDs are arranged using Charlieplexing, a technique that allows 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

- 21 Side Mounted LEDs around the side of the board
- Charlieplexed IO on 6 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 4, 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 LEDS): 3.31mm (0.130 inches)
- Weight: .73 grams (.026 ounces)

Notes

- This board has no top TinyShield connector, so no additional TinyShields can be stack on top of this. This board is meant to be on the top of a TinyDuino stack.
- If a top connector is needed to stack additional TinyShields, there is also the **16 Edge LED TinyShield** which has 16 LEDs and a top connector.
- 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.