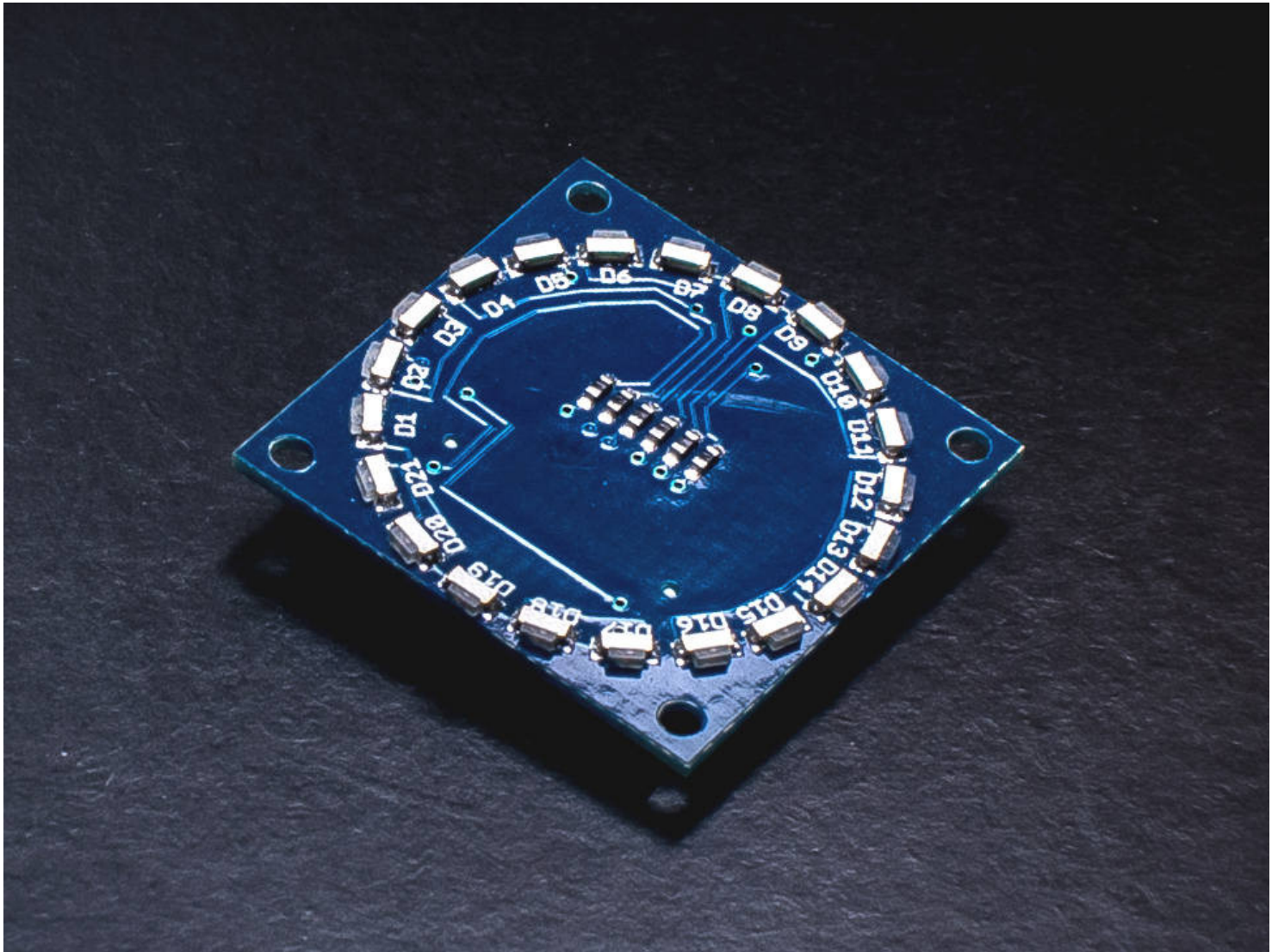


# Circle Edge LED TinyShield - ASD2412-R

[tinycircuits.com/collections/leds-displays/products/circle-edge-led-tinshield](https://tinycircuits.com/collections/leds-displays/products/circle-edge-led-tinshield)



## 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)
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## 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.
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