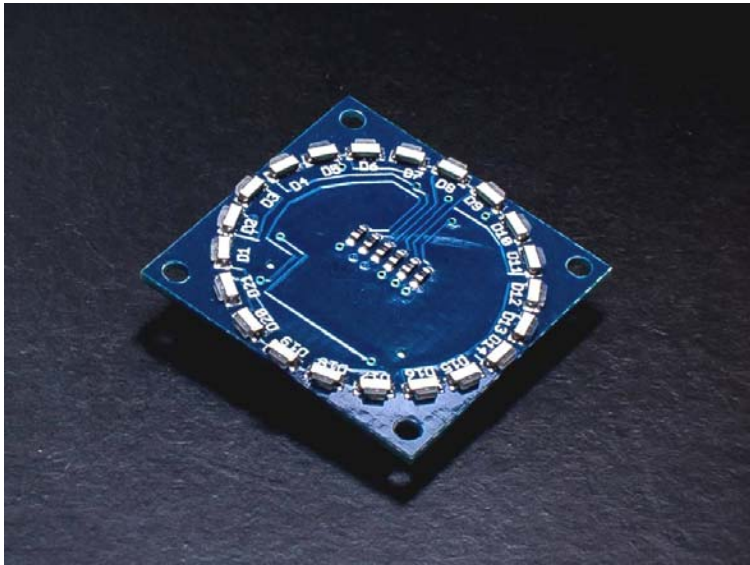# CIRCLE EDGE LED TINYSHIELD

ASD2412-R-LA

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***

https://tinycircuits.com/pages/tinyduino-overview

TECHNICAL DETAILS

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

LED Specs

o   21 Side Mounted LEDs around the side of the board

o   Charlieplexed IO on 6 signals

o   Available in Green, Amber or Red

TinyDuino Power Requirements

o   Voltage: 3.0V - 5.5V

o   Current:

  o   1.5mA per LED (3.0V)

  o   5.0mA per LED (5.0V)

  o   Due to the low current, this board can be run using the TinyDuino coin cell option

Pins Used

o   Pins 4, 5, 6, 7, 8, and 9 are used, see schematic or sample code for connections

Dimensions

o   20mm x 20mm (.787 inches x .787 inches)

o   Max Height (from lower bottom TinyShield Connector to upper top LEDS): 3.31mm (0.130 inches)

o   Weight: .73 grams (.026 ounces)

NOTES

o 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.

o 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.

o 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.