



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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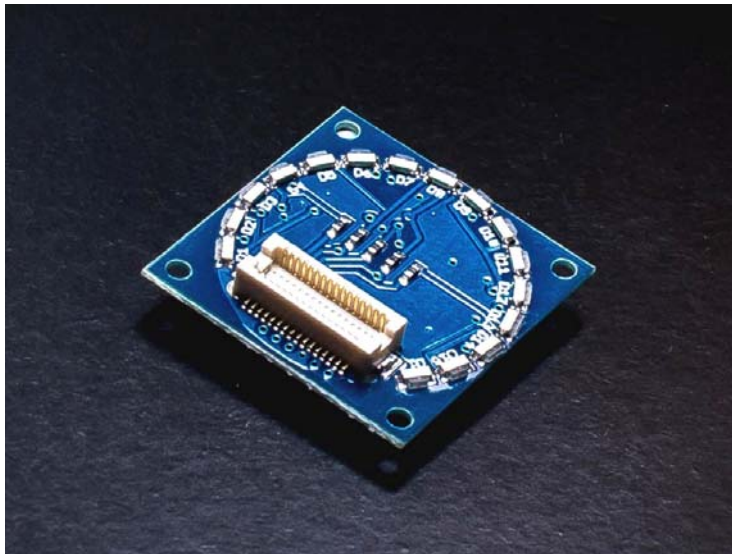
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## 16 EDGE LED TINYSHIELD

ASD2411-R-LG



### 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.

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## 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)

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## 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.



