

## Bright Pi v1.0 Assembly Instructions - Pi Supply



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# Bright Pi v1.0 Assembly Instructions

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C 7 COMMENTS

When you purchased your [Bright Pi v1.0 kit](#), you should have received an anti-static bag with some components in it which will require soldering together in order to get the Bright Pi up and running and connected to your Raspberry Pi (or other single board computer or I2C enabled microcontroller). Below we have put together some simple assembly instructions to get you up and running with the Bright Pi v1.0.

### Kit contents

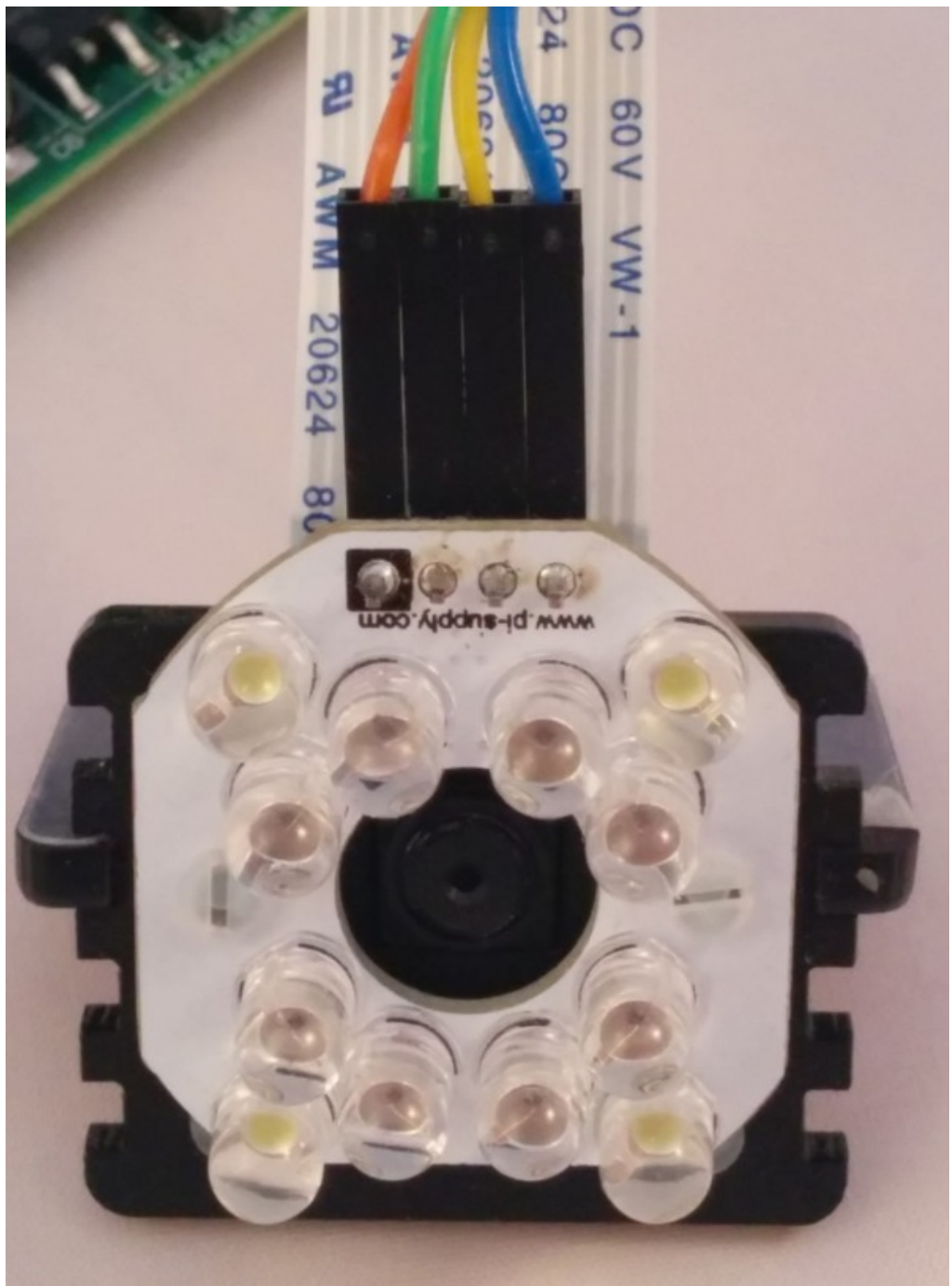
Inside the anti-static bag you should have received the following items:

- 1 x Bright Pi PCB (with LED driver chip pre-assembled)
- 4 x bright white LEDs in small ziploc bag (high quality Cree LEDs)
- 8 x bright IR LEDs (high quality LITEON LEDs)
- 1 x right angle header
- 1 x 4 way header cable, 20cm length
- 3 x M2 x 12mm nylon bolts
- 12 x M2 nylon nuts (to use as spacers as well)
- 3 x stickers
- 1 x info card

There are only three types of component that need to be soldered to the board – the bright white LEDs, the bright IR LEDs and the right angle 4 pin header connector. The location of the LEDs on the PCB is marked out with black circular arrows. The cathode of the LEDs (short leg) needs to be on the same side as the arrows point to on the PCB. As noted above, the four LEDs in a separate bag are the bright white ones, these are intended to go in the four corner spots around the edge (bottom left, top left, top right, bottom right). All of

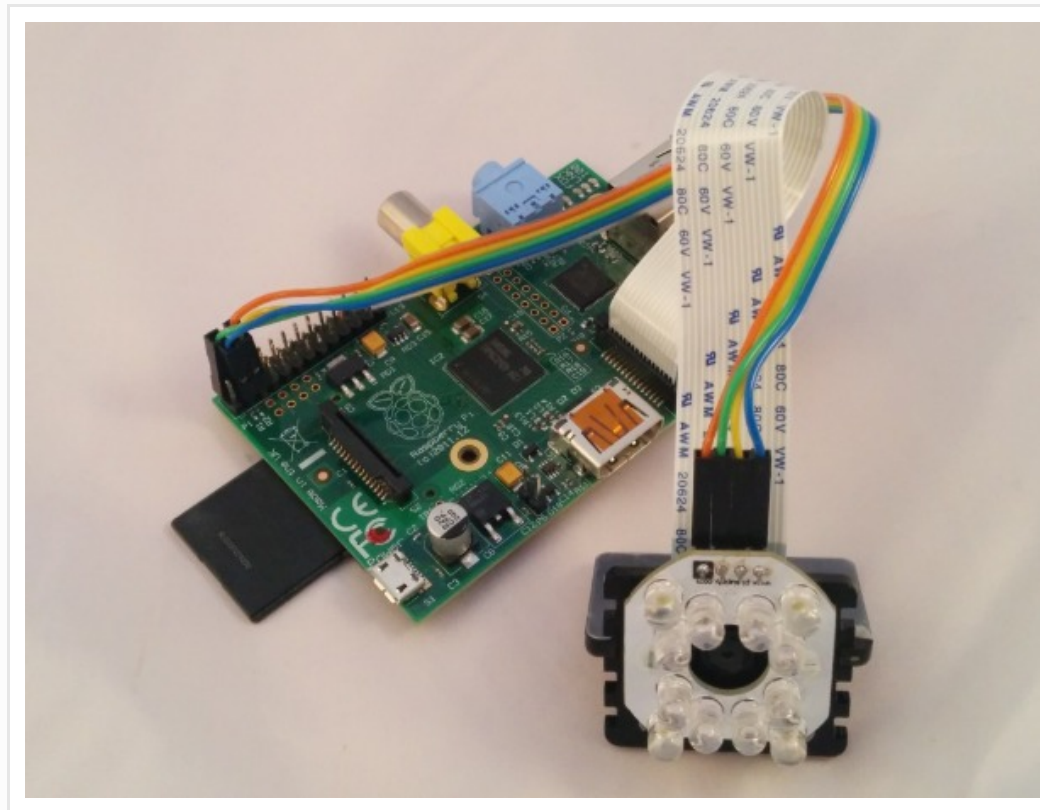
the other 8 LED locations should be filled with the IR LEDs. We would recommend soldering the IR LEDs first (as they are in the centre) and then the white ones around the edge last.

If you mix up which are the bright white and IR LEDs at any point, it is quite easy to tell the different between the two by simply looking down the centre of the LED from the top. As in the below picture you will notice that the white LEDs at each corner have a slight yellow tinge in the centre of the LED:

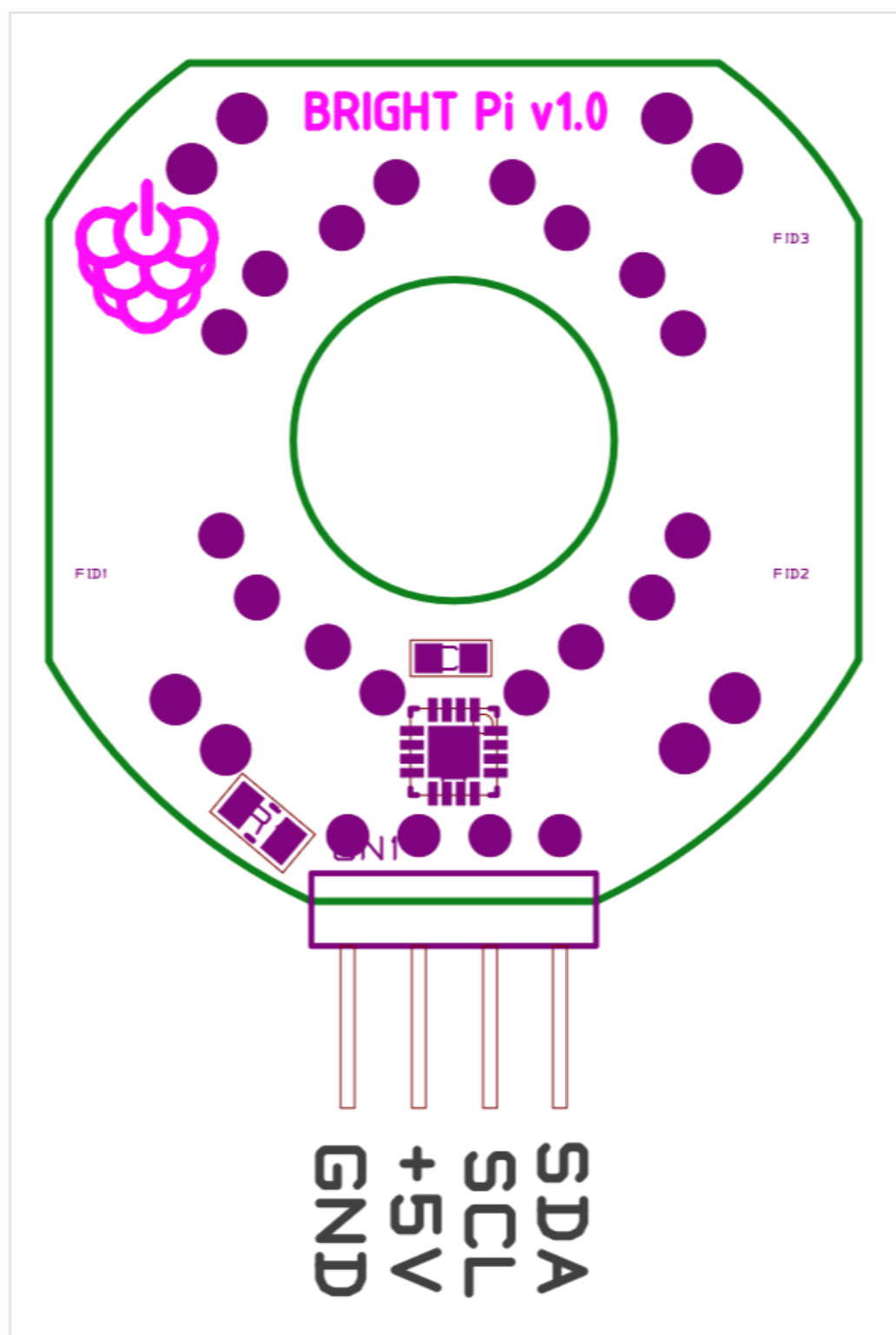


You can solder the header connector on whichever side you wish to on the board, however we recommend soldering the connector the opposite way to the LEDs (i.e. perform the soldering on the top side of the board, as shown in the above picture).

The soldering of this board is fairly straightforward, there are just a fair few components to solder so if you are an absolute beginner at soldering it may take you up to half an hour to complete. Experienced soldering gurus could easily complete the entire job in under 10 minutes. Please be careful when soldering the bottom middle IR LEDs not to touch any of the joints of the small surface mount resistor or LED driver chip as this could damage the operation of the board.



Once you have finished soldering the board you are ready to connect the board up to the Raspberry Pi (or other I2C enabled main board) in order to start using the Bright Pi in your project. On the picture above you will see a square black mark on the PCB. That is the GND pin, which connects to physical pin 6 on the Raspberry Pi (this is the same for model A, B or B+). Moving along the header connector the next connector is the 5V feed which you should connect to physical pin 4 on the Raspberry Pi. The next pin along is the SCL pin for I2C communications which connects to physical pin 5 on the Raspberry Pi and finally the last pin on the header connector is the SDA pin for I2C communications which connects to physical pin 3 on the Raspberry Pi. The full pinout can also be seen on the image below (but please note this is a BOTTOM view of the Bright Pi (i.e. from the side with the LED driver chip and surface mount resistors mounted):



For information on how to use the Bright Pi once soldered, please visit the code examples page and to purchase the Bright Pi you can visit the product page [here](#). In the pictures above the Bright Pi is mounted on a [Pimoroni Raspberry Pi Camera Mount](#) which is the perfect addition to the kit.

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← **Short Crust B+ Case Ready Soon!**

**Bright Pi v1.0 Code Examples** →

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## 7 Responses to “Bright Pi v1.0 Assembly Instructions”



U **Kassal Kane** P **October 21, 2014 at 5:41 am** K **Permalink**

Hi, just assembled my bright pi but my IR LEDs are not working. Any ideas?

**Reply**

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U **Aaron** P **November 3, 2014 at 2:53 pm** K **Permalink**

In what way are they not working. Are you getting a command line error when trying to turn them on?

Or something else?

You would only see a dim red glow to the naked eye when on full power. You would need to look through an IR camera for anything to get “lit up” by them.

**Reply**



U **Matt** P **December 14, 2014 at 7:36 pm** K **Permalink**

Hi Just bought this kit, would it be possible to replace the IR LED's with regular white LED's if I wanted to?

**Reply**

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U **Aaron** P **December 14, 2014 at 7:38 pm** K **Permalink**

Yes you can just replace them with white, or any other colour – should work fine.

**Reply**

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U **matt** P **December 16, 2014 at 11:35 am** K **Permalink**

If we were to replace the IR led's with white LED's would we need any specific voltage or power rated LED's?. Also would all LED's need to be connected for the bright to work or we could we just attach the ones we wanted to use?

**Reply**



U **Nick** P **April 11, 2015 at 11:54 am** K **Permalink**

Thanks for this kit. Just soldered it together and tested in a shoe box. Works great. Really great to be able to take night time pictures.

**Reply**

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Trackbacks/Pingbacks

1. **Adding more to the thermostat I A table for one** - June 20, 2015  
[...] and 4 regular light LEDs that connect to the pins on the Raspberry Pi board. Unfortunately, the assembly instructions point out that 'some' soldering is required. Bugger. Having previously noted that my [...]

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