



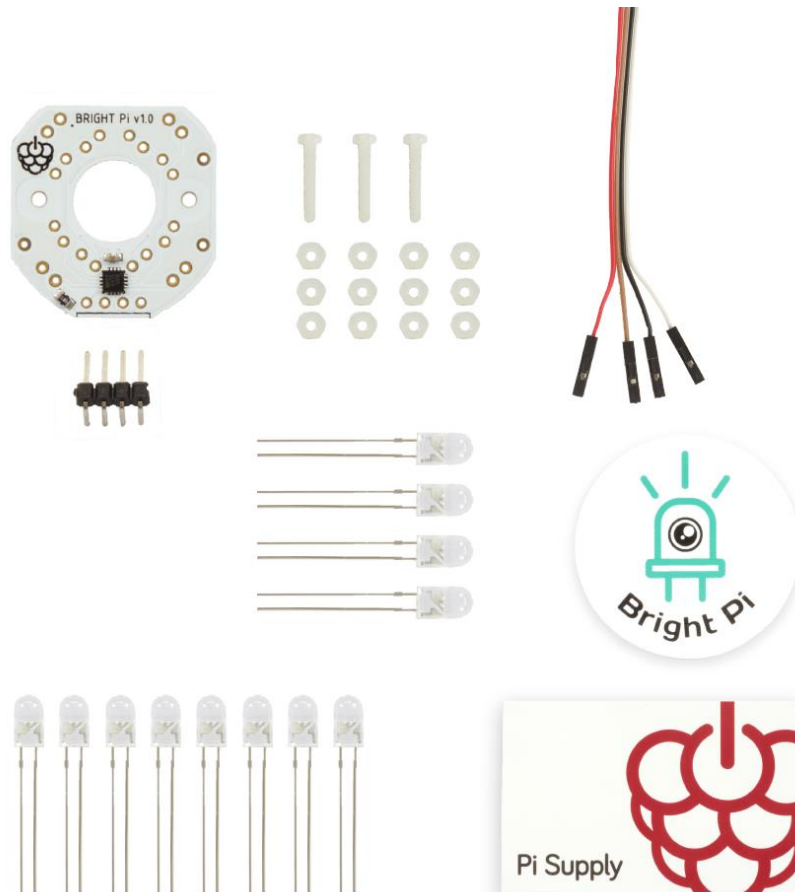
**THE DATASHEET OF
PIS-0027**



Bright Pi Quick Start

Getting Started

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

Putting the kit together

What do you need to do the soldering:

- Soldering iron 15-25W. Keep the temperature at about 300 degrees if you have a regulated one.
 - Leaded solder which is so much easier to use compared to lead free.
 - Some blue tack or a sponge to help you keep the components in place whilst soldering them.
- There are only three types of component that need to be soldered to the board – the bright white LEDs (marked in yellow), the bright IR LEDs (marked in red) 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.

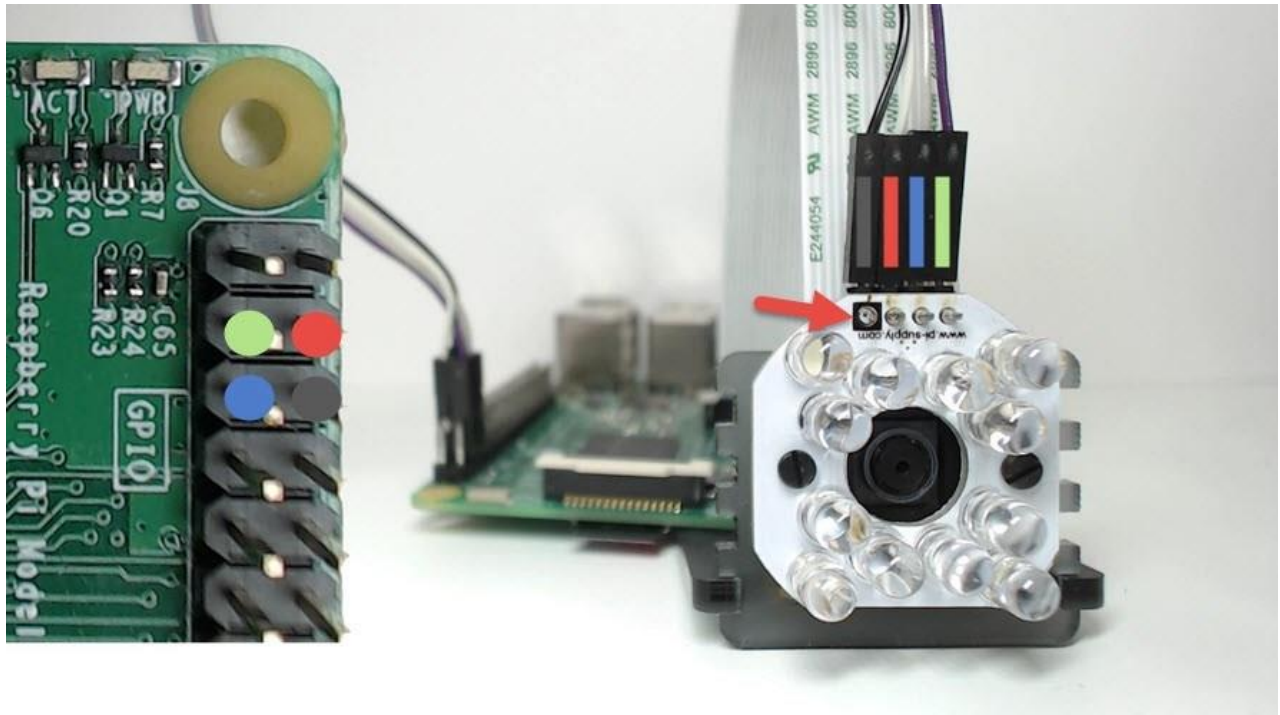
You can solder the header connector on whichever side you wish to on the board, however we recommend soldering the connector the opposite way to the LEDs (i.e. perform the soldering on the top side of the board, as shown in the above picture).

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.

Wiring the Bright Pi

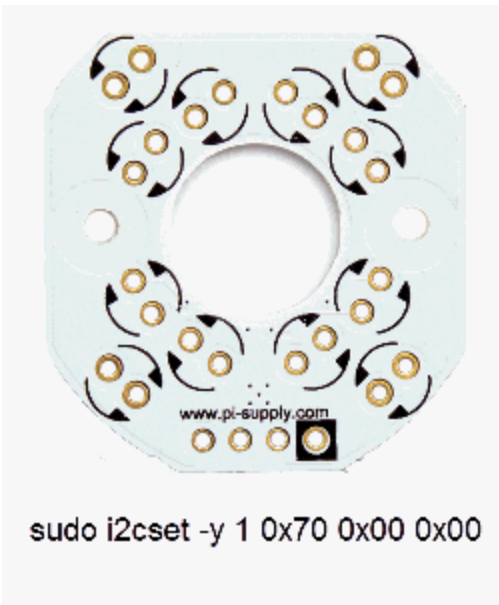
Once you have finished the soldering, you are ready to connect the board up to the Raspberry Pi (or other I2C enabled main board) in order to start using the Bright Pi in your project.



On the picture above you will see a square black mark on the PCB. That is the GND pin 1, which connects to physical pin 6 on the Raspberry Pi. Connect the other wires according to the colour coding in the picture.

Be careful as wiring things in the wrong way could damage the Bright Pi.

You can now move onto **our Github repository** to start coding.



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