LAMP:bit for the BBC micro:bit

www.kitronik.co.uk/5643
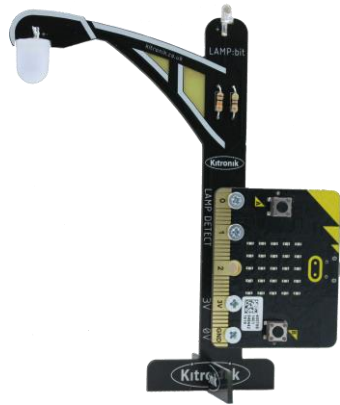
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Introduction: The LAMP:bit is a bolt-on/clip-on board for the BBC micro:bit replicating a street light. The PCB has been designed to have the same physical features of a street light, with the addition of a phototransistor to detect changes in light levels.

Lamp: The LAMP:bit has a white 10mm LED. The LED is driven from pin P0 of the BBC micro:bit.

Detect: The LAMP:bit has a single phototransistor used to detect changes in light levels. When the phototransistor is illuminated with light, it then conducts and P1 is pulled towards 3V. When dark, the phototransistor does not conduct and P1 is pulled down towards 0V with a resistor.
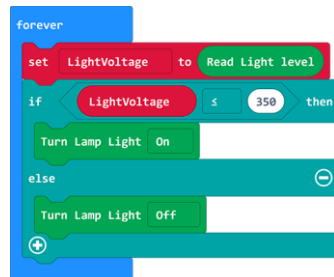
Power: Power is supplied from the BBC micro:bit connections via the 3V and 0V (GND) pins.

Connection: 4 x M3 countersunk screws allow the user to bolt the LAMP:bit onto the BBC micro:bit.
Crocodile clips can also be used between the pads on the LAMP:bit and the matching pads on the BBC micro:bit.

Stand: The bottom section of the LAMP:bit PCB is designed to break off and then slot together with the main PCB to form a stable cross base.

Software: We have added custom LAMP:bit blocks to the MakeCode editor.
- Select the cog in the top right of the editor.
- Select Extensions from the menu.
- Type Kitronik into the search bar.
- Select the Kitronik-lampbit tile.

Layout & Dimensions: