Component Documentation:

LED

Pinout:

|  |  |
| --- | --- |
| Anode (longer lead) | Cathode (shorter lead) |
| + | - |

LEDs, or Light Emitting Diodes, are a component that produces light with a relatively small amount of electricity. LEDs are generally more efficient than incandescent lights (lights that produce light by heating a filament) because they don’t waste as much energy in the form of heat. They also tend to last much longer than incandescent lights.

Because they are a form of diode, LEDs tend to permit flow in only one direction. For this reason, it’s important to connect them correctly to circuits. LEDs that are installed backwards don’t light up, and they can be damaged if you try to power them in this state.

While they’re useful for their low power consumption, LEDs do have a drawback: you should avoid running too much power through them- otherwise you can damage them. When using most LEDs with an Arduino’s 3.3-volt output, most LEDs can often be connected in series with a 220-ohm resistor.

Note: always check the LED’s data sheet to see how much resistance it should be used with!

LEDS have their own symbol in circuit schematics. They are differentiated from normal diodes on a schematic by the arrows point away from them:

A black arrow with arrows pointing to the side

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