Electronics
7 Segment Displays

Terry Sturtevant

Wilfrid Laurier University

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7 Segment Displays

Here is a 7 segment display.

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It is made up of at least 7 separate LEDs.
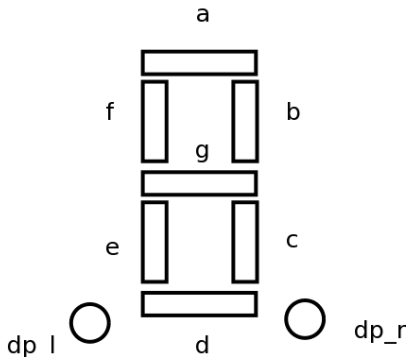
Here is a 7 segment display.

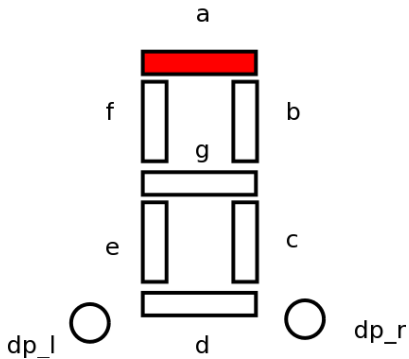It is made up of at least 7 separate LEDs.

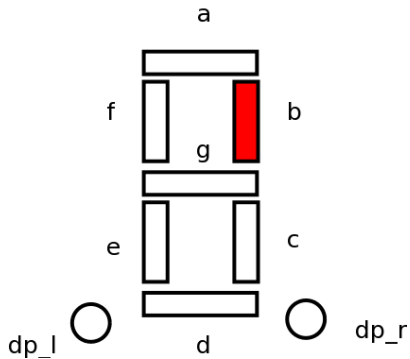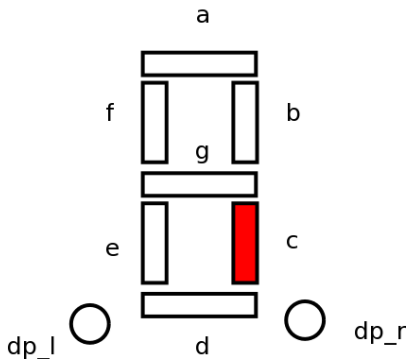(There are actually 8 in this case if you count the decimal point.)

The seven segments are labelled *a* to *g*.

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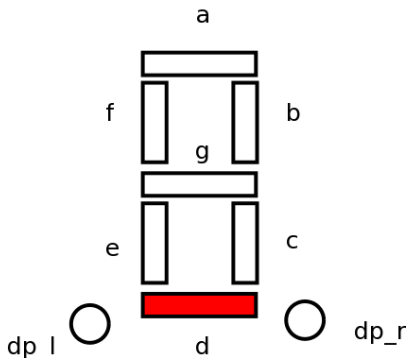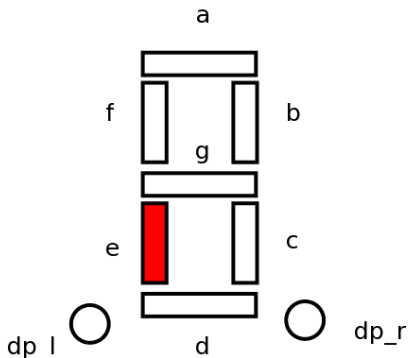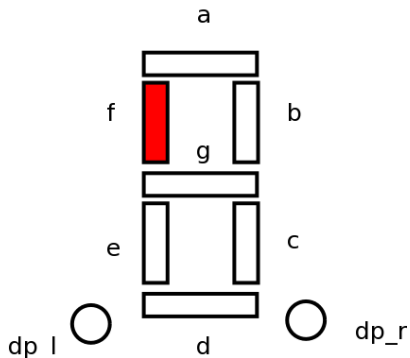The seven segments are labelled *a* to *g*.

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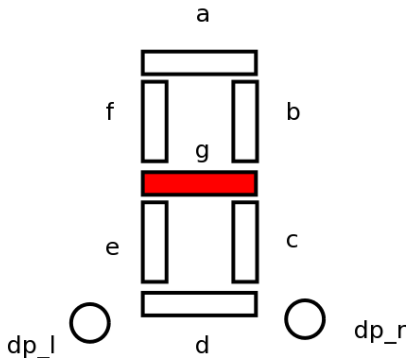
The seven segments are labelled *a* to *g*.

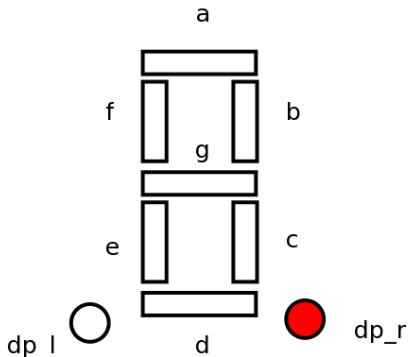The seven segments are labelled *a* to *g*.

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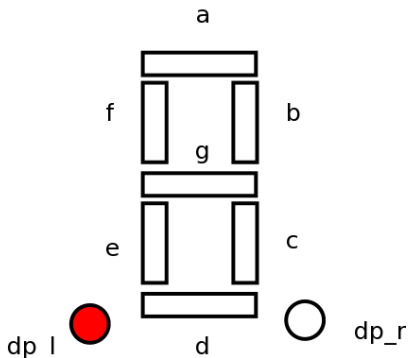
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There is also usually a right decimal point.

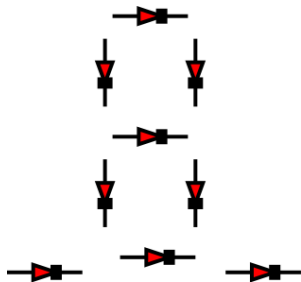The seven segments are labelled *a* to *g*.

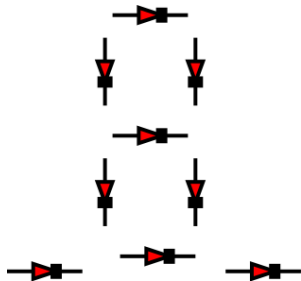There is also usually a right decimal point.

There may also be a left decimal point.

Internally it looks like this.
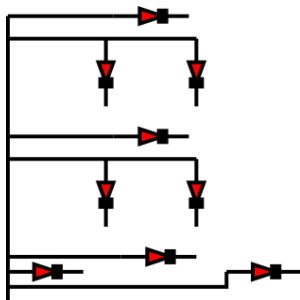
Internally it looks like this.

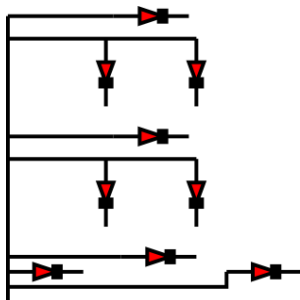Internally it looks like this.

The LEDs will all be tied together at one end.

If the *anodes* are all tied together, it looks like this.

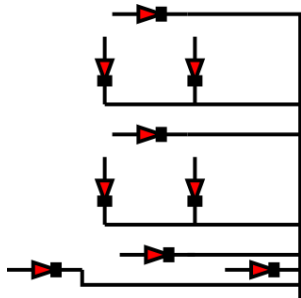If the *anodes* are all tied together, it looks like this.

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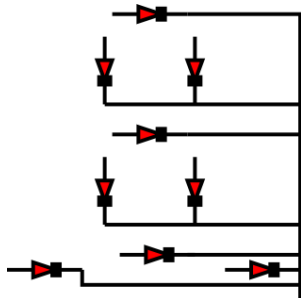

This is called a **common anode** display.

If the *cathodes* are all tied together, it looks like this.

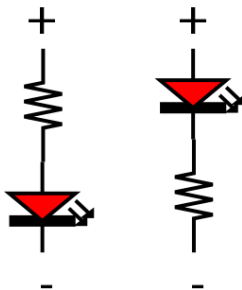If the *cathodes* are all tied together, it looks like this.

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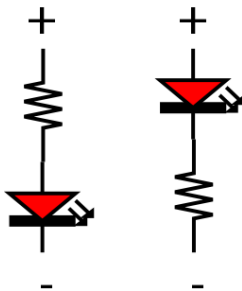

This is called a **common cathode** display.

Remember that *any* LED needs a resistor to limit current.

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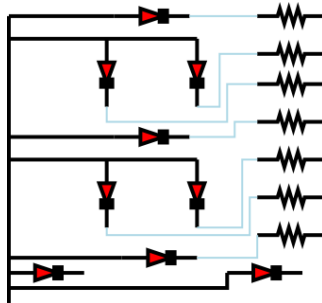
Remember that *any* LED needs a resistor to limit current.
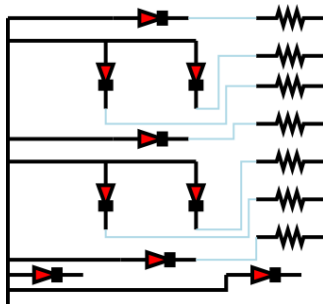

The resistor can come either before or after the LED.

For a common anode display, you can connect to *each* cathode through a resistor.

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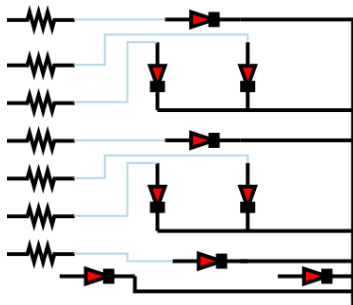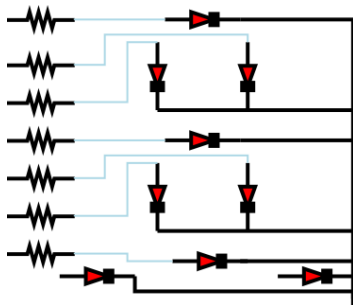through a resistor.

**Note that you can't use a resistor array because the resistors
don't have a common connection at either end!**

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through a resistor.

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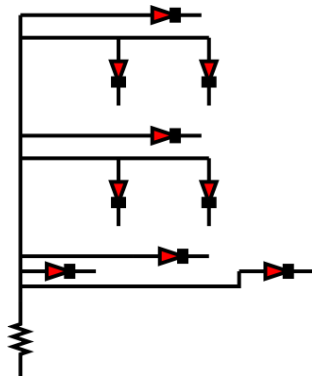don't have a common connection at either end!**

Instead of using several resistors, you could use a single resistor on the common pin.

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The only drawback to this is that you might see the display get dimmer as more segments are lit.

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For a common cathode display, it looks like this.

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