

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.

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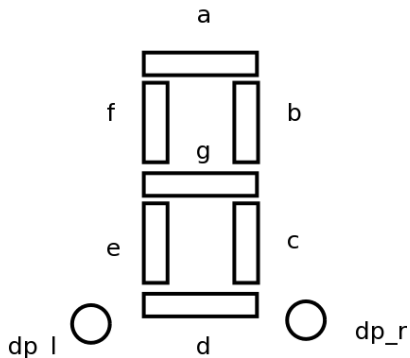


It is made up of at least 7 separate LEDs.

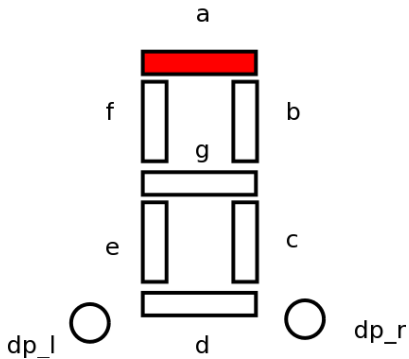
(There are actually 8 in this case if you count the decimal point.)

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

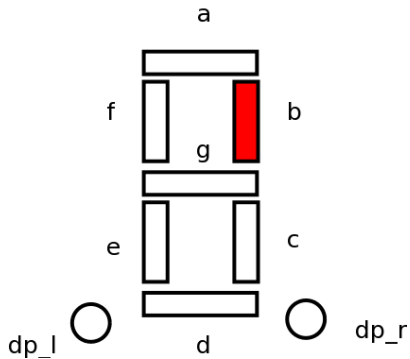
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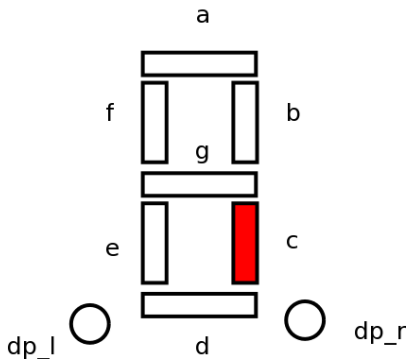
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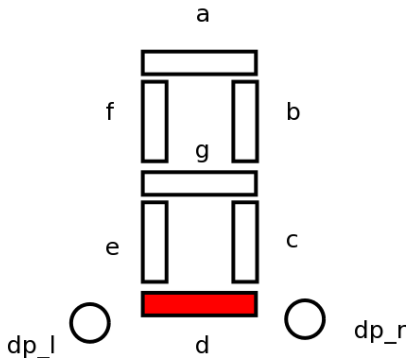
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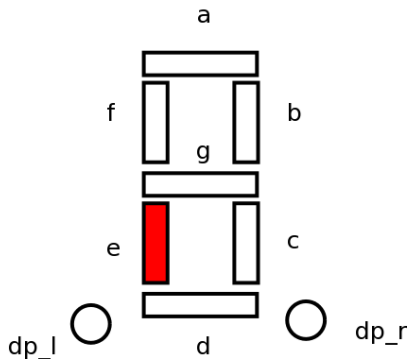
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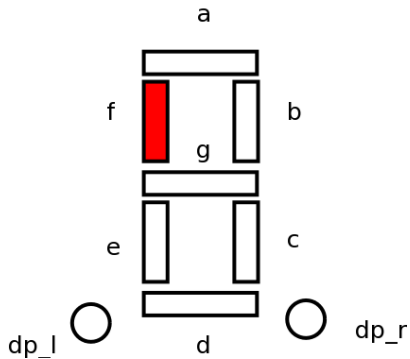
The seven segments are labelled *a* to *g*.



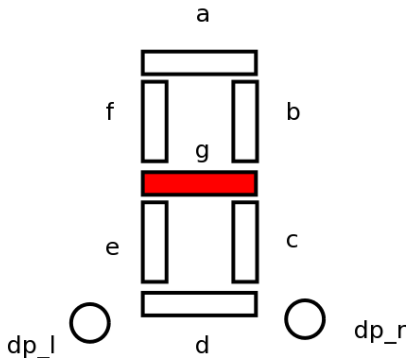
The seven segments are labelled *a* to *g*.



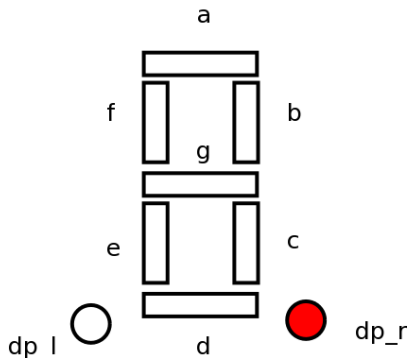
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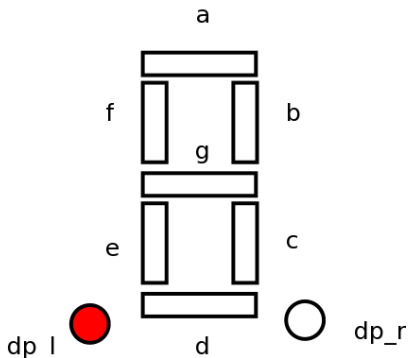


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There is also usually a right decimal point.

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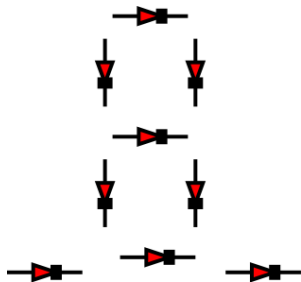


There is also usually a right decimal point.

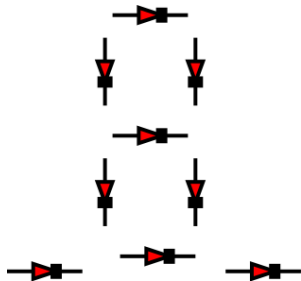
There may also be a left decimal point.

Internally it looks like this.

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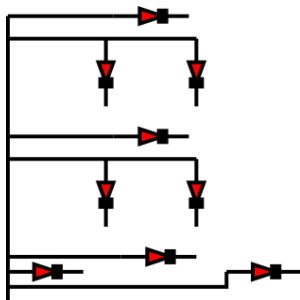
Internally it looks like this.



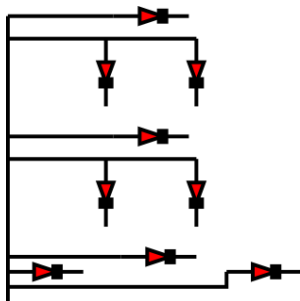
The LEDs will all be tied together at one end.

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

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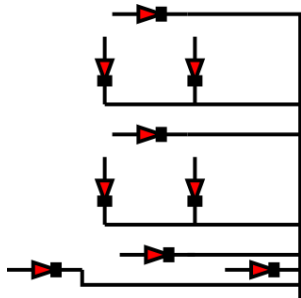
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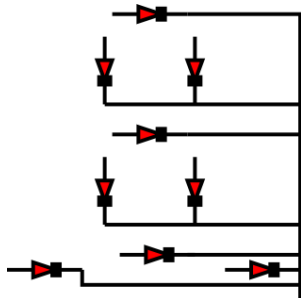
This is called a **common anode** display.

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

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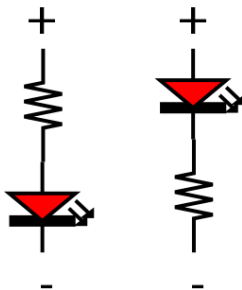
If the *cathodes* are all tied together, it looks like this.



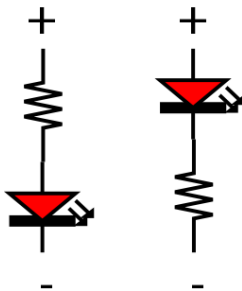
This is called a **common cathode** display.

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

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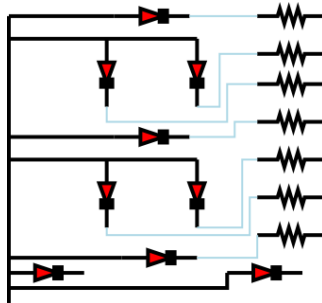
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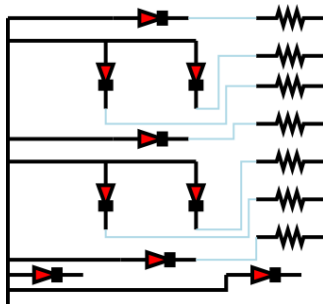
The resistor can come either before or after the LED.

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

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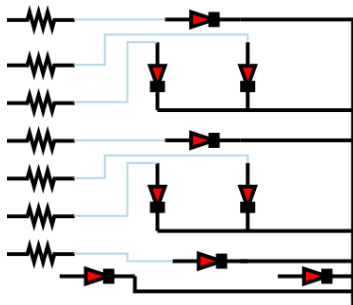
For a common anode display, you can connect to *each* cathode through a resistor.



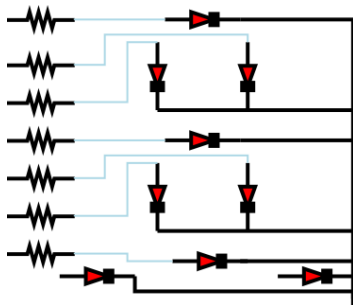
Note that you can't use a resistor array because the resistors don't have a common connection at either end!

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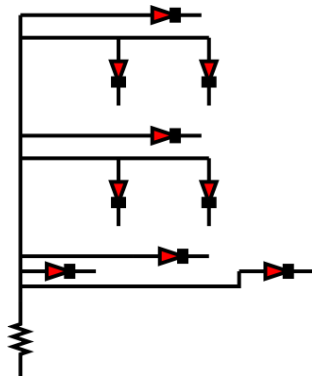
Instead of using several resistors, you could use a single resistor on the common pin.

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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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