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Subject: Re: LED values?

Posted by [Wayne Parham](#) on Wed, 02 Feb 2005 09:33:48 GMT

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Light-emitting diodes are like other diodes, in that they are formed by a semiconductor PN junction. The semiconductor material of the junction is what sets the voltage required to forward-bias it. For example, germanium diodes are forward biased at 0.3v and silicon diodes at 0.7v. That's what sets the operating voltage of a silicon or germanium transistor too. Light-emitting diodes use different semiconductor junctions to provide different colors, and each has a different forward-voltage requirement, usually between 1 and 4 volts. The typical red LED requires about 1.7 volts. Semiconductor junctions that provide higher frequency colors require higher forward voltage bias.

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