

Hi, I am Steve Jones, and now I'm going to tell you how a light bulb works. First of all, we have to see the construction of the light bulb. In fact, the working part is what we call a filament, which is a thin piece of metal, and this gets white hot, it glows very very hot, and, of course, if it was in the air, it would be actually burn away. So, we enclose this in a bulb of glass, which is sealed with a screw thread on here to attach it to the place it's being put, and we have two legs here on which we hang a filament, these are usually tungsten. The electricity comes in at one connection, here, in the bottom, in the middle, and it goes up through here, through the wire and then down and comes out through the screw thread at that side, or sometimes we've got what's called the bayonet connection, it depends on which country you're in. Either screw thread or a bayonet, a bayonet is just flat, you push it and then turn it, and it jams. So the glass bulb is evacuated, that is, there is no air in here, if there were air in here, this soon as it got hot would burn away. You don't want that. What you do is you put in a gas, which won't allow burning, you remove the oxygen in here and you put an argon gas. So this contains argon and won't burn, so this can become white hot, and it would produce mainly light, well, not mainly light, actually, about ten percent is light, most of it is heat, and this glass bulb will get very hot. Normally, these bulbs have a power of around sixty watts, sixty watts is an average. They, in fact, go from something like twenty five watts up to two hundred and fifty watts, a two hundred and fifty watts lamp will actually use a current of one ampere, a twenty five watts, of course, will produce, will use a tenth of an amp. So there we have an electric light bulb and how it works.