

# Bulb

The incandescent light bulb. 230 V 60 W 720 LM base E27 Height approximately 110 mm  
Incandescent electric light source which converts electric energy into light as the result of highly heated metal coils during the flow of electric current through it. The incandescent bulb used the heating effect of the conductor of the filament during the flow of electric current through it the heating effect of current. The temperature of the tungsten filament increases dramatically after switching on the current. The thread emits electromagnetic thermal radiation in accordance with Planck's law. The Planck function has a maximum whose position on the scale of wavelengths depends on the temperature. This maximum shifts with increasing temperature towards shorter wavelengths, the Wien displacement law. To obtain visible radiation, it is necessary that the temperature was several thousand degrees in the ideal temperature 5770 K surface of the Sun. The lower the temperature the smaller the proportion of visible light and especially red seems radiation. Part of the consumed electrical energy the bulb converts the radiation of the leaves by the processes of conduction and convection. Only a small fraction of the radiation is in the visible light region of the main portion of the infrared radiation. To increase efficiency of lamp and obtain the maximum white light is necessary to raise the temperature of the filament which in turn is limited by the properties of the filament material melting temperature. The ideal temperature 5770 K is unattainable because at this temperature, any known material is melted is destroyed and ceases to conduct electrical current. Modern incandescent lamps use a maximum melting points of tungsten is 3410 °C and very rarely osmium is 3045 °C. At practically attainable temperatures 2300-2900 °C emitted is not white and not daylight. For this reason, incandescent bulbs emit light that appears more yellow-red than daylight. To describe the quality of light is called color temperature. In normal air at these temperatures the tungsten instantly would be transformed into oxide. For this reason, the tungsten filament is protected by a glass bulb filled with inert gas usually argon. The first lamp was made with vakuumirovanoj flasks. However, in vacuum at high temperatures the tungsten evaporates, making the filament thinner and dimming the glass bulb at the deposition. Later the bulb started to fill in chemically inert gases. Vacuum flasks are now used only for lamps of low power. LN designs are very diverse and depend on the purpose of a particular type of bulb. However, all LN are

Link to article:: [Bulb](#)