

# BUILDING YOUR OWN HIGH QUALITY CREE LED LAMP WITH 700 LUMENS AND SPENDING ONLY 6W



Mounted lamp with recycled parts

In this post we will see how to build a LED lamp for your house with 700 lumens with only 6W power consumption using 3 chips CREE XML T6 fed pure white 166 mA each ( $6W / 12V = 0,166A$ ) a controller 220V with 6W 12V output power, and something like this cap , but I used a recycled sink another LED lamp 7W (thermally conductive plastic) and a fine of an old E14 energy saving lamp. Total Cost: € 18

The CREE LED chips are expensive but give much light per watt, high quality and durable, enduring the worst working conditions.

**By making LEDs work well below their rated power (only 25% according to its spec sheet ) get lighter per watt, while also reducing its temperature and lengthen your life until after 30,000 hours .**

A bulb in which the driver will break down before (10,000 hours estimated by its electrolytic capacitor life) before the LED. Furthermore the CRI (color accuracy) increases the lower the current.

We have to consider **using an LED that support the voltage we deliver** ; in this case the T6 LED has a working area between 2.9V and 4V; if a cheaper LED chip then we would have put 4 chips in series 3.

First hit the chips with Araldite epoxy two components (that is flexible, durable and can take up to 100 ° C) to sink:



Hand soldered wires to the socket AC controller,



To finally pass through the hole the power cables of LED in series and weld (positive the first negative the next, and negative of the first controller negative and positive from last to positive driver):



This is the first lamp I prepared; I had to cut some chips to place screws

And we Lamp ready for years of savings!



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Source: <http://crecimiento-sostenible.blogspot.in/2015/01/building-your-own-high-quality-cree-led.html>